

Metals Working Standard Prep Log

Date	Standard Name	Working Std Code	Stock Info		Preparation	
			Stock Std Code	Stock Concentration	Stock Concentration	Amount Taken from Stock
08-14-03	Dual-Dilutor Calib. Sol'n	MST030814H	MST030217G	Ce	1000 ppm	0.1 ml
			I	U		
			J	Rh		
			MST030217K	Hg		
			MST030710	C	10,000 ppm	0.02
08-14-03	2.00 µg pb mg	MST030814F	MST030402A		10 ppm	5
09-22-03	ICPMS - STD,	MST030922A	MST030922A	A	1 ppm	5
	- 100	B		B	100 ppm	25
	- 50	C		C	50 ppm	10
	- 10	D	MST030216D		10 ppm	5
	ICPMS - LCS;	E	MST030402B	MS 91603		
	- ICPMS @ 20	F	MST030922E		1 ppm	2.5
			MST030402A		10 ppm	5
09-23-03	ICPMS - STD,	MST030923A	MST030402B		1000 ppm	0.05
	- 20	B	MST030923A	A	1 ppm	5
	- 10	C		B	20 ppm	25
	- 5	D		C	10 ppm	25
	- 0.5	E		D	5 ppm	5
	ICPMS - LCS;	F	MST030216D		10 ppm	5
	- ICPMS @ 10	G	MST030923F		1000 ppm	0.05
					1 ppm	0.5

Metals Working Standard Prep Log

Date	Standard Name	Working Std Code	Stock Info		Preparation	
			Stock Std Code	Stock Concentration	Stock Concentration	Amount Taken from Stock
7-11-03	ICPMS - 5	HST030711D	HST030711	10 ppb	10 ppb	25
	I -0.5	E		5 ppb	5 ppb	5
	ICPMS - LCS1	-FG	HST021216B HST021216B	1000 ppm 10 ppm	1000 ppm 10 ppm	0.05 5
	I - IWLKCC@10	H	HST030711	1 ppm	1 ppm	0.5
7-15-03	ICPMS Tuning Stock Sol'n	HST030715A	HST-010523E	1000 ppm	1000 ppm	0.5
			HST030414H			
			HST030217J			
			HST030414E			
			HST030414C			
			HST030217G			
			HST030414F			
			HST030414D			
			HST030414G			
			HST030217H			
			HST030217I			
			HST030217E			
7-16-03	10 ppb Tuning Solution	HST030716A	HST030715A	1 ppm	1 ppm	10
7-16-03	ICPMS - STD,	HST030716B	HST030402A HST030402B	10 ppm 1000 ppm	10 ppm 1000 ppm	5 0.05
	I -20	C	HST030716B	1 ppm	1 ppm	1
	I -10	D	I C	20 ppb	20 ppb	25

Metals Working Standard Prep Log

Date	Standard Name	Working Std Code	Stock Info		Preparation	
			Stock Std Code	Stock Concentration	Stock Concentration	Amount Taken from Stock
08-14-03	ICPMS - LCS ₁	HST030814 F	HST021216 D	10 ppm	1000 ppm	5
	I - Iw/cw@10	T G	HST030814 F	1 ppm	1 ppm	0.5
08-15-03	ICPMS - STD ₁	HST030815 A	HST030402 A	10 ppm	10 ppm	5
	- 10	B	HST030815 A	1 ppm	1 ppm	0.5
	- 7.5	C	B	10 ppb	10 ppb	37.5
	- 5	D	C	7.5 ppb	7.5 ppb	20
	ICPMS - LCS ₁	E	HST021216 D	10 ppm	10 ppm	5
	I - Iw/cw@5	F	HST030815 E	1 ppm	1 ppm	0.25
08-15-03	ICPMS - Internal Standard	HST030815 G	HST030217 A Li	1000 ppm	1000 ppm	1 mL
			B Ge			
			C Tb			
			D Sc			
			E In			
			F Tm			
08-19-03	ICPMS - STD ₁	HST030819 A	HST030402 A	10 ppm	10 ppm	5
	- 20	B	HST030819 A	1 ppm	1 ppm	1
	- 10	C	B	20 ppb	20 ppb	15
	- 5	D	C	10 ppb	10 ppb	15
	- 0.25	E	D	5 ppb	5 ppb	5
	ICPMS - LCS ₁	F	HST021216 D	10 ppm	10 ppm	5

Metals Working Standard Prep Log

Preparation		Expiration Dates		Comments	Initials
Final Vol. (ml)	Final Conc. (ug/ml)	Diluent Matrix (ie H ₂ O)	Working STD * Exp Date		
50	1 ppm	DI H ₂ O + 2% HNO ₃	11-12-03	benen	WS
↓	10 ppb	↓	11-13-03	↓	↓
50	1 ppm	DI H ₂ O + 2% HNO ₃	↓	benen	WS
↓	10 ppb	↓	↓	↓	↓
↓	7.5 ppb	↓	↓	↓	↓
30	5 ppb	↓	↓	↓	↓
50	1 ppm	↓	↓	benen	↓
↓	5 ppb	↓	↓	↓	↓
100 ml	10 ppm	DI H ₂ O + 2% HNO ₃	11-13-03	High purity	WS
↓	↓	↓	↓	↓	↓
↓	↓	↓	↓	↓	↓
↓	↓	↓	↓	↓	↓
50	1 ppm	DI H ₂ O + 2% HNO ₃	11-17-03	benen	WS
↓	20 ppb	↓	↓	↓	↓
↓	10 ppb	↓	↓	↓	↓
↓	5 ppb	↓	↓	↓	↓
↓	0.5 ppb	↓	↓	↓	↓
↓	1 ppm	↓	↓	benen	↓

0075

ICP-MS : Turbidity Check and Sample Preparation Log

Date Read / Digested: 9/23/03

QC Number:

Method (Circle one): 200.8 Matrix (Circle one):
 1) Drinking Water
 2) Ground Water
 3) Liquid
 4) Soil
 5) Solid
 6) Other water

100 NTU: 10 NTU
 Std Code: SL-0022
 Initials: NS

Acid Lot #
 Hydrochloric N/A
 Nitric N/A

Sample ID	Turbidity Result *	Sample Wt./Vol.	Spike/LCS Amt. Added	Spike/LCS Conc. (ppm)	Spike Code	Final Vol (ml)	Initials	Comments
MS 064877-005A	-0.01	10	0.10ml	1 ppm	HST030923A	10	NS	
MSD	I	I	I	I	I	I	I	
Method Blank	-	I	I	I	I	I	I	
LCS	-	I	0.10ml	1 ppm	HST030923F	I	I	
Blank MS	X	X	X	X	X	X	X	
Blank MSD	X	X	X	X	X	X	X	
1 064876-001A	-0.06	10				10	NS	
2 -002A	-0.08	I	I	I	I	I	I	
3 -003A	-0.17	I	I	I	I	I	I	
4 -004A	-0.08	I	I	I	I	I	I	
5 -005A	-0.06	I	I	I	I	I	I	
6 -006A	-0.10	I	I	I	I	I	I	
7 -007A	-0.08	I	I	I	I	I	I	
8 -008A	-0.08	I	I	I	I	I	I	
9 064877-001A	-0.11	I	I	I	I	I	I	
10 -002A	-0.09	I	I	I	I	I	I	
11 -003A	-0.09	I	I	I	I	I	I	
12 -004A	-0.09	I	I	I	I	I	I	
13 -005A	-0.01	I	I	I	I	I	I	
14 -006A	-0.03	I	I	I	I	I	I	
15 -007A	-0.11	I	I	I	I	I	I	
16 -008A	-0.01	I	I	I	I	I	I	
17 -009A	-0.04	I	I	I	I	I	I	
18	X	X	X	X	X	X	X	
19 064877-002A	-0.09	10				10	NS	
20 064877-005A	-0.03	I	I	I	I	I	I	

* Turbidity < 1 NTU DOES NOT need sample preparation.

Applied P & Ch Laboratory

13760 Magnolia Ave. Chino CA 91710

Tel: (909) 590-1828 Fax: (909) 590-1498

Submitted to:

GEOFON, Inc.

Attention: Brad Shojaee

22632 Golden Spring Dr Ste 270

Diamond Bar CA 91765

Tel: (909)396-7662 Fax: (909)396-1455

APCL Analytical Report

Service ID #: 801-034948

Received: 08/25/03

Collected by:

Extracted: N/A

Collected on: 08/25-27/03

Tested: N/A

Reported: 10/15/03

Sample Description: Water

Project Description: 04-4428.10 JPL

Analysis of Water Samples

Component Analyzed	Method	Unit	PQL	Analysis Result		
				DUPE-6-3-Q03	MW-5	MW-6
				03-04948-1	03-04948-2	03-04948-3
CHROMIUM ^(a)			0.0			

Component Analyzed	Method	Unit	PQL	Analysis Result		
				MW-7	MW-8	MW-10
				03-04948-4	03-04948-5	03-04948-6
CHROMIUM ^(a)						

Component Analyzed	Method	Unit	PQL	Analysis Result		
				MW-13	MW-15	MW-16
				03-04948-7	03-04948-8	03-04948-9
CHROMIUM ^(a)						

PQL: Practical Quantitation Limit. MDL: Method Detection Limit. CRDL: Contract Required Detection Limit


N.D.: Not Detected or less than the practical quantitation limit. "-": Analysis is not required.

J: Reported between PQL and MDL.

Listed Dilution Factors (DF) are relative to the method default DF. All unlisted DFs are 1.0

^(a) Subcontracted to ATL Inc. See attached.

Respectfully submitted,



Dominic Lau
Laboratory Director
Applied P & Ch Laboratory



INCORPORATED
 22632 GOLDEN SPRINGS DR., SUITE 270
 DIAMOND BAR, CA 91765 • (909) 396-7662 • FAX (909) 396-1455

CHAIN-OF-CUSTODY RECORD

LABORATORY COPY

Shallos Wells

0055

Item	Sample Identifier	Matrix	Date	Time	Preserved	# of Cont.	QC Level	T.A.T	Analyses			Comments
									327.2 (VOC)	315.0 (Pesticides)	200.8 (Total Chloro)	
1	HU-10	H ₂ O	8/25/03	0746	5	III	Normal	X	X	X		
2	HU-8		0934					X	X	X		
3	HU-5 8-25-03		1117					X	X	X		
4	IB-8-8-25-03				2			X				
5												
6												
7												
8												
9												
10												

8.25.03

COOLER TEMPERATURE UPON RECEIPT

SAMPLE'S CONDITION UPON RECEIPT

RECEIVED BY: *S. Robinson* DATE: 8-25-03 TIME: 12:15

RECEIVED BY: *S. Robinson* DATE: 8-25-03 TIME: 1:19:00

LABORATORY SERVICE ID: —

LABORATORY CONTACT: Kenny Chen

LABORATORY PHONE: 909 598 1828

LABORATORY FAX: 909 590 1498

LABORATORY ADDRESS: 13760 Magnolia Ave.

CITY, STATE AND ZIP CODE: Chino, CA 91110

MAIL REPORT (COMPANY NAME): Geofon, Inc.

RECIPIENT NAME: Tony Ford

ADDRESS: 22632 Golden Spr. Av.

