SDG COVER PAGE

Lab Name: Bonner Analytical Testing Co. Contract: EPW14029

Lab Code: BON Case No.: 45671 MA No.: 2542.1 SDG No.: MF6R32

SOW No.: ISM02.3

EPA Sample No.	Lab Sample ID	Analysis Method ICP-AES	ICP-MS	Mercury	Cyanide
MF6R32	5120223-01		X		
MF6R42	5120223-02		X		
MF6R42D	PL21004-DUP1		X		
MF6R42D	PL21004-DUP2		X		
MF6R42D	PL21004-DUP3		X		
MF6R42S	PL21004-MS1		X		
MF6R42S	PL21004-MS2		X		
MF6R44	5120223-03		X		
MF6R45	5120223-04		X		
MF6R46	5120223-05		X		
MF6R47	5120223-06		X		

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed in the SDG narrative. Release of the data contained in this hardcopy data package and in the electronic data submitted has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signature.

Signature: Name: Lauren Meadows For Chris Bonner

Date: 01/05/2016 Title: CEO/QAO

SDG COVER PAGE

Lab Name: Bonner Analytical Testing Co. Contract: EPW14029

Lab Code: BON Case No.: 45671 MA No.: SDG No.: MF6R32

SOW No.: ISM02.3

EPA Sample No.	Lab Sample ID	Analysis Method ICP-AES	ICP-MS	Mercury	Cyanide
MF6R32	5120223-01			X	
MF6R42	5120223-02			X	
MF6R42D	PL22005-DUP1			X	
MF6R42S	PL22005-MS1			X	
MF6R44	5120223-03			X	
MF6R45	5120223-04			X	
MF6R46	5120223-05			X	
MF6R47	5120223-06			X	

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed in the SDG narrative. Release of the data contained in this hardcopy data package and in the electronic data submitted has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signature.

Signature: Name: Maxwell S. Bonner For Chris Bonr

Date: 01.05.16 Title: CEO/QAO

USEPA CLP COC (LAB COPY)

DateShipped: 12/15/2015
CarrierName: FedEx
AirbillNo: 859483220215

CHAIN OF CUSTODY RECORD

Case #: 45671 EPW14029
Cooler #: MF6R32

No: 6-121515-111029-0018

Lab: Bonner Analytical Testing Company - BON
Lab Contact: Chris Bonner
Lab Phone: 601-264-2854

Sample Identifier	CLP Sample No.	Matrix/Sampler	Coll. Method	Analysis/Turnaround (Days)	Tag/Preservative/Bottles	Location	Collection Date/Time	For Lab Use Only
277-0030	MF6R29 MF6R42	Ground Water/ SERAS	Grab	DMw+DHg(21), TMw+Hg+Cn(21)	1218 (HNO3 pH<2, 4 C), 1219 (HNO3 pH<2, 4 C), 1221 (HNO3 pH<2, 4 C), 1222 (HNO3 pH<2, 4 C) (4)	TF-34-DISCH	12/14/2015 10:30	
277-0033	MF6R32	Ground Water/ SERAS	Grab	DMw+DHg(21)	1253 (HNO3 pH<2, 4 C) (1)	AA-GW-03	12/14/2015 11:45	
277-0034	MF6R33 MF6R44	Ground Water/ SERAS	Grab	DMw+DHg(21), TMw+Hg+Cn(21)	1263 (HNO3 pH<2, 4 C), 1264 (HNO3 pH<2, 4 C) (2)	TF-34-01	12/14/2015 13:00	
277-0035	MF6R34 MF6R45	Ground Water/ SERAS	Grab	DMw+DHg(21), TMw+Hg+Cn(21)	1273 (HNO3 pH<2, 4 C), 1274 (HNO3 pH<2, 4 C) (2)	LOR-18	12/14/2015 12:00	
277-0036	MF6R35 MF6R46	Surface Water/ SERAS	Grab	DMw+DHg(21), TMw+Hg+Cn(21)	1283 (HNO3 pH<2, 4 C), 1284 (HNO3 pH<2, 4 C) (2)	POND DISCH	12/14/2015 14:00	
277-0037	MF6R36 MF6R47	Surface Water/ SERAS	Grab	DMw+DHg(21), TMw+Hg+Cn(21)	1293 (HNO3 pH<2, 4 C), 1294 (HNO3 pH<2, 4 C) (2)	FD-04	12/14/2015 14:00	

