Level C Data Package Deliverables

Metals

Applied P & Ch Laboratory

Applied P & Ch Laboratory

Metal Analysis Results

Client Name:	GEOFON, Inc.	Project No:	04-4428.10	Collection Date:	05/02/2003
Project ID:	JPL	Service ID:	33015	Collected by:	
		Lab Sample ID:	03M1423-MB-01	Received Date:	05/02/2003
Sample ID:	**03M1423-MB-01**	Sample Matrix	Water	Moisture %:	–
Sample Type:	Method Blank				

Element Name	CAS No	Unit	RL	Result	C	M	Q	Batch	D-Date	A-Date	DF	Method
ARSENIC	7440-38-2	μg/L	5	< 5	U	F		03M1423E	05/02/03	05/02/03	1	200.9
CALCIUM	7440-70-2	μg/L	200	< 200	U	P		03M1421M	05/02/03	05/02/03	1	200.7
IRON	7439-89-6	μg/L	50	13.6	B	P		03M1421M	05/02/03	05/02/03	1	200.7
MAGNESIUM	7439-95-4	μg/L	100	< 100	U	P		03M1421M	05/02/03	05/02/03	1	200.7
POTASSIUM	7440-09-7	μg/L	400	108	B	P		03M1421M	05/02/03	05/02/03	1	200.7
SODIUM	7440-23-5	μg/L	2000	< 2000	U	P		03M1421M	05/02/03	05/02/03	1	200.7

Not Detected is shown as PQL, with dilution and moisture corrected if applicable.

Note: RL: PQL (EQL) or CRDL D-Date: Digestion Date; A-Date: Analysis Date; DF: Dilution Factor

C Qualifier: U - Not Detected or less than IDL B - Less than RL (PQL, EQL or CRDL), but greater than IDL.

Q Qualifier: N - Spike recovery out of control * - Duplicate analysis out of control

W - Post digestion spike for GFAA out of control E - Serial dilution difference out of control

M Qualifier: P - ICP A - FLAA F - GFAA CV - Cold Vapor

Applied P & Ch Laboratory

Metal Analysis Results

Client Name:	GEOFON, Inc.	Project No:	04-4428.10	Collection Date:	05/01/2003
Project ID:	JPL	Service ID:	33015	Collected by:	
		Lab Sample ID:	03-3015-1	Received Date:	05/01/2003
Sample ID:	**DUPE-5-2Q03**	Sample Matrix	Water	Moisture %:	–
Sample Type:	Field Sample				

Element Name	CAS No	Unit	RL	Result	C	M	Q	Batch	D-Date	A-Date	DF	Method
ARSENIC	7440-38-2	μg/L	5	<5	U	F		03M1423E	05/02/03	05/02/03	1	200.9
CALCIUM	7440-70-2	μg/L	200	49800		P		03M1421M	05/02/03	05/02/03	1	200.7
IRON	7439-89-6	μg/L	50	278		P		03M1421M	05/02/03	05/02/03	1	200.7
MAGNESIUM	7439-95-4	μg/L	100	18700		P		03M1421M	05/02/03	05/02/03	1	200.7
POTASSIUM	7440-09-7	μg/L	400	2540		P		03M1421M	05/02/03	05/02/03	1	200.7
SODIUM	7440-23-5	μg/L	2000	18600		P		03M1421M	05/02/03	05/02/03	1	200.7

Not Detected is shown as PQL, with dilution and moisture corrected if applicable.

Note: RL: PQL (EQL) or CRDL D-Date: Digestion Date; A-Date: Analysis Date; DF: Dilution Factor

C Qualifier: U - Not Detected or less than IDL B - Less than RL (PQL, EQL or CRDL), but greater than IDL.

Q Qualifier: N - Spike recovery out of control * - Duplicate analysis out of control

W - Post digestion spike for GFAA out of control E - Serial dilution difference out of control

M Qualifier: P - ICP A - FLAA F - GFAA CV - Cold Vapor

Applied P & Ch Laboratory

Metal Analysis Results

Client Name:	GEOFON, Inc.	Project No:	04-4428.10	Collection Date:	05/01/2003
Project ID:	JPL	Service ID:	33015	Collected by:	
		Lab Sample ID:	03-3015-2	Received Date:	05/01/2003
Sample ID:	**EB-9-5/1/03**	Sample Matrix	Water	Moisture %:	–
Sample Type:	Field Sample				

Element Name	CAS No	Unit	RL	Result	C	M	Q	Batch	D-Date	A-Date	DF	Method
ARSENIC	7440-38-2	μg/L	5	< 5	U	F		03M1423E	05/02/03	05/02/03	1	200.9
CALCIUM	7440-70-2	μg/L	200	< 200	U	P		03M1421M	05/02/03	05/02/03	1	200.7
IRON	7439-89-6	μg/L	50	50.5		P		03M1421M	05/02/03	05/02/03	1	200.7
MAGNESIUM	7439-95-4	μg/L	100	45.9	B	P		03M1421M	05/02/03	05/02/03	1	200.7
POTASSIUM	7440-09-7	μg/L	400	134	B	P		03M1421M	05/02/03	05/02/03	1	200.7
SODIUM	7440-23-5	μg/L	2000	< 2000	U	P		03M1421M	05/02/03	05/02/03	1	200.7

Not Detected is shown as PQL, with dilution and moisture corrected if applicable.

Note: RL: PQL (EQL) or CRDL D-Date: Digestion Date; A-Date: Analysis Date; DF: Dilution Factor

C Qualifier: U - Not Detected or less than IDL B - Less than RL (PQL, EQL or CRDL), but greater than IDL.

Q Qualifier: N - Spike recovery out of control * - Duplicate analysis out of control

W - Post digestion spike for GFAA out of control E - Serial dilution difference out of control

M Qualifier: P - ICP A - FLAA F - GFAA CV - Cold Vapor

Applied P & Ch Laboratory

Metal Analysis Results

Client Name:	GEOFON, Inc.	Project No:	04-4428.10	Collection Date:	05/01/2003
Project ID:	JPL	Service ID:	33015	Collected by:	
		Lab Sample ID:	03-3015-3	Received Date:	05/01/2003
Sample ID:	**MW-3-1**	Sample Matrix	Water	Moisture %:	–
Sample Type:	Field Sample				

Element Name	CAS No	Unit	RL	Result	C	M	Q	Batch	D-Date	A-Date	DF	Method
ARSENIC	7440-38-2	μg/L	5	< 5	U	F		03M1423E	05/02/03	05/02/03	1	200.9
CALCIUM	7440-70-2	μg/L	200	57600		P		03M1421M	05/02/03	05/02/03	1	200.7
IRON	7439-89-6	μg/L	50	1160		P		03M1421M	05/02/03	05/02/03	1	200.7
MAGNESIUM	7439-95-4	μg/L	100	22600		P		03M1421M	05/02/03	05/02/03	1	200.7
POTASSIUM	7440-09-7	μg/L	400	3170		P		03M1421M	05/02/03	05/02/03	1	200.7
SODIUM	7440-23-5	μg/L	2000	23600		P		03M1421M	05/02/03	05/02/03	1	200.7

Not Detected is shown as PQL, with dilution and moisture corrected if applicable.

Note: RL: PQL (EQL) or CRDL D-Date: Digestion Date; A-Date: Analysis Date; DF: Dilution Factor

C Qualifier: U - Not Detected or less than IDL B - Less than RL (PQL, EQL or CRDL), but greater than IDL.

Q Qualifier: N - Spike recovery out of control * - Duplicate analysis out of control

W - Post digestion spike for GFAA out of control E - Serial dilution difference out of control

M Qualifier: P - ICP A - FLAA F - GFAA CV - Cold Vapor

Applied P & Ch Laboratory

Metal Analysis Results

Client Name:	GEOFON, Inc.	Project No:	04-4428.10	Collection Date:	05/01/2003
Project ID:	JPL	Service ID:	33015	Collected by:	
		Lab Sample ID:	03-3015-4	Received Date:	05/01/2003
Sample ID:	**MW-3-2**	Sample Matrix	Water	Moisture %:	–
Sample Type:	Field Sample				

Element Name	CAS No	Unit	RL	Result	C	M	Q	Batch	D-Date	A-Date	DF	Method
ARSENIC	7440-38-2	μg/L	5	< 5	U	F		03M1423E	05/02/03	05/02/03	1	200.9
CALCIUM	7440-70-2	μg/L	200	49900		P		03M1421M	05/02/03	05/02/03	1	200.7
IRON	7439-89-6	μg/L	50	326		P		03M1421M	05/02/03	05/02/03	1	200.7
MAGNESIUM	7439-95-4	μg/L	100	18000		P		03M1421M	05/02/03	05/02/03	1	200.7
POTASSIUM	7440-09-7	μg/L	400	2420		P		03M1421M	05/02/03	05/02/03	1	200.7
SODIUM	7440-23-5	μg/L	2000	18900		P		03M1421M	05/02/03	05/02/03	1	200.7

Not Detected is shown as PQL, with dilution and moisture corrected if applicable.

Note: RL: PQL (EQL) or CRDL D-Date: Digestion Date; A-Date: Analysis Date; DF: Dilution Factor

C Qualifier: U - Not Detected or less than IDL B - Less than RL (PQL, EQL or CRDL), but greater than IDL.

Q Qualifier: N - Spike recovery out of control * - Duplicate analysis out of control

W - Post digestion spike for GFAA out of control E - Serial dilution difference out of control

M Qualifier: P - ICP A - FLAA F - GFAA CV - Cold Vapor

Applied P & Ch Laboratory

Metal Analysis Results

Client Name:	GEOFON, Inc.	Project No:	04-4428.10	Collection Date:	05/01/2003
Project ID:	JPL	Service ID:	33015	Collected by:	
		Lab Sample ID:	03-3015-5	Received Date:	05/01/2003
Sample ID:	**MW-3-3**	Sample Matrix	Water	Moisture %:	–
Sample Type:	Field Sample				

Element Name	CAS No	Unit	RL	Result	C	M	Q	Batch	D-Date	A-Date	DF	Method
ARSENIC	7440-38-2	μg/L	5	< 5	U	F		03M1423E	05/02/03	05/02/03	1	200.9
CALCIUM	7440-70-2	μg/L	200	29800		P		03M1421M	05/02/03	05/02/03	1	200.7
IRON	7439-89-6	μg/L	50	288		P		03M1421M	05/02/03	05/02/03	1	200.7
MAGNESIUM	7439-95-4	μg/L	100	14000		P		03M1421M	05/02/03	05/02/03	1	200.7
POTASSIUM	7440-09-7	μg/L	400	3050		P		03M1421M	05/02/03	05/02/03	1	200.7
SODIUM	7440-23-5	μg/L	2000	42700		P		03M1421M	05/02/03	05/02/03	1	200.7

Not Detected is shown as PQL, with dilution and moisture corrected if applicable.

Note: RL: PQL (EQL) or CRDL D-Date: Digestion Date; A-Date: Analysis Date; DF: Dilution Factor

C Qualifier: U - Not Detected or less than IDL B - Less than RL (PQL, EQL or CRDL), but greater than IDL.

Q Qualifier: N - Spike recovery out of control * - Duplicate analysis out of control

W - Post digestion spike for GFAA out of control E - Serial dilution difference out of control

M Qualifier: P - ICP A - FLAA F - GFAA CV - Cold Vapor

Applied P & Ch Laboratory

Metal Analysis Results

Client Name:	GEOFON, Inc.	Project No:	04-4428.10	Collection Date:	05/01/2003
Project ID:	JPL	Service ID:	33015	Collected by:	
		Lab Sample ID:	03-3015-6	Received Date:	05/01/2003
Sample ID:	**MW-3-4**	Sample Matrix	Water	Moisture %:	–
Sample Type:	Field Sample				

Element Name	CAS No	Unit	RL	Result	C	M	Q	Batch	D-Date	A-Date	DF	Method
ARSENIC	7440-38-2	μg/L	5	< 5	U	F		03M1423E	05/02/03	05/02/03	1	200.9
CALCIUM	7440-70-2	μg/L	200	9690		P		03M1421M	05/02/03	05/02/03	1	200.7
IRON	7439-89-6	μg/L	50	143		P		03M1421M	05/02/03	05/02/03	1	200.7
MAGNESIUM	7439-95-4	μg/L	100	6830		P		03M1421M	05/02/03	05/02/03	1	200.7
POTASSIUM	7440-09-7	μg/L	400	2000		P		03M1421M	05/02/03	05/02/03	1	200.7
SODIUM	7440-23-5	μg/L	2000	47600		P		03M1421M	05/02/03	05/02/03	1	200.7

Not Detected is shown as PQL, with dilution and moisture corrected if applicable.

Note: RL: PQL (EQL) or CRDL D-Date: Digestion Date; A-Date: Analysis Date; DF: Dilution Factor

C Qualifier: U - Not Detected or less than IDL B - Less than RL (PQL, EQL or CRDL), but greater than IDL.

Q Qualifier: N - Spike recovery out of control * - Duplicate analysis out of control

W - Post digestion spike for GFAA out of control E - Serial dilution difference out of control

M Qualifier: P - ICP A - FLAA F - GFAA CV - Cold Vapor

Applied P & Ch Laboratory

Metal Analysis Results

Client Name:	GEOFON, Inc.	Project No:	04-4428.10	Collection Date:	05/01/2003
Project ID:	JPL	Service ID:	33015	Collected by:	
		Lab Sample ID:	03-3015-7	Received Date:	05/01/2003
Sample ID:	**MW-3-5**	Sample Matrix	Water	Moisture %:	–
Sample Type:	Field Sample				

Element Name	CAS No	Unit	RL	Result	C	M	Q	Batch	D-Date	A-Date	DF	Method
ARSENIC	7440-38-2	μg/L	5	4.3	B	F		03M1423E	05/02/03	05/02/03	1	200.9
CALCIUM	7440-70-2	μg/L	200	1790		P		03M1421M	05/02/03	05/02/03	1	200.7
IRON	7439-89-6	μg/L	50	789		P		03M1421M	05/02/03	05/02/03	1	200.7
MAGNESIUM	7439-95-4	μg/L	100	251		P		03M1421M	05/02/03	05/02/03	1	200.7
POTASSIUM	7440-09-7	μg/L	400	1190		P		03M1421M	05/02/03	05/02/03	1	200.7
SODIUM	7440-23-5	μg/L	2000	77300		P		03M1421M	05/02/03	05/02/03	1	200.7

Note: RL: PQL (EQL) or CRDL D-Date: Digestion Date; A-Date: Analysis Date; DF: Dilution Factor

C Qualifier: U - Not Detected or less than IDL B - Less than RL (PQL, EQL or CRDL), but greater than IDL.

Q Qualifier: N - Spike recovery out of control * - Duplicate analysis out of control

W - Post digestion spike for GFAA out of control E - Serial dilution difference out of control

M Qualifier: P - ICP A - FLAA F - GFAA CV - Cold Vapor

FORM-2A Metal

Applied P & Ch Laboratory

Initial and Continuing Calibration Verification

Client Name:	GEOFON, Inc.	Project No:	04-4428.10	Lab Code:	APCL
Project Name:	JPL	Service ID:	033015	Sequence No.:	03M1421M
		Instrument:	ICP -M	Method:	200.7
Batch No.(s):	03M1421				

Analysis Date: **05/02/03** Concentration Units: **UG/L**

		ICV	10:37		CCV	10:44		CCV	10:55		CCV	11:22	
#	Analyte	True	Result	%R	True	Result	%R	True	Result	%R	True	Result	%R
1	Calcium	100000.0	101474.19	101.5	50000.0	50194.23	100.4	50000.0	50152.68	100.3	50000.0	49767.75	99.5
2	Iron	10000.0	10196.16	102.0	5000.0	5147.33	102.9	5000.0	5206.46	104.1	5000.0	5272.79	105.5
3	Magnesium	50000.0	49248.16	98.5	25000.0	25347.94	101.4	25000.0	25908.25	103.6	25000.0	25608.27	102.4
4	Potassium	30000.0	29848.75	99.5	15000.0	15205.54	101.4	15000.0	15607.21	104.0	15000.0	15448.87	103.0
5	Sodium	200000.0	206815.06	103.4	100000.0	102387.51	102.4	100000.0	102741.90	102.7	100000.0	105114.37	105.1

(a) ICV Control Limit 95-105%; For Hg, 90-110%.

(b) CCV Control Limit 90-110%; For Hg, 80-120%.

FORM-2A Metal

Applied P & Ch Laboratory

Initial and Continuing Calibration Verification

Client Name:	GEOFON, Inc.	Project No:	04-4428.10	Lab Code:	APCL
Project Name:	JPL	Service ID:	033015	Sequence No.:	03M1421M
		Instrument:	ICP -M	Method:	200.7
Batch No.(s):	03M1421				

Analysis Date: **05/02/03** Concentration Units: **UG/L**

#	Analyte	CCV True	11:47 Result	%R	CCV True	12:31 Result	%R	True	Result	%R	True	Result	%R
1	Calcium	50000.0	51060.12	102.1	50000.0	51090.77	102.2						
2	Iron	5000.0	5380.15	107.6	5000.0	5418.29	108.4						
3	Magnesium	25000.0	25417.48	101.7	25000.0	25888.35	103.6						
4	Potassium	15000.0	16140.98	107.6	15000.0	15643.31	104.3						
5	Sodium	100000.0	107168.85	107.2	100000.0	106793.66	106.8						

(a) ICV Control Limit 95-105%; For Hg, 90-110%.

(b) CCV Control Limit 90-110%; For Hg, 80-120%.

FORM-2A Metal

Applied P & Ch Laboratory

Initial and Continuing Calibration Verification

Client Name:	GEOFON, Inc.	Project No:	04-4428.10	Lab Code:	APCL
Project Name:	JPL	Service ID:	033015	Sequence No.:	03M1423E
		Instrument:	GFAA-E	Method:	200.9
Batch No.(s):	03M1423				

Analysis Date: **05/02/03** Concentration Units: **UG/L**

		ICV	14:39		CCV	15:56		CCV	17:15		CCV	18:19	
#	Analyte	True	Result	%R	True	Result	%R	True	Result	%R	True	Result	%R
1	Arsenic	50.0	49.10	98.2	50.0	49.40	98.8	50.0	54.00	108.0	50.0	51.10	102.2

(a) ICV Control Limit 95-105%; For Hg, 90-110%.

(b) CCV Control Limit 90-110%; For Hg, 80-120%.

FORM-2B Metal

Applied P & Ch Laboratory

CRDL Standard For AA and ICP

Client Name:	GEOFON, Inc.	Project No:	04-4428.10	Lab Code:	APCL
Project Name:	JPL	Service ID:	033015	Sequence No.:	03M1421M
		Instrument:	ICP -M	Method:	200.7
Batch No.(s):	03M1421				

Analysis Date: **05/02/03**

Concentration Units: **UG/L**

#	Analyte	True	10:48 Found	R%	Time Found	R%
1	Calcium	1000.0	659.21	65.9		
2	Iron	50.0	46.52	93.0		
3	Magnesium		3.65			
4	Potassium		100.49			
5	Sodium		-48.65			

FORM-3 Metal

Applied P & Ch Laboratory

Metal ICB/CCB Summary

Client Name:	GEOFON, Inc.	Project No:	04-4428.10	Lab Code:	APCL
Project Name:	JPL	Service ID:	033015	Sequence No.:	03M1421M
		Instrument:	ICP -M	Method:	200.7
Batch No.(s):	03M1421				

Analysis Date: **05/02/03** Concentration Units: **UG/L**

#	Analyte	ICB Result	10:40 C	CCB Result	10:46 C	CCB Result	10:57 C	CCB Result	11:24 C	CCB Result	11:49 C
1	Calcium	135.00	U	-226.82		-176.99	B	-251.81		135.00	U
2	Iron	-41.49	B	2.30	U	24.87	B	11.94	B	6.91	B
3	Magnesium	6.59	B	6.40	U	39.08	B	12.54	B	21.28	B
4	Potassium	100.18	B	108.27	B	107.19	B	113.21	B	104.65	B
5	Sodium	328.00	U	328.00	U	328.00	U	328.00	U	328.00	U

FORM-3 Metal

Applied P & Ch Laboratory

Metal ICB/CCB Summary

Client Name:	GEOFON, Inc.	Project No:	04-4428.10	Lab Code:	APCL
Project Name:	JPL	Service ID:	033015	Sequence No.:	03M1421M
		Instrument:	ICP -M	Method:	200.7
Batch No.(s):	03M1421				

Analysis Date: **05/02/03**

Concentration Units: **UG/L**

#	Analyte	CCB Result	12:34 C	CCB Result	Time C	CCB Result	Time C	CCB Result	Time C	CCB Result	Time C
1	Calcium	-144.69	B								
2	Iron	41.97	B								
3	Magnesium	33.66	B								
4	Potassium	120.94	B								
5	Sodium	328.00	U								

FORM-3 Metal

Applied P & Ch Laboratory

Metal ICB/CCB Summary

Client Name:	GEOFON, Inc.	Project No:	04-4428.10	Lab Code:	APCL
Project Name:	JPL	Service ID:	033015	Sequence No.:	03M1423E
		Instrument:	GFAA-E	Method:	200.9
Batch No.(s):	03M1423				

Analysis Date: **05/02/03**

Concentration Units: **UG/L**

#	Analyte	ICB Result	14:46 C	CCB Result	16:02 C	CCB Result	17:22 C	CCB Result	18:26 C	CCB Result	Time C
1	Arsenic	2.10	U	2.10	U	2.10	U	2.10	U		

FORM-4 Metal

Applied P & Ch Laboratory

ICP Interference Check Sample

Client Name: GEOFON, Inc.
Project Name: JPL
Batch No.(s): 03M1421

Project No: 04-4428.10
Service ID: 033015
ICP ID Number: ICP -M

Lab Code: APCL
Sequence No.: 03M1421M

Analysis Date: **05/02/03**

Concentration Units: **UG/L**

#	Analyte	Expected Sol. A	Expected Sol. AB	Initial 10:50 Sol. A	Found 10:53 Sol. AB	%R	Final 12:16 Sol. A	Found 12:29 Sol. AB	%R
1	Calcium	500000	500000	515425	486581.3	97.3	510133	488682.2	97.7
2	Iron	200000	200000	189892	176853.5	88.4	192496	178430.0	89.2
3	Magnesium	500000	500000	483092	458182.8	91.6	482532	454444.7	90.9
4	Potassium	0	0	156	167.2		170	159.6	
5	Sodium	0	0	-293	-224.7		-216	-261.9	

FORM-5A Metal

Applied P & Ch Laboratory

Matrix Spike/Matrix Spike Duplicate Recovery for Method 200.9

Client Name:	GEOFON, Inc.	Contract No:		Lab Code:	APCL
Case No:		SAS No:		Service ID:	33015
Project ID:	JPL	Project No:	04-4428.10	Sample Matrix:	Water
		Batch No:	03M1423E		
MS Filename:	-	Date Analyzed:	050203	Time Analyzed:	15:30
MSD Filename:	-	Date Analyzed:	050203	Time Analyzed:	15:37
MS Sample No:	**MW-23-5**	Sample Lab ID:	03-2987-6		

Spiked Components	Unit	Spike Added	Concentration Unspiked	Concentration MS	MS Rec% #	QC Limit, % REC
ARSENIC	μg/L	50	3.2	56.4	106	75-125
# of Out-of-control					0	

Spiked Components	Unit	Spike Added	MSD Concentration	MSD Rec% #	RPD% #	QC Limit, % RPD	QC Limit, % REC
ARSENIC	μg/L	50	55.8	105	1	20	75-125
# of Out-of-control				0	0		

Column to be used to flag recovery and RPD values:

* – Values outside of contract required QC Limits D – Spiked components diluted out

Comments: _____

FORM-5A Metal

Applied P & Ch Laboratory

Matrix Spike/Matrix Spike Duplicate Recovery for Method 200.7

Client Name:	GEOFON, Inc.	Contract No:		Lab Code:	APCL
Case No:		SAS No:		Service ID:	33015
Project ID:	JPL	Project No:	04-4428.10	Sample Matrix:	Water
		Batch No:	03M1421M		
MS Filename:	-	Date Analyzed:	050203	Time Analyzed:	11:13
MSD Filename:	-	Date Analyzed:	050203	Time Analyzed:	11:15
MS Sample No:	**MW-23-5**	Sample Lab ID:	03-2987-6		

Spiked Components	Unit	Spike Added	Concentration Unspiked	Concentration MS	MS Rec% #	QC Limit, % REC
CALCIUM	μg/L	20000	5270	26800	108	75-125
IRON	μg/L	1000	189	1260	107	75-125
MAGNESIUM	μg/L	10000	450	10700	103	75-125
POTASSIUM	μg/L	5000	2530	8700	123	75-125
SODIUM	μg/L	40000	97700	142000	111	75-125
# of Out-of-control					0	

Spiked Components	Unit	Spike Added	MSD Concentration	MSD Rec% #	RPD% #	QC Limit, % RPD	QC Limit, % REC
CALCIUM	μg/L	20000	26500	106	2	20	75-125
IRON	μg/L	1000	1260	107	0	20	75-125
MAGNESIUM	μg/L	10000	10700	103	0	20	75-125
POTASSIUM	μg/L	5000	8540	120	2	20	75-125
SODIUM	μg/L	40000	144000	116	4	20	75-125
# of Out-of-control				0	0		

Column to be used to flag recovery and RPD values:

* – Values outside of contract required QC Limits D – Spiked components diluted out

Comments: _____

FORM-5B Metal

Applied P & Ch Laboratory

Post Digest Spike Sample Recovery

Client Name:	GEOFON, Inc.	Project No:	04-4428.10	Lab Code:	APCL
Project Name:	JPL	Service ID:	033015	Sequence No.:	03M1421M
		Batch No.:	03M1421	Method:	200.7
Spike Sample No. :	03-2987-06	Matrix:	WATER	Instrument:	ICP -M
Client Sample No.:	**MW-23-5**	Analysis Date:	05/02/03		

Concentration Units: **UG/L**

#	Analyte	Spiked Sample Result(SSR)	11:18 C	Sample Result(SR)	11:06 C	Spike Added(SA)	% Rec.	Control Limit	Q
1	Calcium	26403.3594		5272.3296		20000.00	105.7	75-125	
2	Iron	1256.9731		189.0523		1000.00	106.8	75-125	
3	Magnesium	10915.2607		450.0708		10000.00	104.7	75-125	
4	Potassium	8759.2529		2525.3450		5000.00	124.7	75-125	
5	Sodium	143907.5781		97741.5859		40000.00	115.4	75-125	

FORM-5B Metal

Applied P & Ch Laboratory

Post Digest Spike Sample Recovery

Client Name:	GEOFON, Inc.	Project No:	04-4428.10	Lab Code:	APCL
Project Name:	JPL	Service ID:	033015	Sequence No.:	03M1423E
		Batch No.:	03M1423	Method:	200.9
Spike Sample No. :	03-2987-06	Matrix:	WATER	Instrument:	GFAA-E
Client Sample No.:	**MW-23-5**	Analysis Date:	05/02/03		

Concentration Units: **UG/L**

#	Analyte	Spiked Sample Result(SSR)	15:43 C	Sample Result(SR)	15:11 C	Spike Added(SA)	% Rec.	Control Limit	Q
1	Arsenic	53.3000		3.2000	B	50.00	100.2	75-125	

FORM-6 Metal

Applied P & Ch Laboratory

Duplicates Verification

Client Name:	GEOFON, Inc.	Project No:	04-4428.10	Lab Code:	APCL
Project Name:	JPL	Service ID:	033015	Sequence No.:	03M1421M
		Batch No.:	03M1421	Method:	200.7
Spike Sample No.	03-2987-06	Matrix:	WATER	Instrument:	ICP -M
Client Sample No.	**MW-23-5**	% Solid:	0.00	Analysis Date:	05/02/03

Concentration Unit: **UG/L**

#	Analyte	11:06 Sample(s)	C	11:09 Duplicate	C	RPD(%)	Q
1	Calcium	5272.3296		5161.7686		2.1	
2	Iron	189.0523		185.3369		2.0	
3	Magnesium	450.0708		452.7576		0.6	
4	Potassium	2525.3450		2418.9983		4.3	
5	Sodium	97741.5859		98020.2188		0.3	

FORM-6 Metal

Applied P & Ch Laboratory

Duplicates Verification

Client Name:	GEOFON, Inc.	Project No:	04-4428.10	Lab Code:	APCL
Project Name:	JPL	Service ID:	033015	Sequence No.:	03M1423E
		Batch No.:	03M1423	Method:	200.9
Spike Sample No.	03-2987-06	Matrix:	WATER	Instrument:	GFAA-E
Client Sample No.	**MW-23-5**	% Solid:	0.00	Analysis Date:	05/02/03

Concentration Unit: **UG/L**

#	Analyte	15:11 Sample(s)	C	15:17 Duplicate	C	RPD(%)	Q
1	Arsenic	3.2000	B	3.0000	B	6.5	

FORM-7 Metal

Applied P & Ch Laboratory

Lab Control Spike/Lab Control Spike Duplicate Recovery for Method 200.9

Client Name:	GEOFON, Inc.	Contract No:		Lab Code:	APCL
Case No:		SAS No:		Service ID:	33015
Project ID:	JPL	Project No:	04-4428.10	Sample Matrix:	Water
		Batch No:	03M1423E		
LCS Filename:	-	Date Analyzed:	050203	Time Analyzed:	14:58
LCSD Filename:	-	Date Analyzed:	050203	Time Analyzed:	15:04

Spiked Components	Unit	Spike Added	Concentration Unspiked	Concentration LCS	LCS Rec% #	QC Limit, % REC
ARSENIC	μg/L	50	0	47.4	95	80-120
# of Out-of-control					0	

Spiked Components	Unit	Spike Added	LCSD Concentration	LCSD Rec% #	RPD% #	QC Limit, % RPD	QC Limit, % REC
ARSENIC	μg/L	50	47.6	95	0	20	80-120
# of Out-of-control				0	0		

Column to be used to flag recovery and RPD values:

* – Values outside of contract required QC Limits D – Spiked components diluted out

Comments: _____

FORM-7 Metal

Applied P & Ch Laboratory

Lab Control Spike/Lab Control Spike Duplicate Recovery for Method 200.7

Client Name:	GEOFON, Inc.	Contract No:		Lab Code:	APCL
Case No:		SAS No:		Service ID:	33015
Project ID:	JPL	Project No:	04-4428.10	Sample Matrix:	Water
		Batch No:	03M1421M		
LCS Filename:	-	Date Analyzed:	050203	Time Analyzed:	11:02
LCSD Filename:	-	Date Analyzed:	050203	Time Analyzed:	11:04

Spiked Components	Unit	Spike Added	Concentration Unspiked	Concentration LCS	LCS Rec% #	QC Limit, % REC
CALCIUM	μg/L	20000	0	20200	101	80-120
IRON	μg/L	1000	0	1050	105	80-120
MAGNESIUM	μg/L	10000	0	10200	102	80-120
POTASSIUM	μg/L	5000	0	5270	105	80-120
SODIUM	μg/L	40000	0	39700	99	80-120
# of Out-of-control					0	

Spiked Components	Unit	Spike Added	LCSD Concentration	LCSD Rec% #	RPD% #	QC Limit, % RPD	QC Limit, % REC
CALCIUM	μg/L	20000	20500	103	2	20	80-120
IRON	μg/L	1000	1060	106	1	20	80-120
MAGNESIUM	μg/L	10000	9980	100	2	20	80-120
POTASSIUM	μg/L	5000	5160	103	2	20	80-120
SODIUM	μg/L	40000	40800	102	3	20	80-120
# of Out-of-control				0	0		

Column to be used to flag recovery and RPD values:

* – Values outside of contract required QC Limits D – Spiked components diluted out

Comments: _____

FORM-9 Metal

Applied P & Ch Laboratory

Serial Dilution

Client Name:	GEOFON, Inc.	Project No:	04-4428.10	Lab Code:	APCL
Project Name:	JPL	Service ID:	033015	Sequence No.:	03M1421M
		Batch No.:	03M1421	Method:	200.7
Dilution Sample No.:	03-2987-06	Matrix:	WATER	Instrument:	ICP -M
Client Sample No.:	MW-23-5	Analysis Date:	05/02/03		

Concentration Units: **UG/L**

#	Analyte	Initial Sample Results(I)	11:06 C	Serial Dilut Results(S)	11:11 C	% Diff.	Q
1	Calcium	5272.33		5252.51		0.4	
2	Iron	189.05		231.27	B	22.3	E
3	Magnesium	450.07		552.43		22.7	E
4	Potassium	2525.34		2224.24		11.9	E
5	Sodium	97741.59		96143.76		1.6	

FORM-9 Metal

Applied P & Ch Laboratory

Serial Dilution

Client Name:	GEOFON, Inc.	Project No:	04-4428.10	Lab Code:	APCL
Project Name:	JPL	Service ID:	033015	Sequence No.:	03M1423E
		Batch No.:	03M1423	Method:	200.9
Dilution Sample No.:	03-2987-06	Matrix:	WATER	Instrument:	GFAA-E
Client Sample No.:	**MW-23-5**	Analysis Date:	05/02/03		

Concentration Units: **UG/L**

#	Analyte	Initial Sample Results(I)	15:11 C	Serial Dilut Results(S)	15:24 C	% Diff.	Q
1	Arsenic	3.20	B	2.50	U	100.0	

FORM-13 Metal

Applied P & Ch Laboratory

Preparation Log

Client Name:	GEOFON, Inc.	Project No:	04-4428.10	Lab Code:	APCL
Project Name:	JPL	Service ID:	033015	Sequence No.:	03M1421M
		Batch No.:	03M1421	Method:	200.7
Preparation Matrix:	WATER	Instrument:	ICP -M		