CITY, STATE AND ZIP CODE: Diamond Bar, CA 91765

#270

Distribution: White - Laboratory (To be returned with Analytical Report); Goldenrod - Project File; Yellow - Project Data Manager



INCORPORATED
22632 GOLDEN SPRINGS DR., SUITE 270
DIAMOND BAR, CA 91765 • (909) 396-7662 • FAX (909) 396-1455

CHAIN-OF-CUSTODY RECORD

LABORATORY COPY

SMALLOW WELLS

Item	Sample Identifier	Matrix	Date	Time	Preserved	# of Cont	QC Level	T.A.T	Analyses	Comments
GEOPON LAB COORDINATOR: LAB COORDINATOR'S PHONE: LAB COORDINATOR'S FAX: PROJECT NAME: PROJECT LOCATION: PROJECT PHONE NUMBER: PROJECT FAX: PROJECT CONTACT: PROJECT PHONE NUMBER: PROJECT FAX: PROJECT ADDRESS: CITY, STATE AND ZIP CODE: CLIENT: PROJECT MANAGER: PROJECT MANAGER'S PHONE: PROJECT MANAGER'S FAX: PROJECT MANAGER: PROJECT MANAGER'S PHONE: PROJECT MANAGER'S FAX:										
1	H2O-13	H2O	8/26/03	0910	5	III	NORMAL	X	X	X
2	H2O-16		0921					X	X	X
3	H2O-7		11/17					X	X	X
4	H2O									
5	TR-9-8-26-03	H2O			2			X		
6										
7										
8										
9										
10										
SAMPLES COLLECTED BY: <u>Bob Williamson</u> 8/26/03 COURIER AND AIR BILL NUMBER: RELINQUISHED BY: <u>Bob Williamson</u> 8/26/03 RECEIVED BY: <u>Shirley Peterson</u> <u>Shirley Peterson</u> 8/26/03 1552 DATE: 8/26/03 TIME: 0912 COOLER TEMPERATURE UPON RECEIPT: SAMPLE'S CONDITION UPON RECEIPT:										

Distribution: White - Laboratory (To be returned with Analytical Report); Goldenrod - Project File; Yellow - Project Data Manager

1948

VOID ENTRY

MSLHNS

0056



INCORPORATED
22632 GOLDEN SPRINGS DR., SUITE 270
DIAMOND BAR, CA 91765 • (909) 396-7662 • FAX (909) 396-1455

CHAIN-OF-CUSTODY RECORD

LABORATORY COPY

SHALLOW WELLS

0057

Item	Sample Identifier	Matrix	Date	Time	Preserved	QC Level	T.A.T	Analyses	Comments
1	HWS-15	H70	8/21/03	0728	3/25	III	Normal	524.2 (NOGS)	
2	HWS-6-3-003		0729		2	IV		314.0 (Chromat)	
3	HWS-6		0926		5	III		196 (Hex Chrom)	
4	IB-10-8-27-03				2			200.8 (Total Chromium)	
5									
6									
7									
8									
9									
10									

4948

SAMPLES COLLECTED BY: W. Williamson REINQUISHED BY: W. Williamson COOLER AND AIR BILL NUMBER: 805103 0972

RECEIVED BY: Appan Wood DATE: 8/27/03 TIME: 11:23

COOLER TEMPERATURE UPON RECEIPT: _____ SAMPLE'S CONDITION UPON RECEIPT: _____

Distribution: White - Laboratory (To be returned with Analytical Report); Goldenrod - Project File; Yellow - Project Data Manager

LABORATORY SERVICE ID: _____ LABORATORY CONTACT: Kenny Chan MAIL REPORT (COMPANY NAME): GEOFON, INC

LABORATORY PHONE: (909) 590-1828 LABORATORY FAX: (909) 590-1455 RECIPIENT NAME: Tony Ford

LABORATORY ADDRESS: 13760 Magnolia Ave ADDRESS: 22632 Golden Springs Dr. # 270

CITY, STATE AND ZIPCODE: Chico, CA 91710 CITY, STATE AND ZIPCODE: Diamond Bar, CA. 91765

PROJECT NAME: Brad Shojaee LAB COORDINATOR'S PHONE: (909) 396-7662 LAB COORDINATOR'S FAX: (909) 396-1455

PROJECT LOCATION: HWS-15 + HWS-6 PROJECT NUMBER: 64-4428.10

PROJECT CONTACT: J. Robinson PROJECT PHONE NUMBER: (909) 295-9884 PROJECT FAX: (909) 396-1455

PROJECT ADDRESS: 4800 Oak Grove Dr. CITY, STATE AND ZIPCODE: Pasadena, CA. CLIENT: US NAVY EMDR

PROJECT MANAGER: Asia Fabean PROJECT MANAGER'S PHONE: (909) 396-7662 PROJECT MANAGER'S FAX: (909) 396-1455

Applied P & Ch Laboratories
Project: JPL, #4948

ATL Work Order: 064877

0001



Advanced Technology
Laboratories

3275 Walnut Avenue Signal Hill, CA 90755 Tel: 562 989-4045 Fax: 562 989-4040

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ATL Work Order: 064877

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0002



CLIENT: Applied P & Ch Laboratories
Project: JPL, #4948
Lab Order: 064877

CASE NARRATIVE

Results were J-Flag. "J" is used to flag those results that are between the PQL (Practical Quantitation Limit) and the calculated MDL (Method Detection Limit). Results that are "J" flagged are estimated values since it becomes difficult to accurately quantitate the analyte near the MDL.



Applied P & Ch Laboratory

13760 Magnolia Ave. Chino CA 91710
 Tel: (909) 590-1828 Fax: (909) 590-1498

Subcontract Chain of Custody

Please Print in pen Page 1 of 1

Subcontract Lab: ATL Contact: Michelle Ayada Tel #: 562/989-4045 Fax #: 562/989-4040
 Address: 3275 Walnut Ave City: Signal Hill State: CA Zip code: 90827
 APCL Client: # 4948 APCL Contact: Kenny Chan
 Project Name/Code: JPL Job # _____
 BILL TO APCL Sub Quotation # _____

Due Date: Regular Rush: ___ days ___ hours Sampled by: _____

Field Sample ID No.	Sample Description	Date Time Collected	Sample Matrix	Preservation	# of Containers	Analysis Items	Remarks
MW-10		8/24/03 0746	W	HAND3	1		
MW-8		↓					
MW-5		0934					
MW-13		↓					
MW-16		8/24/03 0740					
MW-7		↓					
MW-15		0921			2		
		↓					
Sample 6-3-003		1147					
MW-6		8/26/03 0703					
		↓					
		0729					
		↓					
		0906					

QC Requirement: Regular; QA/QC Report; WIP; Raw Data; Extended Raw Data CLP; ACE AFCEE NEESA (E, C or D); Other _____ (Please specify)

Sample Disposal: Return Disposal by APCL Hold for ___ days after receiving date. Broken; None. Tag # _____

Sample Conditions: Intact; Broken. Cooler Seal: Intact; Broken; Room Temperature: Room Cold (____ °C)

Relinquished by S. Burbanks Date/Time 8/27/03 11:30 Received by [Signature] Date/Time 8/27/03 11:12
 Relinquished by _____ Date/Time _____ Received by _____ Date/Time _____

APCL USE ONLY Service # _____ Note: _____

Client understands that all terms described in the proposals, quotations for this project, and/or the general terms provided in the current APCL price schedules will be followed. APCL reserves the right to terminate its service or withhold delivery of any reports, if in APCL's sole discretion the terms of the project have been broken.
 APCL Form 4-101, Ver. 4.0, Jan. 97

CLIENT: Applied P & Ch Laboratories
Project: JPL, #4948
Lab Order: 064877
Contract No:

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Matrix	Collection Date	Date Received	Date Reported
064877-001A	MW-10	Water	8/25/2003	9/22/2003	9/26/2003
064877-002A	MW-8	Water	8/25/2003	9/22/2003	9/26/2003
064877-003A	MW-5	Water	8/25/2003	9/22/2003	9/26/2003
064877-004A	MW-13	Water	8/26/2003	9/22/2003	9/26/2003
064877-005A	MW-16	Water	8/26/2003	9/22/2003	9/26/2003
064877-006A	MW-7	Water	8/26/2003	9/22/2003	9/26/2003
064877-007A	MW-15	Water	8/27/2003	9/22/2003	9/26/2003
064877-008A	Dupe-6-3-Q03	Water	8/27/2003	9/22/2003	9/26/2003
064877-009A	MW-6	Water	8/27/2003	9/22/2003	9/26/2003



Method 200.8

Advanced Technology Laboratories

Date: 26-Sep-03

CLIENT: Applied P & Ch Laboratories
Lab Order: 064877
Project: JPL, #4948
Lab ID: 064877-001A

Client Sample ID: MW-10
Collection Date: 8/25/2003 7:46:00 AM
Matrix: WATER

Analyte	Result	Qual	MDL	PQL	Units	DF	Date Analyzed
ICP-MS METALS			EPA 200.8			Analyst: NS	
RunID: ICP4_030923B	QC Batch: R31161			PrepDate:			
Chromium	11		0.11	1.0	µg/L	1	9/23/2003 1:14:18 PM

Qualifiers: ND - Not Detected at the Reporting Limit S - Spike Recovery outside accepted recovery limits
J - Analyte detected below quantitation limits R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank E - Value above quantitation range
* - Value exceeds Maximum Contaminant Level H-Samples exceed holding time

Results are wet unless otherwise specified

0008



Advanced Technology Laboratories

Date: 26-Sep-03

CLIENT: Applied P & Ch Laboratories

Client Sample ID: MW-8

Lab Order: 064877

Project: JPL, #4948

Collection Date: 8/25/2003 9:34:00 AM

Lab ID: 064877-002A

Matrix: WATER

Analyte	Result	Qual	MDL	PQL	Units	DF	Date Analyzed
ICP-MS METALS			EPA 200.8			Analyst: NS	
RunID: ICP4_030923B	QC Batch: R31161			PrepDate:			
Chromium	3.6		0.11	1.0	µg/L	1	9/23/2003 1:16:50 PM

Qualifiers: ND - Not Detected at the Reporting Limit S - Spike Recovery outside accepted recovery limits
J - Analyte detected below quantitation limits R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank E - Value above quantitation range
* - Value exceeds Maximum Contaminant Level H-Samples exceed holding time

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Results are wet unless otherwise specified

0009



Advanced Technology Laboratories

Date: 26-Sep-03

CLIENT: Applied P & Ch Laboratories
Lab Order: 064877
Project: JPL, #4948
Lab ID: 064877-003A

Client Sample ID: MW-5
Collection Date: 8/25/2003 11:17:00 AM
Matrix: WATER

Analyte	Result	Qual	MDL	PQL	Units	DF	Date Analyzed
ICP-MS METALS			EPA 200.8			Analyst: NS	
RunID: ICP4_030923B	QC Batch: R31161			PrepDate:			
Chromium	3.1		0.11	1.0	µg/L	1	9/23/2003 1:21:58 PM

Qualifiers: ND - Not Detected at the Reporting Limit S - Spike Recovery outside accepted recovery limits
J - Analyte detected below quantitation limits R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank E - Value above quantitation range
* - Value exceeds Maximum Contaminant Level H-Samples exceed holding time

Results are wet unless otherwise specified



Advanced Technology Laboratories

Date: 26-Sep-03

CLIENT: Applied P & Ch Laboratories
Lab Order: 064877
Project: JPL, #4948
Lab ID: 064877-004A

Client Sample ID: MW-13
Collection Date: 8/26/2003 7:40:00 AM
Matrix: WATER

Analyte	Result	Qual	MDL	PQL	Units	DF	Date Analyzed
ICP-MS METALS			EPA 200.8			Analyst: NS	
RunID: ICP4_030923B	QC Batch: R31161			PrepDate:			
Chromium	8.5		0.11	1.0	µg/L	1	9/23/2003 1:24:32 PM

Qualifiers: ND - Not Detected at the Reporting Limit S - Spike Recovery outside accepted recovery limits
J - Analyte detected below quantitation limits R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank E - Value above quantitation range
* - Value exceeds Maximum Contaminant Level H-Samples exceed holding time

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Results are wet unless otherwise specified

0011



Advanced Technology Laboratories

Date: 26-Sep-03

CLIENT: Applied P & Ch Laboratories
Lab Order: 064877
Project: JPL, #4948
Lab ID: 064877-005A