Sample(s) to be used for Lab QC: 277-0030 Tag 1218, 277-0030 Tag 1219, 277-0030 Tag 1221, 277-0030 Tag 1222 - Special Instructions: ICP-MS for: Aluminum, Calcium, Iron, Magnesium, Potassium, Sodium, Antimony, Arsenic, Barium, Beryllium, Cadmium, Chromium, Cobalt, Copper, Lead, Manganese, Nickel, Selenium, Silver, Thallium, Vanadium, Zinc 3°C

Shipment for Case Complete? N

Samples Transferred From Chain of Custody #

Analysis Key: DMw+DHg=DissMetals ICP-MS by ISM02.3/MA#2542.1 & Dissolved Hg by ISM02.3, TMw+Hg+Cn=TotalMetals ICP-MS by ISM02.3/MA#2542.1 & Hg,Cn by ISM02.3

Items/Reason	Relinquished by (Signature and Organization)	Date/Time	Received by (Signature and Organization)	Date/Time	Sample Condition Upon Receipt
AW/ANALYSIS	LM/SERAS	12/15/15 12:50	P. Aik Bon	0943 12-16-15	good
					COPY
				ORIGINAL IN CSF:	MF6R29
				Signature:	P. Aik

3

SAMPLE DELIVERY GROUP (SDG)
COVER SHEET

SDG Number: MF6R32

☐ ICP-AES ☒ Mercury ☐ Cyanide ☒ ICP-MS

☐ VOA ☐ VOA-SIM ☐ Trace-VOA ☐ Trace-VOA-SIM ☐ SVOA ☐ SVOA-SIM ☐ Aroclors ☐ Pesticides

Laboratory Name: Bonner Analytical Testing Co. **Laboratory Code:** BONNER
Contract No.: EPW14029 **Case No.:** 45671
Solicitation No.: 2694 **SDG Turnaround:** 21 day
Modified Analysis No(s).: 2542.1

EPA Sample Nmbers in SDG (Listed in Numerical Order)

1) MF6R32	7)	13)	19)
2) MF6R42	8)	14)	20)
3) MF6R44	9)	15)	21)
4) MF6R45	10)	16)	22)
5) MF6R46	11)	17)	23)
6) MF6R47	12)	18)	24)

MF6R32
First Sample in SDG

MF6R47
Last Sample in SDG

12/16/2015
First Sample Receipt Date

12/16/2015
Last Sample Receipt Date

Note: There are a maximum of 20 samples (excluding PE Sample) in SDG. Attach TRs to this form in alphanumeric order (the order listed above on this form).

P. Ack
Signature

12-21-15
Date

FORM DC-1
SAMPLE LOG-IN SHEET

Lab Name Bonner Analytical Testing Co. Company		Page 1 of 1
Received By (Print Name) Trisha Aiken		Log-in Date 12-21-15
Received By (Signature)		
Case Number 45671	SDG No. MF6R32	MA No. 2542.1

Remarks:	
1. Custody Seal(s)	Present/Absent* Intact/Broken
2. Custody Seal NOs.	N/A N/A
3. Traffic Reports/Chain of Custody Records or Packing Lists	Present/Absent*
4. Airbill	Airbill/Sticker Present/Absent*
5. Airbill No.	8594 8322 0215 N/A
6. Sample Tags Sample Tag Numbers	Present/Absent* Listed/Not Listed On Traffic Report/Chain of
7. Sample Condition	Intact/Broken*/Leaking
8. Shipping Container Temperature Indicator Bottle	Present/Absent*
9. Shipping Container Temperature	3°C
10. Does information on Traffic Reports/Chain of Custody Records and sample tags agree?	Yes/No*
11. Date Received at Lab	12-16-15
12. Time Received	0943