#	Client Sample No.	APCL Sample No.	Preparation Date	Weight (gram)	Volume (ml)
1	DUPE-4-2Q03	03-2964-01	05/02/03		50.0
2	EB-7-4/29/03	03-2964-02	05/02/03		50.0
3	MW-24-1	03-2964-03	05/02/03		50.0
4	MW-24-2	03-2964-04	05/02/03		50.0
5	MW-24-3	03-2964-05	05/02/03		50.0
6	MW-24-4	03-2964-06	05/02/03		50.0
7	MW-24-5	03-2964-07	05/02/03		50.0
8	MW-23-5	03-2987-06DM	05/02/03		50.0
9	EB-8-4/30/03	03-2987-01	05/02/03		50.0
10	MW-23-1	03-2987-02	05/02/03		50.0
11	MW-23-2	03-2987-03	05/02/03		50.0
12	MW-23-3	03-2987-04	05/02/03		50.0
13	MW-23-4	03-2987-05	05/02/03		50.0
14	DUPE-5-2Q03	03-3015-01	05/02/03		50.0
15	EB-9-5/1/03	03-3015-02	05/02/03		50.0
16	MW-3-1	03-3015-03	05/02/03		50.0
17	MW-3-2	03-3015-04	05/02/03		50.0
18	MW-3-3	03-3015-05	05/02/03		50.0
19	MW-3-4	03-3015-06	05/02/03		50.0
20	MW-3-5	03-3015-07	05/02/03		50.0
21		03M1421MB	05/02/03		50.0
22		03M1421LCS	05/02/03		50.0
23		03M1421LCSD	05/02/03		50.0
24	MW-23-5 Dup.	03M1421MD	05/02/03		50.0
25	MW-23-5 MS	03M1421MS	05/02/03		50.0
26	MW-23-5 MSD	03M1421MSD	05/02/03		50.0

FORM-13 Metal

Applied P & Ch Laboratory

Preparation Log

Client Name:	GEOFON, Inc.	Project No:	04-4428.10	Lab Code:	APCL
Project Name:	JPL	Service ID:	033015	Sequence No.:	03M1423E
		Batch No.:	03M1423	Method:	200.9
Preparation Matrix:	WATER	Instrument:	GFAA-E		

#	Client Sample No.	APCL Sample No.	Preparation Date	Weight (gram)	Volume (ml)
1	DUPE-4-2Q03	03-2964-01	05/02/03		50.0
2	EB-7-4/29/03	03-2964-02	05/02/03		50.0
3	MW-24-1	03-2964-03	05/02/03		50.0
4	MW-24-2	03-2964-04	05/02/03		50.0
5	MW-24-3	03-2964-05	05/02/03		50.0
6	MW-24-4	03-2964-06	05/02/03		50.0
7	MW-24-5	03-2964-07	05/02/03		50.0
8	MW-23-5	03-2987-06DM	05/02/03		50.0
9	EB-8-4/30/03	03-2987-01	05/02/03		50.0
10	MW-23-1	03-2987-02	05/02/03		50.0
11	MW-23-2	03-2987-03	05/02/03		50.0
12	MW-23-3	03-2987-04	05/02/03		50.0
13	MW-23-4	03-2987-05	05/02/03		50.0
14	DUPE-5-2Q03	03-3015-01	05/02/03		50.0
15	EB-9-5/1/03	03-3015-02	05/02/03		50.0
16	MW-3-1	03-3015-03	05/02/03		50.0
17	MW-3-2	03-3015-04	05/02/03		50.0
18	MW-3-3	03-3015-05	05/02/03		50.0
19	MW-3-4	03-3015-06	05/02/03		50.0
20	MW-3-5	03-3015-07	05/02/03		50.0
21		03M1423MB	05/02/03		50.0
22		03M1423LCS	05/02/03		50.0
23		03M1423LCSD	05/02/03		50.0
24	MW-23-5 Dup.	03M1423MD	05/02/03		50.0
25	MW-23-5 MS	03M1423MS	05/02/03		50.0
26	MW-23-5 MSD	03M1423MSD	05/02/03		50.0

FORM-14 Metal

Applied P & Ch Laboratory

Analysis Run Log

Client Name:	GEOFON, Inc.	Project No:	04-4428.10	Lab Code:	APCL
Project Name:	JPL	Service ID:	033015	Sequence No.:	03M1421M
		Instrument:	ICP -M	Method:	200.7
Batch No.(s):	03M1421	Start Date:	05/02/03	End Date:	05/02/03

#	APCL Sample No.	D/F	Time	Al	Sb	As	Ba	Be	Cd	Ca	Cr	Co	Cu	Fe	Pb	Mg	Mn	Hg	Ni	K	Se	Ag	Na	Tl	V	Zn	Mo	Sr	Ti	Sn	Li	B	Si
1	Calib Blank	1.00	10:28							√				√		√				√			√										
2	STD1 1423A	1.00	10:30							√				√		√				√			√										
3	STD2 1423B	1.00	10:33							√				√		√				√			√										
4	STD3 1423C	1.00	10:35							√				√		√				√			√										
5	ICV 1447A	1.00	10:37							√				√		√				√			√										
6	ICB	1.00	10:40							√				√		√				√			√										
7	Calib Blank	1.00	10:42							√				√		√				√			√										
8	CCV 1447B	1.00	10:44							√				√		√				√			√										
9	CCB	1.00	10:46							√				√		√				√			√										
10	CRI A1432	1.00	10:48							√				√		√				√			√										
11	ICSA 1441	1.00	10:50							√				√		√				√			√										
12	ICSAB 1443	1.00	10:53							√				√		√				√			√										
13	CCV 1447B	1.00	10:55							√				√		√				√			√										
14	CCB	1.00	10:57							√				√		√				√			√										
15	M-BL 03M1421 W	1.00	10:59							√				√		√				√			√										
16	LCS-03M1421	1.00	11:02							√				√		√				√			√										
17	LCSD-03M1421	1.00	11:04							√				√		√				√			√										
18	2987-6 S F=1	1.00	11:06							√				√		√				√			√										
19	2987-6 D F=1	1.00	11:09							√				√		√				√			√										
20	2987-6 1/5 F=5	5.00	11:11							√				√		√				√			√										
21	2987-6 MS F=1	1.00	11:13							√				√		√				√			√										
22	2987-6 MSD F=1	1.00	11:15							√				√		√				√			√										
23	2987-6 PS F=1	1.00	11:18							√				√		√				√			√										
24	2987-1 F=1	1.00	11:20							√				√		√				√			√										
25	CCV 1447B	1.00	11:22							√				√		√				√			√										
26	CCB	1.00	11:24							√				√		√				√			√										
27	2987-2 F=1	1.00	11:27							√				√		√				√			√										
28	2987-3 F=1	1.00	11:29							√				√		√				√			√										
29	2987-4 F=1	1.00	11:31							√				√		√				√			√										
30	2987-5 F=1	1.00	11:33							√				√		√				√			√										
31	2964-1 F=1	1.00	11:36							√				√		√				√			√										
32	2964-2 F=1	1.00	11:38							√				√		√				√			√										
33	2964-3 F=1	1.00	11:40							√				√		√				√			√										
34	2964-4 F=1	1.00	11:42							√				√		√				√			√										
35	2964-5 F=1	1.00	11:45							√				√		√				√			√										
36	CCV 1447B	1.00	11:47							√				√		√				√			√										
37	CCB	1.00	11:49							√				√		√				√			√										
38	2964-6 F=1	1.00	11:52							√				√		√				√			√										
39	2964-7 F=1	1.00	11:58							√				√		√				√			√										
40	3015-1 F=1	1.00	12:00							√				√		√				√			√										

FORM-14 Metal

Applied P & Ch Laboratory

Analysis Run Log

Client Name:	GEOFON, Inc.	Project No:	04-4428.10	Lab Code:	APCL
Project Name:	JPL	Service ID:	033015	Sequence No.:	03M1421M
		Instrument:	ICP -M	Method:	200.7
Batch No.(s):	03M1421	Start Date:	05/02/03	End Date:	05/02/03

#	APCL Sample No.	D/F	Time	Al	Sb	As	Ba	Be	Cd	Ca	Cr	Co	Cu	Fe	Pb	Mg	Mn	Hg	Ni	K	Se	Ag	Na	Tl	V	Zn	Mo	Sr	Ti	Sn	Li	B	Si
41	3015-2 F=1	1.00	12:02							√				√		√				√			√										
42	3015-3 F=1	1.00	12:04							√				√		√				√			√										
43	3015-4 F=1	1.00	12:07							√				√		√				√			√										
44	3015-5 F=1	1.00	12:09							√				√		√				√			√										
45	3015-6 F=1	1.00	12:11							√				√		√				√			√										
46	3015-7 F=1	1.00	12:13							√				√		√				√			√										
47	ICSA 1441	1.00	12:16							√				√		√				√			√										
48	ICSAB 1443	1.00	12:29							√				√		√				√			√										
49	CCV 1447B	1.00	12:31							√				√		√				√			√										
50	CCB	1.00	12:34							√				√		√				√			√										

FORM-14 Metal

Applied P & Ch Laboratory

Analysis Run Log

Client Name:	GEOFON, Inc.	Project No:	04-4428.10	Lab Code:	APCL
Project Name:	JPL	Service ID:	033015	Sequence No.:	03M1423E
		Instrument:	GFAA-E	Method:	200.9
Batch No.(s):	03M1423	Start Date:	05/02/03	End Date:	05/02/03

#	APCL Sample No.	D/F	Time	Al	Sb	As	Ba	Be	Cd	Ca	Cr	Co	Cu	Fe	Pb	Mg	Mn	Hg	Ni	K	Se	Ag	Na	Tl	V	Zn	Mo	Sr	Ti	Sn	Li	B	Si
1	Calib. Blank	1.00	14:05	√																													
2	1/2 STD1 1472A	1.00	14:11	√																													
3	STD1 1472A	1.00	14:17	√																													
4	STD2 1472B	1.00	14:23	√																													
5	STD3 1472C	1.00	14:30	√																													
6	ICV A1474	1.00	14:39	√																													
7	ICB	1.00	14:46	√																													
8	M-BL 03M1423	1.00	14:52	√																													
9	LCS-03M1423	1.00	14:58	√																													
10	LCSD-03M1423	1.00	15:04	√																													
11	2987-6 S F=1	1.00	15:11	√																													
12	2987-6 D F=1	1.00	15:17	√																													
13	2987-6 1/5 F=5	5.00	15:24	√																													
14	2987-6 MS F=1	1.00	15:30	√																													
15	2987-6 MSD F=1	1.00	15:37	√																													
16	2987-6 PS F=1	1.00	15:43	√																													
17	2987-1 F=1	1.00	15:50	√																													
18	CCV A1474	1.00	15:56	√																													
19	CCB	1.00	16:02	√																													
20	2987-2 F=1	1.00	16:09	√																													
21	2987-3 F=1	1.00	16:15	√																													
22	2987-4 F=1	1.00	16:21	√																													
23	2987-5 F=1	1.00	16:27	√																													
24	2964-1 F=1	1.00	16:34	√																													
25	2964-2 F=1	1.00	16:40	√																													
26	2964-3 F=1	1.00	16:46	√																													
27	2964-4 F=1	1.00	16:52	√																													
28	2964-5 F=1	1.00	17:02	√																													
29	2964-6 F=1	1.00	17:09	√																													
30	CCV A1474	1.00	17:15	√																													
31	CCB	1.00	17:22	√																													
32	2964-7 F=1	1.00	17:28	√																													
33	3015-1 F=1	1.00	17:34	√																													
34	3015-2 F=1	1.00	17:41	√																													
35	3015-3 F=1	1.00	17:47	√																													
36	3015-4 F=1	1.00	17:54	√																													
37	3015-5 F=1	1.00	18:00	√																													
38	3015-6 F=1	1.00	18:07	√																													
39	3015-7 F=1	1.00	18:13	√																													
40	CCV A1474	1.00	18:19	√																													

FORM-14 Metal

Applied P & Ch Laboratory

Analysis Run Log

Client Name:	GEOFON, Inc.	Project No:	04-4428.10	Lab Code:	APCL
Project Name:	JPL	Service ID:	033015	Sequence No.:	03M1423E
		Instrument:	GFAA-E	Method:	200.9
Batch No.(s):	03M1423	Start Date:	05/02/03	End Date:	05/02/03

#	APCL Sample No.	D/F	Time	Al	Sb	As	Ba	Be	Cd	Ca	Cr	Co	Cu	Fe	Pb	Mg	Mn	Hg	Ni	K	Se	Ag	Na	Tl	V	Zn	Mo	Sr	Ti	Sn	Li	B	Si
41	CCB	1.00	18:26			√																											

Applied P & Ch Laboratory
13760 Magnolia Ave. Chino CA 91710
Tel: (909) 590-1828 Fax: (909) 590-1498

Metal Digestion (3010/3050) Worksheet

Batch #03M1421 Matrix: W Method used: 3010A Date: 5/2/03 Digested by: XL' Diluted by: _____

Lot #: ASTM Type I water RW1409 HNO_3 1102420 H_2SO_4 _____ HCl 4102050 H_2O_2 _____

OP #	Type	Samp ID /Lot #	X (g or mL)	$V_{digest}/X = f_1$	$V_j/V_i = f_2$	$V_j'/V_i' = f_3$	$F=f_1f_2f_3$	Note
1105	Method Blank	Bl. Lot: RW1409	50	50 /X= 1	/ =	/ =		8 ml
1106	LCS1	Bl. Lot: "		/X=	/ =	/ =		T=95%
1107	Sample-1	2987-4		/X=	/ =	/ =		
1108	MS1 on S-1	-6		/X=	/ =	/ =		
1109	MS2 on S-1	-6		/X=	/ =	/ =		
1110	Sample 2	-1		/X=	/ =	/ =		
1111	Sample 3	-2		/X=	/ =	/ =		
1112	Sample 4	-3		/X=	/ =	/ =		
1113	Sample 5	-4		/X=	/ =	/ =		
1114	Sample 6	-5		/X=	/ =	/ =		
1115	Sample 7	2964-1		/X=	/ =	/ =		
1116	Sample 8	-2		/X=	/ =	/ =		
1117	Sample 9	-3		/X=	/ =	/ =		
1118	Sample 10	-4		/X=	/ =	/ =		
1119	LCS2	Bl. Lot: RW1409		/X=	/ =	/ =		
1120	Sample 11	-5		/X=	/ =	/ =		
1121	Sample 12	-6		/X=	/ =	/ =		
1122	Sample 13	-7		/X=	/ =	/ =		
1123	Sample 14	3015-1		/X=	/ =	/ =		
1124	Sample 15	-2		/X=	/ =	/ =		
1125	Sample 16	-3		/X=	/ =	/ =		
1126	Sample 17	-4		/X=	/ =	/ =		
1127	Sample 18	-5		/X=	/ =	/ =		
1128	Sample 19	-6		/X=	/ =	/ =		
1129	Sample 20	-7		/X=	/ =	/ =		
1130	Duplicate	2987-6	✓	✓ /X= ✓	/ =	/ =		

Specification of matrix spike and lab control spike

QC Type	Spiked Element *	Spike Stock Solution Lot #	Spike Stock (Rep.) Conc. C_s, μg/mL	Spike Stock Volum Used V_s mL	Spike Level $T'=C_sV_s/V$ ppm or mg/L	Sample Spike T, ppm
MS1	/As/Se/Sb/M_{20}	AA- /AA- /AA- /AA-1433	/ / / 78	/ / / 2	/ / / 1	
MS2	/As/Se/Sb/M_{20}	AA- /AA- /AA- /AA- "	/ / /	/ / /	/ / /	
LCS1	/As/Se/Sb/M_{20}	AA- /AA- /AA- /AA-1432	/ / /	/ / /	/ / /	
LCS2	/As/Se/Sb/M_{20}	AA- /AA- /AA- /AA- "	/ / ✓	/ / ✓	/ / ✓	

* Notation: T – rep. sample spike level. T' – digest solution spike level. $T=f\,T'=C_sV_s/X$. M20 (or M_j) represents 20 (or j) metals, (see STD logbook).
If digest needs dilution for different metals, use dilution worksheet.

APCL form 6-116 April. 03, 1996. Ver. 4.0 No pencil. Use blue pen for record. Use red pen for correction.
Root-File:[CUST.DOC.AA]DIGEST_ROOT.TEX File:[CUST.DOC.AA]DIGEST .TEX

Supervisor Initial 5/5/03

Applied P & Ch Laboratory
13760 Magnolia Ave. Chino CA 91710
Tel: (909) 590-1828 Fax: (909) 590-1498

Metal Digestion (3010/3050) Worksheet

Batch # 03M1423 Matrix: W Method used: 3020A Date: 5/2/03 Digested by: XV Diluted by: _____

Lot #: ASTM Type I water RW1609 HNO_3 1402120 H_2SO_4 _____ HCl _____ H_2O_2 _____

OP #	Type	Samp ID /Lot #	X (g or mL)	$V_{digest}/X = f_1$	$V_f/V_i = f_2$	$V_f'/V_i' = f_3$	$F=f_1f_2f_3$	Note
1157	Method Blank	Bl. Lot: RW1609	50	50 /X= 1	/ =	/ =		GFAA/AS
1158	LCS1	Bl. Lot: 4		/X=	/ =	/ =		T=95%
1159	Sample-1	2987-6		/X=	/ =	/ =		
1160	MS1 on S-1	-6		/X=	/ =	/ =		
1161	MS2 on S-1	-6		/X=	/ =	/ =		
1162	Sample 2	-1		/X=	/ =	/ =		
1163	Sample 3	-2		/X=	/ =	/ =		
1164	Sample 4	-3		/X=	/ =	/ =		
1165	Sample 5	-4		/X=	/ =	/ =		
1166	Sample 6	-5		/X=	/ =	/ =		
1167	Sample 7	2964-1		/X=	/ =	/ =		
1168	Sample 8	-2		/X=	/ =	/ =		
1169	Sample 9	-3		/X=	/ =	/ =		
1170	Sample 10	-4		/X=	/ =	/ =		
1171	LCS2	Bl. Lot: RW1609		/X=	/ =	/ =		
1172	Sample 11	-5		/X=	/ =	/ =		
1173	Sample 12	-6		/X=	/ =	/ =		
1174	Sample 13	-7		/X=	/ =	/ =		
1175	Sample 14	3015-1		/X=	/ =	/ =		
1176	Sample 15	-2		/X=	/ =	/ =		
1177	Sample 16	-3		/X=	/ =	/ =		
1178	Sample 17	-4		/X=	/ =	/ =		
1179	Sample 18	-5		/X=	/ =	/ =		
1180	Sample 19	-6		/X=	/ =	/ =		
1181	Sample 20	-7		/X=	/ =	/ =		
1182	Duplicate	2987-6	↓	↓ /X= ↓	/ =	/ =		

Specification of matrix spike and lab control spike

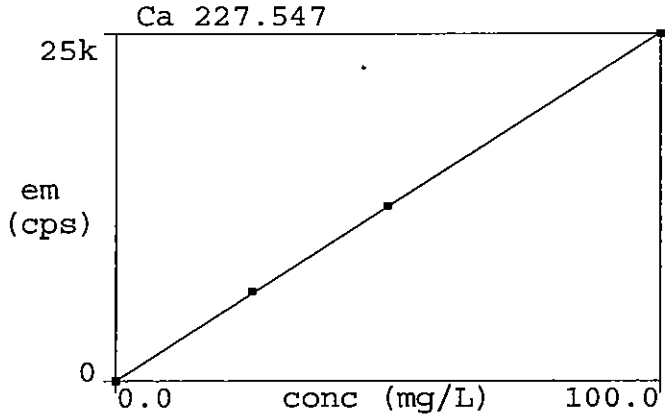
QC Type	Spiked Element *	Spike Stock Solution Lot #	Spike Stock (Rep.) Conc. C_s, µg/mL	Spike Stock Volum Used V_s mL	Spike Level $T'=C_sV_s/V$ ppm or mg/L	Sample Spike T, ppm
MS1	/As/Se/Sb/M_{20}	AA- /AA-1473 /AA- /AA-	/ 5 / /	10.5 /	/ 0.05 /	
MS2	/As/Se/Sb/M_{20}	AA- /AA-1473 /AA- /AA-	/ / /	/ / /	/ / /	
LCS1	/As/Se/Sb/M_{20}	AA- /AA-1473 /AA- /AA-	/ / /	/ / /	/ / /	
LCS2	/As/Se/Sb/M_{20}	AA- /AA-1473 /AA- /AA-	/ / /	/ / /	/ / /	

* Notation: T – rep. sample spike level. T' – digest solution spike level. $T=f\,T'=C_sV_s/X$. M20 (or M_j) represents 20 (or j) metals, (see STD logbook).
If digest needs dilution for different metals, use dilution worksheet.

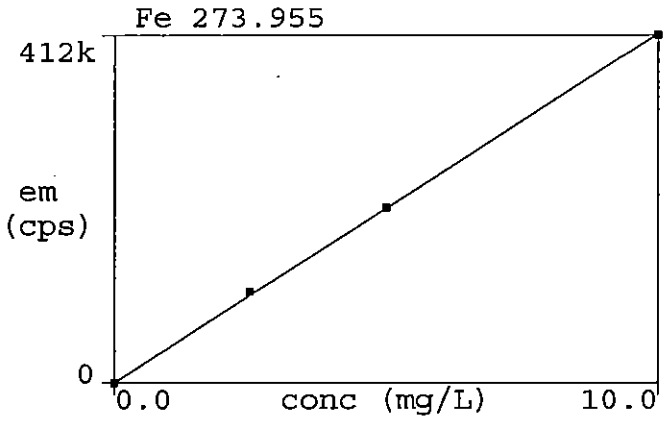
Supervisor Initial 5/6/03

Calibration

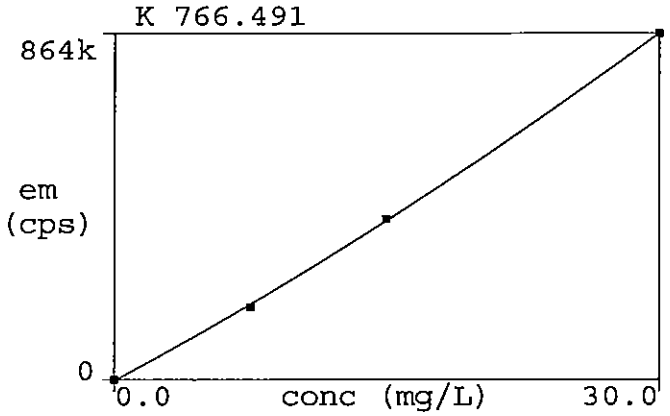
Method: 5ME-1 ICP-M
Result: 03M1421M



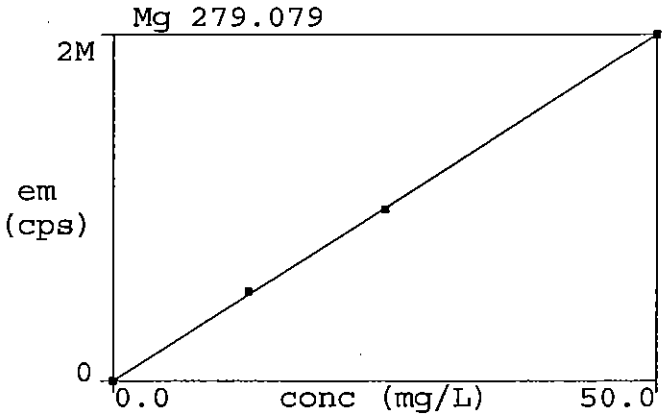
Calib.Eq'n: Linear-thru-Zero
1 Corr. Coeff.: 1.0000



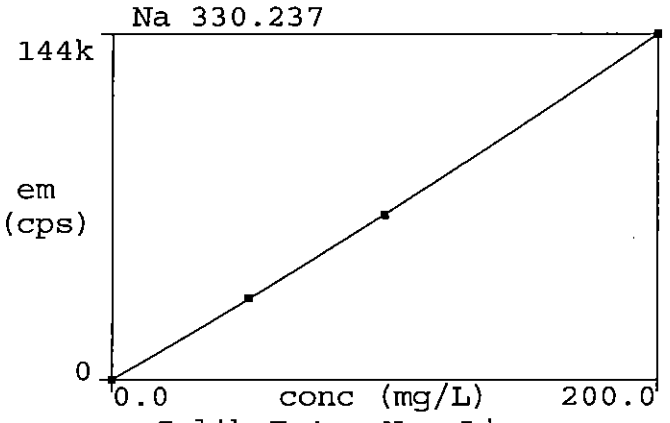
Calib.Eq'n: Linear-thru-Zero
2 Corr. Coeff.: 0.9999



Calib.Eq'n: Non-Linear
3 Corr. Coeff.: 0.9989



Calib.Eq'n: Linear-thru-Zero
4 Corr. Coeff.: 0.9999



Calib.Eq'n: Non-Linear
5 Corr. Coeff.: 0.9997

ethod: 5ME-1 ICP-M IEC: 03miecm.iec MSF:
esults: 03M1421M Spectra Stored: Yes Method Stored: Yes
ample Info: 03m1421m User: User1 Date: 5/2/03 10:27:18 AM
ethod Description: 6010B/200.7--KNaCaMgFe 4/16/03

eplicate Data
D: Calib Blank Date: 5/2/03 10:28:18 AM

epl#	Element	Net Intensity	Corrected Intensity	Calib Conc.	Units
1	Ca 227.547	1683.5	1683.5	0	mg/L
1	Fe 273.955	2891.4	2891.4	0	mg/L
1	K 766.491	3383.6	3383.6	0	mg/L
1	Mg 279.079	967.0	967.0	0	mg/L
1	Na 330.237	5609.7	5609.7	0	mg/L
2	Ca 227.547	1683.2	1683.2	0	mg/L
2	Fe 273.955	2835.6	2835.6	0	mg/L
2	K 766.491	3212.6	3212.6	0	mg/L
2	Mg 279.079	964.6	964.6	0	mg/L
2	Na 330.237	5860.3	5860.3	0	mg/L
3	Ca 227.547	1623.2	1623.2	0	mg/L
3	Fe 273.955	3103.5	3103.5	0	mg/L
3	K 766.491	3305.9	3305.9	0	mg/L
3	Mg 279.079	973.6	973.6	0	mg/L
3	Na 330.237	5665.1	5665.1	0	mg/L

ean Data
D: Calib Blank Seq. No.: 1 A/S Pos: 1
Data: Original Date: 5/2/03 10:28:18 AM

lement	Mean Corr. Intensity	Std.Dev.	RSD	Calib Conc.	Units
a 227.547	1663.3	34.75	2.09%	0	mg/L
e 273.955	2943.5	141.31	4.80%	0	mg/L
766.491	3300.7	85.60	2.59%	0	mg/L
g 279.079	968.4	4.69	0.48%	0	mg/L
a 330.237	5711.7	131.64	2.30%	0	mg/L

eplicate Data
D: STD1 1423A Date: 5/2/03 10:30:34 AM

epl#	Element	Net Intensity	Corrected Intensity	Calib Conc.	Units
1	Ca 227.547	26874.5	25211.2	100.0	mg/L
1	Fe 273.955	417719.0	414775.5	10.00	mg/L
1	K 766.491	873840.7	870540.0	30.00	mg/L
1	Mg 279.079	2249098.3	2248129.9	50.00	mg/L
1	Na 330.237	150236.1	144524.4	200.00	mg/L
2	Ca 227.547	26837.6	25174.3	100.0	mg/L
2	Fe 273.955	417636.2	414692.7	10.00	mg/L
2	K 766.491	853410.3	850109.6	30.00	mg/L
2	Mg 279.079	2160931.4	2159963.0	50.00	mg/L
2	Na 330.237	150287.9	144576.2	200.00	mg/L
3	Ca 227.547	26382.4	24719.1	100.0	mg/L
3	Fe 273.955	409751.5	406808.1	10.00	mg/L
3	K 766.491	875846.8	872546.1	30.00	mg/L
3	Mg 279.079	2195445.8	2194477.4	50.00	mg/L
3	Na 330.237	147478.5	141766.8	200.00	mg/L

ean Data
D: STD1 1423A Seq. No.: 2 A/S Pos: 2
Data: Original Date: 5/2/03 10:30:34 AM

Mean Corr. Calib

lement	Intensity	Std.Dev.	RSD	Conc.	Units
a 227.547	25034.9	274.11	1.09%	100.0	mg/L
e 273.955	412092.1	4576.31	1.11%	10.00	mg/L
766.491	864398.6	12415.18	1.44%	30.00	mg/L
g 279.079	2200856.7	44428.29	2.02%	50.00	mg/L
a 330.237	143622.5	1607.24	1.12%	200.00	mg/L

eplicate Data
D: STD2 1423B Date: 5/2/03 10:32:58 AM

epl#	Element	Net Intensity	Corrected Intensity	Conc.	Calib Units
1	Ca 227.547	14150.8	12487.5	50.00	mg/L
1	Fe 273.955	209193.2	206249.7	5.000	mg/L
1	K 766.491	415242.2	411941.5	15.00	mg/L
1	Mg 279.079	1085301.4	1084333.0	25.000	mg/L
1	Na 330.237	73708.7	67997.0	100.00	mg/L
2	Ca 227.547	14389.4	12726.1	50.00	mg/L
2	Fe 273.955	211737.6	208794.1	5.000	mg/L
2	K 766.491	396682.3	393381.7	15.00	mg/L
2	Mg 279.079	1107582.7	1106614.3	25.000	mg/L
2	Na 330.237	74422.8	68711.1	100.00	mg/L
3	Ca 227.547	14295.4	12632.1	50.00	mg/L
3	Fe 273.955	211256.2	208312.7	5.000	mg/L
3	K 766.491	408370.7	405070.0	15.00	mg/L
3	Mg 279.079	1088615.8	1087647.4	25.000	mg/L
3	Na 330.237	74590.2	68878.5	100.00	mg/L

ean Data
D: STD2 1423B Seq. No.: 3 A/S Pos: 3
Data: Original Date: 5/2/03 10:32:58 AM

lement	Mean Corr. Intensity	Std.Dev.	RSD	Conc.	Calib Units
a 227.547	12615.2	120.19	0.95%	50.00	mg/L
e 273.955	207785.5	1351.65	0.65%	5.000	mg/L
766.491	403464.4	9383.51	2.33%	15.00	mg/L
g 279.079	1092864.9	12022.09	1.10%	25.000	mg/L
a 330.237	68528.9	468.15	0.68%	100.00	mg/L

eplicate Data
D: STD3 1423C Date: 5/2/03 10:35:18 AM

epl#	Element	Net Intensity	Corrected Intensity	Conc.	Calib Units
1	Ca 227.547	7978.4	6315.1	25.00	mg/L
1	Fe 273.955	109574.3	106630.8	2.500	mg/L
1	K 766.491	185169.3	181868.6	7.500	mg/L
1	Mg 279.079	569579.7	568611.3	12.500	mg/L
1	Na 330.237	39186.4	33474.7	50.00	mg/L
2	Ca 227.547	8264.4	6601.1	25.00	mg/L
2	Fe 273.955	115002.0	112058.5	2.500	mg/L
2	K 766.491	186956.5	183655.8	7.500	mg/L
2	Mg 279.079	574884.5	573916.1	12.500	mg/L
2	Na 330.237	40854.9	35143.2	50.00	mg/L
3	Ca 227.547	7965.4	6302.1	25.00	mg/L
3	Fe 273.955	108651.2	105707.7	2.500	mg/L
3	K 766.491	186193.3	182892.7	7.500	mg/L
3	Mg 279.079	570565.3	569596.9	12.500	mg/L
3	Na 330.237	38703.6	32991.9	50.00	mg/L

ean Data
D: STD3 1423C Seq. No.: 4 A/S Pos: 4
Data: Original Date: 5/2/03 10:35:18 AM