Client Sample ID: MW-16
Collection Date: 8/26/2003 9:21:00 AM
Matrix: WATER

Analyte	Result	Qual	MDL	PQL	Units	DF	Date Analyzed
ICP-MS METALS			EPA 200.8		Analyst: NS		
RunID: ICP4_030923B	QC Batch: R31161			PrepDate:			
Chromium	2.7		0.11	1.0	µg/L	1	9/23/2003 1:27:03 PM

Qualifiers: ND - Not Detected at the Reporting Limit S - Spike Recovery outside accepted recovery limits
J - Analyte detected below quantitation limits R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank E - Value above quantitation range
* - Value exceeds Maximum Contaminant Level H-Samples exceed holding time

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Results are wet unless otherwise specified

0012



Advanced Technology Laboratories

Date: 26-Sep-03

CLIENT: Applied P & Ch Laboratories
Lab Order: 064877
Project: JPL, #4948
Lab ID: 064877-006A

Client Sample ID: MW-7
Collection Date: 8/26/2003 11:47:00 AM
Matrix: WATER

Analyte	Result	Qual	MDL	PQL	Units	DF	Date Analyzed
ICP-MS METALS			EPA 200.8			Analyst: NS	
RunID: ICP4_030923B	QC Batch: R31161			PrepDate:			
Chromium	4.6		0.11	1.0	µg/L	1	9/23/2003 1:31:58 PM

Qualifiers: ND - Not Detected at the Reporting Limit S - Spike Recovery outside accepted recovery limits
J - Analyte detected below quantitation limits R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank E - Value above quantitation range
* - Value exceeds Maximum Contaminant Level H-Samples exceed holding time

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Results are wet unless otherwise specified

0013



Advanced Technology Laboratories

Date: 26-Sep-03

CLIENT: Applied P & Ch Laboratories
Lab Order: 064877
Project: JPL, #4948
Lab ID: 064877-007A

Client Sample ID: MW-15
Collection Date: 8/27/2003 7:23:00 AM
Matrix: WATER

Analyte	Result	Qual	MDL	PQL	Units	DF	Date Analyzed
ICP-MS METALS			EPA 200.8		Analyst: NS		
RunID: ICP4_030923B	QC Batch: R31161			PrepDate:			
Chromium	3.9		0.11	1.0	µg/L	1	9/23/2003 1:34:26 PM

Qualifiers: ND - Not Detected at the Reporting Limit S - Spike Recovery outside accepted recovery limits
J - Analyte detected below quantitation limits R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank E - Value above quantitation range
* - Value exceeds Maximum Contaminant Level H-Samples exceed holding time

Page 7 of 9

Results are wet unless otherwise specified

0014



Advanced Technology Laboratories

Date: 26-Sep-03

CLIENT: Applied P & Ch Laboratories
Lab Order: 064877
Project: JPL, #4948
Lab ID: 064877-008A

Client Sample ID: Dupe-6-3-Q03
Collection Date: 8/27/2003 7:29:00 AM
Matrix: WATER

Analyte	Result	Qual	MDL	PQL	Units	DF	Date Analyzed
ICP-MS METALS			EPA 200.8			Analyst: NS	
RunID: ICP4_030923B	QC Batch: R31161			PrepDate:			
Chromium	3.6		0.11	1.0	µg/L	1	9/23/2003 1:36:55 PM

Qualifiers: ND - Not Detected at the Reporting Limit S - Spike Recovery outside accepted recovery limits
J - Analyte detected below quantitation limits R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank E - Value above quantitation range
* - Value exceeds Maximum Contaminant Level H-Samples exceed holding time

Page 8 of 9

Results are wet unless otherwise specified

0015



Advanced Technology Laboratories

Date: 26-Sep-03

CLIENT: Applied P & Ch Laboratories
Lab Order: 064877
Project: JPL, #4948
Lab ID: 064877-009A

Client Sample ID: MW-6
Collection Date: 8/27/2003 9:06:00 AM
Matrix: WATER

Analyte	Result	Qual	MDL	PQL	Units	DF	Date Analyzed
ICP-MS METALS			EPA 200.8		Analyst: NS		
RunID: ICP4_030923B	QC Batch: R31161			PrepDate:			
Chromium	6.6		0.11	1.0	µg/L	1	9/23/2003 1:44:33 PM

Qualifiers: ND - Not Detected at the Reporting Limit S - Spike Recovery outside accepted recovery limits
J - Analyte detected below quantitation limits R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank E - Value above quantitation range
* - Value exceeds Maximum Contaminant Level H-Samples exceed holding time

Page 9 of 9

Results are wet unless otherwise specified

0016





Advanced Technology Laboratories

Date: 26-Sep-03

CLIENT: Applied P & Ch Laboratories
Work Order: 064877
Project: JPL, #4948

ANALYTICAL QC SUMMARY REPORT

TestCode: 200.8_W

Table with 12 columns: Sample ID, Client ID, Analyte, Chromium, SampType, Batch ID, Result, PQL, SPK value, SPK Ref Val, Units, %REC, LowLimit, HighLimit, RPD Ref Val, %RPD, RPDLimit, Qual. Row 1: MB-R31161, ZZZZ, ND, 0.50, MBLK, R31161, ND, 0.50, 10, 0, 0.50, 100, 85, 115, 0, 0, 0.

Table with 12 columns: Sample ID, Client ID, Analyte, Chromium, SampType, Batch ID, Result, PQL, SPK value, SPK Ref Val, Units, %REC, LowLimit, HighLimit, RPD Ref Val, %RPD, RPDLimit, Qual. Row 1: LCS-R31161, ZZZZ, 10.01, 0.50, LCS, R31161, 10.01, 0.50, 10, 0, 0.50, 100, 85, 115, 0, 0, 0.

Table with 12 columns: Sample ID, Client ID, Analyte, Chromium, SampType, Batch ID, Result, PQL, SPK value, SPK Ref Val, Units, %REC, LowLimit, HighLimit, RPD Ref Val, %RPD, RPDLimit, Qual. Row 1: 064877-005AMS, MW-16, 10.73, 0.50, MS, R31161, 10.73, 0.50, 10, 2.674, 2.674, 80.6, 80, 120, 0, 0, 0.

Table with 12 columns: Sample ID, Client ID, Analyte, Chromium, SampType, Batch ID, Result, PQL, SPK value, SPK Ref Val, Units, %REC, LowLimit, HighLimit, RPD Ref Val, %RPD, RPDLimit, Qual. Row 1: 064877-005AMSD, MW-16, 10.58, 0.50, MSD, R31161, 10.58, 0.50, 10, 2.674, 2.674, 79.1, 80, 120, 10.73, 1.40, 20, S.

Table with 12 columns: Sample ID, Client ID, Analyte, Chromium, SampType, Batch ID, Result, PQL, SPK value, SPK Ref Val, Units, %REC, LowLimit, HighLimit, RPD Ref Val, %RPD, RPDLimit, Qual. Row 1: 064877-002ADUP, MW-8, 3.143, 1.0, DUP, R31161, 3.143, 1.0, 0, 0, 0, 0, 0, 0, 3.571, 12.7, 30.

Qualifiers: ND - Not Detected at the Reporting Limit; S - Spike Recovery outside accepted recovery limits; DO - Surrogate dilute out; J - Analyte detected below quantitation limits; B - Analyte detected in the associated Method Blank; H - Sample exceeded holding time; R - RPD outside accepted recovery limits; Calculations are based on raw values.

0017



CLIENT: Applied P & Ch Laboratories
Work Order: 064877
Project: JPL, #4948

ANALYTICAL QC SUMMARY REPORT

TestCode: 200.8_W

Sample ID: 064877-005ADUP	SampType: DUP	TestCode: 200.8_W	Units: µg/L	Prep Date:	Run ID: ICP4_030923B						
Client ID: MW-16	Batch ID: R31161	TestNo: EPA 200.8		Analysis Date: 9/23/2003	SeqNo: 465458						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	2.635	1.0	0	0	0	0	0	2.674	1.47	30	

Qualifiers: ND - Not Detected at the Reporting Limit
 J - Analyte detected below quantitation limits
 R - RPD outside accepted recovery limits
 S - Spike Recovery outside accepted recovery limits
 B - Analyte detected in the associated Method Blank
 DO - Surrogate dilute out
 H - Sample exceeded holding time
Calculations are based on raw values

0018

Test Code: 200.8_W
 Test Number: EPA 200.8
 Test Name: ICPMS METALS
 Matrix: Aqueous Units: µg/L

**METHOD DETECTION /
 REPORTING LIMITS**

Updated: 13-Feb-03

Type	Analyte	MDL	PQL
A	Aluminum	1.66	10
A	Antimony	0.0309	0.5
A	Arsenic	0.0309	1
A	Barium	0.0638	1
A	Beryllium	0.0349	0.5
A	Cadmium	0.0319	0.5
A	Calcium	10.5	50
A	Chromium	0.111	0.5
A	Cobalt	0.0353	0.5
A	Copper	0.0785	1
A	Iron	4.73	10
A	Lead	0.134	1
A	Magnesium	7.09	50
A	Manganese	0.216	1
A	Mercury	0.467	1
A	Molybdenum	0.0409	0.5
A	Nickel	0.0711	1
A	Potassium	8.66	50
A	Selenium	0.188	0.5
A	Silver	0.0377	0.5
A	Sodium	9.70	50
A	Thallium	0.0304	0.5
A	Tin	5.00	10
A	Vanadium	0.0606	1
A	Zinc	3.34	10



ATL Number: 064877

(EPA 200.8) - INITIAL CALIBRATION

Instrument ID: ICP4

Date(s) Analyzed: 09/23/03

Initial Calibration:

COMPOUND	INTENSITY				r2
	STD1	STD2	STD3	STD4	
CHROMIUM	14298	59237	109122	206489	0.999987

Standard Concentration	0.5 ppb	5 ppb	10 ppb	20 ppb
Standard ID:	MST030923E	MST030923D	MST030923C	MST030923B

Calibration Acceptance Criteria: > 0.995 Correlation

0020



ATL Number: 064877

(EPA 200.8) INITIAL AND CONTINUING CALIBRATION VERIFICATION
(EXTERNAL REFERENCE STANDARD)

Instrument ID: ICP4

Date Analyzed: 08/14/2003

Initial Calibration Verification:	<u>LEEMAN LABS</u>	<u>Standard Code:</u> <u>MST030923G</u>
Continuing Calibration Verification:	<u>LEEMAN LABS</u>	<u>MST030923G</u>

Concentration Units: ug/L

Analyte	Initial Calibration			Continuing Calibration				
	True	Found	%R(1)	True	Found CCV1	%R(1)	Found CCV2	%R(1)
Chromium	10.0	9.995	100	10.0	9.932	99	9.900	99

ICV Limits: 90 -110%
CCV Limits: 85 -115%



ATL Number: 064877

(EPA 200.8) INITIAL AND CONTINUING CALIBRATION VERIFICATION
(EXTERNAL REFERENCE STANDARD)

Instrument ID: ICP4

Date Analyzed: 09/23/2003

Initial Calibration Verification: Source: LEEMAN LABS Standard Code: MST030923G

Continuing Calibration Verification: LEEMAN LABS MST030923G

Concentration Units: ug/L

Analyte	Initial Calibration			Continuing Calibration				
	True	Found	%R(1)	True	Found CCV3	%R(1)	Found CCV4	%R(1)
Chromium	10.0	9.995	100	10.0	9.794	98	9.917	99