	EPA Sample #	Aqueous/ Water Sample pH	Corresponding Sample Tag #	Corresponding Assigned Lab #	Remarks: Condition of Sample Shipment, etc.
1	MF6R32	1	NA	5120223-01	Doc Good
2	MF6R42	1	NA	5120223-02	
3	MF6R44	1	NA	5120223-03	
4	MF6R45	1	NA	5120223-04	
5	MF6R46	1	NA	5120223-05	
6	MF6R47	1	NA	5120223-06	
7					
8					
9					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					

* Contact SMO and attach record of resolution

Reviewed By P. Aiken	Logbook No.
Date 12-21-15	~~Logbook Page No.~~

FORM DC-2
FULL INORGANICS COMPLETE SDG FILE (CSF) INVENTORY SHEET

LAB NAME Bonner Analytical Testing Company

LAB CODE BON

CONTRACT NO. EPW14029

CASE NO. 45671 SDG NO. MF6R32

MA NO. 2542.1

SOW NO. ISM02.3

All documents delivered in the Complete SDG File must be original documents where possible. (Reference - Exhibit B Section 2.4)

		PAGE NOs.		CHECK	
		FROM	TO	LAB	REGION
1.	SDG Cover Page	1	2	✓	
2.	Traffic Report/Chain of Custody Record(s)	3	4	✓	
3.	Sample Log-In Sheet (DC-1)	5	5	✓	
4.	CSF Inventory Sheet (DC-2)	6	9	✓	
5.	SDG Narrative	10	12	✓	

Inorganic Analysis

ICP-AES

6.	Inorganic Analysis Data Sheet (Form 1-IN)				
7.	Initial and Continuing Calibration Verification (Form 2-IN)				
8.	Blanks (Form 3-IN)				
9.	ICP Interference Check Sample (Form 4-IN)				
10.	Matrix Spike Sample Recovery (Form 5A-IN)				
11.	Post-Digestion/Distillation Spike Sample Recovery (Form 5B-IN)				
12.	Duplicates (Form 6-IN)				
13.	Laboratory Control Sample (Form 7-IN)				
14.	ICP-AES and ICP-MS Serial Dilutions (Form 8-IN)				
15.	Method Detection Limit (Form 9-IN)				
16.	ICP-AES Interelement Correction Factors (Form 10A-IN)				
17.	ICP-AES Interelement Correction Factors (Form 10B-IN)				
18.	Analysis Log (Form 12-IN)				
19.	Initial Calibration (Form 15-IN)				

FORM DC-2
FULL INORGANICS COMPLETE SDG FILE (CSF) INVENTORY SHEET

		PAGE NOs. FROM	PAGE NOs. TO	CHECK LAB	CHECK REGION
20.	Initial Calibration Summary (Form 16-IN)				
21.	ICP-AES Raw Data				
22.	ICP-AES Preparation Log Books, Preparation records, Analysis records, and PE Instructions				
ICP MS					
23.	Inorganic Analysis Data Sheet (Form 1-IN)	13	18	✓	
24.	Initial and Continuing Calibration Verification (Form 2-IN)	19	22	✓	
25.	Blanks (Form 3-IN)	23	25	✓	
26.	ICP Interference Check Sample (Form 4-IN)	26	28	✓	
27.	Matrix Spike Sample Recovery (Form 5A-IN)	29	29	✓	
28.	Post-Digestion/Distillation Spike Sample Recovery (Form 5B-IN)	N/A	N/A	✓	
29.	Duplicates (Form 6-IN)	30	30	✓	
30.	Laboratory Control Sample (Form 7-IN)	31	35	✓	
31.	ICP-AES and ICP-MS Serial Dilutions (Form 8-IN)	36	36	✓	
32.	Method Detection Limit (Form 9-IN)	37	37	✓	
33.	ICP-MS Internal Standard Association (Form 11-IN)	38	40	✓	
34.	Analysis Log (Form 12-IN)	41	45	✓	
35.	ICP-MS Tune (Form 13-IN)	46	48	✓	
36.	ICP-MS Internal Standards Relative Intensity Summary (Form 14-IN)	49	58	✓	
37.	Initial Calibration (Form 15-IN)	59	68	✓	
38.	Initial Calibration Summary (Form 16-IN)	69	71	✓	
39.	ICP-MS Raw Data	72	148	✓	
40.	ICP-MS Preparation Log Books, Preparation records, Analysis records, and PE Instructions	149	162	✓	
Mercury					
41.	Inorganic Analysis Data Sheet (Form 1-IN)	163	168	✓	
42.	Initial and Continuing Calibration Verification (Form 2-IN)	169	169	✓	
43.	Blanks (Form 3-IN)	170	170	✓	
44.	Matrix Spike Sample Recovery (Form 5A-IN)	171	171	✓	
45.	Duplicates (Form 6-IN)	172	172	✓	
46.	Method Detection Limit (Form 9-IN)	173	173	✓	
47.	Analysis Log (Form 12-IN)	174	174	✓	
48.	Initial Calibration (Form 15-IN)	175	177	✓	