Mean Corr. Calib

lement	Intensity	Std.Dev.	RSD	Conc.	Units
a 227.547	6406.1	169.01	2.64%	25.00	mg/L
e 273.955	108132.3	3431.32	3.17%	2.500	mg/L
766.491	182805.7	896.76	0.49%	7.500	mg/L
g 279.079	570708.1	2821.59	0.49%	12.500	mg/L
a 330.237	33869.9	1128.81	3.33%	50.00	mg/L

alibration Summary
ethod: 5ME-1 ICP-M Date: 5/2/03 10:35:37 AM

lement	Stds	Equation	Intercept	Slope	Curvature	Corr. Coeff.
a 227.547	3	Linear-thru-Zero	0.0	251.0	0.00000	0.999963
e 273.955	3	Linear-thru-Zero	0.0	41372.8	0.00000	0.999863
766.491	3	Non-Linear	-2562.1	24526.5	146.68897	0.998878
g 279.079	3	Linear-thru-Zero	0.0	44037.6	0.00000	0.999910
a 330.237	3	Non-Linear	93.0	654.9	0.31274	0.999656

eplicate Data
D: ICV 1447A Date: 5/2/03 10:37:40 AM

epl#	Element	Net Intensity	Corrected Intensity	Calib Conc.	Units	Sample Conc.	Units
1	Ca 227.547	27296.9	25633.6	102.1	mg/L		
1	Fe 273.955	427045.8	424102.3	10.25	mg/L		
1	K 766.491	861431.3	858130.6	29.79	mg/L		
1	Mg 279.079	2168735.5	2167767.1	49.23	mg/L		
1	Na 330.237	155322.5	149610.8	207.7	mg/L		
2	Ca 227.547	27623.7	25960.4	103.4	mg/L		
2	Fe 273.955	429794.2	426850.7	10.32	mg/L		
2	K 766.491	876922.5	873621.9	30.25	mg/L		
2	Mg 279.079	2158608.0	2157639.6	49.00	mg/L		
2	Na 330.237	156764.6	151052.9	209.5	mg/L		
3	Ca 227.547	26480.1	24816.8	98.87	mg/L		
3	Fe 273.955	417521.4	414577.9	10.02	mg/L		
3	K 766.491	852235.0	848934.3	29.51	mg/L		
3	Mg 279.079	2181870.8	2180902.4	49.52	mg/L		
3	Na 330.237	151820.7	146109.0	203.2	mg/L		

ean Data
D: ICV 1447A Seq. No.: 5 Sample No.: 1 A/S Pos: 5
ample Qty: 1.0000 g Prep. Vol.: 1.0 L Dilution: 1.0: 1.0
Data: Original Date: 5/2/03 10:37:40 AM

lement	Mean Corr. Intensity	Mean Conc.	Std.Dev.	Calib Units	Mean Conc.	Std.Dev.	Sample Units	RSD
a 227.547	25470.2	101.5	2.35	mg/L				2.31%
e 273.955	421843.6	10.20	0.156	mg/L				1.53%
766.491	860228.9	29.85	0.375	mg/L				1.26%
g 279.079	2168769.7	49.25	0.265	mg/L				0.54%
a 330.237	148924.2	206.8	3.24	mg/L				1.57%

eplicate Data
D: ICB Date: 5/2/03 10:40:43 AM

epl#	Element	Net Intensity	Corrected Intensity	Calib Conc.	Units	Sample Conc.	Units
1	Ca 227.547	1687.1	23.8	0.0949	mg/L		
1	Fe 273.955	1199.7	-1743.8	-0.0421	mg/L		
1	K 766.491	3161.7	-139.0	0.0987	mg/L		
1	Mg 279.079	1273.6	305.2	0.0069	mg/L		
1	Na 330.237	5494.8	-216.9	-0.4733	mg/L		
2	Ca 227.547	1643.9	-19.4	-0.0772	mg/L		
2	Fe 273.955	1161.5	-1781.9	-0.0431	mg/L		
2	K 766.491	3390.7	90.0	0.1081	mg/L		
2	Mg 279.079	1175.4	207.0	0.0047	mg/L		

2 Na 330.237	5885.1	173.4	0.1228	mg/L
3 Ca 227.547	1706.6	43.3	0.1724	mg/L
3 Fe 273.955	1319.3	-1624.2	-0.0393	mg/L
3 K 766.491	3039.3	-261.4	0.0938	mg/L
3 Mg 279.079	1326.2	357.8	0.0081	mg/L
3 Na 330.237	5662.1	-49.6	-0.2177	mg/L

ean Data ----------

D: ICB Seq. No.: 6 Sample No.: 2 A/S Pos: 1
ample Qty: 1.0000 g Prep. Vol.: 1.0 L Dilution: 1.0: 1.0
Data: Original Date: 5/2/03 10:40:43 AM

lement	Mean Corr. Intensity	Mean Conc.	Calib Std.Dev.	Calib Units	Mean Conc.	Sample Std.Dev.	Sample Units	RSD
a 227.547	15.9	0.0634	0.12774	mg/L				201.62%
e 273.955	-1716.6	-0.0415	0.00199	mg/L				4.79%
766.491	-103.5	0.1002	0.00726	mg/L				7.25%
g 279.079	290.0	0.0066	0.00174	mg/L				26.40%
a 330.237	-31.0	-0.1894	0.29905	mg/L				157.92%

eplicate Data ----------

D: Calib Blank Date: 5/2/03 10:42:47 AM

epl#	Element	Net Intensity	Corrected Intensity	Conc.	Calib Units
1	Ca 227.547	1645.4	1645.4	0	mg/L
1	Fe 273.955	1223.7	1223.7	0	mg/L
1	K 766.491	3785.0	3785.0	0	mg/L
1	Mg 279.079	1507.4	1507.4	0	mg/L
1	Na 330.237	5710.9	5710.9	0	mg/L
2	Ca 227.547	1807.8	1807.8	0	mg/L
2	Fe 273.955	1148.7	1148.7	0	mg/L
2	K 766.491	3391.0	3391.0	0	mg/L
2	Mg 279.079	1506.6	1506.6	0	mg/L
2	Na 330.237	5590.4	5590.4	0	mg/L
3	Ca 227.547	1726.1	1726.1	0	mg/L
3	Fe 273.955	1163.8	1163.8	0	mg/L
3	K 766.491	3005.2	3005.2	0	mg/L
3	Mg 279.079	1504.6	1504.6	0	mg/L
3	Na 330.237	5803.8	5803.8	0	mg/L

ean Data ----------

): Calib Blank Seq. No.: 1 A/S Pos: 1
Data: Original Date: 5/2/03 10:42:47 AM

.ement	Mean Corr. Intensity	Std.Dev.	RSD	Conc.	Calib Units
227.547	1726.4	81.17	4.70%	0	mg/L
273.955	1178.7	39.70	3.37%	0	mg/L
766.491	3393.7	389.91	11.49%	0	mg/L
279.079	1506.2	1.43	0.09%	0	mg/L
330.237	5701.7	106.99	1.88%	0	mg/L

ilibration Summary ----------

ethod: 5ME-1 ICP-M Date: 5/2/03 10:43:03 AM

.ement	Stds	Equation	Intercept	Slope	Curvature	Corr. Coeff.
227.547	3	Linear-thru-Zero	0.0	251.0	0.00000	0.999963
273.955	3	Linear-thru-Zero	0.0	41372.8	0.00000	0.999863
766.491	3	Non-Linear	-2562.1	24526.5	146.68897	0.998878
279.079	3	Linear-thru-Zero	0.0	44037.6	0.00000	0.999910
330.237	3	Non-Linear	93.0	654.9	0.31274	0.999656

.libration Summary ----------

thod: 5ME-1 ICP-M Date: 5/2/03 10:43:14 AM

lement	Stds	Equation	Intercept	Slope	Curvature	Corr. Coeff.
a 227.547	3	Linear-thru-Zero	0.0	251.0	0.00000	0.999963
e 273.955	3	Linear-thru-Zero	0.0	41372.8	0.00000	0.999863
766.491	3	Non-Linear	-2562.1	24526.5	146.68897	0.998878
g 279.079	3	Linear-thru-Zero	0.0	44037.6	0.00000	0.999910
a 330.237	3	Non-Linear	93.0	654.9	0.31274	0.999656

eplicate Data ----------

D: CCV 1447B Date: 5/2/03 10:44:16 AM

epl#	Element	Net Intensity	Corrected Intensity	Calib Conc.	Units	Sample Conc.	Units
1	Ca 227.547	14033.7	12307.2	49.03	mg/L		
1	Fe 273.955	209674.9	208496.2	5.039	mg/L		
1	K 766.491	406752.3	403358.6	15.17	mg/L		
1	Mg 279.079	1132939.5	1131433.3	25.69	mg/L		
1	Na 330.237	74251.4	68549.7	99.77	mg/L		
2	Ca 227.547	14485.7	12759.2	50.83	mg/L		
2	Fe 273.955	217167.9	215989.2	5.221	mg/L		
2	K 766.491	409484.9	406091.2	15.27	mg/L		
2	Mg 279.079	1093021.4	1091515.3	24.79	mg/L		
2	Na 330.237	77333.5	71631.8	104.1	mg/L		
3	Ca 227.547	14456.5	12730.1	50.72	mg/L		
3	Fe 273.955	215571.7	214393.0	5.182	mg/L		
3	K 766.491	406821.2	403427.5	15.18	mg/L		
3	Mg 279.079	1127343.2	1125837.0	25.57	mg/L		
3	Na 330.237	76812.4	71110.7	103.3	mg/L		

ean Data ----------

D: CCV 1447B Seq. No.: 10 Sample No.: 5 A/S Pos: 6

ample Qty: 1.0000 g Prep. Vol.: 1.0 L Dilution: 1.0: 1.0

Data: Original Date: 5/2/03 10:44:16 AM

lement	Mean Corr. Intensity	Mean Conc.	Calib Std.Dev.	Units	Mean Conc.	Sample Std.Dev.	Units	RSD
a 227.547	12598.9	50.19	1.008	mg/L				2.01%
e 273.955	212959.4	5.147	0.0954	mg/L				1.85%
766.491	404292.4	15.21	0.054	mg/L				0.35%
g 279.079	1116261.9	25.35	0.491	mg/L				1.94%
a 330.237	70430.7	102.4	2.30	mg/L				2.24%

eplicate Data ----------

D: CCB Date: 5/2/03 10:46:35 AM

epl#	Element	Net Intensity	Corrected Intensity	Calib Conc.	Units	Sample Conc.	Units
1	Ca 227.547	1569.1	-157.3	-0.6268	mg/L		
1	Fe 273.955	1155.3	-23.4	-0.0006	mg/L		
1	K 766.491	3088.1	-305.6	0.0920	mg/L		
1	Mg 279.079	1625.8	119.6	0.0027	mg/L		
1	Na 330.237	5696.6	-5.1	-0.1498	mg/L		
2	Ca 227.547	1767.2	40.8	0.1626	mg/L		
2	Fe 273.955	1109.5	-69.2	-0.0017	mg/L		
2	K 766.491	3747.4	353.7	0.1188	mg/L		
2	Mg 279.079	1622.7	116.5	0.0026	mg/L		
2	Na 330.237	5863.3	161.6	0.1048	mg/L		
3	Ca 227.547	1672.1	-54.3	-0.2163	mg/L		
3	Fe 273.955	1151.5	-27.2	-0.0007	mg/L		
3	K 766.491	3631.1	237.5	0.1141	mg/L		
3	Mg 279.079	1800.1	293.9	0.0067	mg/L		
3	Na 330.237	5519.9	-181.8	-0.4196	mg/L		

an Data ----------

: CCB Seq. No.: 11 Sample No.: 6 A/S Pos: 1

ample Qty: 1.0000 g Prep. Vol.: 1.0 L Dilution: 1.0: 1.0
Data: Original Date: 5/2/03 10:46:35 AM

lement	Mean Corr. Intensity	Mean Conc.	Calib Std.Dev.	Calib Units	Mean Conc.	Sample Std.Dev.	Sample Units	RSD
a 227.547	-56.9	-0.2268	0.39480	mg/L				174.06%
e 273.955	-40.0	-0.0010	0.00061	mg/L				63.65%
766.491	95.2	0.1083	0.01433	mg/L				13.24%
g 279.079	176.7	0.0040	0.00231	mg/L				57.47%
a 330.237	-8.5	-0.1549	0.26223	mg/L				169.30%

alibration Summary
ethod: 5ME-1 ICP-M Date: 5/2/03 10:47:12 AM

lement	Stds	Equation	Intercept	Slope	Curvature	Corr. Coeff.
a 227.547	3	Linear-thru-Zero	0.0	251.0	0.00000	0.999963
e 273.955	3	Linear-thru-Zero	0.0	41372.8	0.00000	0.999863
766.491	3	Non-Linear	-2562.1	24526.5	146.68897	0.998878
g 279.079	3	Linear-thru-Zero	0.0	44037.6	0.00000	0.999910
a 330.237	3	Non-Linear	93.0	654.9	0.31274	0.999656

eplicate Data
D: CRI A1432 Date: 5/2/03 10:48:09 AM

epl#	Element	Net Intensity	Corrected Intensity	Calib Conc.	Calib Units	Sample Conc.	Sample Units
1	Ca 227.547	1898.1	171.7	0.6839	mg/L		
1	Fe 273.955	3103.8	1925.0	0.0465	mg/L		
1	K 766.491	3327.8	-65.9	0.1017	mg/L		
1	Mg 279.079	1732.4	226.3	0.0051	mg/L		
1	Na 330.237	5915.2	213.5	0.1840	mg/L		
2	Ca 227.547	1959.2	232.7	0.9272	mg/L		
2	Fe 273.955	3075.8	1897.1	0.0459	mg/L		
2	K 766.491	3490.2	96.5	0.1083	mg/L		
2	Mg 279.079	1651.6	145.5	0.0033	mg/L		
2	Na 330.237	5703.5	1.8	-0.1392	mg/L		
3	Ca 227.547	1818.4	92.0	0.3665	mg/L		
3	Fe 273.955	3130.0	1951.3	0.0472	mg/L		
3	K 766.491	3075.8	-317.9	0.0914	mg/L		
3	Mg 279.079	1616.7	110.5	0.0025	mg/L		
3	Na 330.237	5669.8	-31.9	-0.1907	mg/L		

ean Data
D: CRI A1432 Seq. No.: 7 Sample No.: 8 A/S Pos: 9
ample Qty: 1.0000 g Prep. Vol.: 1.0 L Dilution: 1.0: 1.0
Data: Original Date: 5/2/03 10:48:09 AM

lement	Mean Corr. Intensity	Mean Conc.	Calib Std.Dev.	Calib Units	Mean Conc.	Sample Std.Dev.	Sample Units	RSD
a 227.547	165.5	0.6592	0.28116	mg/L				42.65%
e 273.955	1924.5	0.0465	0.00066	mg/L				1.41%
766.491	-95.8	0.1005	0.00850	mg/L				8.46%
g 279.079	160.8	0.0037	0.00135	mg/L				36.94%
a 330.237	61.1	-0.0486	0.20308	mg/L				417.46%

eplicate Data
D: ICSA 1441 Date: 5/2/03 10:50:26 AM

epl#	Element	Net Intensity	Corrected Intensity	Calib Conc.	Calib Units	Sample Conc.	Sample Units
1	Ca 227.547	129465.9	127739.5	512.6	mg/L		
1	Fe 273.955	7813170.0	7811991.3	188.8	mg/L		
1	K 766.491	4967.6	1573.9	0.1685	mg/L		
1	Mg 279.079	21114338.8	21112832.7	479.4	mg/L		
1	Na 330.237	5684.9	-16.8	-0.1676	mg/L		

2	Ca 227.547	128745.4	127019.0	509.8	mg/L
2	Fe 273.955	7912380.4	7911201.7	191.2	mg/L
2	K 766.491	4502.4	1108.8	0.1495	mg/L
2	Mg 279.079	21427359.4	21425853.2	486.5	mg/L
2	Na 330.237	5469.1	-232.6	-0.4972	mg/L
3	Ca 227.547	132293.4	130566.9	523.9	mg/L
3	Fe 273.955	7847053.2	7845874.5	189.6	mg/L
3	K 766.491	4489.4	1095.7	0.1490	mg/L
3	Mg 279.079	21285362.3	21283856.2	483.3	mg/L
3	Na 330.237	5654.0	-47.7	-0.2148	mg/L

ean Data ----------

D: ICSA 1441 Seq. No.: 8 Sample No.: 3 A/S Pos: 7
ample Qty: 1.0000 g Prep. Vol.: 1.0 L Dilution: 1.0: 1.0
Data: Original Date: 5/2/03 10:50:26 AM

lement	Mean Corr. Intensity	Mean Conc.	Std.Dev.	Calib Units	Mean Conc.	Std.Dev.	Sample Units	RSD
a 227.547	128441.8	515.4	7.46	mg/L				1.45%
e 273.955	7856355.8	189.9	1.22	mg/L				0.64%
766.491	1259.5	0.1557	0.01109	mg/L				7.12%
g 279.079	21274180.7	483.1	3.56	mg/L				0.74%
a 330.237	-99.0	-0.2932	0.17822	mg/L				60.78%

eplicate Data ----------

D: ICSAB 1443 Date: 5/2/03 10:52:51 AM

epl#	Element	Net Intensity	Corrected Intensity	Calib Conc.	Units	Sample Conc.	Units
1	Ca 227.547	123186.6	121460.1	487.4	mg/L		
1	Fe 273.955	7329799.2	7328620.5	177.1	mg/L		
1	K 766.491	5116.2	1722.5	0.1745	mg/L		
1	Mg 279.079	20186337.7	20184831.5	458.4	mg/L		
1	Na 330.237	5616.4	-85.3	-0.2723	mg/L		
2	Ca 227.547	121490.3	119763.9	480.5	mg/L		
2	Fe 273.955	7127690.6	7126511.9	172.3	mg/L		
2	K 766.491	4795.0	1401.3	0.1614	mg/L		
2	Mg 279.079	19629249.4	19627743.2	445.7	mg/L		
2	Na 330.237	5649.5	-52.2	-0.2217	mg/L		
3	Ca 227.547	124299.8	122573.4	491.9	mg/L		
3	Fe 273.955	7496813.2	7495634.5	181.2	mg/L		
3	K 766.491	4896.8	1503.1	0.1656	mg/L		
3	Mg 279.079	20720722.7	20719216.6	470.5	mg/L		
3	Na 330.237	5676.8	-24.9	-0.1800	mg/L		

ean Data ----------

D: ICSAB 1443 Seq. No.: 9 Sample No.: 4 A/S Pos: 8
mple Qty: 1.0000 g Prep. Vol.: 1.0 L Dilution: 1.0: 1.0
Data: Original Date: 5/2/03 10:52:51 AM

ement	Mean Corr. Intensity	Mean Conc.	Std.Dev.	Calib Units	Mean Conc.	Std.Dev.	Sample Units	RSD
227.547	121265.8	486.6	5.72	mg/L				1.18%
273.955	7316922.3	176.9	4.47	mg/L				2.53%
766.491	1542.3	0.1672	0.00668	mg/L				4.00%
279.079	20177263.8	458.2	12.39	mg/L				2.70%
330.237	-54.2	-0.2247	0.04619	mg/L				20.56%

plicate Data ----------

D: CCV 1447B Date: 5/2/03 10:55:14 AM

pl#	Element	Net Intensity	Corrected Intensity	Calib Conc.	Units	Sample Conc.	Units
1	Ca 227.547	14270.9	12544.5	49.98	mg/L		
1	Fe 273.955	215348.6	214169.9	5.177	mg/L		
1	K 766.491	426188.2	422794.5	15.84	mg/L		
1	Mg 279.079	1129464.3	1127958.1	25.61	mg/L		

1 Na 330.237	76078.8	70377.0	102.3	mg/L
2 Ca 227.547	14378.2	12651.8	50.41	mg/L
2 Fe 273.955	216325.2	215146.5	5.200	mg/L
2 K 766.491	418621.5	415227.8	15.58	mg/L
2 Mg 279.079	1135182.3	1133676.1	25.74	mg/L
2 Na 330.237	75863.9	70162.2	102.0	mg/L
3 Ca 227.547	14295.4	12569.0	50.08	mg/L
3 Fe 273.955	218079.9	216901.1	5.243	mg/L
3 K 766.491	413263.6	409869.9	15.40	mg/L
3 Mg 279.079	1162681.9	1161175.8	26.37	mg/L
3 Na 330.237	77216.4	71514.7	103.9	mg/L

ean Data ----------

D: CCV 1447B Seq. No.: 10 Sample No.: 5 A/S Pos: 6
ample Qty: 1.0000 g Prep. Vol.: 1.0 L Dilution: 1.0: 1.0
Data: Original Date: 5/2/03 10:55:14 AM

lement	Mean Corr. Intensity	Mean Conc.	Std.Dev.	Calib Units	Mean Conc.	Std.Dev.	Sample Units	RSD
a 227.547	12588.4	50.15	0.224	mg/L				0.45%
e 273.955	215405.9	5.206	0.0335	mg/L				0.64%
766.491	415964.1	15.61	0.223	mg/L				1.43%
g 279.079	1140936.7	25.91	0.403	mg/L				1.56%
a 330.237	70684.7	102.7	1.01	mg/L				0.98%

eplicate Data ----------

D: CCB Date: 5/2/03 10:57:35 AM

epl#	Element	Net Intensity	Corrected Intensity	Calib Conc.	Units	Sample Conc.	Units
1	Ca 227.547	1644.1	-82.3	-0.3279	mg/L		
1	Fe 273.955	2243.9	1065.2	0.0257	mg/L		
1	K 766.491	3420.2	26.5	0.1055	mg/L		
1	Mg 279.079	3293.4	1787.3	0.0406	mg/L		
1	Na 330.237	5817.1	115.4	0.0342	mg/L		
2	Ca 227.547	1669.1	-57.4	-0.2286	mg/L		
2	Fe 273.955	2157.5	978.8	0.0237	mg/L		
2	K 766.491	3485.3	91.6	0.1081	mg/L		
2	Mg 279.079	3274.6	1768.4	0.0402	mg/L		
2	Na 330.237	5759.8	58.1	-0.0532	mg/L		
3	Ca 227.547	1732.8	6.4	0.0255	mg/L		
3	Fe 273.955	2221.9	1043.1	0.0252	mg/L		
3	K 766.491	3481.8	88.1	0.1080	mg/L		
3	Mg 279.079	3113.8	1607.6	0.0365	mg/L		
3	Na 330.237	5604.2	-97.5	-0.2909	mg/L		

ean Data ----------

): CCB Seq. No.: 11 Sample No.: 6 A/S Pos: 1
mple Qty: 1.0000 g Prep. Vol.: 1.0 L Dilution: 1.0: 1.0
Data: Original Date: 5/2/03 10:57:35 AM

ement	Mean Corr. Intensity	Mean Conc.	Std.Dev.	Calib Units	Mean Conc.	Std.Dev.	Sample Units	RSD
227.547	-44.4	-0.1770	0.18222	mg/L				102.96%
273.955	1029.0	0.0249	0.00109	mg/L				4.36%
766.491	68.7	0.1072	0.00149	mg/L				1.39%
279.079	1721.1	0.0391	0.00224	mg/L				5.74%
330.237	25.3	-0.1033	0.16823	mg/L				162.81%

plicate Data ----------

): M-BL 03M1421 Date: 5/2/03 10:59:47 AM

pl#	Element	Net Intensity	Corrected Intensity	Calib Conc.	Units	Sample Conc.	Units
1	Ca 227.547	1723.7	-2.8	-0.0110	mg/L	-0.0110	ppm
1	Fe 273.955	1686.9	508.2	0.0123	mg/L	0.0123	ppm

1	K 766.491	3273.5	-120.2	0.0995	mg/L	0.0995 ppm
1	Mg 279.079	1280.1	-226.0	-0.0051	mg/L	-0.0051 ppm
1	Na 330.237	6108.3	406.6	0.4787	mg/L	0.4787 ppm
2	Ca 227.547	1658.5	-68.0	-0.2708	mg/L	-0.2708 ppm
2	Fe 273.955	1811.3	632.5	0.0153	mg/L	0.0153 ppm
2	K 766.491	3504.3	110.6	0.1089	mg/L	0.1089 ppm
2	Mg 279.079	1299.9	-206.3	-0.0047	mg/L	-0.0047 ppm
2	Na 330.237	5906.9	205.2	0.1714	mg/L	0.1714 ppm
3	Ca 227.547	1690.4	-36.0	-0.1434	mg/L	-0.1434 ppm
3	Fe 273.955	1730.4	551.7	0.0133	mg/L	0.0133 ppm
3	K 766.491	3699.7	306.0	0.1169	mg/L	0.1169 ppm
3	Mg 279.079	1288.5	-217.6	-0.0049	mg/L	-0.0049 ppm
3	Na 330.237	5824.2	122.5	0.0450	mg/L	0.0450 ppm

ean Data

D: M-BL 03M1421 Seq. No.: 12 Sample No.: 1 A/S Pos: 10
ample Qty: 1.0000 mL Prep. Vol.: 1.0 mL Dilution: 1.0: 1.0
Data: Original Date: 5/2/03 10:59:47 AM

lement	Mean Corr. Intensity	Mean Conc.	Std.Dev.	Calib Units	Mean Conc.	Std.Dev.	Sample Units	RSD
a 227.547	-35.6	-0.1417	0.12992	mg/L	-0.1417	0.12992	ppm	91.68%
e 273.955	564.2	0.0136	0.00152	mg/L	0.0136	0.00152	ppm	11.18%
766.491	98.8	0.1084	0.00869	mg/L	0.1084	0.00869	ppm	8.01%
g 279.079	-216.7	-0.0049	0.00022	mg/L	-0.0049	0.00022	ppm	4.57%
a 330.237	244.8	0.2317	0.22307	mg/L	0.2317	0.22307	ppm	96.27%

eplicate Data

D: LCS-03M1421 Date: 5/2/03 11:02:03 AM

epl#	Element	Net Intensity	Corrected Intensity	Calib Conc.	Units	Sample Conc.	Units
1	Ca 227.547	6872.3	5145.9	20.50	mg/L	20.50	ppm
1	Fe 273.955	46399.2	45220.5	1.093	mg/L	1.093	ppm
1	K 766.491	139081.3	135687.6	5.459	mg/L	5.459	ppm
1	Mg 279.079	455125.1	453618.9	10.30	mg/L	10.30	ppm
1	Na 330.237	33431.2	27729.5	41.38	mg/L	41.38	ppm
2	Ca 227.547	6966.0	5239.6	20.87	mg/L	20.87	ppm
2	Fe 273.955	46050.5	44871.8	1.085	mg/L	1.085	ppm
2	K 766.491	138583.6	135189.9	5.439	mg/L	5.439	ppm
2	Mg 279.079	454064.3	452558.1	10.28	mg/L	10.28	ppm
2	Na 330.237	33040.1	27338.4	40.80	mg/L	40.80	ppm
3	Ca 227.547	6525.6	4799.1	19.12	mg/L	19.12	ppm
3	Fe 273.955	43114.3	41935.6	1.014	mg/L	1.014	ppm
3	K 766.491	133062.3	129668.6	5.228	mg/L	5.228	ppm
3	Mg 279.079	436313.1	434806.9	9.874	mg/L	9.874	ppm
3	Na 330.237	30914.4	25212.7	37.68	mg/L	37.68	ppm

ean Data

D: LCS-03M1421 Seq. No.: 13 Sample No.: 2 A/S Pos: 11
ample Qty: 1.0000 mL Prep. Vol.: 1.0 mL Dilution: 1.0: 1.0
Data: Original Date: 5/2/03 11:02:03 AM

lement	Mean Corr. Intensity	Mean Conc.	Std.Dev.	Calib Units	Mean Conc.	Std.Dev.	Sample Units	RSD
a 227.547	5061.5	20.17	0.924	mg/L	20.17	0.924	ppm	4.58%
e 273.955	44009.3	1.064	0.0436	mg/L	1.064	0.0436	ppm	4.10%
766.491	133515.4	5.375	0.1280	mg/L	5.375	0.1280	ppm	2.38%
g 279.079	446994.7	10.15	0.240	mg/L	10.15	0.240	ppm	2.36%
a 330.237	26760.2	39.95	1.993	mg/L	39.95	1.993	ppm	4.99%

atrix Check Sample: LCS-03M1421

ement	Expected Conc.	Measured Conc.	Std.Dev.	Calib Units	% Recovery
a 227.547	19.86	20.17	0.924	mg/L	101.535

e 273.955	1.014	1.064	0.044	mg/L	105.009
766.491	5.108	5.375	0.128	mg/L	105.338
g 279.079	9.995	10.15	0.240	mg/L	101.552
a 330.237	40.23	39.95	1.993	mg/L	99.304

eplicate Data ----------
D: LCSD-03M1421 Date: 5/2/03 11:04:19 AM

epl#	Element	Net Intensity	Corrected Intensity	Calib Conc.	Calib Units	Sample Conc.	Sample Units
1	Ca 227.547	6937.0	5210.6	20.76	mg/L	20.76	ppm
1	Fe 273.955	45359.7	44181.0	1.068	mg/L	1.068	ppm
1	K 766.491	136205.1	132811.4	5.348	mg/L	5.348	ppm
1	Mg 279.079	443818.6	442312.4	10.04	mg/L	10.04	ppm
1	Na 330.237	33197.7	27496.0	41.04	mg/L	41.04	ppm
2	Ca 227.547	6730.5	5004.0	19.94	mg/L	19.94	ppm
2	Fe 273.955	45173.3	43994.6	1.063	mg/L	1.063	ppm
2	K 766.491	130379.9	126986.2	5.125	mg/L	5.125	ppm
2	Mg 279.079	431045.9	429539.7	9.754	mg/L	9.754	ppm
2	Na 330.237	32734.7	27033.0	40.36	mg/L	40.36	ppm
3	Ca 227.547	6938.1	5211.6	20.76	mg/L	20.76	ppm
3	Fe 273.955	45853.1	44674.4	1.080	mg/L	1.080	ppm
3	K 766.491	135938.7	132545.0	5.338	mg/L	5.338	ppm
3	Mg 279.079	447986.1	446479.9	10.14	mg/L	10.14	ppm
3	Na 330.237	33605.2	27903.4	41.63	mg/L	41.63	ppm

ean Data ----------
D: LCSD-03M1421 Seq. No.: 14 Sample No.: 3 A/S Pos: 12
ample Qty: 1.0000 mL Prep. Vol.: 1.0 mL Dilution: 1.0: 1.0
Data: Original Date: 5/2/03 11:04:19 AM

lement	Mean Corr. Intensity	Mean Conc.	Calib Std.Dev.	Calib Units	Mean Conc.	Sample Std.Dev.	Sample Units	RSD
a 227.547	5142.1	20.49	0.476	mg/L	20.49	0.476	ppm	2.32%
e 273.955	44283.3	1.070	0.0085	mg/L	1.070	0.0085	ppm	0.79%
766.491	130780.9	5.270	0.1262	mg/L	5.270	0.1262	ppm	2.39%
g 279.079	439444.0	9.979	0.2004	mg/L	9.979	0.2004	ppm	2.01%
a 330.237	27477.5	41.01	0.640	mg/L	41.01	0.640	ppm	1.56%

atrix Check Sample: LCSD-03M1421

lement	Expected Conc.	Measured Conc.	Std.Dev.	Calib Units	% Recovery
a 227.547	19.86	20.49	0.476	mg/L	103.140
e 273.955	1.014	1.070	0.008	mg/L	105.671
766.491	5.108	5.270	0.126	mg/L	103.241
g 279.079	9.995	9.979	0.200	mg/L	99.838
a 330.237	40.23	41.01	0.640	mg/L	101.943

eplicate Data ----------
D: 2987-6 S F=1 Date: 5/2/03 11:06:35 AM

epl#	Element	Net Intensity	Corrected Intensity	Calib Conc.	Calib Units	Sample Conc.	Sample Units
1	Ca 227.547	3057.0	1330.5	5.301	mg/L	5.301	ppm
1	Fe 273.955	9069.3	7890.6	0.1907	mg/L	0.1907	ppm
1	K 766.491	59752.2	56358.5	2.369	mg/L	2.369	ppm
1	Mg 279.079	21297.9	19791.7	0.4494	mg/L	0.4494	ppm
1	Na 330.237	72666.7	66965.0	97.56	mg/L	97.56	ppm
2	Ca 227.547	3097.3	1370.9	5.462	mg/L	5.462	ppm
2	Fe 273.955	9057.5	7878.8	0.1904	mg/L	0.1904	ppm
2	K 766.491	66512.2	63118.5	2.636	mg/L	2.636	ppm
2	Mg 279.079	21544.5	20038.3	0.4550	mg/L	0.4550	ppm
2	Na 330.237	73730.0	68028.2	99.04	mg/L	99.04	ppm
3	Ca 227.547	2995.1	1268.7	5.054	mg/L	5.054	ppm