ICV Limits: 90 -110%
CCV Limits: 85 -115%

0022

ATL Number: 064877

(EPA 200.8) BLANK *

Instrument ID: ICP 4
Date Digested: N/A
Digestion Method: N/A

Dilution Factor: 1
Matrix: Water
Date Analyzed: 09/23/2003

QC Batch Number: R31161

Analyte	DLR	Initial Calib. Blank (ug/L)	C	Continuing Calibration Blank (ug/L)						Preparation Blank	C	M
				4	C	5	C	6	C			
Chromium	1	0.085		0.092						0.049		



ATL Number: 064877

Instrument ID: ICP4 Internal Standard ID: MSI030815G

Date Analyzed: 09/23/2003 Standard Concentration: 50 ug/L

QC Batch: R31161

Lab ID	Sample Description	Lithium		Sc		Ge		In		Terbium	
		Intensity	% Rec	Intensity	% Rec	Intensity	% Rec	Intensity	% Rec	Intensity	% Rec
	Calibration Blank	698771	---		---		---		---		---
MB-R31161				710116	102						
LCS-R31161				710058	102						
064876-001A				810683	116						
064876-002A				823788	118						
064876-003A				798816	114						
064876-004A				803457	115						
064876-005A				814129	117						
064876-006A				849817	122						
064876-007A				780987	112						
064876-008A				678523	97						
064877-001A				814895	117						
064877-002A				767143	110						
064877-003A				759470	109						
064877-004A				811005	116						
064877-005A				780936	112						
064877-006A				748101	107						
064877-007A				748466	107						
064877-008A				754225	108						
064877-009A				830176	119						

* Outside Acceptance Criteria
Acceptance Criteria: 60 - 125%



ICP-MS : Turbidity Check and Sample Preparation Log

Date Read / Digested: 9/23/03

QC Number: _____

Method (Circle one):

- 1) 200B
- 2) 3010A
- 3) 3050B
- 4) 3051

Turb. Calibration

100 NTU: 0.000
 Std Code: S.R. 0000
 Initials: NS

Matrix (Circle one):

- 1) Drinking Water
- 2) Ground Water
- 3) Liquid
- 4) Soil
- 5) Solid
- 6) Other Water

Acid Lot #

Hydrochloric N/A
 Nitric N/A

Sample ID	Turbidity Result *	Sample Wt./Vol.	Spike / LCS Amt. Added	Spike / LCS Conc. (ppm)	Spike Code	Final Vol (ml)	Initials	Comments
MS 064877-005A	-0.01	10	0.10ml	1 ppm	H5T030923A	10	NS	
MSD	I	I	I	I	I	I	I	
Method Blank	-	-	-	-	-	-	-	
LCS	-	-	0.10ml	1 ppm	H5T030923F	-	-	
Blank MS	X	X	X	X	X	X	X	
Blank MSD	X	X	X	X	X	X	X	
064876-001A	-0.06	10				10	NS	
-002A	-0.08							
-003A	-0.17							
-004A	-0.08							
-005A	-0.06							
-006A	-0.10							
-007A	-0.08							
-008A	-0.08							
064877-001A	-0.11							
-002A	-0.09							
-003A	-0.09							
-004A	-0.09							
-005A	-0.01							
-006A	-0.03							
-007A	-0.11							
-008A	-0.01							
-009A	-0.04							
064877-002A	-0.09	10				10	NS	
064877-005A	-0.03							

* Turbidity <1 NTU DOES NOT need sample preparation.

Sample/Batch Report

User Name: Nancy

Computer Name: ICPMS PE 6100

Sample File: D:\ELAN\Elan\data03\Sept\Sample\2003\September\092303-2.sam

Report Date/Time: Tuesday, September 23, 2003 14:36:11

A/S Loc.	Batch ID	Sample ID	Description	Sample Type	Init. Quant.	Prep. Vol.	Aliquot Vol.	Diluted Vol.	Solids Ratio
7		ICV							
1		ICB							
9		MB-							
10		LCS-	> R31161	NS 9/26/03					
11		064876-001A							
12		064876-002A							
13		064876-003A							
14		064876-004A	064876-004A	NS 9/26/03					
15		064876-005A							
16		064876-006A							
17		064876-007A							
18		064876-008A							
7		CCV							
8		CCB							
19		064877-001A							
20		064877-002A							
21		064877-002ADUP							
22		064877-003A							
23		064877-004A							
24		064877-005A							
25		064877-005ADUP							
26		064877-006A							
27		064877-007A							
28		064877-008A							
7		CCV							
8		CCB							
29		064877-009A							
30		064877-005AMS							
31		064877-005AMSD							
7		CCV							
8		CCB							
32		064877-005AMS							
7		CCV							
8		CCB							

CAL: MST030923 B/20
 C/10
 D/5
 E/0.5

IW/KW: MST030923G

LCS: MST030923F

MS/MED: MST030923A

ICP4

NS, 9/23/03

0028

Instrument Tuning Report

File Name: 092303.tun
File Path: D:\ELAN\Elandata03Sept\TUNING\2003\September

Analyte	Exact Mass	Meas. Mass	Mass DAC	Res. DAC	Meas. Pk. Width	Custom Res.
Be	9.012	9.026	2046	2040	0.708	
Mg	23.985	23.979	5706	2020	0.714	
Rh	102.905	102.879	24969	1965	0.706	
Ce	139.905	139.879	33967	2025	0.718	
Pb	207.977	207.979	50416	2270	0.733	
U	238.050	238.026	57616	2435	0.752	

ELAN Instrument Control Session

File Edit Analyt. Options Window Help



Data Only Method - c:\elandata\Method\ATL Methods 030217\ATL-TUNING250.mn

Timing Processing Equation Calibration Sampling Data

Storage / Reading: Est. Reading Time: 00:00:00
 Reading / Replicate: Est. Replicate Time: 00:00:00
 Replicates: Est. Sample Time: 00:00:00
 Timing File: Save...
 Optimization File: Print... Enable Shortcuts

	Analyte (M)	Start Mass (amu)	End Mass (amu)	Scan Mode (M)	MCA Channels	dwell Time per AMU (sec)	Int. (cps)
1		5	10	Scanning	20	20	4200
2		22	26	Scanning	20	20	3500
3		102	104	Scanning	20	20	2100
4		139	141	Scanning	20	20	2100
5		206	209	Scanning	20	20	2800

Tuning - D:\ELAN\elandata03Sept\TUNING\2003\September\092303.tun

Time Mass Spec Peak Width Only
 Peak Search Window (amu): Resolution (Da): Analyte:

	Analyte	Mass (amu)	Measured Mass (amu)	Mass Calibration DAC Value	Resolution (Da Value)	Peak Width
1	Be	9.0122	9.02575	2046	2040	0.708
2	Mg	23.985	23.9787	5706	2020	0.714
3	Rh	102.905	102.879	24969	1965	0.706
4	Ce	139.905	139.879	33967	2025	0.718
5	Pb	207.977	207.979	50416	2270	0.733
6	U	238.05	238.026	57616	2435	0.752

Daily Performance Report

Sample ID: 092303-daily

Sample Date/Time: Tuesday, September 23, 2003 10:10:27

Sample Description:

Method File: c:\elandata\Method\Daily.mth

Dataset File: d:\elan\elandata03sept\daily performance\2003\september\092303-daily.048

Tuning File: c:\elandata\Tuning\default.tun

Optimization File: c:\elandata\Optimize\default.dac

Dual Detector Mode: Pulse

Acq. Dead Time(ns): 35

Current Dead Time (ns): 35

Summary

Analyte	Mass	Meas. Intens. Mean	Net Intens. Mean	Net Intens. SD	Net Intens. RSD
Mg	24.0	51598.6	51598.553	1442.745	2.8
Rh	102.9	239540.8	239540.845	3819.398	1.6
In	114.9	309648.9	309648.912	630.035	0.2
Pb	208.0	162856.5	162856.524	594.324	0.4
[> Ba	137.9	240247.1	240247.074	7546.798	3.1
[Ba++	69.0	7219.1	0.030	0.001	2.7
[> Ce	139.9	279193.1	279193.075	8640.388	3.1
[CeO	155.9	7942.8	0.028	0.001	3.7
Bkgd	220.0	7.3	7.250	3.182	43.9

Current Optimization File Data

Current Value	Description
0.81	Nebulizer Gas Flow
8.50	Lens Voltage
1000.00	ICP RF Power
-2100.00	Analog Stage Voltage
2000.00	Pulse Stage Voltage
85.00	Discriminator Threshold
-1.50	AC Rod Offset
60.00	Service DAC 1
0.00	Quadrupole Rod Offset

Current Autolens Data

Analyte	Mass	Num of Pts	DAC Value	Maximum Intensity
Be	9	0		
Co	59	0		
In	115	0		

Quantitative Analysis Summary

Sample Date/Time: Tuesday, September 23, 2003 12:06:20

Dataset File: D:\ELAN\Eladata03Sept\Dataset\2003\September\092303-2\Blank.001

Method File: c:\elandata\Method\atl methods 030317\atl-epa 200.8 cr apcl.mth

Optimization File: c:\elandata\Optimize\default.dac

Number of Replicates: 3

Sample ID: Blank

Sample Type:

Summary

Analyte	Mass	Blank Intensity	Meas. Intensity	Int. RSD	Conc. Mean	Conc. SD	Conc. RSD
Li	7		115366	1.1		ug/L	%
Ge	72		145362	0.6		ug/L	%
Sc-1	45		698771	1.0		ug/L	%
Cr	52		8432	2.3		ug/L	%
In	115		1346331	0.7		ug/L	%
Tb	159		1589758	0.1		ug/L	%
Sc	45		698771	1.0		ug/L	%

Quantitative Analysis Summary

Sample Date/Time: Tuesday, September 23, 2003 12:08:49

Dataset File: D:\ELAN\Eladata03Sept\Dataset\2003\September\092303-2\Standard 1.002

Method File: c:\elandata\Method\atl methods 030317\atl-epa 200.8 cr apcl.mth

Optimization File: c:\elandata\Optimize\default.dac

Number of Replicates: 3

Sample ID: Standard 1

Sample Type:

Summary

Analyte	Mass	Blank Intensity	Meas. Intensity	Int. RSD	Conc. Mean	Conc. SD	Conc. RSD
Li	7	115366	115719	0.3		ug/L	%
Ge	72	145362	145350	0.5		ug/L	%
Sc-1	45	698771	709446	0.7		ug/L	%
Cr	52	8432	14298	1.5	0.500	0.017 ug/L	3.4 %
In	115	1346331	1339708	0.5		ug/L	%
Tb	159	1589758	1581740	0.6		ug/L	%
Sc	45	698771	709446	0.7		ug/L	%

Quantitative Analysis Summary

Sample Date/Time: Tuesday, September 23, 2003 12:11:34

Dataset File: D:\ELAN\Elan\data03Sept\Dataset\2003\September\092303-2\Standard 2.003

Method File: c:\elandata\Method\atl methods 030317\atl-epa 200.8 cr apl.mth

Optimization File: c:\elandata\Optimize\default.dac

Number of Replicates: 3

Sample ID: Standard 2

Sample Type:

Summary

Analyte	Mass	Blank Intensity	Meas. Intensity	Int. RSD	Conc. Mean	Conc. SD	Conc. RSD
Li	7	115366	113333	1.0		ug/L	%
Ge	72	145362	145249	0.4		ug/L	%
[> Sc-1	45	698771	701327	0.2		ug/L	%
[Cr	52	8432	59237	0.6	4.994	0.044 ug/L	0.9 %
In	115	1346331	1344233	0.5		ug/L	%
Tb	159	1589758	1590466	1.0		ug/L	%
Sc	45	698771	701327	0.2		ug/L	%

Quantitative Analysis Summary

Sample Date/Time: Tuesday, September 23, 2003 12:14:19

Dataset File: D:\ELAN\Elan\data03Sept\Dataset\2003\September\092303-2\Standard 3.004