FORM DC-2
FULL INORGANICS COMPLETE SDG FILE (CSF) INVENTORY SHEET

49.	Initial Calibration Summary (Form 16-IN)	178	178	✓	
50.	Mercury Raw Data	179	181	✓	
51.	Mercury Preparation Log Books, Preparation records, Analysis records, and PE Instructions	182	188	✓	
Cyanide					
52.	Inorganic Analysis Data Sheet (Form 1-IN)				
53.	Initial and Continuing Calibration Verification (Form 2-IN)				
54.	Blanks (Form 3-IN)				
55.	Matrix Spike Sample Recovery (Form 5A-IN)				
56.	Post-Digestion/Distillation Spike Sample Recovery (Form 5B-IN)				
57.	Duplicates (Form 6-IN)				
58.	Method Detection Limit (Form 9-IN)				
59.	Analysis Log (Form 12-IN)				
60.	Initial Calibration (Form 15-IN)				
61.	Initial Calibration Summary (Form 16-IN)				
62.	Cyanide Raw Data				
63.	Cyanide Preparation Log Books, Preparation records, Analysis records, and PE Instructions				
Additional					
64.	Percent Solids Determination Log	N/A	N/A	✓	
65.	EPA Shipping/Receiving Documents	N/A	N/A	✓	
	Airbill (No. of Shipments 1)	189	189	✓	
	Sample Tags	N/A	N/A	✓	
	Sample Log-In Sheet (Lab)	190	191	✓	
66.	Misc. Shipping/Receiving Records (list all individual records) Communication Logs	N/A	N/A	✓	
		N/A	N/A	✓	
67.	Internal Lab Sample Transfer Records & Tracking Sheets (describe or list)	N/A	N/A	✓	
	IN house / Digestate	192	194	✓	
68.	Other Records (describe or list)	N/A	N/A	✓	
	Communication Logs	195	212	✓	
	Email Corrective Action	213	214	✓	

FORM DC-2
FULL INORGANICS COMPLETE SDG FILE (CSF) INVENTORY SHEET

69. Comments:

Completed by:
(CLP Lab) Patricia Aiken (Signature) | Patricia Aiken Sample Custodian (Print Name & Title) | 1-4-16 (Date)

Audited by:
(EPA) (Signature) | (Print Name & Title) | (Date)

BONNER Analytical
2703 Oak Grove Road
Hattiesburg, MS 39402
601-264-2854 Phone
601-268-7084 Fax

SDG NARRATIVE:

SDG Number: MF6R32
Case Number: 45671
Contract Number: EPW14029
Contract SOW:ISM02.3
Solicitation 2694

Sample Receipt:
On December 16, 2015 we received 11 waters via FedEx air bill 8594 8322 0215. Custody seals were present and intact. Cooler temp was determined to be 3°C. Samples were in good condition except for the following discrepancies.

pH outside allowable limits
Issue 1: Sample MF6R33 (TM) had a pH level of 5. HNO3 was added to the sample to bring the pH to below 2. Please confirm if this is acceptable.
Resolution 1: Per Region 6, the laboratory should note the issue in the SDG Narrative and proceed with the analysis of the samples.