3 Fe 273.955	8874.2	7695.5	0.1860 mg/L	0.1860 ppm
3 K 766.491	64856.2	61462.5	2.571 mg/L	2.571 ppm
3 Mg 279.079	21136.2	19630.1	0.4458 mg/L	0.4458 ppm
3 Na 330.237	71997.4	66295.7	96.62 mg/L	96.62 ppm

ean Data ----------

D: 2987-6 S F=1 Seq. No.: 15 Sample No.: 4 A/S Pos: 13
ample Qty: 1.0000 mL Prep. Vol.: 1.0 mL Dilution: 1.0: 1.0
Data: Original Date: 5/2/03 11:06:35 AM

lement	Mean Corr. Intensity	Mean Conc.	Calib Std.Dev.	Calib Units	Mean Conc.	Sample Std.Dev.	Sample Units	RSD
a 227.547	1323.4	5.272	0.2052	mg/L	5.272	0.2052	ppm	3.89%
e 273.955	7821.6	0.1891	0.00264	mg/L	0.1891	0.00264	ppm	1.40%
766.491	60313.2	2.525	0.1395	mg/L	2.525	0.1395	ppm	5.52%
g 279.079	19820.0	0.4501	0.00467	mg/L	0.4501	0.00467	ppm	1.04%
a 330.237	67096.3	97.74	1.220	mg/L	97.74	1.220	ppm	1.25%

eplicate Data ----------

D: 2987-6 D F=1 Date: 5/2/03 11:08:52 AM

epl#	Element	Net Intensity	Corrected Intensity	Calib Conc.	Calib Units	Sample Conc.	Sample Units
1	Ca 227.547	3144.1	1417.7	5.648	mg/L	5.648	ppm
1	Fe 273.955	8900.3	7721.6	0.1866	mg/L	0.1866	ppm
1	K 766.491	62264.9	58871.2	2.468	mg/L	2.468	ppm
1	Mg 279.079	21230.1	19723.9	0.4479	mg/L	0.4479	ppm
1	Na 330.237	72770.5	67068.7	97.70	mg/L	97.70	ppm
2	Ca 227.547	2823.3	1096.9	4.370	mg/L	4.370	ppm
2	Fe 273.955	8714.9	7536.2	0.1822	mg/L	0.1822	ppm
2	K 766.491	59797.7	56404.0	2.371	mg/L	2.371	ppm
2	Mg 279.079	21150.2	19644.0	0.4461	mg/L	0.4461	ppm
2	Na 330.237	72166.0	66464.2	96.86	mg/L	96.86	ppm
3	Ca 227.547	3098.7	1372.3	5.467	mg/L	5.467	ppm
3	Fe 273.955	8924.6	7745.9	0.1872	mg/L	0.1872	ppm
3	K 766.491	60996.6	57602.9	2.418	mg/L	2.418	ppm
3	Mg 279.079	21953.3	20447.1	0.4643	mg/L	0.4643	ppm
3	Na 330.237	74056.5	68354.8	99.50	mg/L	99.50	ppm

ean Data ----------

): 2987-6 D F=1 Seq. No.: 16 Sample No.: 5 A/S Pos: 14
ample Qty: 1.0000 mL Prep. Vol.: 1.0 mL Dilution: 1.0: 1.0
Data: Original Date: 5/2/03 11:08:52 AM

lement	Mean Corr. Intensity	Mean Conc.	Calib Std.Dev.	Calib Units	Mean Conc.	Sample Std.Dev.	Sample Units	RSD
a 227.547	1295.6	5.162	0.6917	mg/L	5.162	0.6917	ppm	13.40%
e 273.955	7667.9	0.1853	0.00277	mg/L	0.1853	0.00277	ppm	1.50%
766.491	57626.1	2.419	0.0489	mg/L	2.419	0.0489	ppm	2.02%
g 279.079	19938.3	0.4528	0.01005	mg/L	0.4528	0.01005	ppm	2.22%
a 330.237	67295.9	98.02	1.348	mg/L	98.02	1.348	ppm	1.37%

atrix Check Sample: 2987-6 D F=1

.ement	Expected Conc.	Measured Conc.	Std.Dev.	Calib Units	Relative % Diff.
a 227.547	5.272	5.162	0.692	mg/L	2.119
e 273.955	0.1891	0.1853	0.003	mg/L	1.985
766.491	2.525	2.419	0.049	mg/L	4.302
g 279.079	0.4501	0.4528	0.010	mg/L	0.595
a 330.237	97.74	98.02	1.348	mg/L	0.285

eplicate Data ----------

): 2987-6 1/5 F=5 Date: 5/2/03 11:11:10 AM

epl#	Element	Net Intensity	Corrected Intensity	Calib Conc.	Calib Units	Sample Conc.	Sample Units

1	Ca 227.547	2045.8	319.4	1.272	mg/L	6.362 ppm
1	Fe 273.955	3168.3	1989.6	0.0481	mg/L	0.2404 ppm
1	K 766.491	11844.6	8450.9	0.4478	mg/L	2.239 ppm
1	Mg 279.079	6468.0	4961.9	0.1127	mg/L	0.5634 ppm
1	Na 330.237	18885.8	13184.0	19.80	mg/L	99.00 ppm
2	Ca 227.547	1953.8	227.3	0.9057	mg/L	4.529 ppm
2	Fe 273.955	3026.7	1848.0	0.0447	mg/L	0.2233 ppm
2	K 766.491	12203.6	8809.9	0.4624	mg/L	2.312 ppm
2	Mg 279.079	6230.0	4723.8	0.1073	mg/L	0.5363 ppm
2	Na 330.237	18089.5	12387.8	18.61	mg/L	93.03 ppm
3	Ca 227.547	1970.8	244.3	0.9734	mg/L	4.867 ppm
3	Fe 273.955	3082.2	1903.5	0.0460	mg/L	0.2300 ppm
3	K 766.491	11265.7	7872.0	0.4243	mg/L	2.122 ppm
3	Mg 279.079	6417.0	4910.8	0.1115	mg/L	0.5576 ppm
3	Na 330.237	18537.2	12835.5	19.28	mg/L	96.39 ppm

ean Data ----------

D: 2987-6 1/5 F=5 Seq. No.: 17 Sample No.: 6 A/S Pos: 15
ample Qty: 1.0000 mL Prep. Vol.: 1.0 mL Dilution: 1.0: 5.0
Data: Original Date: 5/2/03 11:11:10 AM

lement	Mean Corr. Intensity	Mean Conc.	Std.Dev.	Calib Units	Mean Conc.	Std.Dev.	Sample Units	RSD
a 227.547	263.7	1.051	0.1951	mg/L	5.253	0.9756	ppm	18.57%
e 273.955	1913.7	0.0463	0.00172	mg/L	0.2313	0.00862	ppm	3.73%
766.491	8377.6	0.4448	0.01919	mg/L	2.224	0.0960	ppm	4.31%
g 279.079	4865.5	0.1105	0.00285	mg/L	0.5524	0.01423	ppm	2.58%
a 330.237	12802.4	19.23	0.598	mg/L	96.14	2.992	ppm	3.11%

eplicate Data ----------

D: 2987-6 MS F=1 Date: 5/2/03 11:13:30 AM

epl#	Element	Net Intensity	Corrected Intensity	Calib Conc.	Units	Sample Conc.	Units
1	Ca 227.547	8716.1	6989.7	27.85	mg/L	27.85	ppm
1	Fe 273.955	55122.0	53943.3	1.304	mg/L	1.304	ppm
1	K 766.491	225174.8	221781.1	8.695	mg/L	8.695	ppm
1	Mg 279.079	475532.6	474026.4	10.76	mg/L	10.76	ppm
1	Na 330.237	108661.0	102959.3	146.8	mg/L	146.8	ppm
2	Ca 227.547	8394.9	6668.5	26.57	mg/L	26.57	ppm
2	Fe 273.955	53040.6	51861.9	1.254	mg/L	1.254	ppm
2	K 766.491	221108.7	217715.0	8.545	mg/L	8.545	ppm
2	Mg 279.079	464512.4	463006.2	10.51	mg/L	10.51	ppm
2	Na 330.237	104673.1	98971.4	141.4	mg/L	141.4	ppm
3	Ca 227.547	8283.4	6557.0	26.12	mg/L	26.12	ppm
3	Fe 273.955	52102.6	50923.9	1.231	mg/L	1.231	ppm
3	K 766.491	229061.3	225667.6	8.838	mg/L	8.838	ppm
3	Mg 279.079	477169.3	475663.1	10.80	mg/L	10.80	ppm
3	Na 330.237	103067.7	97366.0	139.3	mg/L	139.3	ppm

ean Data ----------

D: 2987-6 MS F=1 Seq. No.: 18 Sample No.: 7 A/S Pos: 16
ample Qty: 1.0000 mL Prep. Vol.: 1.0 mL Dilution: 1.0: 1.0
Data: Original Date: 5/2/03 11:13:30 AM

lement	Mean Corr. Intensity	Mean Conc.	Std.Dev.	Calib Units	Mean Conc.	Std.Dev.	Sample Units	RSD
a 227.547	6738.4	26.85	0.895	mg/L	26.85	0.895	ppm	3.33%
e 273.955	52243.1	1.263	0.0374	mg/L	1.263	0.0374	ppm	2.96%
766.491	221721.3	8.693	0.1469	mg/L	8.693	0.1469	ppm	1.69%
g 279.079	470898.6	10.69	0.156	mg/L	10.69	0.156	ppm	1.46%
a 330.237	99765.6	142.5	3.87	mg/L	142.5	3.87	ppm	2.71%

atrix Check Sample: 2987-6 MS F=1

Expected Measured Calib

lement	Conc.	Conc.	Std.Dev.	Units	% Recovery
a 227.547	25.27	26.85	0.895	mg/L	107.868
e 273.955	1.189	1.263	0.037	mg/L	107.369
766.491	7.525	8.693	0.147	mg/L	123.344
g 279.079	10.45	10.69	0.156	mg/L	102.430
a 330.237	137.7	142.5	3.868	mg/L	111.860

eplicate Data
D: 2987-6 MSD F=1 Date: 5/2/03 11:15:47 AM

epl#	Element	Net Intensity	Corrected Intensity	Calib Conc.	Calib Units	Sample Conc.	Sample Units
1	Ca 227.547	8222.0	6495.5	25.88	mg/L	25.88	ppm
1	Fe 273.955	53073.8	51895.1	1.254	mg/L	1.254	ppm
1	K 766.491	231202.8	227809.1	8.917	mg/L	8.917	ppm
1	Mg 279.079	490309.0	488802.9	11.10	mg/L	11.10	ppm
1	Na 330.237	105525.6	99823.8	142.6	mg/L	142.6	ppm
2	Ca 227.547	8374.1	6647.7	26.48	mg/L	26.48	ppm
2	Fe 273.955	52829.4	51650.7	1.248	mg/L	1.248	ppm
2	K 766.491	213616.8	210223.1	8.267	mg/L	8.267	ppm
2	Mg 279.079	459507.8	458001.7	10.40	mg/L	10.40	ppm
2	Na 330.237	105181.0	99479.3	142.1	mg/L	142.1	ppm
3	Ca 227.547	8539.9	6813.5	27.15	mg/L	27.15	ppm
3	Fe 273.955	54180.8	53002.1	1.281	mg/L	1.281	ppm
3	K 766.491	217783.4	214389.7	8.421	mg/L	8.421	ppm
3	Mg 279.079	465950.2	464444.0	10.55	mg/L	10.55	ppm
3	Na 330.237	108483.6	102781.9	146.5	mg/L	146.5	ppm

ean Data
D: 2987-6 MSD F=1 Seq. No.: 19 Sample No.: 8 A/S Pos: 17
ample Qty: 1.0000 mL Prep. Vol.: 1.0 mL Dilution: 1.0: 1.0
Data: Original Date: 5/2/03 11:15:47 AM

lement	Mean Corr. Intensity	Mean Conc.	Std.Dev.	Calib Units	Mean Conc.	Std.Dev.	Sample Units	RSD
a 227.547	6652.2	26.50	0.634	mg/L	26.50	0.634	ppm	2.39%
e 273.955	52182.6	1.261	0.0174	mg/L	1.261	0.0174	ppm	1.38%
766.491	217474.0	8.535	0.3397	mg/L	8.535	0.3397	ppm	3.98%
g 279.079	470416.2	10.68	0.369	mg/L	10.68	0.369	ppm	3.45%
a 330.237	100695.0	143.7	2.44	mg/L	143.7	2.44	ppm	1.69%

atrix Check Sample: 2987-6 MSD F=1

.ement	Expected Conc.	Measured Conc.	Std.Dev.	Calib Units	% Recovery
a 227.547	25.27	26.50	0.634	mg/L	106.152
e 273.955	1.189	1.261	0.017	mg/L	107.223
766.491	7.525	8.535	0.340	mg/L	120.197
g 279.079	10.45	10.68	0.369	mg/L	102.321
a 330.237	137.7	143.7	2.436	mg/L	114.988

eplicate Data
D: 2987-6 PS F=1 Date: 5/2/03 11:18:00 AM

epl#	Element	Net Intensity	Corrected Intensity	Calib Conc.	Calib Units	Sample Conc.	Sample Units
1	Ca 227.547	8537.7	6811.2	27.14	mg/L	27.14	ppm
1	Fe 273.955	54397.7	53219.0	1.286	mg/L	1.286	ppm
1	K 766.491	234943.2	231549.5	9.055	mg/L	9.055	ppm
1	Mg 279.079	494727.5	493221.4	11.20	mg/L	11.20	ppm
1	Na 330.237	109086.5	103384.7	147.3	mg/L	147.3	ppm
2	Ca 227.547	8322.8	6596.4	26.28	mg/L	26.28	ppm
2	Fe 273.955	52891.9	51713.2	1.250	mg/L	1.250	ppm
2	K 766.491	220488.6	217094.9	8.522	mg/L	8.522	ppm
2	Mg 279.079	470820.1	469313.9	10.66	mg/L	10.66	ppm
2	Na 330.237	105878.7	100176.9	143.0	mg/L	143.0	ppm

3 Ca 227.547	8200.7	6474.3	25.79 mg/L	25.79 ppm
3 Fe 273.955	52260.1	51081.3	1.235 mg/L	1.235 ppm
3 K 766.491	225349.7	221956.0	8.701 mg/L	8.701 ppm
3 Mg 279.079	481015.8	479509.7	10.89 mg/L	10.89 ppm
3 Na 330.237	104609.3	98907.6	141.3 mg/L	141.3 ppm

ean Data ----------

D: 2987-6 PS F=1 Seq. No.: 20 Sample No.: 9 A/S Pos: 18
ample Qty: 1.0000 mL Prep. Vol.: 1.0 mL Dilution: 1.0: 1.0
Data: Original Date: 5/2/03 11:18:00 AM

lement	Mean Corr. Intensity	Mean Conc.	Std.Dev.	Calib Units	Mean Conc.	Std.Dev.	Sample Units	RSD
a 227.547	6627.3	26.40	0.680	mg/L	26.40	0.680	ppm	2.57%
e 273.955	52004.5	1.257	0.0265	mg/L	1.257	0.0265	ppm	2.11%
766.491	223533.5	8.759	0.2713	mg/L	8.759	0.2713	ppm	3.10%
g 279.079	480681.6	10.92	0.272	mg/L	10.92	0.272	ppm	2.50%
a 330.237	100823.1	143.9	3.10	mg/L	143.9	3.10	ppm	2.15%

atrix Check Sample: 2987-6 PS F=1

lement	Expected Conc.	Measured Conc.	Std.Dev.	Calib Units	% Recovery
a 227.547	25.27	26.40	0.680	mg/L	105.655
e 273.955	1.189	1.257	0.027	mg/L	106.792
766.491	7.525	8.759	0.271	mg/L	124.678
g 279.079	10.45	10.92	0.272	mg/L	104.652
a 330.237	137.7	143.9	3.096	mg/L	115.415

eplicate Data ----------

): 2987-1 F=1 Date: 5/2/03 11:20:13 AM

pl# Element	Net Intensity	Corrected Intensity	Calib Conc.	Units	Sample Conc.	Units
1 Ca 227.547	1631.6	-94.8	-0.3777	mg/L	-0.3777	ppm
1 Fe 273.955	2019.3	840.6	0.0203	mg/L	0.0203	ppm
1 K 766.491	4429.7	1036.0	0.1466	mg/L	0.1466	ppm
1 Mg 279.079	3291.4	1785.3	0.0405	mg/L	0.0405	ppm
1 Na 330.237	5816.4	114.7	0.0332	mg/L	0.0332	ppm
2 Ca 227.547	1638.0	-88.4	-0.3522	mg/L	-0.3522	ppm
2 Fe 273.955	2247.5	1068.8	0.0258	mg/L	0.0258	ppm
2 K 766.491	4537.4	1143.7	0.1510	mg/L	0.1510	ppm
2 Mg 279.079	3334.7	1828.6	0.0415	mg/L	0.0415	ppm
2 Na 330.237	5804.3	102.5	0.0146	mg/L	0.0146	ppm
3 Ca 227.547	1724.6	-1.8	-0.0073	mg/L	-0.0073	ppm
3 Fe 273.955	2166.2	987.5	0.0239	mg/L	0.0239	ppm
3 K 766.491	4241.0	847.3	0.1389	mg/L	0.1389	ppm
3 Mg 279.079	3044.2	1538.0	0.0349	mg/L	0.0349	ppm
3 Na 330.237	6022.0	320.3	0.3470	mg/L	0.3470	ppm

an Data ----------

: 2987-1 F=1 Seq. No.: 21 Sample No.: 10 A/S Pos: 19
mple Qty: 1.0000 mL Prep. Vol.: 1.0 mL Dilution: 1.0: 1.0
Data: Original Date: 5/2/03 11:20:13 AM

ement	Mean Corr. Intensity	Mean Conc.	Std.Dev.	Calib Units	Mean Conc.	Std.Dev.	Sample Units	RSD
227.547	-61.7	-0.2457	0.20688	mg/L	-0.2457	0.20688	ppm	84.19%
273.955	965.6	0.0233	0.00280	mg/L	0.0233	0.00280	ppm	11.98%
766.491	1009.0	0.1455	0.00611	mg/L	0.1455	0.00611	ppm	4.20%
279.079	1717.3	0.0390	0.00356	mg/L	0.0390	0.00356	ppm	9.13%
330.237	179.2	0.1316	0.18679	mg/L	0.1316	0.18679	ppm	141.94%

plicate Data ----------

: CCV 1447B Date: 5/2/03 11:22:30 AM

Net Corrected Calib Sample

epl#	Element	Intensity	Intensity	Conc.	Units	Conc.	Units
1	Ca 227.547	13641.5	11915.1	47.47	mg/L		
1	Fe 273.955	209525.1	208346.4	5.036	mg/L		
1	K 766.491	412130.4	408736.7	15.36	mg/L		
1	Mg 279.079	1134856.6	1133350.5	25.74	mg/L		
1	Na 330.237	74501.6	68799.9	100.1	mg/L		
2	Ca 227.547	14436.6	12710.2	50.64	mg/L		
2	Fe 273.955	223489.3	222310.6	5.373	mg/L		
2	K 766.491	412325.5	408931.8	15.37	mg/L		
2	Mg 279.079	1140440.6	1138934.5	25.86	mg/L		
2	Na 330.237	79478.8	73777.1	107.0	mg/L		
3	Ca 227.547	14576.6	12850.2	51.20	mg/L		
3	Fe 273.955	224971.4	223792.7	5.409	mg/L		
3	K 766.491	419794.5	416400.8	15.62	mg/L		
3	Mg 279.079	1112399.8	1110893.6	25.23	mg/L		
3	Na 330.237	80314.2	74612.5	108.2	mg/L		

ean Data ----------

D: CCV 1447B Seq. No.: 22 Sample No.: 5 A/S Pos: 6
ample Qty: 1.0000 g Prep. Vol.: 1.0 L Dilution: 1.0: 1.0
Data: Original Date: 5/2/03 11:22:30 AM

lement	Mean Corr. Intensity	Mean Conc.	Calib Std.Dev.	Units	Mean Conc.	Sample Std.Dev.	Units	RSD
a 227.547	12491.8	49.77	2.009	mg/L				4.04%
e 273.955	218149.9	5.273	0.2060	mg/L				3.91%
766.491	411356.4	15.45	0.150	mg/L				0.97%
g 279.079	1127726.2	25.61	0.337	mg/L				1.32%
a 330.237	72396.5	105.1	4.36	mg/L				4.15%

eplicate Data ----------

D: CCB Date: 5/2/03 11:24:51 AM

epl#	Element	Net Intensity	Corrected Intensity	Calib Conc.	Units	Sample Conc.	Units
1	Ca 227.547	1680.2	-46.2	-0.1842	mg/L		
1	Fe 273.955	1632.2	453.5	0.0110	mg/L		
1	K 766.491	3769.8	376.1	0.1197	mg/L		
1	Mg 279.079	2007.0	500.8	0.0114	mg/L		
1	Na 330.237	5619.3	-82.4	-0.2679	mg/L		
2	Ca 227.547	1741.1	14.7	0.0584	mg/L		
2	Fe 273.955	1713.0	534.3	0.0129	mg/L		
2	K 766.491	3613.0	219.3	0.1133	mg/L		
2	Mg 279.079	2122.7	616.5	0.0140	mg/L		
2	Na 330.237	5560.7	-141.0	-0.3574	mg/L		
3	Ca 227.547	1568.4	-158.0	-0.6296	mg/L		
3	Fe 273.955	1672.6	493.9	0.0119	mg/L		
3	K 766.491	3447.7	54.0	0.1066	mg/L		
3	Mg 279.079	2046.2	540.0	0.0123	mg/L		
3	Na 330.237	5800.6	98.9	0.0091	mg/L		

ean Data ----------

D: CCB Seq. No.: 23 Sample No.: 6 A/S Pos: 1
mple Qty: 1.0000 g Prep. Vol.: 1.0 L Dilution: 1.0: 1.0
Data: Original Date: 5/2/03 11:24:51 AM

ement	Mean Corr. Intensity	Mean Conc.	Calib Std.Dev.	Units	Mean Conc.	Sample Std.Dev.	Units	RSD
227.547	-63.2	-0.2518	0.34893	mg/L				138.57%
273.955	493.9	0.0119	0.00098	mg/L				8.18%
766.491	216.5	0.1132	0.00656	mg/L				5.79%
279.079	552.4	0.0125	0.00134	mg/L				10.66%
330.237	-41.5	-0.2054	0.19105	mg/L				93.02%

plicate Data ----------

: 2987-2 F=1 Date: 5/2/03 11:27:04 AM

epl#	Element	Net Intensity	Corrected Intensity	Calib Conc.	Calib Units	Sample Conc.	Sample Units
1	Ca 227.547	38276.7	36550.2	145.6	mg/L	145.6	ppm
1	Fe 273.955	19576.4	18397.7	0.4447	mg/L	0.4447	ppm
1	K 766.491	77495.9	74102.2	3.069	mg/L	3.069	ppm
1	Mg 279.079	2232840.1	2231333.9	50.67	mg/L	50.67	ppm
1	Na 330.237	29570.7	23868.9	35.69	mg/L	35.69	ppm
2	Ca 227.547	38052.6	36326.1	144.7	mg/L	144.7	ppm
2	Fe 273.955	19277.2	18098.5	0.4374	mg/L	0.4374	ppm
2	K 766.491	76885.5	73491.8	3.045	mg/L	3.045	ppm
2	Mg 279.079	2233979.1	2232472.9	50.69	mg/L	50.69	ppm
2	Na 330.237	29140.8	23439.0	35.06	mg/L	35.06	ppm
3	Ca 227.547	39142.5	37416.1	149.1	mg/L	149.1	ppm
3	Fe 273.955	20126.6	18947.9	0.4580	mg/L	0.4580	ppm
3	K 766.491	74935.9	71542.2	2.969	mg/L	2.969	ppm
3	Mg 279.079	2186200.7	2184694.5	49.61	mg/L	49.61	ppm
3	Na 330.237	30318.4	24616.7	36.80	mg/L	36.80	ppm

ean Data

D: 2987-2 F=1 Seq. No.: 24 Sample No.: 11 A/S Pos: 20
ample Qty: 1.0000 mL Prep. Vol.: 1.0 mL Dilution: 1.0: 1.0
Data: Original Date: 5/2/03 11:27:04 AM

lement	Mean Corr. Intensity	Mean Conc.	Calib Std.Dev.	Calib Units	Mean Conc.	Sample Std.Dev.	Sample Units	RSD
a 227.547	36764.2	146.5	2.29	mg/L	146.5	2.29	ppm	1.57%
e 273.955	18481.4	0.4467	0.01041	mg/L	0.4467	0.01041	ppm	2.33%
766.491	73045.4	3.028	0.0526	mg/L	3.028	0.0526	ppm	1.74%
g 279.079	2216167.1	50.32	0.619	mg/L	50.32	0.619	ppm	1.23%
a 330.237	23974.9	35.85	0.880	mg/L	35.85	0.880	ppm	2.45%

eplicate Data

D: 2987-3 F=1 Date: 5/2/03 11:29:19 AM

epl#	Element	Net Intensity	Corrected Intensity	Calib Conc.	Calib Units	Sample Conc.	Sample Units
1	Ca 227.547	27449.8	25723.4	102.5	mg/L	102.5	ppm
1	Fe 273.955	3136.3	1957.6	0.0473	mg/L	0.0473	ppm
1	K 766.491	73850.9	70457.2	2.926	mg/L	2.926	ppm
1	Mg 279.079	1741782.5	1740276.3	39.52	mg/L	39.52	ppm
1	Na 330.237	29333.7	23631.9	35.34	mg/L	35.34	ppm
2	Ca 227.547	28813.2	27086.7	107.9	mg/L	107.9	ppm
2	Fe 273.955	3181.8	2003.0	0.0484	mg/L	0.0484	ppm
2	K 766.491	75351.6	71957.9	2.985	mg/L	2.985	ppm
2	Mg 279.079	1774711.7	1773205.5	40.27	mg/L	40.27	ppm
2	Na 330.237	30812.9	25111.2	37.53	mg/L	37.53	ppm
3	Ca 227.547	28698.8	26972.4	107.5	mg/L	107.5	ppm
3	Fe 273.955	3320.4	2141.7	0.0518	mg/L	0.0518	ppm
3	K 766.491	74167.8	70774.1	2.938	mg/L	2.938	ppm
3	Mg 279.079	1755324.3	1753818.1	39.83	mg/L	39.83	ppm
3	Na 330.237	30530.2	24828.5	37.11	mg/L	37.11	ppm

an Data

D: 2987-3 F=1 Seq. No.: 25 Sample No.: 12 A/S Pos: 21
mple Qty: 1.0000 mL Prep. Vol.: 1.0 mL Dilution: 1.0: 1.0
Data: Original Date: 5/2/03 11:29:19 AM

ement	Mean Corr. Intensity	Mean Conc.	Calib Std.Dev.	Calib Units	Mean Conc.	Sample Std.Dev.	Sample Units	RSD
227.547	26594.2	106.0	3.01	mg/L	106.0	3.01	ppm	2.84%
273.955	2034.1	0.0492	0.00232	mg/L	0.0492	0.00232	ppm	4.72%
766.491	71063.1	2.950	0.0311	mg/L	2.950	0.0311	ppm	1.06%
279.079	1755766.6	39.87	0.376	mg/L	39.87	0.376	ppm	0.94%
330.237	24523.8	36.66	1.159	mg/L	36.66	1.159	ppm	3.16%

eplicate Data
D: 2987-4 F=1 Date: 5/2/03 11:31:32 AM

epl#	Element	Net Intensity	Corrected Intensity	Calib Conc.	Calib Units	Sample Conc.	Sample Units
1	Ca 227.547	11674.3	9947.8	39.63	mg/L	39.63	ppm
1	Fe 273.955	28679.4	27500.7	0.6647	mg/L	0.6647	ppm
1	K 766.491	44268.1	40874.4	1.753	mg/L	1.753	ppm
1	Mg 279.079	609977.9	608471.8	13.82	mg/L	13.82	ppm
1	Na 330.237	23349.7	17648.0	26.47	mg/L	26.47	ppm
2	Ca 227.547	12329.4	10602.9	42.24	mg/L	42.24	ppm
2	Fe 273.955	30077.0	28898.3	0.6985	mg/L	0.6985	ppm
2	K 766.491	45991.0	42597.3	1.821	mg/L	1.821	ppm
2	Mg 279.079	622675.8	621169.6	14.11	mg/L	14.11	ppm
2	Na 330.237	24280.0	18578.3	27.85	mg/L	27.85	ppm
3	Ca 227.547	11796.3	10069.9	40.12	mg/L	40.12	ppm
3	Fe 273.955	28808.2	27629.5	0.6678	mg/L	0.6678	ppm
3	K 766.491	43369.4	39975.7	1.717	mg/L	1.717	ppm
3	Mg 279.079	588231.1	586724.9	13.32	mg/L	13.32	ppm
3	Na 330.237	23528.9	17827.2	26.74	mg/L	26.74	ppm

ean Data
D: 2987-4 F=1 Seq. No.: 26 Sample No.: 13 A/S Pos: 22
ample Qty: 1.0000 mL Prep. Vol.: 1.0 mL Dilution: 1.0: 1.0
Data: Original Date: 5/2/03 11:31:32 AM

lement	Mean Corr. Intensity	Mean Conc.	Calib Std.Dev.	Calib Units	Mean Conc.	Sample Std.Dev.	Sample Units	RSD
a 227.547	10206.9	40.66	1.388	mg/L	40.66	1.388	ppm	3.41%
e 273.955	28009.5	0.6770	0.01867	mg/L	0.6770	0.01867	ppm	2.76%
766.491	41149.1	1.764	0.0532	mg/L	1.764	0.0532	ppm	3.02%
g 279.079	605455.4	13.75	0.396	mg/L	13.75	0.396	ppm	2.88%
a 330.237	18017.8	27.02	0.735	mg/L	27.02	0.735	ppm	2.72%

eplicate Data
D: 2987-5 F=1 Date: 5/2/03 11:33:47 AM

epl#	Element	Net Intensity	Corrected Intensity	Calib Conc.	Calib Units	Sample Conc.	Sample Units
1	Ca 227.547	8700.3	6973.9	27.78	mg/L	27.78	ppm
1	Fe 273.955	3656.7	2477.9	0.0599	mg/L	0.0599	ppm
1	K 766.491	49796.9	46403.2	1.973	mg/L	1.973	ppm
1	Mg 279.079	549268.1	547762.0	12.44	mg/L	12.44	ppm
1	Na 330.237	26319.7	20618.0	30.88	mg/L	30.88	ppm
2	Ca 227.547	8644.2	6917.7	27.56	mg/L	27.56	ppm
2	Fe 273.955	3663.6	2484.9	0.0601	mg/L	0.0601	ppm
2	K 766.491	49599.0	46205.3	1.965	mg/L	1.965	ppm
2	Mg 279.079	548045.3	546539.2	12.41	mg/L	12.41	ppm
2	Na 330.237	26041.6	20339.9	30.47	mg/L	30.47	ppm
3	Ca 227.547	8460.3	6733.8	26.83	mg/L	26.83	ppm
3	Fe 273.955	3571.5	2392.8	0.0578	mg/L	0.0578	ppm
3	K 766.491	51413.3	48019.6	2.037	mg/L	2.037	ppm
3	Mg 279.079	555661.9	554155.8	12.58	mg/L	12.58	ppm
3	Na 330.237	25857.1	20155.4	30.20	mg/L	30.20	ppm

ean Data
D: 2987-5 F=1 Seq. No.: 27 Sample No.: 14 A/S Pos: 23
ample Qty: 1.0000 mL Prep. Vol.: 1.0 mL Dilution: 1.0: 1.0
Data: Original Date: 5/2/03 11:33:47 AM

lement	Mean Corr. Intensity	Mean Conc.	Calib Std.Dev.	Calib Units	Mean Conc.	Sample Std.Dev.	Sample Units	RSD
a 227.547	6875.2	27.39	0.500	mg/L	27.39	0.500	ppm	1.83%
e 273.955	2451.9	0.0593	0.00124	mg/L	0.0593	0.00124	ppm	2.09%
766.491	46876.0	1.992	0.0396	mg/L	1.992	0.0396	ppm	1.99%
g 279.079	549485.6	12.48	0.093	mg/L	12.48	0.093	ppm	0.74%

a 330.237	20371.1	30.52	0.346 mg/L	30.52	0.346 ppm	1.13%

eplicate Data
D: 2964-1 F=1 Date: 5/2/03 11:36:03 AM

epl#	Element	Net Intensity	Corrected Intensity	Calib Conc.	Units	Sample Conc.	Units
1	Ca 227.547	6837.4	5110.9	20.36	mg/L	20.36	ppm
1	Fe 273.955	9995.7	8816.9	0.2131	mg/L	0.2131	ppm
1	K 766.491	68453.0	65059.3	2.713	mg/L	2.713	ppm
1	Mg 279.079	533819.8	532313.7	12.09	mg/L	12.09	ppm
1	Na 330.237	34692.3	28990.5	43.23	mg/L	43.23	ppm
2	Ca 227.547	6641.9	4915.5	19.58	mg/L	19.58	ppm
2	Fe 273.955	9882.8	8704.1	0.2104	mg/L	0.2104	ppm
2	K 766.491	72207.5	68813.8	2.861	mg/L	2.861	ppm
2	Mg 279.079	553864.2	552358.1	12.54	mg/L	12.54	ppm
2	Na 330.237	33867.2	28165.5	42.02	mg/L	42.02	ppm
3	Ca 227.547	6451.6	4725.1	18.83	mg/L	18.83	ppm
3	Fe 273.955	9702.7	8524.0	0.2060	mg/L	0.2060	ppm
3	K 766.491	69330.5	65936.8	2.748	mg/L	2.748	ppm
3	Mg 279.079	535002.7	533496.5	12.11	mg/L	12.11	ppm
3	Na 330.237	33101.4	27399.7	40.89	mg/L	40.89	ppm

ean Data
): 2964-1 F=1 Seq. No.: 28 Sample No.: 15 A/S Pos: 24
ample Qty: 1.0000 mL Prep. Vol.: 1.0 mL Dilution: 1.0: 1.0
Data: Original Date: 5/2/03 11:36:03 AM

lement	Mean Corr. Intensity	Mean Conc.	Calib Std.Dev.	Units	Mean Conc.	Sample Std.Dev.	Units	RSD
a 227.547	4917.2	19.59	0.769	mg/L	19.59	0.769	ppm	3.92%
e 273.955	8681.7	0.2098	0.00357	mg/L	0.2098	0.00357	ppm	1.70%
766.491	66603.3	2.774	0.0775	mg/L	2.774	0.0775	ppm	2.79%
g 279.079	539389.4	12.25	0.255	mg/L	12.25	0.255	ppm	2.09%
a 330.237	28185.3	42.05	1.168	mg/L	42.05	1.168	ppm	2.78%

eplicate Data
): 2964-2 F=1 Date: 5/2/03 11:38:18 AM

epl#	Element	Net Intensity	Corrected Intensity	Calib Conc.	Units	Sample Conc.	Units
1	Ca 227.547	1608.8	-117.6	-0.4686	mg/L	-0.4686	ppm
1	Fe 273.955	2187.8	1009.1	0.0244	mg/L	0.0244	ppm
1	K 766.491	4062.2	668.5	0.1316	mg/L	0.1316	ppm
1	Mg 279.079	3506.8	2000.7	0.0454	mg/L	0.0454	ppm
1	Na 330.237	6015.1	313.3	0.3364	mg/L	0.3364	ppm
2	Ca 227.547	1617.4	-109.0	-0.4343	mg/L	-0.4343	ppm
2	Fe 273.955	2136.7	958.0	0.0232	mg/L	0.0232	ppm
2	K 766.491	3635.3	241.6	0.1142	mg/L	0.1142	ppm
2	Mg 279.079	3573.3	2067.2	0.0469	mg/L	0.0469	ppm
2	Na 330.237	6056.6	354.9	0.3999	mg/L	0.3999	ppm
3	Ca 227.547	1626.9	-99.6	-0.3967	mg/L	-0.3967	ppm
3	Fe 273.955	2264.9	1086.2	0.0263	mg/L	0.0263	ppm
3	K 766.491	3014.4	-379.3	0.0889	mg/L	0.0889	ppm
3	Mg 279.079	3476.0	1969.8	0.0447	mg/L	0.0447	ppm
3	Na 330.237	5876.5	174.8	0.1249	mg/L	0.1249	ppm

an Data
): 2964-2 F=1 Seq. No.: 29 Sample No.: 16 A/S Pos: 25
mple Qty: 1.0000 mL Prep. Vol.: 1.0 mL Dilution: 1.0: 1.0
Data: Original Date: 5/2/03 11:38:18 AM

ement	Mean Corr. Intensity	Mean Conc.	Calib Std.Dev.	Units	Mean Conc.	Sample Std.Dev.	Units	RSD
227.547	-108.7	-0.4332	0.03595	mg/L	-0.4332	0.03595	ppm	8.30%
273.955	1017.7	0.0246	0.00156	mg/L	0.0246	0.00156	ppm	6.34%