Method File: c:\elandata\Method\atl methods 030317\atl-epa 200.8 cr apcl.mth

Optimization File: c:\elandata\Optimize\default.dac

Number of Replicates: 3

Sample ID: Standard 3

Sample Type:

Summary

Analyte	Mass	Blank Intensity	Meas. Intensity	Int. RSD	Conc. Mean	Conc. SD	Conc. RSD
Li	7	115366	114526	2.3		ug/L	%
Ge	72	145362	146155	0.7		ug/L	%
[> Sc-1	45	698771	696562	1.0		ug/L	%
[Cr	52	8432	109122	0.3	9.995	0.076 ug/L	0.8 %
In	115	1346331	1341320	1.1		ug/L	%
Tb	159	1589758	1573802	0.2		ug/L	%
Sc	45	698771	696562	1.0		ug/L	%

Quantitative Analysis Summary

Sample Date/Time: Tuesday, September 23, 2003 12:17:06

Dataset File: D:\ELAN\Eladata03Sept\Dataset\2003\September\092303-2\Standard 4.005

Method File: c:\elandata\Method\atl methods 030317\atl-epa 200.8 cr apl.mth

Optimization File: c:\elandata\Optimize\default.dac

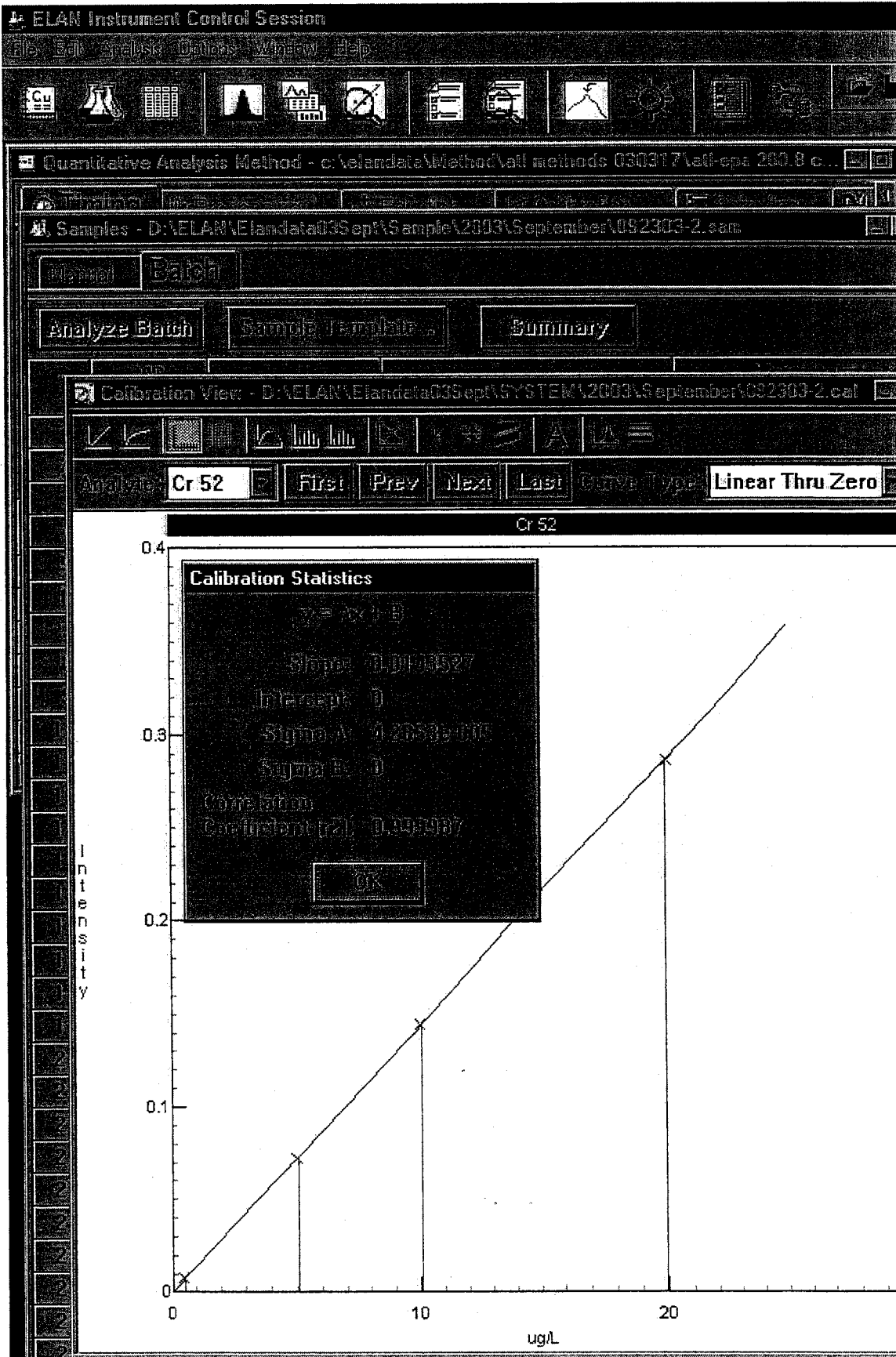
Number of Replicates: 3

Sample ID: Standard 4

Sample Type:

Summary

Analyte	Mass	Blank Intensity	Meas. Intensity	Int. RSD	Conc. Mean	Conc. SD	Conc. RSD
Li	7	115366	111333	1.3		ug/L	%
Ge	72	145362	145284	0.4		ug/L	%
Sc-1	45	698771	691988	0.7		ug/L	%
Cr	52	8432	206489	0.9	19.950	0.161 ug/L	0.8 %
In	115	1346331	1344910	0.7		ug/L	%
Tb	159	1589758	1573440	0.7		ug/L	%
Sc	45	698771	691988	0.7		ug/L	%



Quantitative Analysis Summary

Sample Date/Time: Tuesday, September 23, 2003 12:19:54

Dataset File: D:\ELAN\Elan\data03\Sept\Dataset\2003\September\092303-2\ICV.006

Method File: c:\elandata\Method\atl methods 030317\atl-epa 200.8 cr apl.mth

Optimization File: c:\elandata\Optimize\default.dac

Number of Replicates: 3

Sample ID: ICV

Sample Type:

Summary

Analyte	Mass	Blank Intensity	Meas. Intensity	Int. RSD	Conc. Mean	Conc. SD	Conc. RSD
Li	7	115366	112992	1.0		ug/L	%
Ge	72	145362	146151	1.3		ug/L	%
Sc-1	45	698771	701178	0.3		ug/L	%
Cr	52	8432	109050	0.8	9.995	0.055 ug/L	0.5 %
In	115	1346331	1349453	1.1		ug/L	%
Tb	159	1589758	1589079	1.5		ug/L	%
Sc	45	698771	701178	0.3		ug/L	%

Quantitative Analysis Summary

Sample Date/Time: Tuesday, September 23, 2003 12:22:25

Dataset File: D:\ELAN\Elanata03Sept\Dataset\2003\September\092303-2\ICB.007

Method File: c:\elandata\Method\atl methods 030317\atl-epa 200.8 cr apcl.mth

Optimization File: c:\elandata\Optimize\default.dac

Number of Replicates: 3

Sample ID: ICB

Sample Type:

Summary

Analyte	Mass	Blank Intensity	Meas. Intensity	Int. RSD	Conc. Mean	Conc. SD	Conc. RSD
Li	7	115366	113127	0.6		ug/L	%
Ge	72	145362	145729	0.7		ug/L	%
Sc-1	45	698771	699375	0.7		ug/L	%
Cr	52	8432	9298	2.8	0.085	0.024	28.2 %
In	115	1346331	1334985	0.8		ug/L	%
Tb	159	1589758	1590522	1.1		ug/L	%
Sc	45	698771	699375	0.7		ug/L	%

Quantitative Analysis Summary

Sample Date/Time: Tuesday, September 23, 2003 12:44:04

Dataset File: D:\ELAN\Eladata03Sept\Dataset\2003\September\092303-2\MB-.008

Method File: c:\elandata\Method\atl methods 030317\atl-epa 200.8 cr apcl.mth

Optimization File: c:\elandata\Optimize\default.dac

Number of Replicates: 3

Sample ID: MB- R31161 NS 9/26/03

Sample Type:

Summary

Analyte	Mass	Blank Intensity	Meas. Intensity	Int. RSD	Conc. Mean	Conc. SD	Conc. RSD
Li	7	115366	112326	0.6		ug/L	%
Ge	72	145362	149245	0.5		ug/L	%
Sc-1	45	698771	710116	0.9		ug/L	%
Cr	52	8432	9067	2.8	0.049	0.030 ug/L	62.1 %
In	115	1346331	1364934	0.1		ug/L	%
Tb	159	1589758	1600736	1.7		ug/L	%
Sc	45	698771	710116	0.9		ug/L	%

Quantitative Analysis Summary

Sample Date/Time: Tuesday, September 23, 2003 12:46:35

Dataset File: D:\ELAN\Elan\data03Sept\Dataset\2003\September\092303-2\LCS-.009

Method File: c:\elandata\Method\atl methods 030317\atl-epa 200.8 cr apcl.mth

Optimization File: c:\elandata\Optimize\default.dac

Number of Replicates: 3

Sample ID: LCS- R31161 NS 9/26/03

Sample Type:

Summary

Analyte	Mass	Blank Intensity	Meas. Intensity	Int. RSD	Conc. Mean	Conc. SD	Conc. RSD
Li	7	115366	111953	1.0		ug/L	%
Ge	72	145362	147296	1.1		ug/L	%
Sc-1	45	698771	710058	0.3		ug/L	%
Cr	52	8432	110594	0.7	10.011	0.079 ug/L	0.8 %
In	115	1346331	1356340	0.3		ug/L	%
Tb	159	1589758	1590089	0.5		ug/L	%
Sc	45	698771	710058	0.3		ug/L	%

Quantitative Analysis Summary

Sample Date/Time: Tuesday, September 23, 2003 12:49:03

Dataset File: D:\ELAN\Elan\data03Sept\Dataset\2003\September\092303-2\064876-001A.010

Method File: c:\elandata\Method\atl methods 030317\atl-epa 200.8 cr apcl.mth

Optimization File: c:\elandata\Optimize\default.dac

Number of Replicates: 3

Sample ID: 064876-001A

Sample Type:

Summary

Analyte	Mass	Blank Intensity	Meas. Intensity	Int. RSD	Conc. Mean	Conc. SD	Conc. RSD
Li	7	115366	106656	0.6		ug/L	%
Ge	72	145362	156342	1.4		ug/L	%
Sc-1	45	698771	810683	0.9		ug/L	%
Cr	52	8432	38184	1.8	2.441	0.033 ug/L	1.4 %
In	115	1346331	1427131	0.8		ug/L	%
Tb	159	1589758	1647052	0.8		ug/L	%
Sc	45	698771	810683	0.9		ug/L	%

Quantitative Analysis Summary

Sample Date/Time: Tuesday, September 23, 2003 12:51:32

Dataset File: D:\ELAN\Elan\data03Sept\Dataset\2003\September\092303-2\064876-002A.011

Method File: c:\elandata\Method\atl methods 030317\atl-epa 200.8 cr apcl.mth

Optimization File: c:\elandata\Optimize\default.dac

Number of Replicates: 3

Sample ID: 064876-002A

Sample Type:

Summary

Analyte	Mass	Blank Intensity	Meas. Intensity	Int. RSD	Conc. Mean	Conc. SD	Conc. RSD
Li	7	115366	113213	1.9		ug/L	%
Ge	72	145362	154276	0.5		ug/L	%
Sc-1	45	698771	823788	0.1		ug/L	%
Cr	52	8432	54442	1.5	3.764	0.063 ug/L	1.7 %
In	115	1346331	1397846	2.3		ug/L	%
Tb	159	1589758	1626402	0.9		ug/L	%
Sc	45	698771	823788	0.1		ug/L	%