Laboratory problems
Issue 2: Sample MF6R32 is a black liquid with a very strong odor. This sample has a pH level of 9.5. The laboratory did not add HNO3 due to the nature of the sample. The laboratory would like to request any and all background information that is available on this sample in order to protect the instrumentation.
Resolution 2: Per Region 6, this sample is from a temporary well and not a drum. The laboratory should proceed with digesting and analyzing the sample. The laboratory could use a reduced volume as appropriate (10-1 mLs for example), add acid as per normal digestion procedure, and reconstitute to their normal analytical volume of 100 (or 50 mLs). Please note the issue in the SDG Narrative and proceed with the analysis of the samples.

Non-standard matrix
Issue 3: The DM samples MF6R33 and MF6R34 both contain sediment. Please note that while there is more sediment in the TM samples, the laboratory felt the need to report this as an issue. Please advise.
Resolution 3: Per Region 6, the laboratory should filter an aliquot of the DM samples with the customary 0.45 micron filter and proceed to digestion. If filtering is not possible, the laboratory should let the sediment precipitate to the bottom of the container and take an aliquot off the top for digestion. Please note the issue in the SDG Narrative and proceed with the analysis of the samples.

Incorrect/duplicated sample IDs
Issue 4: Several of the TM and DM samples have the same sample ID. Please advise if SMO should provide new sample IDs for the DM samples that have a duplicate sample ID. Please note that the laboratory only received a DM sample for MF6R32.
Resolution 4: Per Region 6, the below sample IDs should be used for the DM samples. The sample ID for MF6R32 remains the same, provided that there are no other samples with this same sample ID. Please note the issue in the SDG Narrative and proceed with the analysis of the samples.

Old Sample ID	New Sample ID
MF6R29	MF6R42
MF6R33	MF6R44
MF6R34	MF6R45
MF6R35	MF6R46
MF6R36	MF6R47

BONNER Analytical
2703 Oak Grove Road
Hattiesburg, MS 39402
601-264-2854 Phone
601-268-7084 Fax

Issue: The laboratory is scheduled for CN analysis and it is also listed on the COC. The laboratory did not receive any samples that were properly preserved with sodium hydroxide for CN analysis.
Resolution: Per Region 6, the CN analysis for these water samples is cancelled. Please note the issue in the SDG Narrative.

Analysis = Al, Ca, Fe, K, Mg, Na by ICP-AES/Ag, As, Ba, Be, Cd, Co, Cr, Cu, Mn, Ni, Pb, Sb, Se, Tl, V, Zn by ICP-MS MA 2542.1/Hg

ICP-MS
The analytical run began 12/29/2015 @ 1312 hrs. Samples were scanned by ICP-AES prior to ICP-MS to protect instrumentation. The first analytical run was for Na. MF6R32 was analyzed at initial 100X dilution; the sample could not be analyzed for Na undiluted. MF6R44 was over the range for Na; the sample was reanalyzed at an appropriate dilution. The second run was for TM minus Cr and Na. The third run was for Cr and dilutions. MF6R32 was over the range for V; 44 was over the range for Pb—the samples were reanalyzed at appropriate dilutions. The Y and Bi internal standard failed for MF6R32; the sample was reanalyzed at a 2X dilution and passed for Bi.

Mercury
The analytical run began 12/23/2015 @ 0924 hrs. Due to the nature of the sample, MF6R32 used an initial volume of 25 mL for digestion.