766.491	176.9	0.1116	0.02145 mg/L	0.1116	0.02145 ppm	19.22%
g 279.079	2012.6	0.0457	0.00113 mg/L	0.0457	0.00113 ppm	2.47%
a 330.237	281.0	0.2871	0.14397 mg/L	0.2871	0.14397 ppm	50.15%

eplicate Data ----------
D: 2964-3 F=1 Date: 5/2/03 11:40:34 AM

epl#	Element	Net Intensity	Corrected Intensity	Calib Conc.	Units	Sample Conc.	Units
1	Ca 227.547	16384.3	14657.8	58.40	mg/L	58.40	ppm
1	Fe 273.955	9345.9	8167.2	0.1974	mg/L	0.1974	ppm
1	K 766.491	69214.2	65820.5	2.743	mg/L	2.743	ppm
1	Mg 279.079	903612.1	902105.9	20.48	mg/L	20.48	ppm
1	Na 330.237	18885.8	13184.1	19.80	mg/L	19.80	ppm
2	Ca 227.547	16941.8	15215.4	60.62	mg/L	60.62	ppm
2	Fe 273.955	9635.1	8456.4	0.2044	mg/L	0.2044	ppm
2	K 766.491	69141.4	65747.7	2.740	mg/L	2.740	ppm
2	Mg 279.079	898338.2	896832.1	20.37	mg/L	20.37	ppm
2	Na 330.237	19696.1	13994.3	21.01	mg/L	21.01	ppm
3	Ca 227.547	17232.0	15505.6	61.77	mg/L	61.77	ppm
3	Fe 273.955	9738.8	8560.1	0.2069	mg/L	0.2069	ppm
3	K 766.491	68634.2	65240.5	2.720	mg/L	2.720	ppm
3	Mg 279.079	897381.9	895875.7	20.34	mg/L	20.34	ppm
3	Na 330.237	19669.5	13967.8	20.97	mg/L	20.97	ppm

ean Data ----------
D: 2964-3 F=1 Seq. No.: 30 Sample No.: 17 A/S Pos: 26
ample Qty: 1.0000 mL Prep. Vol.: 1.0 mL Dilution: 1.0: 1.0
Data: Original Date: 5/2/03 11:40:34 AM

lement	Mean Corr. Intensity	Mean Conc.	Calib Std.Dev.	Units	Mean Conc.	Sample Std.Dev.	Units	RSD
a 227.547	15126.3	60.26	1.716	mg/L	60.26	1.716	ppm	2.85%
e 273.955	8394.6	0.2029	0.00492	mg/L	0.2029	0.00492	ppm	2.43%
766.491	65602.9	2.735	0.0125	mg/L	2.735	0.0125	ppm	0.46%
g 279.079	898271.2	20.40	0.076	mg/L	20.40	0.076	ppm	0.37%
a 330.237	13715.4	20.60	0.689	mg/L	20.60	0.689	ppm	3.35%

eplicate Data ----------
D: 2964-4 F=1 Date: 5/2/03 11:42:51 AM

epl#	Element	Net Intensity	Corrected Intensity	Calib Conc.	Units	Sample Conc.	Units
1	Ca 227.547	6686.5	4960.1	19.76	mg/L	19.76	ppm
1	Fe 273.955	11009.0	9830.3	0.2376	mg/L	0.2376	ppm
1	K 766.491	72219.8	68826.1	2.862	mg/L	2.862	ppm
1	Mg 279.079	552455.1	550949.0	12.51	mg/L	12.51	ppm
1	Na 330.237	34291.5	28589.8	42.64	mg/L	42.64	ppm
2	Ca 227.547	6764.3	5037.9	20.07	mg/L	20.07	ppm
2	Fe 273.955	11095.3	9916.6	0.2397	mg/L	0.2397	ppm
2	K 766.491	74707.5	71313.8	2.960	mg/L	2.960	ppm
2	Mg 279.079	567795.4	566289.3	12.86	mg/L	12.86	ppm
2	Na 330.237	34759.6	29057.9	43.33	mg/L	43.33	ppm
3	Ca 227.547	6675.8	4949.4	19.72	mg/L	19.72	ppm
3	Fe 273.955	11140.2	9961.5	0.2408	mg/L	0.2408	ppm
3	K 766.491	73871.1	70477.4	2.927	mg/L	2.927	ppm
3	Mg 279.079	562356.9	560850.7	12.74	mg/L	12.74	ppm
3	Na 330.237	35059.1	29357.4	43.77	mg/L	43.77	ppm

ean Data ----------
D: 2964-4 F=1 Seq. No.: 31 Sample No.: 18 A/S Pos: 27
mple Qty: 1.0000 mL Prep. Vol.: 1.0 mL Dilution: 1.0: 1.0
Data: Original Date: 5/2/03 11:42:51 AM

ement	Mean Corr. Intensity	Mean Conc.	Calib Std.Dev.	Units	Mean Conc.	Sample Std.Dev.	Units	RSD

a 227.547	4982.5	19.85	0.193 mg/L	19.85	0.193 ppm	0.97%
e 273.955	9902.8	0.2394	0.00161 mg/L	0.2394	0.00161 ppm	0.67%
766.491	70205.8	2.916	0.0499 mg/L	2.916	0.0499 ppm	1.71%
g 279.079	559363.0	12.70	0.177 mg/L	12.70	0.177 ppm	1.39%
a 330.237	29001.7	43.25	0.567 mg/L	43.25	0.567 ppm	1.31%

eplicate Data
D: 2964-5 F=1 Date: 5/2/03 11:45:09 AM

epl#	Element	Net Intensity	Corrected Intensity	Calib Conc.	Units	Sample Conc.	Units
1	Ca 227.547	5922.8	4196.3	16.72	mg/L	16.72	ppm
1	Fe 273.955	9505.7	8327.0	0.2013	mg/L	0.2013	ppm
1	K 766.491	60601.7	57208.0	2.402	mg/L	2.402	ppm
1	Mg 279.079	574967.6	573461.5	13.02	mg/L	13.02	ppm
1	Na 330.237	35700.2	29998.5	44.71	mg/L	44.71	ppm
2	Ca 227.547	5835.1	4108.7	16.37	mg/L	16.37	ppm
2	Fe 273.955	9223.9	8045.2	0.1945	mg/L	0.1945	ppm
2	K 766.491	60617.9	57224.2	2.403	mg/L	2.403	ppm
2	Mg 279.079	572414.3	570908.2	12.96	mg/L	12.96	ppm
2	Na 330.237	35055.8	29354.0	43.76	mg/L	43.76	ppm
3	Ca 227.547	5873.3	4146.9	16.52	mg/L	16.52	ppm
3	Fe 273.955	9321.0	8142.3	0.1968	mg/L	0.1968	ppm
3	K 766.491	57994.8	54601.1	2.299	mg/L	2.299	ppm
3	Mg 279.079	554199.6	552693.4	12.55	mg/L	12.55	ppm
3	Na 330.237	34650.8	28949.0	43.17	mg/L	43.17	ppm

ean Data
D: 2964-5 F=1 Seq. No.: 32 Sample No.: 19 A/S Pos: 28
ample Qty: 1.0000 mL Prep. Vol.: 1.0 mL Dilution: 1.0: 1.0
Data: Original Date: 5/2/03 11:45:09 AM

lement	Mean Corr. Intensity	Mean Conc.	Calib Std.Dev.	Units	Mean Conc.	Sample Std.Dev.	Units	RSD
a 227.547	4150.6	16.54	0.175	mg/L	16.54	0.175	ppm	1.06%
e 273.955	8171.5	0.1975	0.00346	mg/L	0.1975	0.00346	ppm	1.75%
766.491	56344.4	2.368	0.0599	mg/L	2.368	0.0599	ppm	2.53%
g 279.079	565687.7	12.85	0.257	mg/L	12.85	0.257	ppm	2.00%
a 330.237	29433.9	43.88	0.776	mg/L	43.88	0.776	ppm	1.77%

eplicate Data
D: CCV 1447B Date: 5/2/03 11:47:29 AM

epl#	Element	Net Intensity	Corrected Intensity	Calib Conc.	Units	Sample Conc.	Units
1	Ca 227.547	14433.4	12707.0	50.62	mg/L		
1	Fe 273.955	222752.4	221573.7	5.356	mg/L		
1	K 766.491	437031.0	433637.3	16.21	mg/L		
1	Mg 279.079	1123522.1	1122016.0	25.48	mg/L		
1	Na 330.237	79106.4	73404.6	106.5	mg/L		
2	Ca 227.547	14623.4	12896.9	51.38	mg/L		
2	Fe 273.955	224208.3	223029.6	5.391	mg/L		
2	K 766.491	417860.4	414466.7	15.56	mg/L		
2	Mg 279.079	1129173.6	1127667.5	25.61	mg/L		
2	Na 330.237	79975.7	74274.0	107.7	mg/L		
3	Ca 227.547	14571.1	12844.7	51.17	mg/L		
3	Fe 273.955	224350.5	223171.8	5.394	mg/L		
3	K 766.491	449988.8	446595.1	16.65	mg/L		
3	Mg 279.079	1109796.3	1108290.1	25.17	mg/L		
3	Na 330.237	79646.8	73945.0	107.3	mg/L		

ean Data
D: CCV 1447B Seq. No.: 33 Sample No.: 5 A/S Pos: 6
mple Qty: 1.0000 g Prep. Vol.: 1.0 L Dilution: 1.0: 1.0
Data: Original Date: 5/2/03 11:47:29 AM

lement	Mean Corr. Intensity	Mean Conc.	Calib Std.Dev.	Calib Units	Mean Conc.	Sample Std.Dev.	Sample Units	RSD
a 227.547	12816.2	51.06	0.391	mg/L				0.77%
e 273.955	222591.7	5.380	0.0214	mg/L				0.40%
766.491	431566.4	16.14	0.553	mg/L				3.42%
g 279.079	1119324.5	25.42	0.226	mg/L				0.89%
a 330.237	73874.5	107.2	0.61	mg/L				0.57%

eplicate Data ----------
D: CCB Date: 5/2/03 11:49:49 AM

epl#	Element	Net Intensity	Corrected Intensity	Calib Conc.	Calib Units	Sample Conc.	Sample Units
1	Ca 227.547	1722.1	-4.4	-0.0174	mg/L		
1	Fe 273.955	1498.0	319.3	0.0077	mg/L		
1	K 766.491	3076.4	-317.3	0.0915	mg/L		
1	Mg 279.079	2569.6	1063.4	0.0241	mg/L		
1	Na 330.237	5969.8	268.0	0.2673	mg/L		
2	Ca 227.547	1737.3	10.9	0.0433	mg/L		
2	Fe 273.955	1489.0	310.3	0.0075	mg/L		
2	K 766.491	3661.1	267.4	0.1153	mg/L		
2	Mg 279.079	2365.0	858.8	0.0195	mg/L		
2	Na 330.237	5661.8	-40.0	-0.2030	mg/L		
3	Ca 227.547	1661.2	-65.2	-0.2598	mg/L		
3	Fe 273.955	1406.3	227.6	0.0055	mg/L		
3	K 766.491	3462.1	68.4	0.1072	mg/L		
3	Mg 279.079	2395.2	889.1	0.0202	mg/L		
3	Na 330.237	5630.7	-71.1	-0.2505	mg/L		

ean Data ----------
D: CCB Seq. No.: 34 Sample No.: 6 A/S Pos: 1
ample Qty: 1.0000 g Prep. Vol.: 1.0 L Dilution: 1.0: 1.0
Data: Original Date: 5/2/03 11:49:49 AM

lement	Mean Corr. Intensity	Mean Conc.	Calib Std.Dev.	Calib Units	Mean Conc.	Sample Std.Dev.	Sample Units	RSD
a 227.547	-19.6	-0.0779	0.16035	mg/L				205.73%
e 273.955	285.7	0.0069	0.00122	mg/L				17.69%
766.491	6.2	0.1046	0.01211	mg/L				11.57%
g 279.079	937.1	0.0213	0.00251	mg/L				11.78%
a 330.237	52.3	-0.0621	0.28620	mg/L				461.13%

eplicate Data ----------
D: 2964-6 F=1 Date: 5/2/03 11:52:04 AM

epl#	Element	Net Intensity	Corrected Intensity	Calib Conc.	Calib Units	Sample Conc.	Sample Units
1	Ca 227.547	3554.9	1828.5	7.285	mg/L	7.285	ppm
1	Fe 273.955	3408.2	2229.5	0.0539	mg/L	0.0539	ppm
1	K 766.491	54790.8	51397.1	2.172	mg/L	2.172	ppm
1	Mg 279.079	373509.1	372003.0	8.447	mg/L	8.447	ppm
1	Na 330.237	34382.6	28680.9	42.78	mg/L	42.78	ppm
2	Ca 227.547	3618.3	1891.8	7.537	mg/L	7.537	ppm
2	Fe 273.955	3428.8	2250.1	0.0544	mg/L	0.0544	ppm
2	K 766.491	54641.0	51247.3	2.166	mg/L	2.166	ppm
2	Mg 279.079	373660.6	372154.4	8.451	mg/L	8.451	ppm
2	Na 330.237	34528.0	28826.3	42.99	mg/L	42.99	ppm
3	Ca 227.547	3634.2	1907.7	7.601	mg/L	7.601	ppm
3	Fe 273.955	3567.4	2388.7	0.0577	mg/L	0.0577	ppm
3	K 766.491	55836.3	52442.6	2.213	mg/L	2.213	ppm
3	Mg 279.079	375219.4	373713.2	8.486	mg/L	8.486	ppm
3	Na 330.237	35241.3	29539.6	44.03	mg/L	44.03	ppm

an Data ----------
: 2964-6 F=1 Seq. No.: 35 Sample No.: 20 A/S Pos: 29
mple Qty: 1.0000 mL Prep. Vol.: 1.0 mL Dilution: 1.0:

Data: Original Date: 5/2/03 11:52:04 AM

lement	Mean Corr. Intensity	Mean Conc.	Std.Dev.	Calib Units	Mean Conc.	Std.Dev.	Sample Units	RSD
a 227.547	1876.0	7.474	0.1671	mg/L	7.474	0.1671	ppm	2.24%
e 273.955	2289.4	0.0553	0.00209	mg/L	0.0553	0.00209	ppm	3.78%
766.491	51695.7	2.184	0.0259	mg/L	2.184	0.0259	ppm	1.18%
g 279.079	372623.5	8.461	0.0215	mg/L	8.461	0.0215	ppm	0.25%
a 330.237	29015.6	43.27	0.674	mg/L	43.27	0.674	ppm	1.56%

ethod: 5ME-1 ICP-M IEC: 03miecm.iec MSF:
esults: 03M1421M Spectra Stored: Yes Method Stored: Yes
ample Info: 03m1421m User: User1 Date: 5/2/03 11:56:34 AM
ethod Description: 6010B/200.7--KNaCaMgFe 4/16/03

alibration Summary
ethod: 5ME-1 ICP-M Date: 5/2/03 11:56:54 AM

lement	Stds	Equation	Intercept	Slope	Curvature	Corr. Coeff.
a 227.547	3	Linear-thru-Zero	0.0	251.0	0.00000	0.999963
e 273.955	3	Linear-thru-Zero	0.0	41372.8	0.00000	0.999863
766.491	3	Non-Linear	-2562.1	24526.5	146.68897	0.998878
g 279.079	3	Linear-thru-Zero	0.0	44037.6	0.00000	0.999910
a 330.237	3	Non-Linear	93.0	654.9	0.31274	0.999656

eplicate Data
D: 2964-7 F=1 Date: 5/2/03 11:57:54 AM

epl#	Element	Net Intensity	Corrected Intensity	Calib Conc.	Units	Sample Conc.	Units
1	Ca 227.547	9057.5	7331.1	29.21	mg/L	29.21	ppm
1	Fe 273.955	2280.3	1101.6	0.0266	mg/L	0.0266	ppm
1	K 766.491	47387.9	43994.2	1.877	mg/L	1.877	ppm
1	Mg 279.079	403446.8	401940.6	9.127	mg/L	9.127	ppm
1	Na 330.237	31333.5	25631.8	38.29	mg/L	38.29	ppm
2	Ca 227.547	9042.7	7316.2	29.15	mg/L	29.15	ppm
2	Fe 273.955	2237.6	1058.9	0.0256	mg/L	0.0256	ppm
2	K 766.491	46196.8	42803.1	1.830	mg/L	1.830	ppm
2	Mg 279.079	401252.4	399746.2	9.077	mg/L	9.077	ppm
2	Na 330.237	31595.0	25893.3	38.68	mg/L	38.68	ppm
3	Ca 227.547	9129.3	7402.9	29.49	mg/L	29.49	ppm
3	Fe 273.955	2255.2	1076.5	0.0260	mg/L	0.0260	ppm
3	K 766.491	46623.8	43230.1	1.847	mg/L	1.847	ppm
3	Mg 279.079	395635.6	394129.4	8.950	mg/L	8.950	ppm
3	Na 330.237	32255.1	26553.4	39.65	mg/L	39.65	ppm

ean Data
D: 2964-7 F=1 Seq. No.: 36 Sample No.: 21 A/S Pos: 30
ample Qty: 1.0000 mL Prep. Vol.: 1.0 mL Dilution: 1.0: 1.0
Data: Original Date: 5/2/03 11:57:54 AM

.ement	Mean Corr. Intensity	Mean Conc.	Calib Std.Dev.	Units	Mean Conc.	Sample Std.Dev.	Units	RSD
a 227.547	7350.1	29.28	0.185	mg/L	29.28	0.185	ppm	0.63%
e 273.955	1079.0	0.0261	0.00052	mg/L	0.0261	0.00052	ppm	1.99%
766.491	43342.5	1.851	0.0241	mg/L	1.851	0.0241	ppm	1.30%
g 279.079	398605.4	9.051	0.0915	mg/L	9.051	0.0915	ppm	1.01%
a 330.237	26026.1	38.87	0.699	mg/L	38.87	0.699	ppm	1.80%

eplicate Data
D: 3015-1 F=1 Date: 5/2/03 12:00:13 PM

epl#	Element	Net Intensity	Corrected Intensity	Calib Conc.	Units	Sample Conc.	Units
1	Ca 227.547	14341.9	12615.5	50.26	mg/L	50.26	ppm
1	Fe 273.955	12795.9	11617.1	0.2808	mg/L	0.2808	ppm
1	K 766.491	63354.5	59960.8	2.511	mg/L	2.511	ppm
1	Mg 279.079	821249.7	819743.5	18.61	mg/L	18.61	ppm
1	Na 330.237	18186.7	12485.0	18.75	mg/L	18.75	ppm
2	Ca 227.547	14150.7	12424.2	49.50	mg/L	49.50	ppm
2	Fe 273.955	12575.2	11396.4	0.2755	mg/L	0.2755	ppm
2	K 766.491	64201.7	60808.0	2.545	mg/L	2.545	ppm
2	Mg 279.079	831550.6	830044.4	18.85	mg/L	18.85	ppm

2 Na 330.237	17993.5	12291.8	18.46 mg/L	18.46 ppm
3 Ca 227.547	14156.8	12430.4	49.52 mg/L	49.52 ppm
3 Fe 273.955	12662.2	11483.5	0.2776 mg/L	0.2776 ppm
3 K 766.491	64306.4	60912.7	2.549 mg/L	2.549 ppm
3 Mg 279.079	826710.9	825204.7	18.74 mg/L	18.74 ppm
3 Na 330.237	18072.5	12370.8	18.58 mg/L	18.58 ppm

ean Data ----------

D: 3015-1 F=1 Seq. No.: 37 Sample No.: 22 A/S Pos: 31
ample Qty: 1.0000 mL Prep. Vol.: 1.0 mL Dilution: 1.0: 1.0
Data: Original Date: 5/2/03 12:00:13 PM

lement	Mean Corr. Intensity	Mean Conc.	Calib Std.Dev.	Calib Units	Mean Conc.	Sample Std.Dev.	Sample Units	RSD
a 227.547	12490.0	49.76	0.433	mg/L	49.76	0.433	ppm	0.87%
e 273.955	11499.0	0.2779	0.00269	mg/L	0.2779	0.00269	ppm	0.97%
766.491	60560.5	2.535	0.0207	mg/L	2.535	0.0207	ppm	0.81%
g 279.079	824997.5	18.73	0.117	mg/L	18.73	0.117	ppm	0.62%
a 330.237	12382.5	18.60	0.146	mg/L	18.60	0.146	ppm	0.78%

eplicate Data ----------

D: 3015-2 F=1 Date: 5/2/03 12:02:29 PM

epl#	Element	Net Intensity	Corrected Intensity	Calib Conc.	Calib Units	Sample Conc.	Sample Units
1	Ca 227.547	1679.5	-46.9	-0.1869	mg/L	-0.1869	ppm
1	Fe 273.955	3259.5	2080.8	0.0503	mg/L	0.0503	ppm
1	K 766.491	3997.9	604.2	0.1290	mg/L	0.1290	ppm
1	Mg 279.079	3539.1	2033.0	0.0462	mg/L	0.0462	ppm
1	Na 330.237	5883.2	181.5	0.1351	mg/L	0.1351	ppm
2	Ca 227.547	1769.2	42.7	0.1703	mg/L	0.1703	ppm
2	Fe 273.955	3303.4	2124.7	0.0514	mg/L	0.0514	ppm
2	K 766.491	4633.2	1239.5	0.1549	mg/L	0.1549	ppm
2	Mg 279.079	3500.4	1994.2	0.0453	mg/L	0.0453	ppm
2	Na 330.237	5997.7	296.0	0.3100	mg/L	0.3100	ppm
3	Ca 227.547	1641.1	-85.3	-0.3399	mg/L	-0.3399	ppm
3	Fe 273.955	3235.4	2056.7	0.0497	mg/L	0.0497	ppm
3	K 766.491	3738.6	344.9	0.1184	mg/L	0.1184	ppm
3	Mg 279.079	3543.8	2037.6	0.0463	mg/L	0.0463	ppm
3	Na 330.237	5895.9	194.1	0.1544	mg/L	0.1544	ppm

ean Data ----------

): 3015-2 F=1 Seq. No.: 38 Sample No.: 23 A/S Pos: 32
mple Qty: 1.0000 mL Prep. Vol.: 1.0 mL Dilution: 1.0: 1.0
Data: Original Date: 5/2/03 12:02:29 PM

ement	Mean Corr. Intensity	Mean Conc.	Calib Std.Dev.	Calib Units	Mean Conc.	Sample Std.Dev.	Sample Units	RSD
227.547	-29.8	-0.1189	0.26182	mg/L	-0.1189	0.26182	ppm	220.29%
273.955	2087.4	0.0505	0.00083	mg/L	0.0505	0.00083	ppm	1.65%
766.491	729.5	0.1341	0.01874	mg/L	0.1341	0.01874	ppm	13.97%
279.079	2021.6	0.0459	0.00054	mg/L	0.0459	0.00054	ppm	1.18%
330.237	223.9	0.1999	0.09586	mg/L	0.1999	0.09586	ppm	47.97%

plicate Data ----------

): 3015-3 F=1 Date: 5/2/03 12:04:40 PM

pl#	Element	Net Intensity	Corrected Intensity	Calib Conc.	Calib Units	Sample Conc.	Sample Units
1	Ca 227.547	16318.6	14592.2	58.14	mg/L	58.14	ppm
1	Fe 273.955	49489.7	48311.0	1.168	mg/L	1.168	ppm
1	K 766.491	79544.6	76150.9	3.150	mg/L	3.150	ppm
1	Mg 279.079	990796.2	989290.0	22.46	mg/L	22.46	ppm
1	Na 330.237	21266.3	15564.5	23.36	mg/L	23.36	ppm
2	Ca 227.547	16256.5	14530.1	57.89	mg/L	57.89	ppm
2	Fe 273.955	49246.4	48067.7	1.162	mg/L	1.162	ppm

2 K 766.491	79539.7	76146.0	3.150 mg/L	3.150 ppm
2 Mg 279.079	991224.1	989717.9	22.47 mg/L	22.47 ppm
2 Na 330.237	21472.9	15771.2	23.67 mg/L	23.67 ppm
3 Ca 227.547	15983.5	14257.0	56.80 mg/L	56.80 ppm
3 Fe 273.955	48766.2	47587.5	1.150 mg/L	1.150 ppm
3 K 766.491	81377.8	77984.2	3.222 mg/L	3.222 ppm
3 Mg 279.079	1008240.8	1006734.6	22.86 mg/L	22.86 ppm
3 Na 330.237	21436.7	15735.0	23.62 mg/L	23.62 ppm

ean Data ----------

D: 3015-3 F=1 Seq. No.: 39 Sample No.: 24 A/S Pos: 33
ample Qty: 1.0000 mL Prep. Vol.: 1.0 mL Dilution: 1.0: 1.0
Data: Original Date: 5/2/03 12:04:40 PM

lement	Mean Corr. Intensity	Mean Conc.	Calib Std.Dev.	Calib Units	Mean Conc.	Sample Std.Dev.	Sample Units	RSD
a 227.547	14459.8	57.61	0.710	mg/L	57.61	0.710	ppm	1.23%
e 273.955	47988.7	1.160	0.0089	mg/L	1.160	0.0089	ppm	0.77%
766.491	76760.3	3.174	0.0416	mg/L	3.174	0.0416	ppm	1.31%
g 279.079	995247.5	22.60	0.226	mg/L	22.60	0.226	ppm	1.00%
a 330.237	15690.3	23.55	0.165	mg/L	23.55	0.165	ppm	0.70%

eplicate Data ----------

D: 3015-4 F=1 Date: 5/2/03 12:06:53 PM

epl#	Element	Net Intensity	Corrected Intensity	Calib Conc.	Calib Units	Sample Conc.	Sample Units
1	Ca 227.547	14043.1	12316.7	49.07	mg/L	49.07	ppm
1	Fe 273.955	14312.3	13133.6	0.3174	mg/L	0.3174	ppm
1	K 766.491	62078.2	58684.5	2.461	mg/L	2.461	ppm
1	Mg 279.079	803290.9	801784.7	18.21	mg/L	18.21	ppm
1	Na 330.237	17943.8	12242.1	18.39	mg/L	18.39	ppm
2	Ca 227.547	14266.5	12540.1	49.96	mg/L	49.96	ppm
2	Fe 273.955	14867.6	13688.9	0.3309	mg/L	0.3309	ppm
2	K 766.491	59997.8	56604.1	2.379	mg/L	2.379	ppm
2	Mg 279.079	786505.9	784999.7	17.83	mg/L	17.83	ppm
2	Na 330.237	18550.6	12848.9	19.30	mg/L	19.30	ppm
3	Ca 227.547	14406.8	12680.4	50.52	mg/L	50.52	ppm
3	Fe 273.955	14783.8	13605.1	0.3288	mg/L	0.3288	ppm
3	K 766.491	61263.8	57870.1	2.429	mg/L	2.429	ppm
3	Mg 279.079	797812.7	796306.5	18.08	mg/L	18.08	ppm
3	Na 330.237	18251.4	12549.7	18.85	mg/L	18.85	ppm

ean Data ----------

): 3015-4 F=1 Seq. No.: 40 Sample No.: 25 A/S Pos: 34
ample Qty: 1.0000 mL Prep. Vol.: 1.0 mL Dilution: 1.0: 1.0
Data: Original Date: 5/2/03 12:06:53 PM

ement	Mean Corr. Intensity	Mean Conc.	Calib Std.Dev.	Calib Units	Mean Conc.	Sample Std.Dev.	Sample Units	RSD
227.547	12512.4	49.85	0.731	mg/L	49.85	0.731	ppm	1.47%
273.955	13475.8	0.3257	0.00724	mg/L	0.3257	0.00724	ppm	2.22%
766.491	57719.6	2.423	0.0415	mg/L	2.423	0.0415	ppm	1.71%
279.079	794363.7	18.04	0.194	mg/L	18.04	0.194	ppm	1.08%
330.237	12546.9	18.85	0.455	mg/L	18.85	0.455	ppm	2.41%

plicate Data ----------

): 3015-5 F=1 Date: 5/2/03 12:09:06 PM

pl#	Element	Net Intensity	Corrected Intensity	Calib Conc.	Calib Units	Sample Conc.	Sample Units
1	Ca 227.547	9099.8	7373.4	29.38	mg/L	29.38	ppm
1	Fe 273.955	12873.9	11695.2	0.2827	mg/L	0.2827	ppm
1	K 766.491	78743.2	75349.5	3.118	mg/L	3.118	ppm
1	Mg 279.079	633424.9	631918.7	14.35	mg/L	14.35	ppm
1	Na 330.237	33771.1	28069.4	41.88	mg/L	41.88	ppm

2	Ca 227.547	9474.3	7747.8	30.87	mg/L	30.87 ppm
2	Fe 273.955	13497.3	12318.6	0.2977	mg/L	0.2977 ppm
2	K 766.491	76854.3	73460.6	3.044	mg/L	3.044 ppm
2	Mg 279.079	618729.6	617223.4	14.02	mg/L	14.02 ppm
2	Na 330.237	35689.7	29988.0	44.69	mg/L	44.69 ppm
3	Ca 227.547	9057.5	7331.1	29.21	mg/L	29.21 ppm
3	Fe 273.955	12873.9	11695.2	0.2827	mg/L	0.2827 ppm
3	K 766.491	75073.4	71679.7	2.974	mg/L	2.974 ppm
3	Mg 279.079	607707.8	606201.6	13.77	mg/L	13.77 ppm
3	Na 330.237	33569.9	27868.2	41.58	mg/L	41.58 ppm

ean Data ----------

D: 3015-5 F=1 Seq. No.: 41 Sample No.: 26 A/S Pos: 35
ample Qty: 1.0000 mL Prep. Vol.: 1.0 mL Dilution: 1.0: 1.0
Data: Original Date: 5/2/03 12:09:06 PM

lement	Mean Corr. Intensity	Mean Conc.	Std.Dev.	Calib Units	Mean Conc.	Std.Dev.	Sample Units	RSD
a 227.547	7484.1	29.82	0.914	mg/L	29.82	0.914	ppm	3.06%
e 273.955	11903.0	0.2877	0.00870	mg/L	0.2877	0.00870	ppm	3.02%
766.491	73496.6	3.046	0.0722	mg/L	3.046	0.0722	ppm	2.37%
g 279.079	618447.9	14.04	0.293	mg/L	14.04	0.293	ppm	2.09%
a 330.237	28641.9	42.72	1.716	mg/L	42.72	1.716	ppm	4.02%

eplicate Data ----------

D: 3015-6 F=1 Date: 5/2/03 12:11:21 PM

epl#	Element	Net Intensity	Corrected Intensity	Calib Conc.	Units	Sample Conc.	Units
1	Ca 227.547	4182.5	2456.1	9.785	mg/L	9.785	ppm
1	Fe 273.955	7292.3	6113.5	0.1478	mg/L	0.1478	ppm
1	K 766.491	52366.0	48972.3	2.075	mg/L	2.075	ppm
1	Mg 279.079	310914.9	309408.7	7.026	mg/L	7.026	ppm
1	Na 330.237	38383.0	32681.2	48.63	mg/L	48.63	ppm
2	Ca 227.547	4207.4	2480.9	9.884	mg/L	9.884	ppm
2	Fe 273.955	7032.5	5853.8	0.1415	mg/L	0.1415	ppm
2	K 766.491	50363.4	46969.7	1.996	mg/L	1.996	ppm
2	Mg 279.079	303198.9	301692.8	6.851	mg/L	6.851	ppm
2	Na 330.237	37791.2	32089.5	47.76	mg/L	47.76	ppm
3	Ca 227.547	4084.6	2358.2	9.395	mg/L	9.395	ppm
3	Fe 273.955	6913.1	5734.4	0.1386	mg/L	0.1386	ppm
3	K 766.491	48836.0	45442.3	1.935	mg/L	1.935	ppm
3	Mg 279.079	293039.8	291533.6	6.620	mg/L	6.620	ppm
3	Na 330.237	36816.2	31114.5	46.34	mg/L	46.34	ppm

ean Data ----------

D: 3015-6 F=1 Seq. No.: 42 Sample No.: 27 A/S Pos: 36
ample Qty: 1.0000 mL Prep. Vol.: 1.0 mL Dilution: 1.0: 1.0
Data: Original Date: 5/2/03 12:11:21 PM

lement	Mean Corr. Intensity	Mean Conc.	Std.Dev.	Calib Units	Mean Conc.	Std.Dev.	Sample Units	RSD
a 227.547	2431.7	9.688	0.2586	mg/L	9.688	0.2586	ppm	2.67%
e 273.955	5900.6	0.1426	0.00469	mg/L	0.1426	0.00469	ppm	3.29%
766.491	47128.1	2.002	0.0705	mg/L	2.002	0.0705	ppm	3.52%
g 279.079	300878.4	6.832	0.2036	mg/L	6.832	0.2036	ppm	2.98%
a 330.237	31961.8	47.58	1.156	mg/L	47.58	1.156	ppm	2.43%

eplicate Data ----------

D: 3015-7 F=1 Date: 5/2/03 12:13:34 PM

epl#	Element	Net Intensity	Corrected Intensity	Calib Conc.	Units	Sample Conc.	Units
1	Ca 227.547	2155.3	428.9	1.709	mg/L	1.709	ppm
1	Fe 273.955	33887.5	32708.8	0.7906	mg/L	0.7906	ppm
1	K 766.491	30667.2	27273.5	1.208	mg/L	1.208	ppm
1	Mg 279.079	12588.2	11082.0	0.2516	mg/L	0.2516	ppm