Quantitative Analysis Summary

Sample Date/Time: Tuesday, September 23, 2003 12:54:02

Dataset File: D:\ELAN\Eladata03Sept\Dataset\2003\September\092303-2\064876-003A.012

Method File: c:\elandata\Method\atl methods 030317\atl-epa 200.8 cr apl.mth

Optimization File: c:\elandata\Optimize\default.dac

Number of Replicates: 3

Sample ID: 064876-003A

Sample Type:

Summary

Analyte	Mass	Blank Intensity	Meas. Intensity	Int. RSD	Conc. Mean	Conc. SD	Conc. RSD
Li	7	115366	119020	1.2		ug/L	%
Ge	72	145362	153417	0.7		ug/L	%
Sc-1	45	698771	798816	2.0		ug/L	%
Cr	52	8432	101283	0.5	7.996	0.213 ug/L	2.7 %
In	115	1346331	1378352	1.6		ug/L	%
Tb	159	1589758	1595905	1.3		ug/L	%
Sc	45	698771	798816	2.0		ug/L	%

Quantitative Analysis Summary

Sample Date/Time: Tuesday, September 23, 2003 12:56:32

Dataset File: D:\ELAN\Elan\data03Sept\Dataset\2003\September\092303-2\064867-004A.013

Method File: c:\elandata\Method\atl methods 030317\atl-epa 200.8 cr apl.mth

Optimization File: c:\elandata\Optimize\default.dac

Number of Replicates: 3

Sample ID: ~~064867-004A~~

064876-004A NS 9/23/03

Sample Type:

Summary

Analyte	Mass	Blank Intensity	Meas. Intensity	Int. RSD	Conc. Mean	Conc. SD	Conc. RSD
Li	7	115366	113336	0.4		ug/L	%
Ge	72	145362	151972	0.4		ug/L	%
Sc-1	45	698771	803457	1.4		ug/L	%
Cr	52	8432	43130	0.4	2.900	0.039 ug/L	1.3 %
In	115	1346331	1356165	0.6		ug/L	%
Tb	159	1589758	1585972	0.5		ug/L	%
Sc	45	698771	803457	1.4		ug/L	%

Quantitative Analysis Summary

Sample Date/Time: Tuesday, September 23, 2003 12:59:02

Dataset File: D:\ELAN\Elan\data03\Sept\Dataset\2003\September\092303-2\064876-005A.014

Method File: c:\elandata\Method\atl methods 030317\atl-epa 200.8 cr apl.mth

Optimization File: c:\elandata\Optimize\default.dac

Number of Replicates: 3

Sample ID: 064876-005A

Sample Type:

Summary

Analyte	Mass	Blank Intensity	Meas. Intensity	Int. RSD	Conc. Mean	Conc. SD	Conc. RSD
Li	7	115366	109112	0.7		ug/L	%
Ge	72	145362	151284	1.1		ug/L	%
Sc-1	45	698771	814129	0.9		ug/L	%
Cr	52	8432	41190	0.4	2.685	0.043 ug/L	1.6 %
In	115	1346331	1348220	0.9		ug/L	%
Tb	159	1589758	1564036	0.2		ug/L	%
Sc	45	698771	814129	0.9		ug/L	%

Quantitative Analysis Summary

Sample Date/Time: Tuesday, September 23, 2003 13:01:33

Dataset File: D:\ELAN\Elan\data03Sept\Dataset\2003\September\092303-2\064876-006A.015

Method File: c:\elandata\Method\atl methods 030317\atl-epa 200.8 cr apcl.mth

Optimization File: c:\elandata\Optimize\default.dac

Number of Replicates: 3

Sample ID: 064876-006A

Sample Type:

Summary

Analyte	Mass	Blank Intensity	Meas. Intensity	Int. RSD	Conc. Mean	Conc. SD	Conc. RSD
Li	7	115366	118513	0.9		ug/L	%
Ge	72	145362	146389	0.4		ug/L	%
Sc-1	45	698771	849817	1.4		ug/L	%
Cr	52	8432	61065	2.4	4.165	0.068 ug/L	1.6 %
In	115	1346331	1313061	0.7		ug/L	%
Tb	159	1589758	1524392	0.4		ug/L	%
Sc	45	698771	849817	1.4		ug/L	%

Quantitative Analysis Summary

Sample Date/Time: Tuesday, September 23, 2003 13:04:05

Dataset File: D:\ELAN\Elan\data03Sept\Dataset\2003\September\092303-2\064876-007A.016

Method File: c:\elandata\Method\atl methods 030317\atl-epa 200.8 cr apl.mth

Optimization File: c:\elandata\Optimize\default.dac

Number of Replicates: 3

Sample ID: 064876-007A

Sample Type:

Summary

Analyte	Mass	Blank Intensity	Meas. Intensity	Int. RSD	Conc. Mean	Conc. SD	Conc. RSD
Li	7	115366	113042	1.6		ug/L	%
Ge	72	145362	145009	1.3		ug/L	%
[> Sc-1	45	698771	780987	0.7		ug/L	%
[Cr	52	8432	36923	0.9	2.453	0.048 ug/L	2.0 %
In	115	1346331	1307705	0.8		ug/L	%
Tb	159	1589758	1507556	1.2		ug/L	%
Sc	45	698771	780987	0.7		ug/L	%

Quantitative Analysis Summary

Sample Date/Time: Tuesday, September 23, 2003 13:06:36

Dataset File: D:\ELAN\Elan\data03Sept\Dataset\2003\September\092303-2\064876-008A.017

Method File: c:\elandata\Method\atl methods 030317\atl-epa 200.8 cr apcl.mth

Optimization File: c:\elandata\Optimize\default.dac

Number of Replicates: 3

Sample ID: 064876-008A

Sample Type:

Summary

Analyte	Mass	Blank Intensity	Meas. Intensity	Int. RSD	Conc. Mean	Conc. SD	Conc. RSD
Li	7	115366	108430	2.1		ug/L	%
Ge	72	145362	144480	0.4		ug/L	%
Sc-1	45	698771	678523	0.2		ug/L	%
Cr	52	8432	8724	1.4	0.055	0.012 ug/L	21.1 %
In	115	1346331	1338382	0.4		ug/L	%
Tb	159	1589758	1555549	1.3		ug/L	%
Sc	45	698771	678523	0.2		ug/L	%

Quantitative Analysis Summary

Sample Date/Time: Tuesday, September 23, 2003 13:09:09

Dataset File: D:\ELAN\Elanata03Sept\Dataset\2003\September\092303-2\CCV.018

Method File: c:\elandata\Method\atl methods 030317\atl-epa 200.8 cr apcl.mth

Optimization File: c:\elandata\Optimize\default.dac

Number of Replicates: 3

Sample ID: CCV

Sample Type:

Summary

Analyte	Mass	Blank Intensity	Meas. Intensity	Int. RSD	Conc. Mean	Conc. SD	Conc. RSD
Li	7	115366	115096	0.4		ug/L	%
Ge	72	145362	136487	0.4		ug/L	%
Sc-1	45	698771	654341	0.9		ug/L	%
Cr	52	8432	101170	0.7	9.932	0.032 ug/L	0.3 %
In	115	1346331	1259927	1.1		ug/L	%
Tb	159	1589758	1486961	0.8		ug/L	%
Sc	45	698771	654341	0.9		ug/L	%

Quantitative Analysis Summary

Sample Date/Time: Tuesday, September 23, 2003 13:11:44

Dataset File: D:\ELAN\Eladata03Sept\Dataset\2003\September\092303-2\CCB.019

Method File: c:\elandata\Method\atl methods 030317\atl-epa 200.8 cr apl.mth

Optimization File: c:\elandata\Optimize\default.dac

Number of Replicates: 3

Sample ID: CCB

Sample Type:

Summary

Analyte	Mass	Blank Intensity	Meas. Intensity	Int. RSD	Conc. Mean	Conc. SD	Conc. RSD
Li	7	115366	112845	1.4		ug/L	%
Ge	72	145362	139415	0.7		ug/L	%
Sc-1	45	698771	669747	1.2		ug/L	%
Cr	52	8432	8981	2.5	0.094	0.025 ug/L	26.2 %
In	115	1346331	1282368	0.7		ug/L	%
Tb	159	1589758	1534612	1.7		ug/L	%
Sc	45	698771	669747	1.2		ug/L	%

Quantitative Analysis Summary

Sample Date/Time: Tuesday, September 23, 2003 13:14:18

Dataset File: D:\ELAN\Eladata03Sept\Dataset\2003\September\092303-2\064877-001A.020

Method File: c:\elandata\Method\atl methods 030317\atl-epa 200.8 cr apci.mth

Optimization File: c:\elandata\Optimize\default.dac

Number of Replicates: 3

Sample ID: 064877-001A

Sample Type:

Summary

Analyte	Mass	Blank Intensity	Meas. Intensity	Int. RSD	Conc. Mean	Conc. SD	Conc. RSD
Li	7	115366	116211	1.1		ug/L	%
Ge	72	145362	146277	0.9		ug/L	%
Sc-1	45	698771	814895	0.5		ug/L	%
Cr	52	8432	132671	1.4	10.502	0.099 ug/L	0.9 %
In	115	1346331	1299543	0.7		ug/L	%
Tb	159	1589758	1536225	0.3		ug/L	%
Sc	45	698771	814895	0.5		ug/L	%

Quantitative Analysis Summary

Sample Date/Time: Tuesday, September 23, 2003 13:16:50

Dataset File: D:\ELAN\Elan\data03\Sept\Dataset\2003\September\092303-2\064877-002A.021

Method File: c:\elandata\Method\atl methods 030317\atl-epa 200.8 cr apl.mth

Optimization File: c:\elandata\Optimize\default.dac

Number of Replicates: 3

Sample ID: 064877-002A

Sample Type:

Summary

Analyte	Mass	Blank Intensity	Meas. Intensity	Int. RSD	Conc. Mean	Conc. SD	Conc. RSD
Li	7	115366	116711	1.3		ug/L	%
Ge	72	145362	145596	0.4		ug/L	%
Sc-1	45	698771	767143	0.6		ug/L	%
Cr	52	8432	48581	0.8	3.571	0.015 ug/L	0.4 %
In	115	1346331	1308583	0.1		ug/L	%
Tb	159	1589758	1536150	1.0		ug/L	%
Sc	45	698771	767143	0.6		ug/L	%

Quantitative Analysis Summary

Sample Date/Time: Tuesday, September 23, 2003 13:19:24

Dataset File: D:\ELAN\Elan\data03\Sept\Dataset\2003\September\092303-2\064877-002ADUP.022

Method File: c:\elandata\Method\atl methods 030317\atl-epa 200.8 cr apl.mth

Optimization File: c:\elandata\Optimize\default.dac

Number of Replicates: 3

Sample ID: 064877-002ADUP

Sample Type:

Summary

Analyte	Mass	Blank Intensity	Meas. Intensity	Int. RSD	Conc. Mean	Conc. SD	Conc. RSD
Li	7	115366	114108	1.0		ug/L	%
Ge	72	145362	146810	0.2		ug/L	%
Sc-1	45	698771	757707	1.1		ug/L	%
Cr	52	8432	43319	1.5	3.143	0.045 ug/L	1.4 %
In	115	1346331	1307147	0.3		ug/L	%
Tb	159	1589758	1517184	0.2		ug/L	%
Sc	45	698771	757707	1.1		ug/L	%

Quantitative Analysis Summary

Sample Date/Time: Tuesday, September 23, 2003 13:21:58

Dataset File: D:\ELAN\Elan\data03\Sept\Dataset\2003\September\092303-2\064877-003A.023

Method File: c:\elandata\Method\atl methods 030317\atl-epa 200.8 cr apcl.mth

Optimization File: c:\elandata\Optimize\default.dac

Number of Replicates: 3

Sample ID: 064877-003A

Sample Type:

Summary

Analyte	Mass	Blank Intensity	Meas. Intensity	Int. RSD	Conc. Mean	Conc. SD	Conc. RSD
Li	7	115366	114562	1.6		ug/L	%
Ge	72	145362	149468	0.7		ug/L	%
Sc-1	45	698771	759470	0.5		ug/L	%
Cr	52	8432	43038	0.7	3.108	0.045 ug/L	1.4 %
In	115	1346331	1328070	1.6		ug/L	%
Tb	159	1589758	1543173	0.6		ug/L	%
Sc	45	698771	759470	0.5		ug/L	%

Quantitative Analysis Summary

Sample Date/Time: Tuesday, September 23, 2003 13:24:32

Dataset File: D:\ELAN\Elanata03Sept\Dataset\2003\September\092303-2\064877-004A.024

Method File: c:\elandata\Method\atl methods 030317\atl-epa 200.8 cr apl.mth

Optimization File: c:\elandata\Optimize\default.dac

Number of Replicates: 3

Sample ID: 064877-004A

Sample Type:

Summary

Analyte	Mass	Blank Intensity	Meas. Intensity	Int. RSD	Conc. Mean	Conc. SD	Conc. RSD
Li	7	115366	111218	0.9		ug/L	%
Ge	72	145362	143462	0.9		ug/L	%
Sc-1	45	698771	811005	0.3		ug/L	%
Cr	52	8432	108334	0.6	8.466	0.040 ug/L	0.5 %
In	115	1346331	1270887	0.9		ug/L	%
Tb	159	1589758	1476815	0.5		ug/L	%
Sc	45	698771	811005	0.3		ug/L	%

Quantitative Analysis Summary

Sample Date/Time: Tuesday, September 23, 2003 13:27:03

Dataset File: D:\ELAN\Elandata03Sept\Dataset\2003\September\092303-2\064877-005A.025

Method File: c:\elandata\Method\atl methods 030317\atl-epa 200.8 cr apl.mth

Optimization File: c:\elandata\Optimize\default.dac

Number of Replicates: 3

Sample ID: 064877-005A

Sample Type:

Summary

Analyte	Mass	Blank Intensity	Meas. Intensity	Int. RSD	Conc. Mean	Conc. SD	Conc. RSD
Li	7	115366	112049	1.4		ug/L	%
Ge	72	145362	142362	0.7		ug/L	%
Sc-1	45	698771	780936	0.9		ug/L	%
Cr	52	8432	39400	1.9	2.674	0.042 ug/L	1.6 %
In	115	1346331	1269954	1.3		ug/L	%
Tb	159	1589758	1479664	1.0		ug/L	%
Sc	45	698771	780936	0.9		ug/L	%

Quantitative Analysis Summary

Sample Date/Time: Tuesday, September 23, 2003 13:29:30

Dataset File: D:\ELAN\Elanata03Sept\Dataset\2003\September\092303-2\064877-005ADUP.026

Method File: c:\elandata\Method\atl methods 030317\atl-epa 200.8 cr apl.mth

Optimization File: c:\elandata\Optimize\default.dac

Number of Replicates: 3

Sample ID: 064877-005ADUP

Sample Type:

Summary

Analyte	Mass	Blank Intensity	Meas. Intensity	Int. RSD	Conc. Mean	Conc. SD	Conc. RSD
Li	7	115366	110999	1.2		ug/L	%
Ge	72	145362	141594	1.1		ug/L	%
Sc-1	45	698771	791055	1.5		ug/L	%
Cr	52	8432	39458	1.3	2.635	0.040 ug/L	1.5 %
In	115	1346331	1275457	1.0		ug/L	%
Tb	159	1589758	1484176	0.4		ug/L	%
Sc	45	698771	791055	1.5		ug/L	%

Quantitative Analysis Summary

Sample Date/Time: Tuesday, September 23, 2003 13:31:58

Dataset File: D:\ELAN\Eladata03Sept\Dataset\2003\September\092303-2\064877-006A.027

Method File: c:\elandata\Method\atl methods 030317\atl-epa 200.8 cr apl.mth

Optimization File: c:\elandata\Optimize\default.dac

Number of Replicates: 3

Sample ID: 064877-006A

Sample Type:

Summary

Analyte	Mass	Blank Intensity	Meas. Intensity	Int. RSD	Conc. Mean	Conc. SD	Conc. RSD
Li	7	115366	108126	1.3		ug/L	%
Ge	72	145362	142299	0.3		ug/L	%
Sc-1	45	698771	748101	0.5		ug/L	%
Cr	52	8432	58163	1.0	4.576	0.054 ug/L	1.2 %
In	115	1346331	1279582	1.0		ug/L	%
Tb	159	1589758	1482702	0.6		ug/L	%
Sc	45	698771	748101	0.5		ug/L	%

Quantitative Analysis Summary

Sample Date/Time: Tuesday, September 23, 2003 13:34:26

Dataset File: D:\ELAN\Eladata03Sept\Dataset\2003\September\092303-2\064877-007A.028

Method File: c:\elandata\Method\atl methods 030317\atl-epa 200.8 cr apcl.mth

Optimization File: c:\elandata\Optimize\default.dac

Number of Replicates: 3

Sample ID: 064877-007A

Sample Type:

Summary

Analyte	Mass	Blank Intensity	Meas. Intensity	Int. RSD	Conc. Mean	Conc. SD	Conc. RSD
Li	7	115366	113047	1.1		ug/L	%
Ge	72	145362	144771	0.4		ug/L	%
Sc-1	45	698771	748466	1.0		ug/L	%
Cr	52	8432	50812	0.9	3.890	0.059 ug/L	1.5 %
In	115	1346331	1287267	0.3		ug/L	%
Tb	159	1589758	1505825	0.7		ug/L	%
Sc	45	698771	748466	1.0		ug/L	%

Quantitative Analysis Summary

Sample Date/Time: Tuesday, September 23, 2003 13:36:55

Dataset File: D:\ELAN\Eladata03Sept\Dataset\2003\September\092303-2\064877-008A.029

Method File: c:\elandata\Method\atl methods 030317\atl-epa 200.8 cr apcl.mth

Optimization File: c:\elandata\Optimize\default.dac

Number of Replicates: 3

Sample ID: 064877-008A

Sample Type:

Summary

Analyte	Mass	Blank Intensity	Meas. Intensity	Int. RSD	Conc. Mean	Conc. SD	Conc. RSD
Li	7	115366	113648	1.3		ug/L	%
Ge	72	145362	145801	0.9		ug/L	%
Sc-1	45	698771	754225	0.8		ug/L	%
Cr	52	8432	48396	2.3	3.630	0.080 ug/L	2.2 %
In	115	1346331	1300697	0.7		ug/L	%
Tb	159	1589758	1515575	0.8		ug/L	%
Sc	45	698771	754225	0.8		ug/L	%

Quantitative Analysis Summary

Sample Date/Time: Tuesday, September 23, 2003 13:39:27

Dataset File: D:\ELAN\Eladata03Sept\Dataset\2003\September\092303-2\CCV.030

Method File: c:\elandata\Method\atl methods 030317\atl-epa 200.8 cr apcl.mth

Optimization File: c:\elandata\Optimize\default.dac

Number of Replicates: 3

Sample ID: CCV

Sample Type:

Summary

Analyte	Mass	Blank Intensity	Meas. Intensity	Int. RSD	Conc. Mean	Conc. SD		Conc. RSD
Li	7	115366	109323	0.7			ug/L	%
Ge	72	145362	133083	0.2			ug/L	%
[> Sc-1	45	698771	633437	0.1			ug/L	%
[Cr	52	8432	97650	1.1	9.900	0.129	ug/L	1.3 %
In	115	1346331	1215182	1.3			ug/L	%
Tb	159	1589758	1461627	0.4			ug/L	%
Sc	45	698771	633437	0.1			ug/L	%

Quantitative Analysis Summary

Sample Date/Time: Tuesday, September 23, 2003 13:42:01

Dataset File: D:\ELAN\Eladata03Sept\Dataset\2003\September\092303-2\CCB.031

Method File: c:\elandata\Method\atl methods 030317\atl-epa 200.8 cr apci.mth

Optimization File: c:\elandata\Optimize\default.dac

Number of Replicates: 3

Sample ID: CCB

Sample Type:

Summary

Analyte	Mass	Blank Intensity	Meas. Intensity	Int. RSD	Conc. Mean	Conc. SD	Conc. RSD
Li	7	115366	106244	0.8		ug/L	%
Ge	72	145362	135794	0.9		ug/L	%
Sc-1	45	698771	644603	0.6		ug/L	%
Cr	52	8432	8908	2.0	0.122	0.024 ug/L	19.6 %
In	115	1346331	1237905	0.8		ug/L	%
Tb	159	1589758	1473174	1.0		ug/L	%
Sc	45	698771	644603	0.6		ug/L	%

Quantitative Analysis Summary

Sample Date/Time: Tuesday, September 23, 2003 13:44:33

Dataset File: D:\ELAN\Eladata03Sept\Dataset\2003\September\092303-2\064877-009A.032

Method File: c:\elandata\Method\atl methods 030317\atl-epa 200.8 cr apl.mth

Optimization File: c:\elandata\Optimize\default.dac

Number of Replicates: 3

Sample ID: 064877-009A

Sample Type:

Summary

Analyte	Mass	Blank Intensity	Meas. Intensity	Int. RSD	Conc. Mean	Conc. SD	Conc. RSD
Li	7	115366	111164	1.7		ug/L	%
Ge	72	145362	142593	1.0		ug/L	%
[> Sc-1	45	698771	830176	0.4		ug/L	%
[Cr	52	8432	88981	1.9	6.627	0.131 ug/L	2.0 %
In	115	1346331	1260885	0.9		ug/L	%
Tb	159	1589758	1489450	1.1		ug/L	%
Sc	45	698771	830176	0.4		ug/L	%

Quantitative Analysis Summary

Sample Date/Time: Tuesday, September 23, 2003 13:47:03

Dataset File: D:\ELAN\Eladata03Sept\Dataset\2003\September\092303-2\064877-005AMS.033

Method File: c:\elandata\Method\atl methods 030317\atl-epa 200.8 cr apcl.mth

Optimization File: c:\elandata\Optimize\default.dac

Number of Replicates: 3

Sample ID: 064877-005AMS

Sample Type:

Summary

Analyte	Mass	Blank Intensity	Meas. Intensity	Int. RSD	Conc. Mean	Conc. SD	Conc. RSD
Li	7	115366	111588	1.2		ug/L	%
Ge	72	145362	143697	0.7		ug/L	%
Sc-1	45	698771	788238	0.4		ug/L	%
Cr	52	8432	88245	80.8	6.959	6.302 ug/L	90.6 %
In	115	1346331	1288516	1.5		ug/L	%
Tb	159	1589758	1494271	0.8		ug/L	%
Sc	45	698771	788238	0.4		ug/L	%

*not reported
as 9/23/03*

Quantitative Analysis Summary

Sample Date/Time: Tuesday, September 23, 2003 13:49:33

Dataset File: D:\ELAN\Eladata03Sept\Dataset\2003\September\092303-2\064877-005AMSD.034

Method File: c:\elandata\Method\atl methods 030317\atl-epa 200.8 cr apl.mth

Optimization File: c:\elandata\Optimize\default.dac

Number of Replicates: 3

Sample ID: 064877-005AMSD

Sample Type:

Summary

Analyte	Mass	Blank Intensity	Meas. Intensity	Int. RSD	Conc. Mean	Conc. SD	Conc. RSD
Li	7	115366	111786	0.5		ug/L	%
Ge	72	145362	146792	0.7		ug/L	%
Sc-1	45	698771	809899	0.8		ug/L	%
Cr	52	8432	132762	0.9	10.581	0.196 ug/L	1.9 %
In	115	1346331	1313646	0.7		ug/L	%
Tb	159	1589758	1523124	0.4		ug/L	%
Sc	45	698771	809899	0.8		ug/L	%