Sample Equation:

Lab ID 5120223-01 EPA Sample # MF6R32

Date & Time 12/30/2015@1919

ICP-MS: 635.3 µg/L * 1 (Dilution Factor) = 635 µg/L
(Analyte Al)

Date & Time 12/23/2015@0954

Hg: 0.074 µg/L * 50mL/25mL * 1 (Dilution Factor) = 0.15 mg/L

Authorized by _____
Data Package Reviewer

Date: 11/24/2015	MA: 2542.1	Title: ICP-MS Analysis with lower CRQLs
Method Source: ISM02.3	Method: ICP-MS	
Matrix: Aqueous/Water, Soil/Sediment, Sludge		

Summary of Modification

The purpose of this modified analysis is to analyze sludge, soil, and/or water samples by ICP-MS at the requested CRQLs in Section I. Unless specifically modified by this modification, all analyses, Quality Control (QC), and reporting requirements specified in the SOW listed in your current EPA agreement remain unchanged and in full force and effect.

I. Analyte Modifications Not applicable ☐

Analyte	CAS Number	CRQL (µg/L)	CRQL (mg/kg)	Spike Added (µg/L)	Spike Added (mg/kg)
Antimony (Sb)	7440-36-0	1.0	Per SOW	Per SOW	Per SOW
Arsenic (As)	7440-38-2	0.50	Per SOW	Per SOW	Per SOW
Cadmium (Cd)	7440-43-9	0.50	Per SOW	Per SOW	Per SOW
Chromium (Cr)	7440-47-3	1.0	Per SOW	Per SOW	Per SOW
Cobalt (Co)	7440-48-4	0.50	Per SOW	Per SOW	Per SOW
Magnesium (Mg)	7439-95-4	250	--	Per SOW	--
Selenium (Se)	7782-49-2	2.5	Per SOW	Per SOW	Per SOW
Thallium (Tl)	7440-28-0	0.50	0.25	Per SOW	Per SOW

II. Calibration and QC Requirements Not applicable ☐

The Laboratory shall:

- Perform the Initial Calibration with at least one non-blank standard at or below the modified CRQLs, converted to µg/L as necessary.
- Evaluate the ICB and CCB against the modified CRQLs converted to µg/L as necessary.
- Evaluate the Preparation Blanks using the modified CRQLs.
- Perform the Matrix Spike at the levels specified above. Post-digestion spike requirements are per the SOW.
- Flag the Duplicates based on the modified CRQLs.
- Prepare the LCS at 2 times the appropriate modified CRQLs.

III. Preparation and Method Modifications Not applicable ☐

The Laboratory shall:

- Analyze all samples undiluted if this can be done without damaging the instrument. Both diluted and undiluted sample measurements must be contained in the raw data.

IV. Special Reporting Requirements Not applicable ☐

The Laboratory shall:

- Report the "J" and "U" qualifiers in accordance with the requirements in Exhibit B, Section 3.4.2.2.5.2, using the modified CRQLs.

EPA SAMPLE NO.

MF6R32

FORM 1-IN
INORGANIC ANALYSIS DATA SHEET

Lab Name: Bonner Analytical Testing Co. Contract: EPW14029

Lab Code: BON Case No.: 45671 MA No.: 2542.1 SDG No.: MF6R32

Matrix: Water Lab Sample ID: 5120223-01

% Solids: Date Received: 12/16/2015

Analytical method: ICP-MS

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

CAS NO.	Analyte	Concentration	Q	Date Analyzed	Time Analyzed
7429-90-5	Aluminum	1270		12/30/2015	1919
7440-36-0	Antimony	13.3		12/30/2015	1919
7440-38-2	Arsenic	707		12/30/2015	1919
7440-39-3	Barium	752		12/30/2015	1919
7440-41-7	Beryllium	13.9		12/30/2015	1919
7440-43-9	Cadmium	0.97	J	12/30/2015	1919
7440-70-2	Calcium	69300		12/30/2015	1919
7440-47-3	Chromium	752		01/04/2016	1354
7440-48-4	Cobalt	69.8		12/30/2015	1919
7440-50-8	Copper	39.0		12/30/2015	1919
7439-89-6	Iron	16700		12/30/2015	1919
7439-92-1	Lead	752	D	01/04/2016	1428
7439-95-4	Magnesium	79000		12/30/2015	1919
7439-96-5	Manganese	1370		12/30/2015	1919
7440-02-0	Nickel	919		12/30/2015	1919
7440-09-7	Potassium	1550		12/30/2015	1919
7782-49-2	Selenium	58.5		12/30/2015	1919
7440-22-4	Silver	0.38	J	12/30/2015	1919
7440-23-5	Sodium	6480000	D*	12/29/2015	1357
7440-28-0	Thallium	0.15	JD	01/04/2016	1428
7440-62-2	Vanadium	4170	D	01/04/2016	1436
7440-66-6	Zinc	35.9		12/30/2015	1919