1	Na 330.237	58773.0	53071.3	77.99	mg/L	77.99 ppm
2	Ca 227.547	2145.7	419.2	1.670	mg/L	1.670 ppm
2	Fe 273.955	33571.9	32393.2	0.7830	mg/L	0.7830 ppm
2	K 766.491	30404.8	27011.1	1.197	mg/L	1.197 ppm
2	Mg 279.079	12545.2	11039.1	0.2507	mg/L	0.2507 ppm
2	Na 330.237	57691.6	51989.9	76.45	mg/L	76.45 ppm
3	Ca 227.547	2223.1	496.6	1.979	mg/L	1.979 ppm
3	Fe 273.955	33965.9	32787.2	0.7925	mg/L	0.7925 ppm
3	K 766.491	29810.7	26417.0	1.173	mg/L	1.173 ppm
3	Mg 279.079	12485.8	10979.7	0.2493	mg/L	0.2493 ppm
3	Na 330.237	58350.5	52648.8	77.39	mg/L	77.39 ppm

ean Data

D: 3015-7 F=1 Seq. No.: 43 Sample No.: 28 A/S Pos: 37
ample Qty: 1.0000 mL Prep. Vol.: 1.0 mL Dilution: 1.0: 1.0
Data: Original Date: 5/2/03 12:13:34 PM

lement	Mean Corr. Intensity	Mean Conc.	Std.Dev.	Calib Units	Mean Conc.	Std.Dev.	Sample Units	RSD
a 227.547	448.2	1.786	0.1680	mg/L	1.786	0.1680	ppm	9.41%
e 273.955	32629.7	0.7887	0.00504	mg/L	0.7887	0.00504	ppm	0.64%
766.491	26900.5	1.193	0.0176	mg/L	1.193	0.0176	ppm	1.48%
g 279.079	11033.6	0.2505	0.00117	mg/L	0.2505	0.00117	ppm	0.47%
a 330.237	52570.0	77.27	0.775	mg/L	77.27	0.775	ppm	1.00%

eplicate Data

D: ICSA 1441 Date: 5/2/03 12:15:54 PM

epl#	Element	Net Intensity	Corrected Intensity	Calib Conc.	Units	Sample Conc.	Units
1	Ca 227.547	127738.5	126012.1	505.8	mg/L		
1	Fe 273.955	8006658.8	8005480.1	193.5	mg/L		
1	K 766.491	4819.9	1426.2	0.1625	mg/L		
1	Mg 279.079	21371889.3	21370383.1	485.3	mg/L		
1	Na 330.237	5713.8	12.1	-0.1235	mg/L		
2	Ca 227.547	128361.9	126635.5	508.3	mg/L		
2	Fe 273.955	7961509.9	7960331.2	192.4	mg/L		
2	K 766.491	5227.1	1833.4	0.1790	mg/L		
2	Mg 279.079	21241994.8	21240488.6	482.3	mg/L		
2	Na 330.237	5636.8	-64.9	-0.2411	mg/L		
3	Ca 227.547	130380.5	128654.1	516.3	mg/L		
3	Fe 273.955	7927653.4	7926474.7	191.6	mg/L		
3	K 766.491	4968.1	1574.4	0.1685	mg/L		
3	Mg 279.079	21139233.2	21137727.1	480.0	mg/L		
3	Na 330.237	5609.1	-92.6	-0.2834	mg/L		

ean Data

D: ICSA 1441 Seq. No.: 44 Sample No.: 3 A/S Pos: 7
mple Qty: 1.0000 g Prep. Vol.: 1.0 L Dilution: 1.0: 1.0
Data: Original Date: 5/2/03 12:15:54 PM

ement	Mean Corr. Intensity	Mean Conc.	Std.Dev.	Calib Units	Mean Conc.	Std.Dev.	Sample Units	RSD
a 227.547	127100.5	510.1	5.48	mg/L				1.08%
e 273.955	7964095.3	192.5	0.96	mg/L				0.50%
766.491	1611.4	0.1700	0.00839	mg/L				4.93%
g 279.079	21249532.9	482.5	2.65	mg/L				0.55%
a 330.237	-48.5	-0.2160	0.08282	mg/L				38.34%

ethod: 5ME-1 ICP-M IEC: 03miecm.iec MSF:
esults: 03M1421M Spectra Stored: Yes Method Stored: Yes
ample Info: 03m1421m User: User1 Date: 5/2/03 12:27:52 PM
ethod Description: 6010B/200.7--KNaCaMgFe 4/16/03

alibration Summary
ethod: 5ME-1 ICP-M Date: 5/2/03 12:28:11 PM

lement	Stds	Equation	Intercept	Slope	Curvature	Corr. Coeff.
a 227.547	3	Linear-thru-Zero	0.0	251.0	0.00000	0.999963
e 273.955	3	Linear-thru-Zero	0.0	41372.8	0.00000	0.999863
766.491	3	Non-Linear	-2562.1	24526.5	146.68897	0.998878
g 279.079	3	Linear-thru-Zero	0.0	44037.6	0.00000	0.999910
a 330.237	3	Non-Linear	93.0	654.9	0.31274	0.999656

eplicate Data
D: ICSAB 1443 Date: 5/2/03 12:29:14 PM

epl#	Element	Net Intensity	Corrected Intensity	Calib Conc.	Units	Sample Conc.	Units
1	Ca 227.547	123349.2	121622.8	488.0	mg/L		
1	Fe 273.955	7356731.6	7355552.9	177.8	mg/L		
1	K 766.491	4522.7	1129.0	0.1504	mg/L		
1	Mg 279.079	19914467.8	19912961.7	452.2	mg/L		
1	Na 330.237	5672.2	-29.6	-0.1871	mg/L		
2	Ca 227.547	123999.6	122273.1	490.6	mg/L		
2	Fe 273.955	7416751.3	7415572.6	179.2	mg/L		
2	K 766.491	4956.8	1563.1	0.1680	mg/L		
2	Mg 279.079	20141136.0	20139629.9	457.3	mg/L		
2	Na 330.237	5593.7	-108.0	-0.3069	mg/L		
3	Ca 227.547	123186.7	121460.3	487.4	mg/L		
3	Fe 273.955	7376502.0	7375323.3	178.3	mg/L		
3	K 766.491	4770.0	1376.3	0.1604	mg/L		
3	Mg 279.079	19986846.1	19985339.9	453.8	mg/L		
3	Na 330.237	5603.6	-98.1	-0.2917	mg/L		

ean Data
D: ICSAB 1443 Seq. No.: 45 Sample No.: 4 A/S Pos: 8
mple Qty: 1.0000 g Prep. Vol.: 1.0 L Dilution: 1.0: 1.0
Data: Original Date: 5/2/03 12:29:14 PM

ement	Mean Corr. Intensity	Mean Conc.	Calib Std.Dev.	Units	Mean Conc.	Sample Std.Dev.	Units	RSD
a 227.547	121785.4	488.7	1.73	mg/L				0.35%
e 273.955	7382149.6	178.4	0.74	mg/L				0.41%
766.491	1356.1	0.1596	0.00886	mg/L				5.55%
g 279.079	20012643.8	454.4	2.63	mg/L				0.58%
a 330.237	-78.6	-0.2619	0.06524	mg/L				24.91%

plicate Data
D: CCV 1447B Date: 5/2/03 12:31:38 PM

pl#	Element	Net Intensity	Corrected Intensity	Calib Conc.	Units	Sample Conc.	Units
1	Ca 227.547	14603.5	12877.1	51.30	mg/L		
1	Fe 273.955	226661.3	225482.6	5.450	mg/L		
1	K 766.491	411138.0	407744.3	15.32	mg/L		
1	Mg 279.079	1158632.7	1157126.6	26.28	mg/L		
1	Na 330.237	79615.4	73913.6	107.2	mg/L		
2	Ca 227.547	14232.6	12506.2	49.83	mg/L		
2	Fe 273.955	220377.1	219198.3	5.298	mg/L		
2	K 766.491	417970.6	414576.9	15.56	mg/L		
2	Mg 279.079	1121112.5	1119606.4	25.42	mg/L		

2 Na 330.237	77668.1	71966.4	104.5	mg/L
3 Ca 227.547	14814.9	13088.4	52.14	mg/L
3 Fe 273.955	229007.7	227829.0	5.507	mg/L
3 K 766.491	432142.7	428749.0	16.05	mg/L
3 Mg 279.079	1144953.5	1143447.3	25.97	mg/L
3 Na 330.237	80635.3	74933.6	108.6	mg/L

ean Data ----------

D: CCV 1447B Seq. No.: 46 Sample No.: 5 A/S Pos: 6
ample Qty: 1.0000 g Prep. Vol.: 1.0 L Dilution: 1.0: 1.0
Data: Original Date: 5/2/03 12:31:38 PM

lement	Mean Corr. Intensity	Mean Conc.	Calib Std.Dev.	Units	Mean Conc.	Sample Std.Dev.	Units	RSD
a 227.547	12823.9	51.09	1.174	mg/L				2.30%
e 273.955	224170.0	5.418	0.1079	mg/L				1.99%
766.491	417023.4	15.64	0.368	mg/L				2.35%
g 279.079	1140060.1	25.89	0.431	mg/L				1.67%
a 330.237	73604.5	106.8	2.09	mg/L				1.96%

eplicate Data ----------

D: CCB Date: 5/2/03 12:33:59 PM

epl#	Element	Net Intensity	Corrected Intensity	Calib Conc.	Units	Sample Conc.	Units
1	Ca 227.547	1578.7	-147.8	-0.5887	mg/L		
1	Fe 273.955	2912.7	1734.0	0.0419	mg/L		
1	K 766.491	3967.2	573.5	0.1277	mg/L		
1	Mg 279.079	2928.9	1422.7	0.0323	mg/L		
1	Na 330.237	5636.2	-65.5	-0.2420	mg/L		
2	Ca 227.547	1700.1	-26.4	-0.1050	mg/L		
2	Fe 273.955	2968.0	1789.3	0.0432	mg/L		
2	K 766.491	3795.5	401.8	0.1208	mg/L		
2	Mg 279.079	3017.3	1511.2	0.0343	mg/L		
2	Na 330.237	5874.4	172.7	0.1217	mg/L		
3	Ca 227.547	1791.6	65.2	0.2597	mg/L		
3	Fe 273.955	2864.7	1686.0	0.0408	mg/L		
3	K 766.491	3637.3	243.6	0.1143	mg/L		
3	Mg 279.079	3019.2	1513.0	0.0344	mg/L		
3	Na 330.237	5805.5	103.8	0.0165	mg/L		

ean Data ----------

D: CCB Seq. No.: 47 Sample No.: 6 A/S Pos: 1
ample Qty: 1.0000 g Prep. Vol.: 1.0 L Dilution: 1.0: 1.0
Data: Original Date: 5/2/03 12:33:59 PM

lement	Mean Corr. Intensity	Mean Conc.	Calib Std.Dev.	Units	Mean Conc.	Sample Std.Dev.	Units	RSD
a 227.547	-36.3	-0.1447	0.42557	mg/L				294.11%
e 273.955	1736.4	0.0420	0.00125	mg/L				2.98%
766.491	406.3	0.1209	0.00672	mg/L				5.55%
g 279.079	1482.3	0.0337	0.00117	mg/L				3.48%
a 330.237	70.3	-0.0346	0.18716	mg/L				541.22%

GPW 5/2/03

Y2K non-compliant software. The date not 5/2/99. The date should be 5/2/03.

GPW 5/2/03.

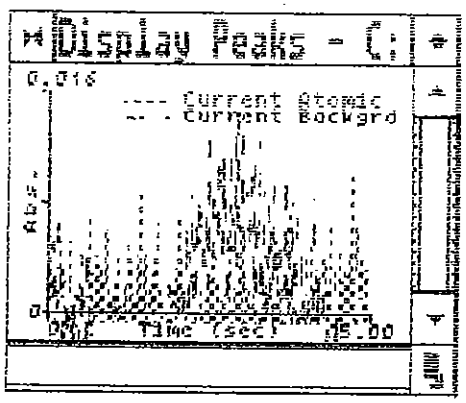
---

lement File: AS_7060.GEL Element: As Wavelength: 193.7
ate: 05/02/~~99~~ 03 Time: 14:05 Slit: 0.70 L
ata File: 03M1423Z.DAT ID/Wt File: 1.IDW Lamp Current: 0
echnique: HGA Calib. Type: Linear Energy: 53

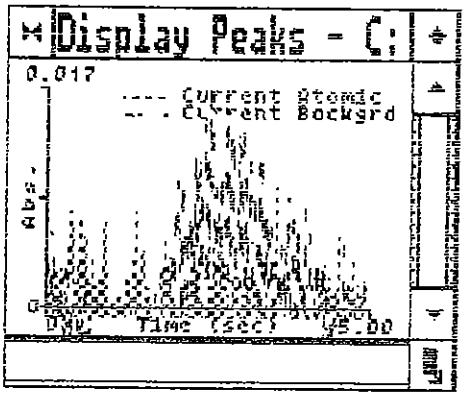
---

s ID: Calib. Blank Seq. No.: 00001 A/S Pos.: 1 Date: 05/02/99

L dispensed: 5 from 20, 20 from 1
eplicate 1 Time: 14:07
eak Area (A-s): -0.002 Peak Height (A): 0.010
ackground Pk Area (A-s): -0.005 Background Pk Height (A): 0.016
lank Corrected Pk Area (A-s): 0.005
oncentration (mg/L): 0.0017



dispensed: 5 from 20, 20 from 1
plicate 2 Time: 14:11
ak Area (A-s): -0.002 Peak Height (A): 0.009
ckground Pk Area (A-s): -0.002 Background Pk Height (A): 0.017
ank Corrected Pk Area (A-s): 0.005
ncentration (mg/L): 0.0016



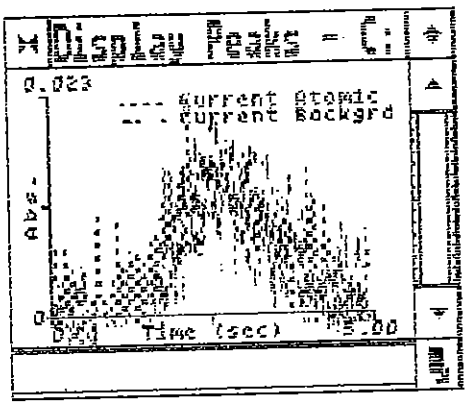
n Conc (mg/L): 0.0017 SD: 0.00004 RSD(%): 2.61

o-zero performed.

uL dispensed: 10 from 0, 5 from 20, 10 from 4

Replicate 1
Peak Area (A-s): 0.028
Background Pk Area (A-s): 0.018
Blank Corrected Pk Area (A-s): 0.030
Concentration (mg/L): 0.0106

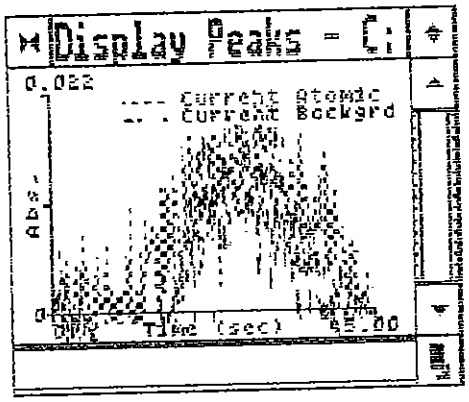
Time: 14:14
Peak Height (A): 0.023
Background Pk Height (A): 0.020



uL dispensed: 10 from 0, 5 from 20, 10 from 4

Replicate 2
Peak Area (A-s): 0.035
Background Pk Area (A-s): 0.013
Blank Corrected Pk Area (A-s): 0.038
Concentration (mg/L): 0.0134

Time: 14:17
Peak Height (A): 0.022
Background Pk Height (A): 0.020



Mean Conc (mg/L): 0.0120 SD: 0.00197 RSD(%): 16.43

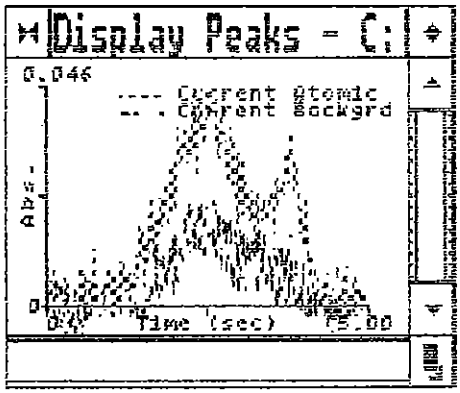
Standard number 1 applied. [0.0125]
Correlation coefficient: 1.00000 Slope: 2.7064

As ID: STD1 1472A Seq. No.: 00003 A/S Pos.: 4 Date: 05/02/99

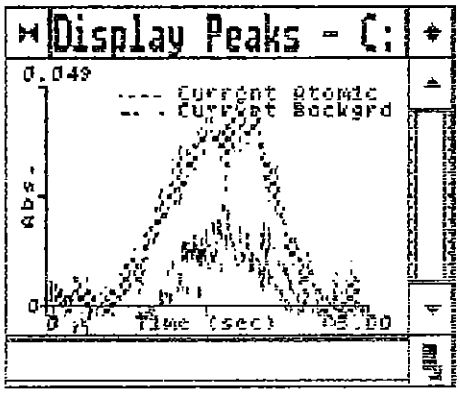
uL dispensed: 5 from 20, 20 from 4

Replicate 1
Peak Area (A-s): 0.075
Background Pk Area (A-s): 0.018
Blank Corrected Pk Area (A-s): 0.077
Concentration (mg/L): 0.0285

Time: 14:20
Peak Height (A): 0.046
Background Pk Height (A): 0.022



, dispensed: 5 from 20, 20 from 4
:plicate 2 Time: 14:23
:ak Area (A-s): 0.077 Peak Height (A): 0.049
:ckground Pk Area (A-s): 0.011 Background Pk Height (A): 0.023
ank Corrected Pk Area (A-s): 0.079
:ncentration (mg/L): 0.0293

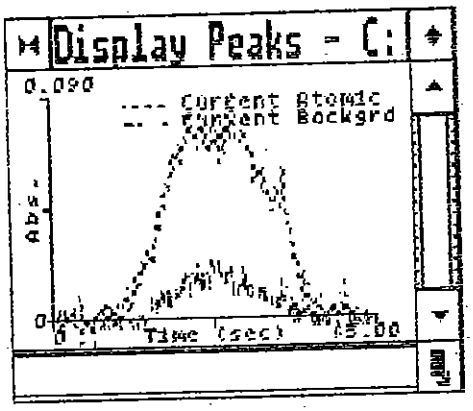


:an Conc (mg/L): 0.0289 SD: 0.00054 RSD(%): 1.86

andard number 2 applied. [0.0250]
:rrelation coefficient: 0.98468 Slope: 3.0517

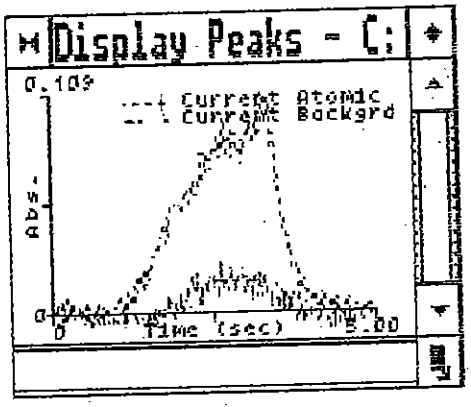
ID: STD2 1472B Seq. No.: 00004 A/S Pos.: 3 Date: 05/02/99

. dispensed: 5 from 20, 20 from 3
plicate 1 Time: 14:26
ak Area (A-s): 0.152 Peak Height (A): 0.090
ckground Pk Area (A-s): 0.020 Background Pk Height (A): 0.025
ank Corrected Pk Area (A-s): 0.154
ncentration (mg/L): 0.0504



uL dispensed: 5 from 20, 20 from 3
Replicate 2
Peak Area (A-s): 0.162
Background Pk Area (A-s): 0.011
Blank Corrected Pk Area (A-s): 0.164
Concentration (mg/L): 0.0539

Time: 14:29
Peak Height (A): 0.109
Background Pk Height (A): 0.025



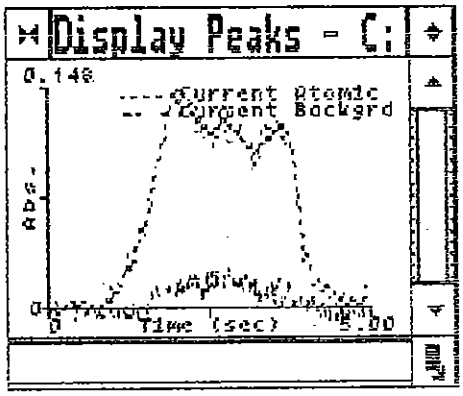
Mean Conc (mg/L): 0.0521 SD: 0.00243 RSD(%): 4.66

Standard number 3 applied. [0.0500]
Correlation coefficient: 0.99767 Slope: 3.1520

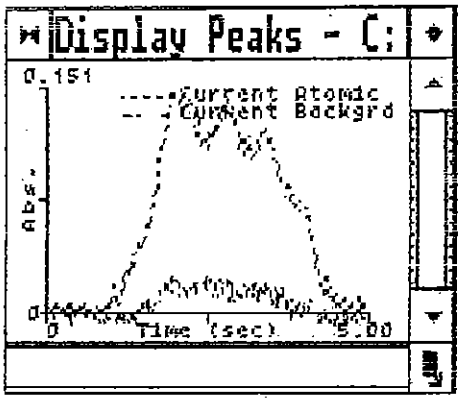
As ID: STD3 1472C Seq. No.: 00005 A/S Pos.: 2 Date: 05/02/99

uL dispensed: 5 from 20, 20 from 2
Replicate 1
Peak Area (A-s): 0.311
Background Pk Area (A-s): 0.024
Blank Corrected Pk Area (A-s): 0.313
Concentration (mg/L): 0.0993

Time: 14:33
Peak Height (A): 0.148
Background Pk Height (A): 0.029

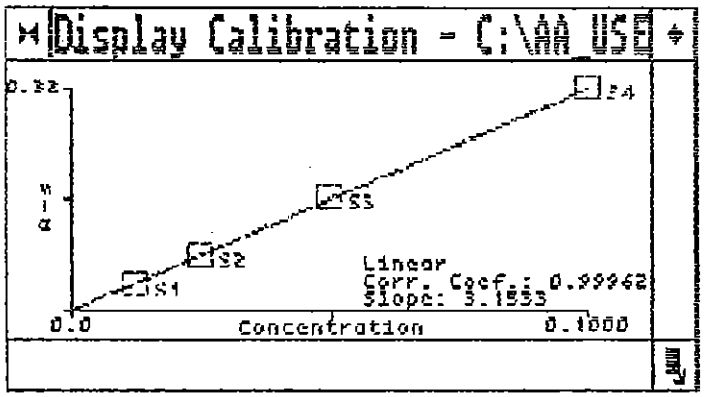


, dispensed: 5 from 20, 20 from 2
plicate 2 Time: 14:36
eak Area (A-s): 0.315 Peak Height (A): 0.151
ackground Pk Area (A-s): 0.026 Background Pk Height (A): 0.025
ank Corrected Pk Area (A-s): 0.318
oncentration (mg/L): 0.1008



ean Conc (mg/L): 0.1001 SD: 0.00103 RSD(%): 1.03

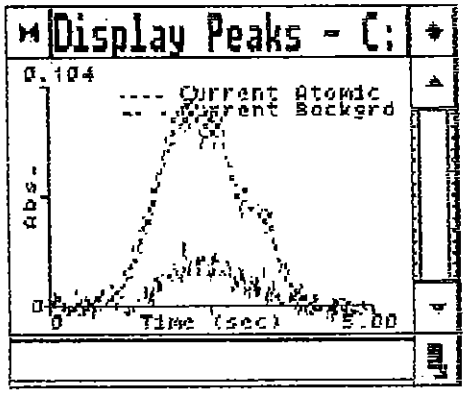
tandard number 4 applied. [0.1000]
orrelation coefficient: 0.99962 Slope: 3.1533



ID: ICV A1474 Seq. No.: 00006 A/S Pos.: 40 Date: 05/02/99

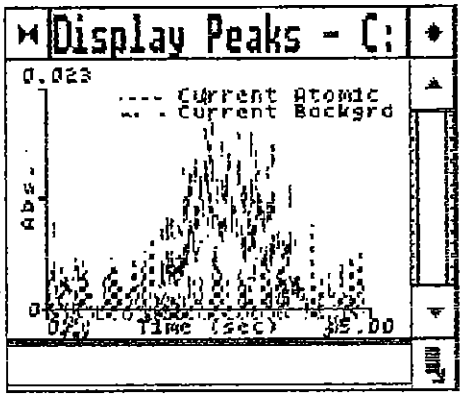
dispensed: 5 from 20, 20 from 40
licate 1 Time: 14:42

Area (A-s): 0.153 Peak Height (A): 0.104
ground Pk Area (A-s): 0.022 Background Pk Height (A): 0.031
k Corrected Pk Area (A-s): 0.156
entration (mg/L): 0.0494 Corrected Conc (ppm): ----------

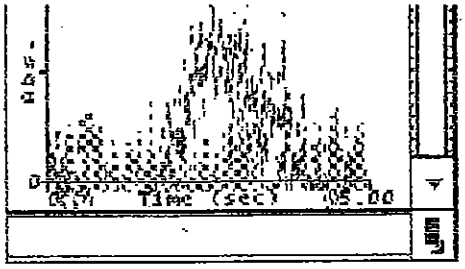


[illegible]

k Area (A-s): -0.003 Peak Height (A): 0.009
kground Pk Area (A-s): 0.005 Background Pk Height (A): 0.023
nk Corrected Pk Area (A-s): -0.000
centration (mg/L): -0.0002 Corrected Conc (ppm): ----------



dispensed: 5 from 20, 20 from 1
plicate 2 Time: 14:52
ak Area (A-s): -0.001 Peak Height (A): 0.009
ckground Pk Area (A-s): 0.002 Background Pk Height (A): 0.020
ank Corrected Pk Area (A-s): 0.002
ncentration (mg/L): 0.0006 Corrected Conc (ppm): ----------



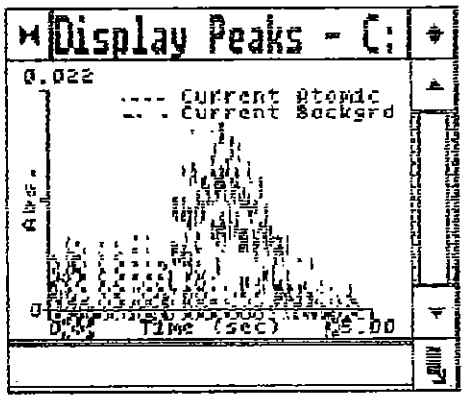
ean Conc (mg/L): 0.0002 SD: 0.00051 RSD(%): 248.05
orrected Conc (ppm): ----------

C sample is within range

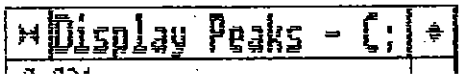
---

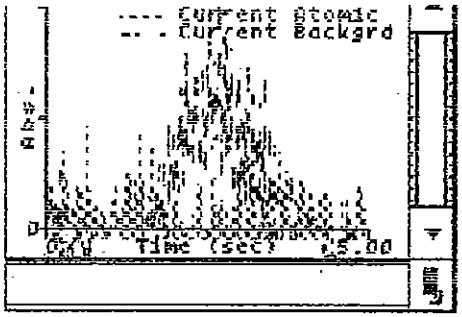
s ID: M-BL 03M1423 Seq. No.: 00008 A/S Pos.: 5 Date: 05/02/99

L dispensed: 5 from 20, 20 from 5
eplicate 1 Time: 14:55
eak Area (A-s): -0.006 Peak Height (A): 0.008
ackground Pk Area (A-s): 0.003 Background Pk Height (A): 0.022
lank Corrected Pk Area (A-s): -0.004
oncentration (mg/L): -0.0011 Corrected Conc (ppm): -0.0011



1L dispensed: 5 from 20, 20 from 5
Replicate 2 Time: 14:58
Peak Area (A-s): -0.005 Peak Height (A): 0.010
Background Pk Area (A-s): 0.000 Background Pk Height (A): 0.021
Blank Corrected Pk Area (A-s): -0.002
Concentration (mg/L): -0.0007 Corrected Conc (ppm): -0.0007

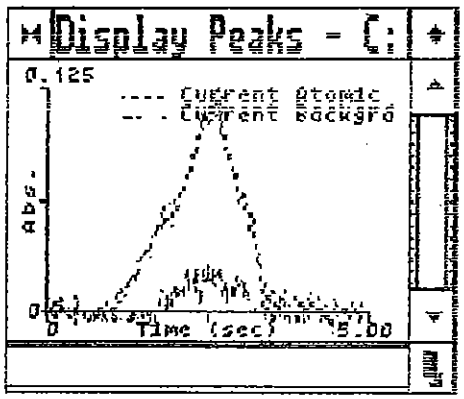




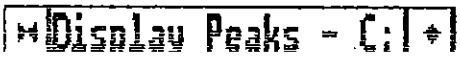
Mean Conc (mg/L): -0.0009 SD: 0.00030 RSD(%): 32.73
Corrected Conc (ppm): -0.0009

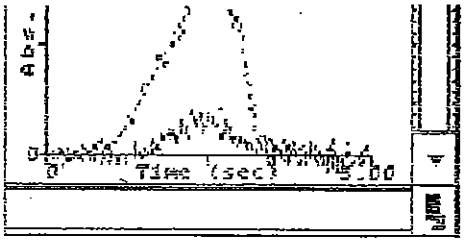
As ID: LCS-03M1423 Seq. No.: 00009 A/S Pos.: 6 Date: 05/02/99

uL dispensed: 5 from 20, 20 from 6
Replicate 1 Time: 15:01
Peak Area (A-s): 0.146 Peak Height (A): 0.125
Background Pk Area (A-s): 0.006 Background Pk Height (A): 0.026
Blank Corrected Pk Area (A-s): 0.148
Concentration (mg/L): 0.0471 Corrected Conc (ppm): 0.0471



uL dispensed: 5 from 20, 20 from 6
Replicate 2 Time: 15:04
Peak Area (A-s): 0.148 Peak Height (A): 0.132
Background Pk Area (A-s): 0.011 Background Pk Height (A): 0.028
Blank Corrected Pk Area (A-s): 0.151
Concentration (mg/L): 0.0478 Corrected Conc (ppm): 0.0478

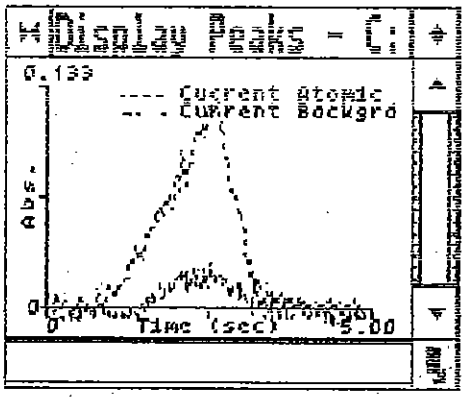




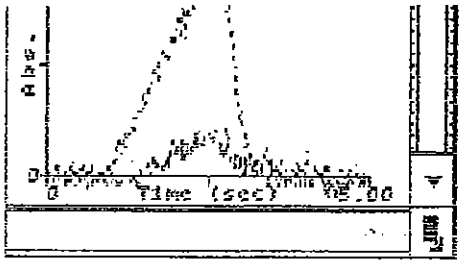
:n Conc (mg/L): 0.0474 SD: 0.00052 RSD(%): 1.09
'rected Conc (ppm): 0.0474