Quantitative Analysis Summary

Sample Date/Time: Tuesday, September 23, 2003 13:52:05

Dataset File: D:\ELAN\Elan\data03Sept\Dataset\2003\September\092303-2\CCV.035

Method File: c:\elandata\Method\atl methods 030317\atl-epa 200.8 cr apl.mth

Optimization File: c:\elandata\Optimize\default.dac

Number of Replicates: 3

Sample ID: CCV

Sample Type:

Summary

Analyte	Mass	Blank Intensity	Meas. Intensity	Int. RSD	Conc. Mean	Conc. SD	Conc. RSD
Li	7	115366	108060	0.9		ug/L	%
Ge	72	145362	134360	1.1		ug/L	%
Sc-1	45	698771	640874	2.1		ug/L	%
Cr	52	8432	97794	1.1	9.794	0.255 ug/L	2.6 %
In	115	1346331	1238810	0.6		ug/L	%
Tb	159	1589758	1476962	1.0		ug/L	%
Sc	45	698771	640874	2.1		ug/L	%

Quantitative Analysis Summary

Sample Date/Time: Tuesday, September 23, 2003 13:54:40

Dataset File: D:\ELAN\Eladata03Sept\Dataset\2003\September\092303-2\CCB.036

Method File: c:\elandata\Method\atl methods 030317\atl-epa 200.8 cr apl.mth

Optimization File: c:\elandata\Optimize\default.dac

Number of Replicates: 3

Sample ID: CCB

Sample Type:

Summary

Analyte	Mass	Blank Intensity	Meas. Intensity	Int. RSD	Conc. Mean	Conc. SD	Conc. RSD
Li	7	115366	104889	0.6		ug/L	%
Ge	72	145362	135122	0.2		ug/L	%
Sc-1	45	698771	640002	0.6		ug/L	%
Cr	52	8432	8935	1.9	0.132	0.016 ug/L	11.8 %
In	115	1346331	1245090	0.8		ug/L	%
Tb	159	1589758	1482854	1.4		ug/L	%
Sc	45	698771	640002	0.6		ug/L	%

Quantitative Analysis Summary

Sample Date/Time: Tuesday, September 23, 2003 14:39:46

Dataset File: D:\ELAN\Eladata03Sept\Dataset\2003\September\092303-2\064877-005AMS.037

Method File: c:\elandata\Method\atl methods 030317\atl-epa 200.8 cr apl.mth

Optimization File: c:\elandata\Optimize\default.dac

Number of Replicates: 3

Sample ID: 064877-005AMS

Sample Type:

Summary

Analyte	Mass	Blank Intensity	Meas. Intensity	Int. RSD	Conc. Mean	Conc. SD	Conc. RSD
Li	7	115366	104241	0.5		ug/L	%
Ge	72	145362	149173	0.4		ug/L	%
Sc-1	45	698771	829696	0.9		ug/L	%
Cr	52	8432	137781	0.7	10.730	0.048 ug/L	0.4 %
In	115	1346331	1327321	0.7		ug/L	%
Tb	159	1589758	1512788	0.4		ug/L	%
Sc	45	698771	829696	0.9		ug/L	%

Quantitative Analysis Summary

Sample Date/Time: Tuesday, September 23, 2003 14:42:19

Dataset File: D:\ELAN\Elan\data03\Sept\Dataset\2003\September\092303-2\CCV.038

Method File: c:\elandata\Method\atl methods 030317\atl-epa 200.8 cr apl.mth

Optimization File: c:\elandata\Optimize\default.dac

Number of Replicates: 3

Sample ID: CCV

Sample Type:

Summary

Analyte	Mass	Blank Intensity	Meas. Intensity	Int. RSD	Conc. Mean	Conc. SD	Conc. RSD
Li	7	115366	104539	3.0		ug/L	%
Ge	72	145362	139990	0.5		ug/L	%
Sc-1	45	698771	667896	1.1		ug/L	%
Cr	52	8432	103122	0.1	9.917	0.103 ug/L	1.0 %
In	115	1346331	1280532	0.5		ug/L	%
Tb	159	1589758	1512214	0.3		ug/L	%
Sc	45	698771	667896	1.1		ug/L	%

Quantitative Analysis Summary

Sample Date/Time: Tuesday, September 23, 2003 14:44:53

Dataset File: D:\ELAN\Eladata03Sept\Dataset\2003\September\092303-2\CCB.039

Method File: c:\elandata\Method\atl methods 030317\atl-epa 200.8 cr apl.mth

Optimization File: c:\elandata\Optimize\default.dac

Number of Replicates: 3

Sample ID: CCB

Sample Type:

Summary

Analyte	Mass	Blank Intensity	Meas. Intensity	Int. RSD	Conc. Mean	Conc. SD	Conc. RSD
Li	7	115366	101765	1.9		ug/L	%
Ge	72	145362	139418	0.7		ug/L	%
Sc-1	45	698771	662166	0.3		ug/L	%
Cr	52	8432	8861	1.9	0.092	0.020 ug/L	21.5 %
In	115	1346331	1276133	0.6		ug/L	%
Tb	159	1589758	1505379	0.6		ug/L	%
Sc	45	698771	662166	0.3		ug/L	%

Metals Working Standard Prep Log

Date	Standard Name	Working Std Code	Stock Info		Preparation	
			Stock Std Code	Stock Concentration	Stock Concentration	Amount Taken from Stock
08-14-03	ICPMS - LCS ₁	MST030814 F	MST021216 D MST021216 B	10 ppm 1000 ppm	10 ppm 1000 ppm	5 0.05
↓	↓ - ICPMS @ 10	↓ G	MST030814 F		1 ppm	0.1
08-15-03	ICPMS - STD ₁	MST030815 A	MST030402 A		10 ppm	5
↓	↓ - 10	↓ B	MST030815 A		1 ppm	0.5
↓	↓ - 7.5	↓ C	↓ B		10 ppm	37.5
↓	↓ - 5	↓ D	↓ C		7.5 ppm	20
↓	ICPMS - LCS ₁	↓ E	MST021216 D		10 ppm	5
↓	↓ - ICPMS @ 5	↓ F	MST030815 E		1 ppm	0.25
08-15-03	ICPMS - Internal Standard	MST030815 G	MST030217 A Li		1000 ppm	1000
↓	↓	↓	↓ B Ge			
↓	↓	↓	↓ C Tb			
↓	↓	↓	↓ D Sc			
↓	↓	↓	↓ E In			
↓	↓	↓	↓ F Tm			
08-19-03	ICPMS - STD ₁	MST030819 A	MST030402 A		10 ppm	5
↓	↓ - 20	↓ B	MST030819 A		1 ppm	1
↓	↓ - 10	↓ C	↓ B		20 ppm	25
↓	↓ - 5	↓ D	↓ C		10 ppm	25
↓	↓ - 0.5	↓ E	↓ D		5 ppm	5
↓	ICPMS - LCS ₁	↓ F	MST021216 D		10 ppm	5

Metals Working Standard Prep Log

Preparation			Expiration Dates		Comments	Initials
Final Vol. (ml)	Final Conc. (ug/ml)	Diluent Matrix (ie H ₂ O)	Working STD *	Exp Date		
50	1 ppm	DI H ₂ O + HNO ₃ 2%	11-12-03			WS
↓	10 ppb	↓	11-13-03			↓
50	1 ppm	DI H ₂ O + HNO ₃ 2%			Zn	WS
↓	10 ppb	↓			↓	↓
30	7.5 ppb	↓			↓	↓
50	5 ppb	↓			benzene	↓
↓	1 ppm	↓			↓	↓
↓	5 ppb	↓			↓	↓
100 ml	10 ppm	DI H ₂ O + HNO ₃ 2%	11-13-03		High purity	WS
↓	↓	↓			↓	↓
↓	↓	↓			↓	↓
↓	↓	↓			↓	↓
50	1 ppm	DI H ₂ O + HNO ₃ 2%	11-17-03			WS
↓	20 ppb	↓			benzene	↓
↓	10 ppb	↓			↓	↓
↓	5 ppb	↓			↓	↓
↓	0.5 ppb	↓			benzene	↓
↓	1 ppm	↓			↓	↓

Check working std versus all manufacturer's

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Metals Working Standard Prep Log

Date	Standard Name	Working Std Code	Stock Info		Preparation	
			Stock Std Code	Stock Concentration	Stock Concentration	Amount Taken from Stock
08-14-03	Dual-Detector Calib. Sol'n	MS030814H	MS030217G	Ce	1000 ppm	0.1 mL
			I	W		
			J	Rk		
			MS030217K	Hg		
			MS030710	C	10,000 ppm	0.02
08-14-03	200 ppb mg	MS030814F	MS030402A		10 ppm	5
09-22-03	ICPMS - STD,	MS030922A	MS030922A		1 ppm	5
	- 100	B		B	100 ppb	25
	- 50	C		C	50 ppb	10
	- 10	D		D	10 ppm	5
	ICPMS - LCS,	E		E	10 ppm	5
	- ICPMS@10	F		F	1 ppm	2.5
			MS030402A		10 ppm	5
			MS030402B		1000 ppm	0.05
01-23-03	ICPMS - STD,	MS030923A	MS030923A		1 ppm	5
	- 20	B		B	20 ppb	25
	- 10	C		C	10 ppb	25
	- 5	D		D	5 ppb	5
	- 0.5	E		E	10 ppm	5
	ICPMS - LCS,	F		F	1000 ppm	0.05
	- ICPMS@10	G		G	1 ppm	0.5

Metals Working Standard Prep Log

Date	Standard Name	Working Std Code	Stock Info		Preparation	
			Stock Std Code	Stock Concentration	Stock Concentration	Amount Taken from Stock
7-11-03	ICFMS - 5	HST030711 D	HST030711	10 ppb	10 ppb	25
	┆ -0.5	E		5 ppb	5 ppb	5
	ICFMS - LCS1	F G	HST021216 B	100 ppm	100 ppm	0.05
	┆ -10000 @ 10	H	HST021216 B	10 ppm	10 ppm	5
			HST030711	1 ppm	1 ppm	0.5
7-15-03	ICFMS - Tuning Stock Sol'n	HST030715 A	HST-010523 E	1000 ppm	1000 ppm	0.5
			HST030414 H			
			HST030217 J			
			HST030414 E			
			HST030414 C			
			HST030217 G			
			HST030414 F			
			HST030414 D			
			HST030414 G			
			HST030217 H			
			HST030217 I			
			HST030217 E			
7-16-03	10 ppb Tuning Solution	HST030716 A	HST030715 A	1 ppm	1 ppm	10
			HST030402 A	10 ppm	10 ppm	5
7-16-03	ICFMS - STD1	HST030716 B	HST030402 B	1000 ppm	1000 ppm	0.05
	┆ -20	C	HST030716 B	1 ppm	1 ppm	1
	┆ -10	D		20 ppb	20 ppb	25

Metals Working Standard Prep Log

Preparation		Expiration Dates		Comments	Initials
Final Vol. (ml)	Final Conc. (ug/ml)	Diluent Matrix (ie H ₂ O)	Working STD *		
50	5 ppb	DI H ₂ O + 2% HNO ₃	10-09-03		LS
	0.5 ppb				
	1 ppb				
	10 ppb				
500	1 ppb	2% HNO ₃ DI H ₂ O	10-13-03	Ultra Scientific High Purity	NS
1000	10 ppb	2% HNO ₃ DI H ₂ O	10-14-03	Ultra Scientific High Purity	NS
50	1 ppb			LS	
	2 ppb				
	10 ppb				

* Check working std versus all manufacturer's