ID: LCSD-03M1423 Seq. No.: 00010 A/S Pos.: 7 Date: 05/02/99

dispensed: 5 from 20, 20 from 7
licate 1 Time: 15:07
k Area (A-s): 0.148 Peak Height (A): 0.133
kground Pk Area (A-s): 0.012 Background Pk Height (A): 0.029
nk Corrected Pk Area (A-s): 0.150
centration (mg/L): 0.0476 Corrected Conc (ppm): 0.0476



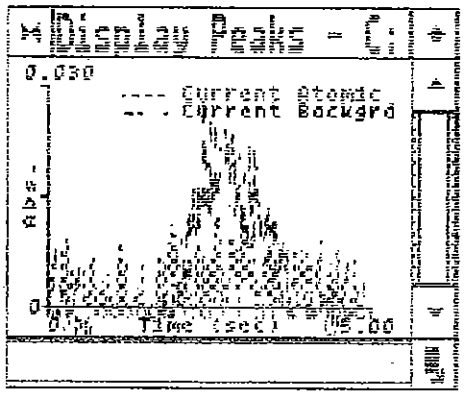
dispensed: 5 from 20, 20 from 7
licate 2 Time: 15:11
k Area (A-s): 0.148 Peak Height (A): 0.124
kground Pk Area (A-s): 0.011 Background Pk Height (A): 0.029
nk Corrected Pk Area (A-s): 0.150
centration (mg/L): 0.0476 Corrected Conc (ppm): 0.0476



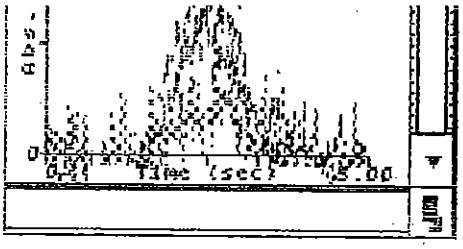
Mean Conc (mg/L): 0.0476 SD: 0.00003 RSD(%): 0.06
Corrected Conc (ppm): 0.0476

As ID: 2987-6 S P=1 Seq. No.: 00011 A/S Pos.: 8 Date: 05/02/99

uL dispensed: 5 from 20, 20 from 8
Replicate 1 Time: 15:14
Peak Area (A-s): 0.008 Peak Height (A): 0.013
Background Pk Area (A-s): 0.011 Background Pk Height (A): 0.030
Blank Corrected Pk Area (A-s): 0.010
Concentration (mg/L): 0.0033 Corrected Conc (ppm): 0.0033



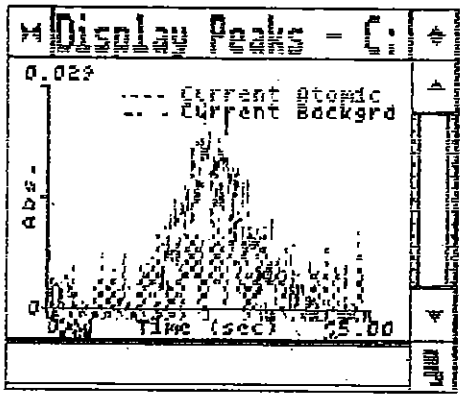
uL dispensed: 5 from 20, 20 from 8
Replicate 2 Time: 15:17
Peak Area (A-s): 0.008 Peak Height (A): 0.013
Background Pk Area (A-s): 0.009 Background Pk Height (A): 0.031
Blank Corrected Pk Area (A-s): 0.010
Concentration (mg/L): 0.0032 Corrected Conc (ppm): 0.0032



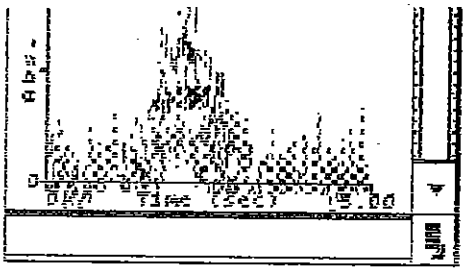
Mean Conc (mg/L): 0.0032 SD: 0.00005 RSD(%): 1.44
Corrected Conc (ppm): 0.0032

As ID: 2987-6 D F=1 Seq. No.: 00012 A/S Pos.: 9 Date: 05/02/99

uL dispensed: 5 from 20, 20 from 9
Replicate 1 Time: 15:20
Peak Area (A-s): 0.008 Peak Height (A): 0.012
Background Pk Area (A-s): 0.010 Background Pk Height (A): 0.029
Blank Corrected Pk Area (A-s): 0.010
Concentration (mg/L): 0.0032 Corrected Conc (ppm): 0.0032



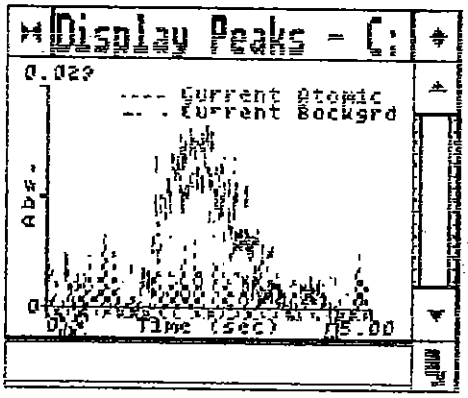
uL dispensed: 5 from 20, 20 from 9
Replicate 2 Time: 15:24
Peak Area (A-s): 0.007 Peak Height (A): 0.016
Background Pk Area (A-s): -0.009 Background Pk Height (A): 0.026
Blank Corrected Pk Area (A-s): 0.009
Concentration (mg/L): 0.0029 Corrected Conc (ppm): 0.0029



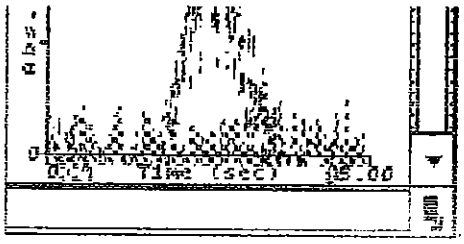
Mean Conc (mg/L): 0.0030 SD: 0.00024 RSD(%): 7.99
Corrected Conc (ppm): 0.0030

As ID: 2987-6 1/5 P=5 Seq. No.: 00013 A/S Pos.: 10 Date: 05/02/99

uL dispensed: 5 from 20, 20 from 10
Replicate 1 Time: 15:27
Peak Area (A-s): -0.001 Peak Height (A): 0.012
Background Pk Area (A-s): 0.016 Background Pk Height (A): 0.029
Blank Corrected Pk Area (A-s): 0.001
Concentration (mg/L): 0.0004 Corrected Conc (ppm): 0.002



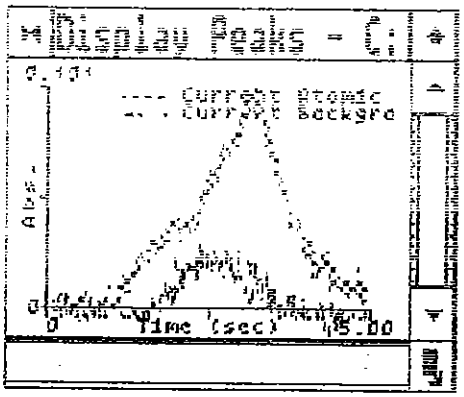
uL dispensed: 5 from 20, 20 from 10
Replicate 2 Time: 15:30
Peak Area (A-s): -0.000 Peak Height (A): 0.012
Background Pk Area (A-s): 0.010 Background Pk Height (A): 0.028
Blank Corrected Pk Area (A-s): 0.002
Concentration (mg/L): 0.0006 Corrected Conc (ppm): 0.003



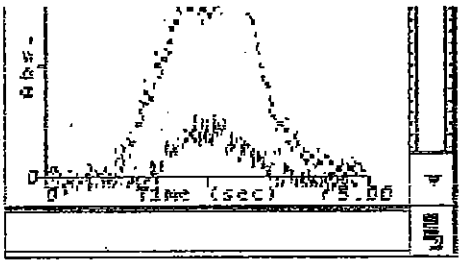
Mean Conc (mg/L): 0.0005 SD: 0.00017 RSD(%): 34.34
Corrected Conc (ppm): 0.003

As ID: 2987-6 MS F=1 Seq No.: 00014 A/S Pos.: 11 Date: 05/02/99

uL dispensed: 5 from 20, 20 from 11
Replicate 1 Time: 15:33
Peak Area (A-s): 0.168 Peak Height (A): 0.101
Background Pk Area (A-s): 0.017 Background Pk Height (A): 0.032
Blank Corrected Pk Area (A-s): 0.164
Concentration (mg/L): 0.0521 Corrected Conc (ppm): 0.0521



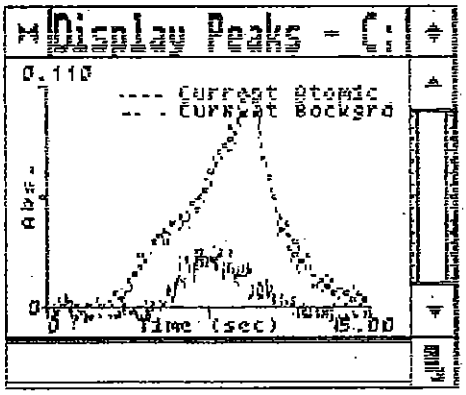
uL dispensed: 5 from 20, 20 from 11
Replicate 2 Time: 15:37
Peak Area (A-s): 0.169 Peak Height (A): 0.106
Background Pk Area (A-s): 0.017 Background Pk Height (A): 0.030
Blank Corrected Pk Area (A-s): 0.171
Concentration (mg/L): 0.0543 Corrected Conc (ppm): 0.0543



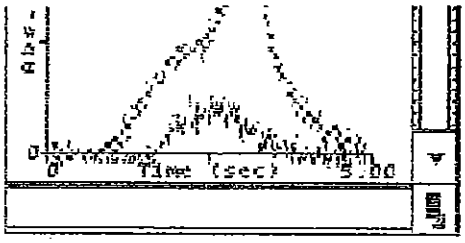
Mean Conc (mg/L): 0.0532 SD: 0.00156 RSD(%): 2.94
Corrected Conc (ppm): 0.0532

As ID: 2987-6 MSD P=1 Seq. No.: 00015 A/S Pos.: 12 Date: 05/02/99

uL dispensed: 5 from 20, 20 from 12
Replicate 1 Time: 15:40
Peak Area (A-s): 0.162 Peak Height (A): 0.110
Background Pk Area (A-s): 0.017 Background Pk Height (A): 0.032
Blank Corrected Pk Area (A-s): 0.164
Concentration (mg/L): 0.0519 Corrected Conc (ppm): 0.0519



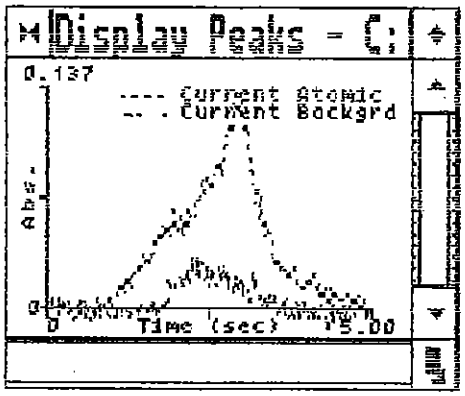
uL dispensed: 5 from 20, 20 from 12
Replicate 2 Time: 15:43
Peak Area (A-s): 0.166 Peak Height (A): 0.113
Background Pk Area (A-s): 0.020 Background Pk Height (A): 0.031
Blank Corrected Pk Area (A-s): 0.168
Concentration (mg/L): 0.0533 Corrected Conc (ppm): 0.0533



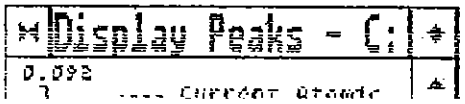
Mean Conc (mg/L): 0.0526 SD: 0.00098 RSD(%): 1.86
Corrected Conc (ppm): 0.0526

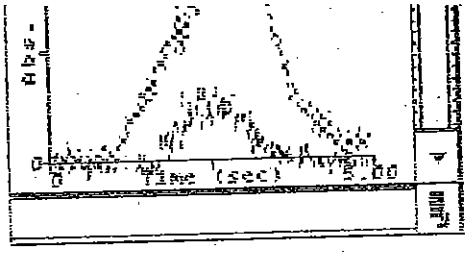
As ID: 2987-6 PS P=1 Seq. No.: 00016 A/S Pos.: 13 Date: 05/02/99

uL dispensed: 5 from 20, 20 from 13
Replicate 1 Time: 15:46
Peak Area (A-s): 0.167 Peak Height (A): 0.137
Background Pk Area (A-s): 0.016 Background Pk Height (A): 0.032
Blank Corrected Pk Area (A-s): 0.169
Concentration (mg/L): 0.0538 Corrected Conc (ppm): 0.0538



uL dispensed: 5 from 20, 20 from 13
Replicate 2 Time: 15:50
Peak Area (A-s): 0.164 Peak Height (A): 0.092
Background Pk Area (A-s): 0.018 Background Pk Height (A): 0.031
Blank Corrected Pk Area (A-s): 0.167
Concentration (mg/L): 0.0528 Corrected Conc (ppm): 0.0528

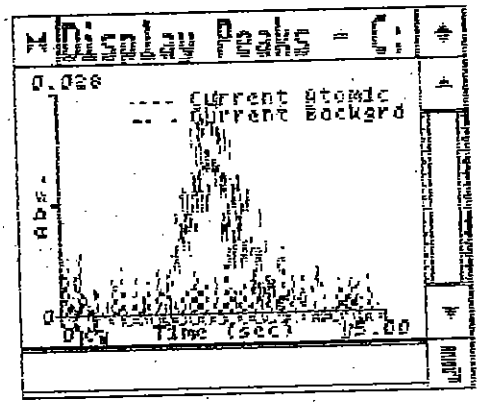




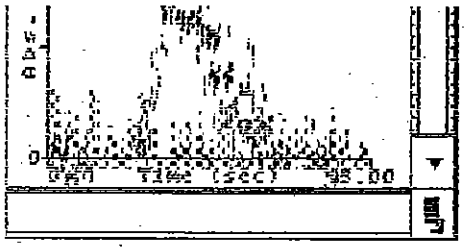
Mean Conc (mg/L): 0.0533 SD: 0.00066 RSD(%): 1.23
Corrected Conc (ppm): 0.0533

As ID: 2987-1 F=1 Seq. No.: 00017 A/S Pos.: 14 Date: 05/02/99

uL dispensed: 5 from 20, 20 from 14
Replicate 1 Time: 15:53
Peak Area (A-s): -0.004 Peak Height (A): 0.009
Background Pk Area (A-s): 0.004 Background Pk Height (A): 0.028
Blank Corrected Pk Area (A-s): -0.002
Concentration (mg/L): -0.0007 Corrected Conc (ppm): -0.0007



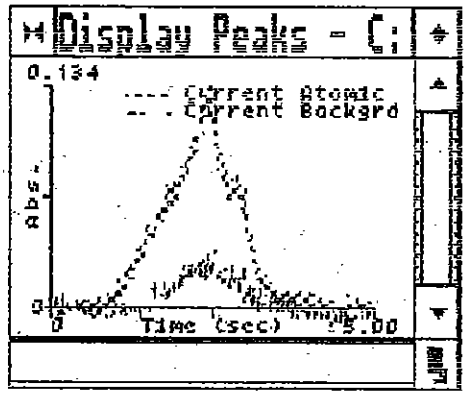
uL dispensed: 5 from 20, 20 from 14
Replicate 2 Time: 15:56
Peak Area (A-s): -0.003 Peak Height (A): 0.009
Background Pk Area (A-s): 0.009 Background Pk Height (A): 0.027
Blank Corrected Pk Area (A-s): -0.001
Concentration (mg/L): -0.0004 Corrected Conc (ppm): -0.0004



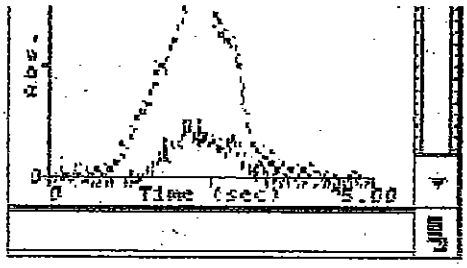
Mean Conc (mg/L): -0.0005 SD: 0.00022 RSD(%): 43.29
Corrected Conc (ppm): -0.0005

As ID: CCV A1474 Seq. No.: 00018 A/S Pos.: 40 Date: 05/02/99

uL dispensed: 5 from 20, 20 from 40
Replicate 1 Time: 15:59
Peak Area (A-s): 0.151 Peak Height (A): 0.134
Background Pk Area (A-s): 0.019 Background Pk Height (A): 0.035
Blank Corrected Pk Area (A-s): 0.154
Concentration (mg/L): 0.0488 Corrected Conc (ppm): ----------



uL dispensed: 5 from 20, 20 from 40
Replicate 2 Time: 16:02
Peak Area (A-s): 0.156 Peak Height (A): 0.130
Background Pk Area (A-s): 0.016 Background Pk Height (A): 0.037
Blank Corrected Pk Area (A-s): 0.158
Concentration (mg/L): 0.0501 Corrected Conc (ppm): ----------

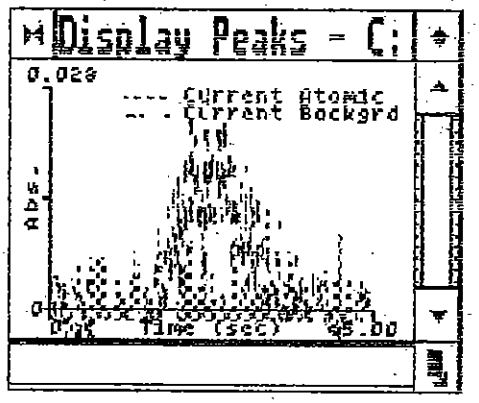


Mean Conc (mg/L): 0.0494 SD: 0.00093 RSD(%): 1.88
Corrected Conc (ppm): ----------

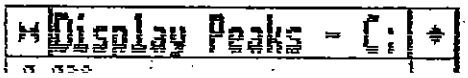
QC sample is within range 0.0425 - 0.0575

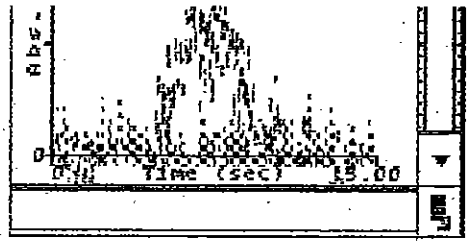
As ID: CCB Seq. No.: 00019 A/S Pos.: 1 Date: 05/02/99

uL dispensed: 5 from 20, 20 from 1
Replicate 1 Time: 16:05
Peak Area (A-s): -0.004 Peak Height (A): 0.013
Background Pk Area (A-s): 0.006 Background Pk Height (A): 0.028
Blank Corrected Pk Area (A-s): -0.002
Concentration (mg/L): -0.0005 Corrected Conc (ppm): ----------



uL dispensed: 5 from 20, 20 from 1
Replicate 2 Time: 16:08
Peak Area (A-s): -0.003 Peak Height (A): 0.009
Background Pk Area (A-s): 0.004 Background Pk Height (A): 0.028
Blank Corrected Pk Area (A-s): -0.001
Concentration (mg/L): -0.0003 Corrected Conc (ppm): ----------



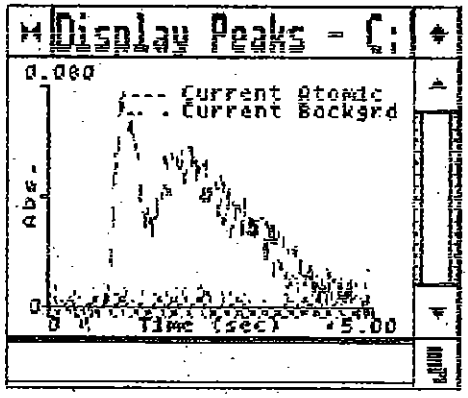


Mean Conc (mg/L): -0.0004 SD: 0.00015 RSD(%): 38.89
Corrected Conc (ppm): ----------

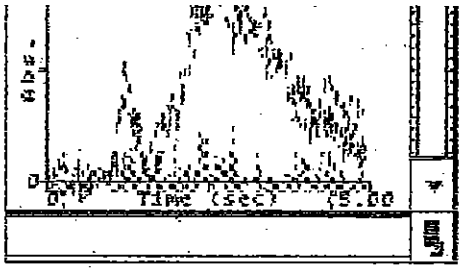
QC sample is within range

As ID: 2987-2 F=1 Seq. No.: 00020 A/S Pos.: 15 Date: 05/02/99

uL dispensed: 5 from 20, 20 from 15
Replicate 1 Time: 16:12
Peak Area (A-s): -0.005 Peak Height (A): 0.009
Background Pk Area (A-s): 0.120 Background Pk Height (A): 0.080
Blank Corrected Pk Area (A-s): -0.003
Concentration (mg/L): -0.0009 Corrected Conc (ppm): -0.0009



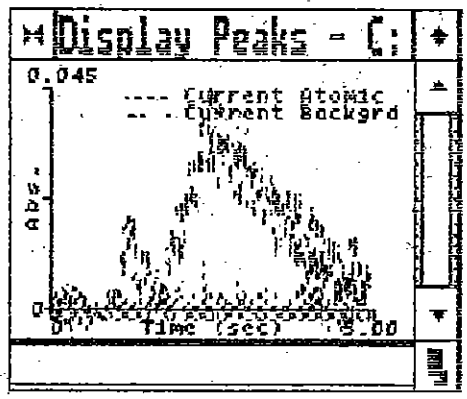
uL dispensed: 5 from 20, 20 from 15
Replicate 2 Time: 16:15
Peak Area (A-s): -0.003 Peak Height (A): 0.013
Background Pk Area (A-s): 0.084 Background Pk Height (A): 0.049
Blank Corrected Pk Area (A-s): -0.001
Concentration (mg/L): -0.0003 Corrected Conc (ppm): -0.0003



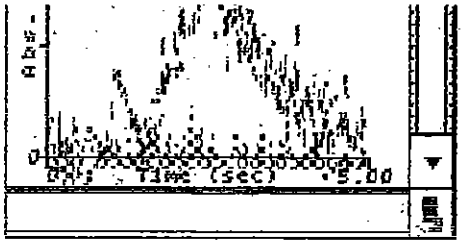
Mean Conc (mg/L): -0.0006 SD: 0.00038 RSD(%): 61.34
Corrected Conc (ppm): -0.0006

As ID: 2987-3 F=1 Seq. No.: 00021 A/S Pos.: 16 Date: 05/02/99

uL dispensed: 5 from 20, 20 from 16
Replicate 1 Time: 16:18
Peak Area (A-s): -0.003 Peak Height (A): 0.011
Background Pk Area (A-s): 0.065 Background Pk Height (A): 0.045
Blank Corrected Pk Area (A-s): -0.001
Concentration (mg/L): -0.0003 Corrected Conc (ppm): -0.0003



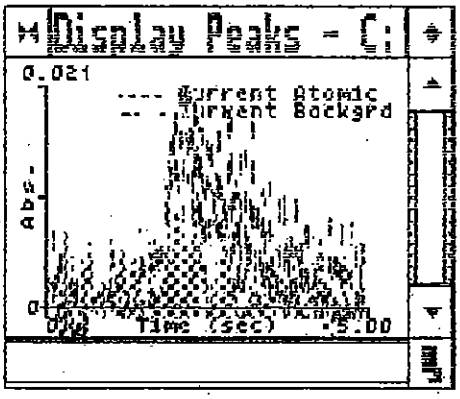
uL dispensed: 5 from 20, 20 from 16
Replicate 2 Time: 16:21
Peak Area (A-s): -0.006 Peak Height (A): 0.011
Background Pk Area (A-s): 0.069 Background Pk Height (A): 0.047
Blank Corrected Pk Area (A-s): -0.003
Concentration (mg/L): -0.0010 Corrected Conc (ppm): -0.0010



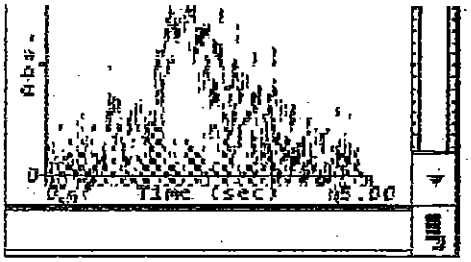
Mean Conc (mg/L): -0.0007 SD: 0.00055 RSD(%): 84.47
Corrected Conc (ppm): -0.0007

As ID: 2987-4 F=1 Seq. No.: 00022 A/S Pos.: 17 Date: 05/02/99

uL dispensed: 5 from 20, 20 from 17
Replicate 1 Time: 16:24
Peak Area (A-s): -0.001 Peak Height (A): 0.012
Background Pk Area (A-s): 0.016 Background Pk Height (A): 0.021
Blank Corrected Pk Area (A-s): 0.001
Concentration (mg/L): 0.0004 Corrected Conc (ppm): 0.0004



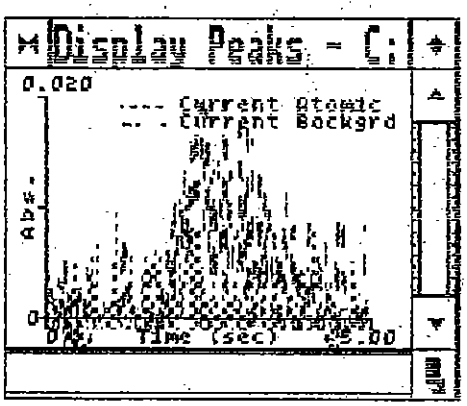
uL dispensed: 5 from 20, 20 from 17
Replicate 2 Time: 16:27
Peak Area (A-s): -0.004 Peak Height (A): 0.009
Background Pk Area (A-s): 0.028 Background Pk Height (A): 0.028
Blank Corrected Pk Area (A-s): -0.002
Concentration (mg/L): -0.0005 Corrected Conc (ppm): -0.0005



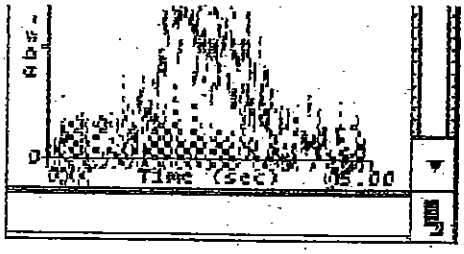
Mean Conc (mg/L): -0.0000 SD: 0.00066 RSD(%): 2544.00
Corrected Conc (ppm): -0.0000

As ID: 2987-5 F=1 Seq. No.: 00023 A/S Pos.: 18 Date: 05/02/99

uL dispensed: 5 from 20, 20 from 18
Replicate 1 Time: 16:30
Peak Area (A-s): -0.000 Peak Height (A): 0.011
Background Pk Area (A-s): 0.012 Background Pk Height (A): 0.020
Blank Corrected Pk Area (A-s): 0.002
Concentration (mg/L): 0.0007 Corrected Conc (ppm): 0.0007



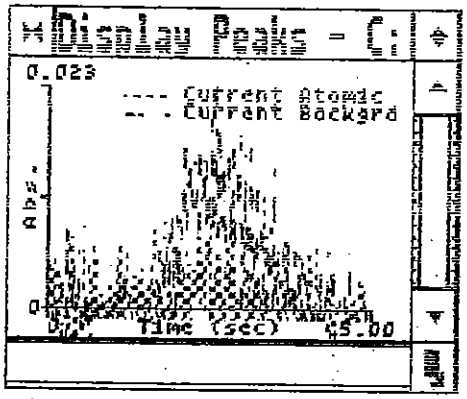
uL dispensed: 5 from 20, 20 from 18
Replicate 2 Time: 16:34
Peak Area (A-s): 0.001 Peak Height (A): 0.010
Background Pk Area (A-s): 0.023 Background Pk Height (A): 0.026
Blank Corrected Pk Area (A-s): 0.003
Concentration (mg/L): 0.0010 Corrected Conc (ppm): 0.0010



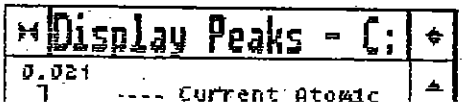
Mean Conc (mg/L): 0.0008 SD: 0.00019 RSD(%): 23.19
Corrected Conc (ppm): 0.0008

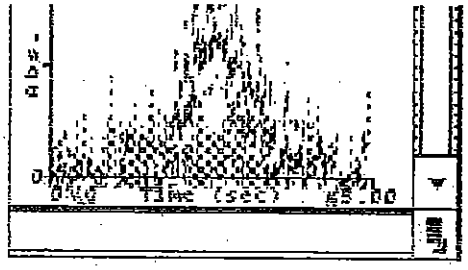
As ID: 2964-1 F=1 Seq. No.: 00024 A/S Pos.: 19 Date: 05/02/99

uL dispensed: 5 from 20, 20 from 19
Replicate 1 Time: 16:37
Peak Area (A-s): 0.001 Peak Height (A): 0.012
Background Pk Area (A-s): 0.011 Background Pk Height (A): 0.023
Blank Corrected Pk Area (A-s): 0.003
Concentration (mg/L): 0.0011 Corrected Conc (ppm): 0.0011



uL dispensed: 5 from 20, 20 from 19
Replicate 2 Time: 16:40
Peak Area (A-s): 0.005 Peak Height (A): 0.010
Background Pk Area (A-s): 0.006 Background Pk Height (A): 0.021
Blank Corrected Pk Area (A-s): 0.008
Concentration (mg/L): 0.0024 Corrected Conc (ppm): 0.0024

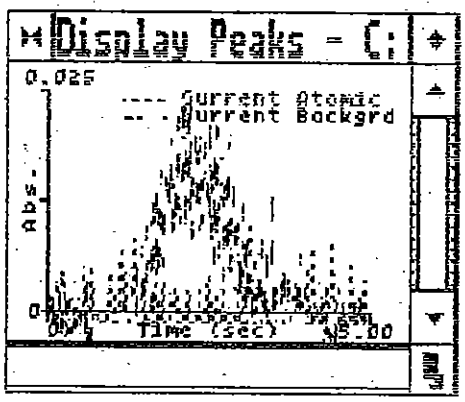




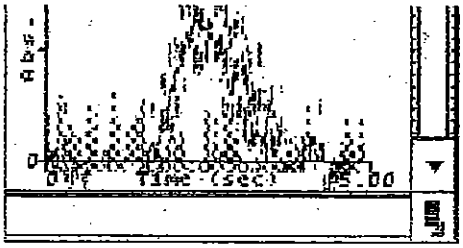
Mean Conc (mg/L): 0.0017 SD: 0.00093 RSD(%): 53.51
Corrected Conc (ppm): 0.0017

As ID: 2964-2 F=1 Seq. No.: 00025 A/S Pos.: 21 Date: 05/02/99

uL dispensed: 5 from 20, 20 from 21
Replicate 1 Time: 16:43
Peak Area (A-s): -0.007 Peak Height (A): 0.010
Background Pk Area (A-s): 0.009 Background Pk Height (A): 0.025
Blank Corrected Pk Area (A-s): -0.005
Concentration (mg/L): -0.0015 Corrected Conc (ppm): -0.0015



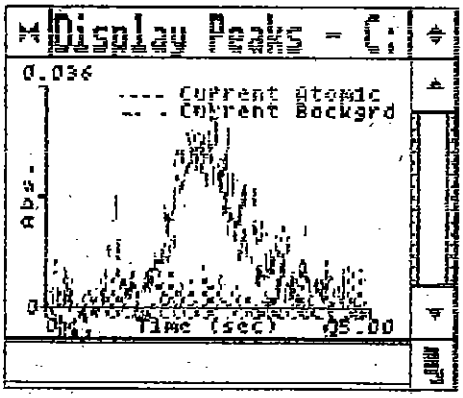
uL dispensed: 5 from 20, 20 from 21
Replicate 2 Time: 16:46
Peak Area (A-s): -0.006 Peak Height (A): 0.008
Background Pk Area (A-s): 0.007 Background Pk Height (A): 0.025
Blank Corrected Pk Area (A-s): -0.004
Concentration (mg/L): -0.0012 Corrected Conc (ppm): -0.0012



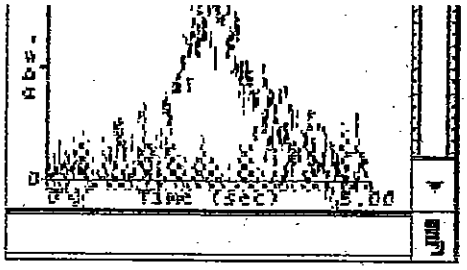
Mean Conc (mg/L): -0.0013 SD: 0.00016 RSD(%): 11.66
Corrected Conc (ppm): -0.0013

As ID: 2964-3 F=1 Seq. No.: 00026 A/S Pos.: 22 Date: 05/02/99

uL dispensed: 5 from 20, 20 from 22
Replicate 1 Time: 16:49
Peak Area (A-s): -0.002 Peak Height (A): 0.008
Background Pk Area (A-s): 0.035 Background Pk Height (A): 0.036
Blank Corrected Pk Area (A-s): -0.000
Concentration (mg/L): -0.0001 Corrected Conc (ppm): -0.0001



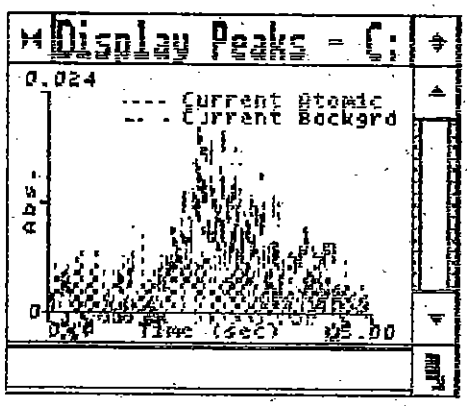
uL dispensed: 5 from 20, 20 from 22
Replicate 2 Time: 16:52
Peak Area (A-s): -0.004 Peak Height (A): 0.011
Background Pk Area (A-s): 0.036 Background Pk Height (A): 0.033
Blank Corrected Pk Area (A-s): -0.002
Concentration (mg/L): -0.0005 Corrected Conc (ppm): -0.0005



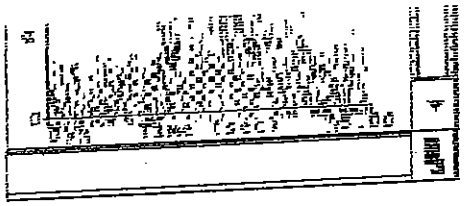
Mean Conc (mg/L): -0.0003 SD: 0.00031 RSD(%): 112.57
Corrected Conc (ppm): -0.0003

As ID: 2964-4 P=1 Seq. No.: 00027 A/S Pos.: 23 Date: 05/02/99

uL dispensed: 5 from 20, 20 from 23
Replicate 1 Time: 16:55
Peak Area (A-s): 0.005 Peak Height (A): 0.009
Background Pk Area (A-s): 0.011 Background Pk Height (A): 0.024
Blank Corrected Pk Area (A-s): 0.007
Concentration (mg/L): 0.0023 Corrected Conc (ppm): 0.0023



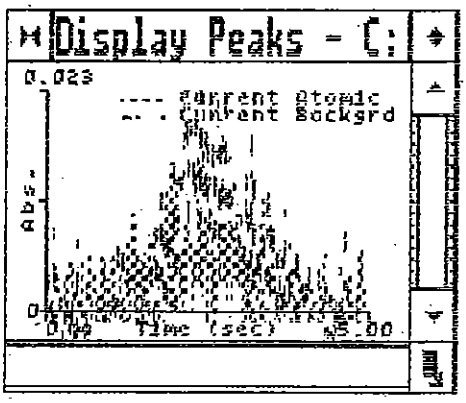
uL dispensed: 5 from 20, 20 from 23
Replicate 2 Time: 16:59
Peak Area (A-s): 0.005 Peak Height (A): 0.012
Background Pk Area (A-s): 0.014 Background Pk Height (A): 0.022
Blank Corrected Pk Area (A-s): 0.007
Concentration (mg/L): 0.0023 Corrected Conc (ppm): 0.0023



Mean Conc (mg/L): 0.0023 SD: 0.00000 RSD(%): 0.04
Corrected Conc (ppm): 0.0023

As ID: 2964-5 F=1 Seq. No.: 00028 A/S Pos.: 24 Date: 05/02/99

uL dispensed: 5 from 20, 20 from 24
Replicate 1 Time: 17:05
Peak Area (A-s): 0.011 Peak Height (A): 0.016
Background Pk Area (A-s): 0.015 Background Pk Height (A): 0.023
Blank Corrected Pk Area (A-s): 0.013
Concentration (mg/L): 0.0041 Corrected Conc (ppm): 0.0041



uL dispensed: 5 from 20, 20 from 24

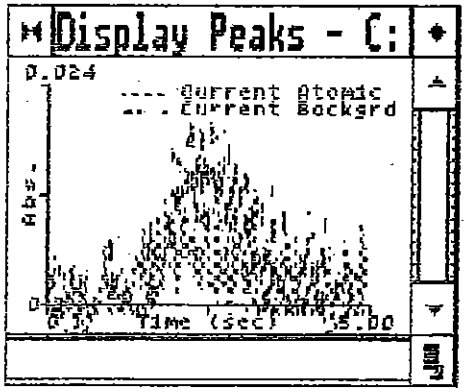
Replicate 2 | Time: 17:09

Peak Area (A-s): 0.013 | Peak Height (A): 0.015

Background Pk Area (A-s): 0.013 | Background Pk Height (A): 0.024

Blank Corrected Pk Area (A-s): 0.015

Concentration (mg/L): 0.0048 | Corrected Conc (ppm): 0.0048

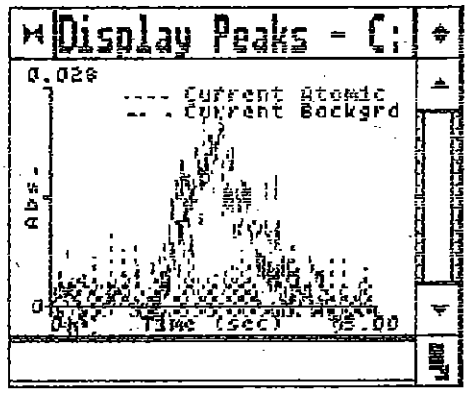


Mean Conc (mg/L): 0.0044 | SD: 0.00048 | RSD(%): 10.93

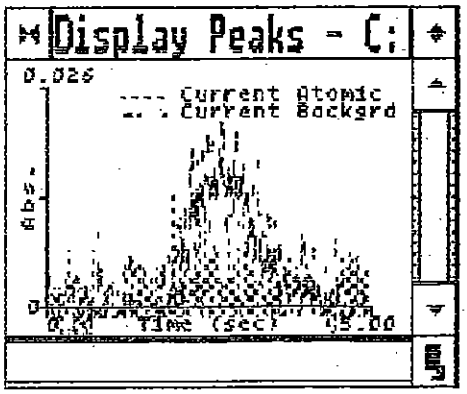
Corrected Conc (ppm): 0.0044

As ID: Z964-6 F=1 Seq. No.: 00029 A/S Pos.: 25 Date: 05/02/95

uL dispensed: 5 from 20, 20 from 25
Replicate 1 Time: 17:12
Peak Area (A-s): -0.001 Peak Height (A): 0.010
Background Pk Area (A-s): 0.014 Background Pk Height (A): 0.028
Blank Corrected Pk Area (A-s): 0.001
Concentration (mg/L): 0.0003 Corrected Conc (ppm): 0.0003



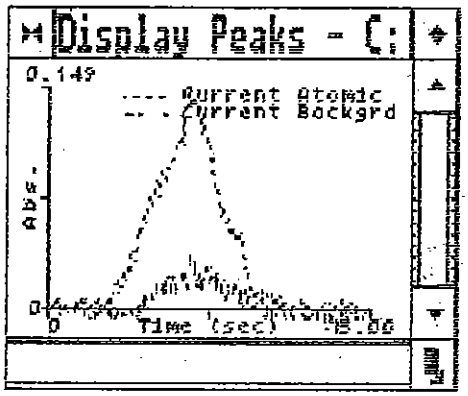
uL dispensed: 5 from 20, 20 from 25
Replicate 2 Time: 17:15
Peak Area (A-s): 0.003 Peak Height (A): 0.014
Background Pk Area (A-s): 0.012 Background Pk Height (A): 0.026
Blank Corrected Pk Area (A-s): 0.005
Concentration (mg/L): 0.0016 Corrected Conc (ppm): 0.0016



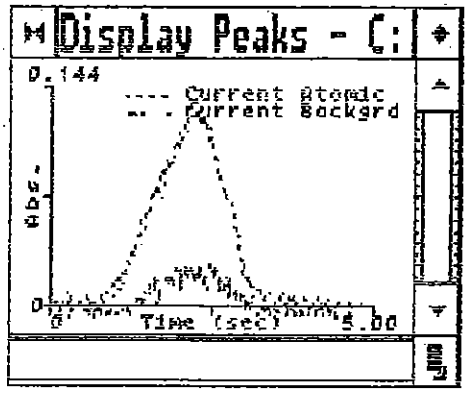
Mean Conc (mg/L): 0.0010 SD: 0.00093 RSD(%): 97.77
Corrected Conc (ppm): 0.0010

As ID: CCV A1474 Seq. No.: 00030 A/S Pos.: 40 Date: 05/02/99

uL dispensed: 5 from 20, 20 from 40
Replicate 1 Time: 17:18
Peak Area (A-s): 0.170 Peak Height (A): 0.149
Background Pk Area (A-s): 0.015 Background Pk Height (A): 0.035
Blank Corrected Pk Area (A-s): 0.172
Concentration (mg/L): 0.0545 Corrected Conc (ppm): ----------



uL dispensed: 5 from 20, 20 from 40
Replicate 2 Time: 17:21
Peak Area (A-s): 0.167 Peak Height (A): 0.144
Background Pk Area (A-s): 0.012 Background Pk Height (A): 0.032
Blank Corrected Pk Area (A-s): 0.169
Concentration (mg/L): 0.0536 Corrected Conc (ppm): ----------

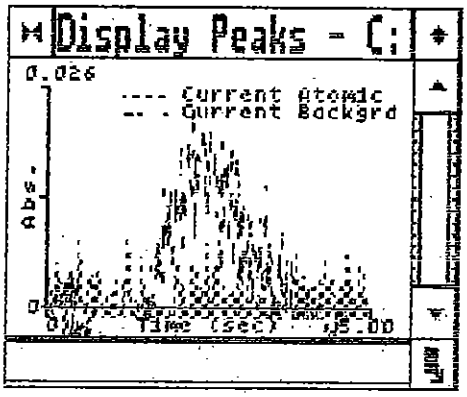


5521

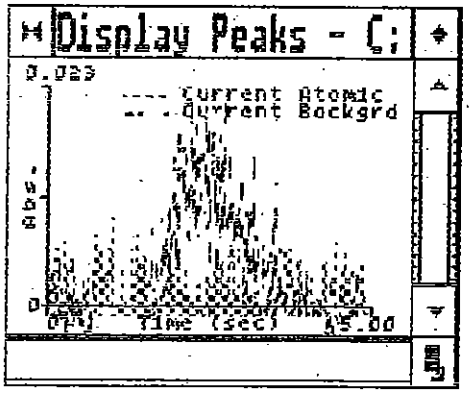
Mean Conc (mg/L): 0.0540 SD: 0.00069 RSD(%): 1.27
Corrected Conc (ppm): ----------

As ID: CCB Seq. No.: 00031 A/S Pos.: 1 Date: 05/02/99

uL dispensed: 5 from 20, 20 from 1
Replicate 1 Time: 17:24
Peak Area (A-s): -0.002 Peak Height (A): 0.009
Background Pk Area (A-s): 0.007 Background Pk Height (A): 0.026
Blank Corrected Pk Area (A-s): -0.000
Concentration (mg/L): -0.0001 Corrected Conc (ppm): ----------



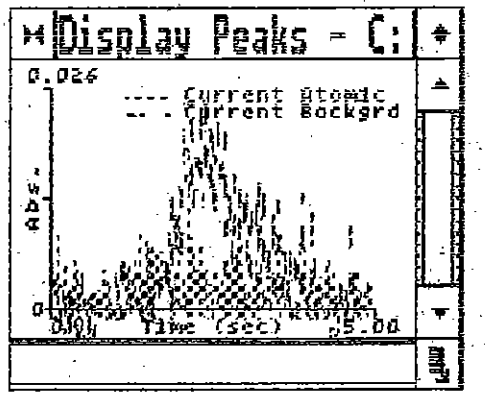
uL dispensed: 5 from 20, 20 from 1
Replicate 2 Time: 17:28
Peak Area (A-s): -0.000 Peak Height (A): 0.010
Background Pk Area (A-s): 0.003 Background Pk Height (A): 0.023
Blank Corrected Pk Area (A-s): 0.002
Concentration (mg/L): 0.0006 Corrected Conc (ppm): ----------



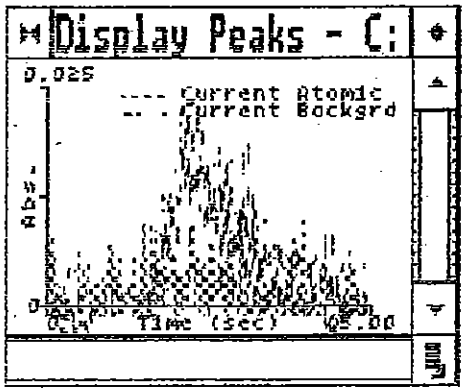
Mean Conc (mg/L): 0.0003 SD: 0.00046 RSD(%): 170.57
Corrected Conc (ppm): ----------

As ID: 2964-7 F=1 Seq. No.: 00032 A/S Pos.: 26 Date: 05/02/99

uL dispensed: 5 from 20, 20 from 26
Replicate 1 Time: 17:31
Peak Area (A-s): 0.006 Peak Height (A): 0.014
Background Pk Area (A-s): 0.017 Background Pk Height (A): 0.026
Blank Corrected Pk Area (A-s): 0.008
Concentration (mg/L): 0.0027 Corrected Conc (ppm): 0.0027



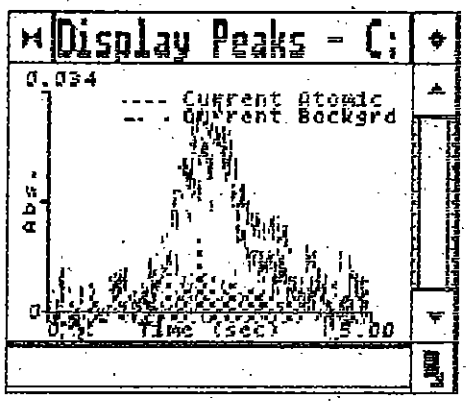
uL dispensed: 5 from 20, 20 from 26
Replicate 2 Time: 17:34
Peak Area (A-s): 0.006 Peak Height (A): 0.013
Background Pk Area (A-s): 0.013 Background Pk Height (A): 0.025
Blank Corrected Pk Area (A-s): 0.008
Concentration (mg/L): 0.0026 Corrected Conc (ppm): 0.0026



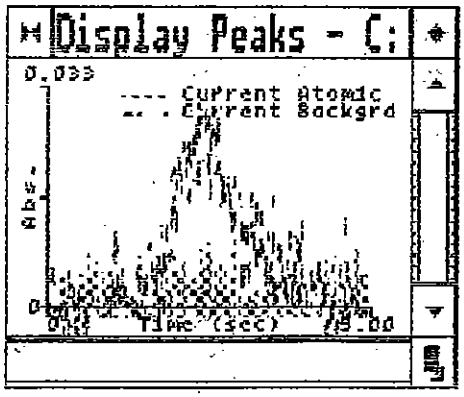
Mean Conc (mg/L): 0.0027 SD: 0.00003 RSD(%): 1.16
Corrected Conc (ppm): 0.0027

AS ID: 3015-1 F=1 Seq. No.: 00033 A/S Pos.: 27 Date: 03/02/99

uL dispensed: 5 from 20, 20 from 27
Replicate 1 Time: 17:37
Peak Area (A-s): -0.003 Peak Height (A): 0.012
Background Pk Area (A-s): 0.034 Background Pk Height (A): 0.034
Blank Corrected Pk Area (A-s): -0.000
Concentration (mg/L): -0.0001 Corrected Conc (ppm): -0.0001



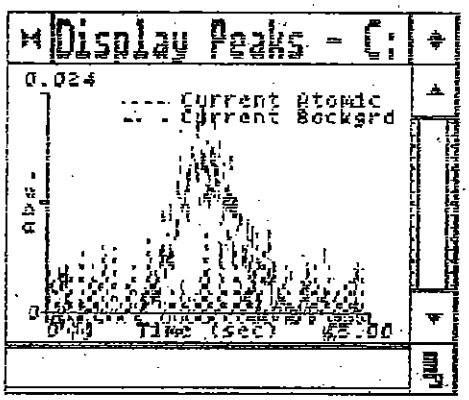
uL dispensed: 5 from 20, 20 from 27
Replicate 2 Time: 17:40
Peak Area (A-s): 0.002 Peak Height (A): 0.010
Background Pk Area (A-s): 0.030 Background Pk Height (A): 0.033
Blank Corrected Pk Area (A-s): 0.004
Concentration (mg/L): 0.0014 Corrected Conc (ppm): 0.0014



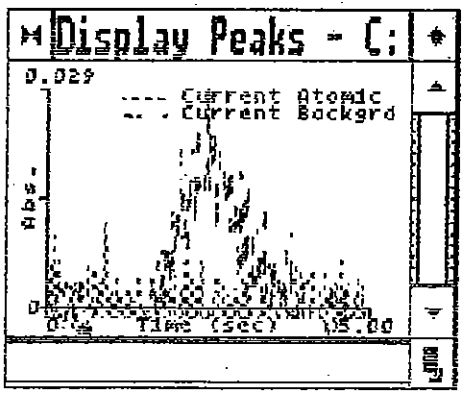
Mean Conc (mg/L): 0.0006 SD: 0.00108 RSD(%): 171.88
Corrected Conc (ppm): 0.0006

As ID: 3015-2 F=1 Seq. No.: 00034 A/S Pos.: 28 Date: 05/02/99

uL dispensed: 5 from 20, 20 from 28
Replicate 1 Time: 17:44
Peak Area (A-s): -0.002 Peak Height (A): 0.009
Background Pk Area (A-s): 0.006 Background Pk Height (A): 0.024
Blank Corrected Pk Area (A-s): 0.001
Concentration (mg/L): 0.0003 Corrected Conc (ppm): 0.0003



uL dispensed: 5 from 20, 20 from 28
Replicate 2 Time: 17:47
Peak Area (A-s): -0.002 Peak Height (A): 0.011
Background Pk Area (A-s): 0.008 Background Pk Height (A): 0.029
Blank Corrected Pk Area (A-s): 0.000
Concentration (mg/L): 0.0000 Corrected Conc (ppm): 0.0000

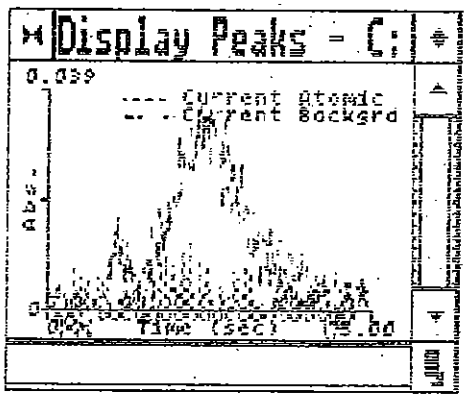


5525

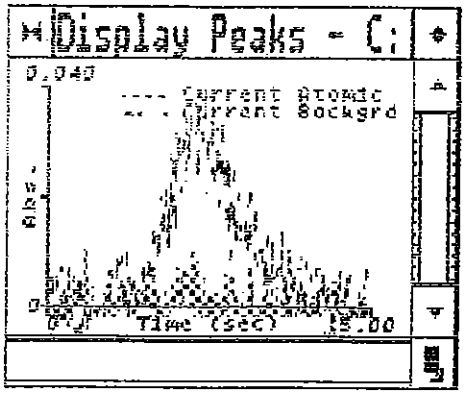
Mean Conc (mg/L): 0.0001 SD: 0.00017 RSD(%): 132.44
Corrected Conc (ppm): 0.0001

AS ID: 3015-3 F=1 Seq. No.: 00035 A/S Pos.: 29 Date: 05/02/99

uL dispensed: 5 from 20, 20 from 29
Replicate 1 Time: 17:50
Peak Area (A-s): -0.002 Peak Height (A): 0.012
Background Pk Area (A-s): 0.045 Background Pk Height (A): 0.039
Blank Corrected Pk Area (A-s): 0.000
Concentration (mg/L): 0.0001 Corrected Conc (ppm): 0.0001



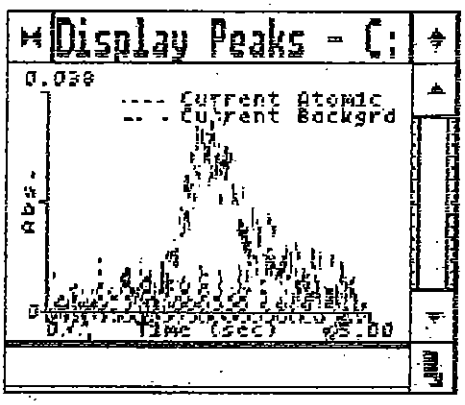
uL dispensed: 5 from 20, 20 from 29
Replicate 2 Time: 17:54
Peak Area (A-s): -0.001 Peak Height (A): 0.011
Background Pk Area (A-s): 0.041 Background Pk Height (A): 0.040
Blank Corrected Pk Area (A-s): 0.001
Concentration (mg/L): 0.0004 Corrected Conc (ppm): 0.0004



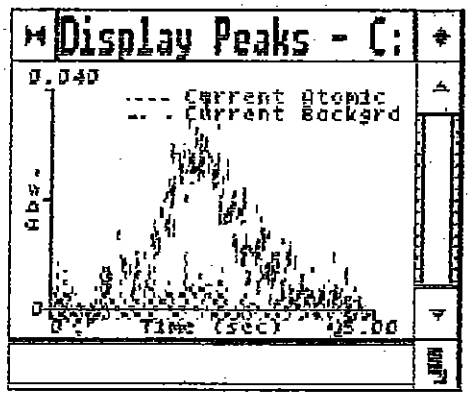
Mean Conc (mg/L): 0.0003 SD: 0.00016 RSD(%): 61.11
Corrected Conc (ppm): 0.0003

As ID: 3015-4 F=1 Seq. No.: 00036 A/S Pos.: 30 Date: 05/02/99

uL dispensed: 5 from 20, 20 from 30
Replicate 1 Time: 17:57
Peak Area (A-s): -0.002 Peak Height (A): 0.009
Background Pk Area (A-s): 0.035 Background Pk Height (A): 0.038
Blank Corrected Pk Area (A-s): -0.000
Concentration (mg/L): -0.0000 Corrected Conc (ppm): -0.0000



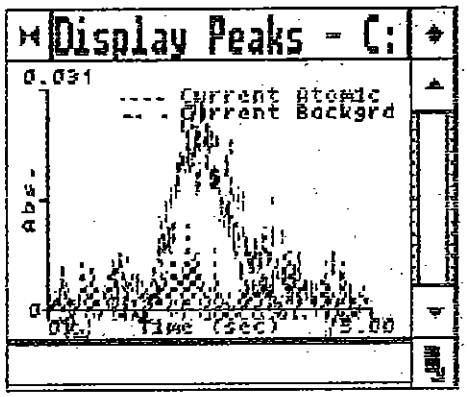
uL dispensed: 5 from 20, 20 from 30
Replicate 2 Time: 18:00
Peak Area (A-s): -0.002 Peak Height (A): 0.010
Background Pk Area (A-s): 0.041 Background Pk Height (A): 0.040
Blank Corrected Pk Area (A-s): 0.000
Concentration (mg/L): 0.0001 Corrected Conc (ppm): 0.0001



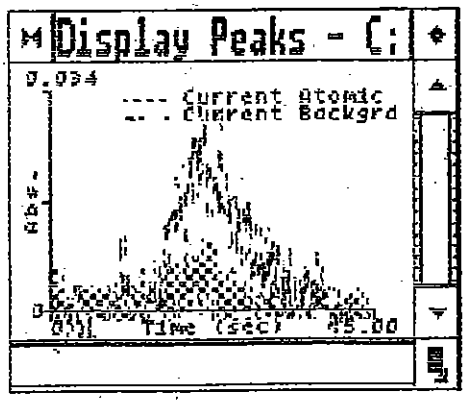
Mean Conc (mg/L): 0.0000 SD: 0.00007 RSD(%): 373.26
Corrected Conc (ppm): 0.0000

As ID: 3015-5 F=1 Seq. No.: 00037 A/S Pos.: 31 Date: 05/02/99

uL dispensed: 5 from 20, 20 from 31
Replicate 1 Time: 18:03
Peak Area (A-s): 0.003 Peak Height (A): 0.012
Background Pk Area (A-s): 0.022 Background Pk Height (A): 0.031
Blank Corrected Pk Area (A-s): 0.005
Concentration (mg/L): 0.0017 Corrected Conc (ppm): 0.0017



uL dispensed: 5 from 20, 20 from 31
Replicate 2 Time: 18:06
Peak Area (A-s): 0.004 Peak Height (A): 0.012
Background Pk Area (A-s): 0.024 Background Pk Height (A): 0.034
Blank Corrected Pk Area (A-s): 0.006
Concentration (mg/L): 0.0020 Corrected Conc (ppm): 0.0020

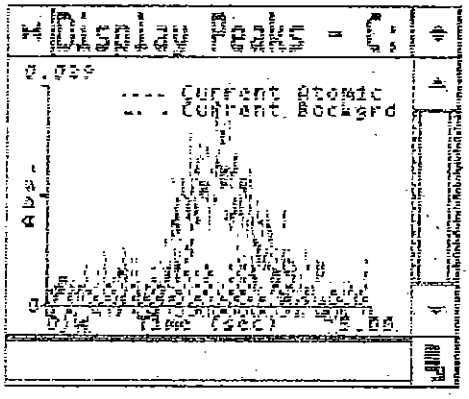


5528

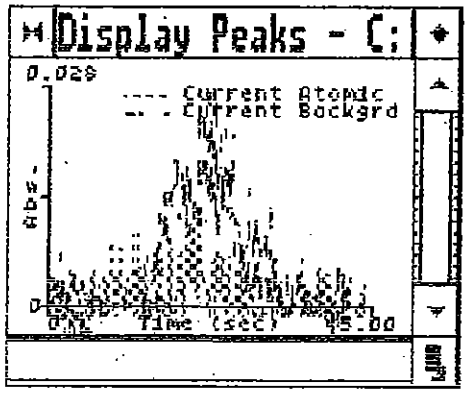
Mean Conc (mg/L): 0.0019 SD: 0.00020 RSD(%): 10.73
Corrected Conc (ppm): 0.0019

As ID: 3015-6 F=1 Seq. No.: 00038 A/S Pos.: 32 Date: 05/02/99

uL dispensed: 5 from 20, 20 from 32
Replicate 1 Time: 18:10
Peak Area (A-s): 0.001 Peak Height (A): 0.011
Background Pk Area (A-s): 0.016 Background Pk Height (A): 0.029
Blank Corrected Pk Area (A-s): 0.003
Concentration (mg/L): 0.0011 Corrected Conc (ppm): 0.0011



uL dispensed: 5 from 20, 20 from 32
Replicate 2 Time: 18:13
Peak Area (A-s): 0.003 Peak Height (A): 0.011
Background Pk Area (A-s): 0.013 Background Pk Height (A): 0.028
Blank Corrected Pk Area (A-s): 0.005
Concentration (mg/L): 0.0016 Corrected Conc (ppm): 0.0016

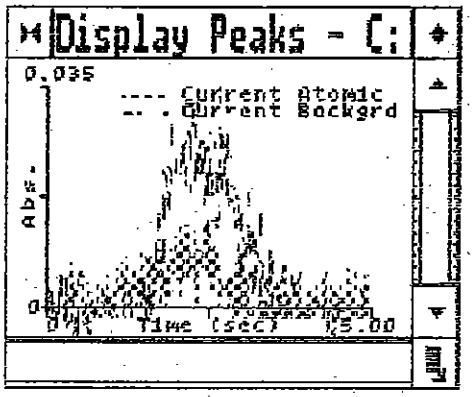


5529

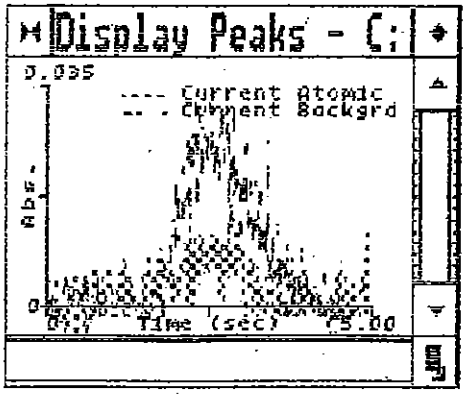
Mean Conc (mg/L): 0.0013 SD: 0.00034 RSD(%): 25.74
Corrected Conc (ppm): 0.0013

AS ID: 3015-7 F=1 Seq. No.: 00039 A/S Pos.: 33 Date: 05/02/99

uL dispensed: 5 from 20, 20 from 33
Replicate 1 Time: 18:16
Peak Area (A-s): 0.012 Peak Height (A): 0.014
Background Pk Area (A-s): 0.020 Background Pk Height (A): 0.035
Blank Corrected Pk Area (A-s): 0.014
Concentration (mg/L): 0.0045 Corrected Conc (ppm): 0.0045



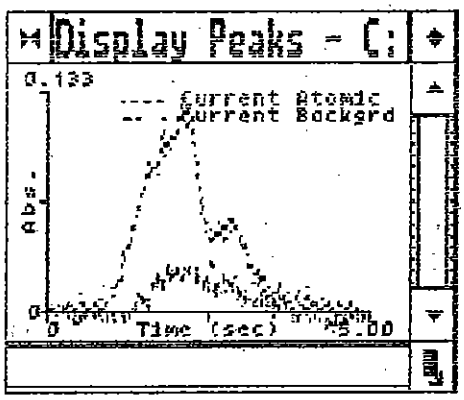
uL dispensed: 5 from 20, 20 from 33
Replicate 2 Time: 18:19
Peak Area (A-s): 0.010 Peak Height (A): 0.016
Background Pk Area (A-s): 0.026 Background Pk Height (A): 0.035
Blank Corrected Pk Area (A-s): 0.013
Concentration (mg/L): 0.0041 Corrected Conc (ppm): 0.0041



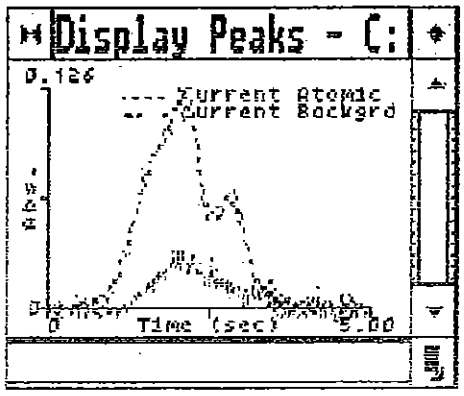
Mean Conc (mg/L): 0.0043 SD: 0.00030 RSD(%): 6.98
Corrected Conc (ppm): 0.0043

As ID: CCV A1474 Seq. No.: 00040 A/S Pos.: 40 Date: 05/02/99

uL dispensed: 5 from 20, 20 from 40
Replicate 1 Time: 18:22
Peak Area (A-s): 0.159 Peak Height (A): 0.133
Background Pk Area (A-s): 0.023 Background Pk Height (A): 0.036
Blank Corrected Pk Area (A-s): 0.161
Concentration (mg/L): 0.0512 Corrected Conc (ppm): ----------



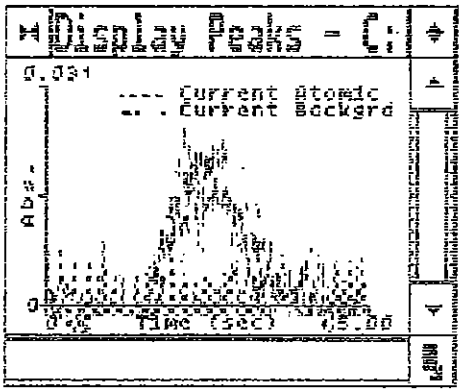
uL dispensed: 5 from 20, 20 from 40
Replicate 2 Time: 18:25
Peak Area (A-s): 0.158 Peak Height (A): 0.126
Background Pk Area (A-s): 0.026 Background Pk Height (A): 0.037
Blank Corrected Pk Area (A-s): 0.161
Concentration (mg/L): 0.0509 Corrected Conc (ppm): ----------



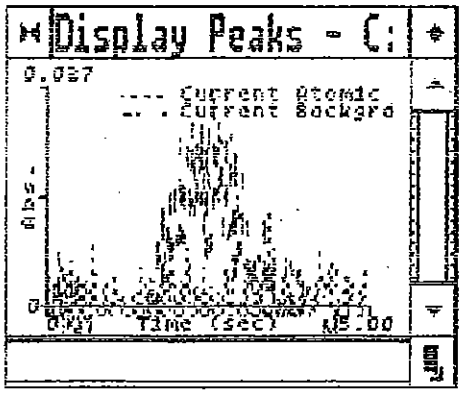
Mean Conc (mg/L): 0.0511 SD: 0.00020 RSD(%): 0.38
Corrected Conc (ppm):

As ID: CCB Seq. No.: 00041 A/S Pos.: 1 Date: 05/02/99

uL dispensed: 5 from 20, 20 from 1
Replicate 1 Time: 18:29
Peak Area (A-s): -0.002 Peak Height (A): 0.009
Background Pk Area (A-s): 0.011 Background Pk Height (A): 0.051
Blank Corrected Pk Area (A-s): 0.001
Concentration (mg/L): 0.0002 Corrected Conc (ppm): ----------



uL dispensed: 5 from 20, 20 from 1
Replicate 2 Time: 18:32
Peak Area (A-s): -0.003 Peak Height (A): 0.012
Background Pk Area (A-s): 0.006 Background Pk Height (A): 0.027
Blank Corrected Pk Area (A-s): -0.001
Concentration (mg/L): -0.0002 Corrected Conc (ppm): ----------



Mean Conc (mg/L): -0.0000 SD: 0.00027 RSD(%): 13152.19
Corrected Conc (ppm): ----------

Level C Data Package Deliverables

Wet Chemistry

Applied P & Ch Laboratory