NOTE: Hardness (total) is reported in mg/L

Comments:
Filtered

EPA SAMPLE NO.

MF6R42

FORM 1-IN
INORGANIC ANALYSIS DATA SHEET

Lab Name: Bonner Analytical Testing Co. Contract: EPW14029

Lab Code: BON Case No.: 45671 MA No.: 2542.1 SDG No.: MF6R32

Matrix: Water Lab Sample ID: 5120223-02

% Solids: Date Received: 12/16/2015

Analytical method: ICP-MS

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

CAS NO.	Analyte	Concentration	Q	Date Analyzed	Time Analyzed
7429-90-5	Aluminum	29.6		12/30/2015	1923
7440-36-0	Antimony	0.63	J	12/30/2015	1923
7440-38-2	Arsenic	1.1		12/30/2015	1923
7440-39-3	Barium	37.9		12/30/2015	1923
7440-41-7	Beryllium	1.0	U	12/30/2015	1923
7440-43-9	Cadmium	0.10	J	12/30/2015	1923
7440-70-2	Calcium	17400		12/30/2015	1923
7440-47-3	Chromium	0.49	J	01/04/2016	1357
7440-48-4	Cobalt	3.6		12/30/2015	1923
7440-50-8	Copper	2.9		12/30/2015	1923
7439-89-6	Iron	1400		12/30/2015	1923
7439-92-1	Lead	106		12/30/2015	1923
7439-95-4	Magnesium	7240		12/30/2015	1923
7439-96-5	Manganese	894		12/30/2015	1923
7440-02-0	Nickel	4.1		12/30/2015	1923
7440-09-7	Potassium	3050		12/30/2015	1923
7782-49-2	Selenium	2.5	U	12/30/2015	1923
7440-22-4	Silver	0.014	J	12/30/2015	1923
7440-23-5	Sodium	8410	*	12/29/2015	1400
7440-28-0	Thallium	0.50	U	12/30/2015	1923
7440-62-2	Vanadium	0.38	J	12/30/2015	1923
7440-66-6	Zinc	14.6		12/30/2015	1923

NOTE: Hardness (total) is reported in mg/L

Comments:
Filtered

EPA SAMPLE NO.

MF6R44

FORM 1-IN
INORGANIC ANALYSIS DATA SHEET

Lab Name: Bonner Analytical Testing Co. Contract: EPW14029

Lab Code: BON Case No.: 45671 MA No.: 2542.1 SDG No.: MF6R32

Matrix: Water Lab Sample ID: 5120223-03

% Solids: Date Received: 12/16/2015

Analytical method: ICP-MS

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

CAS NO.	Analyte	Concentration	Q	Date Analyzed	Time Analyzed
7429-90-5	Aluminum	4430		12/30/2015	1939
7440-36-0	Antimony	1.3		12/30/2015	1939
7440-38-2	Arsenic	8.3		12/30/2015	1939
7440-39-3	Barium	117		12/30/2015	1939
7440-41-7	Beryllium	0.31	J	12/30/2015	1939
7440-43-9	Cadmium	0.068	J	12/30/2015	1939
7440-70-2	Calcium	15800		12/30/2015	1939
7440-47-3	Chromium	9.1		01/04/2016	1413
7440-48-4	Cobalt	6.0		12/30/2015	1939
7440-50-8	Copper	5.9		12/30/2015	1939
7439-89-6	Iron	6490		12/30/2015	1939
7439-92-1	Lead	3860	D	01/04/2016	1432
7439-95-4	Magnesium	8070		12/30/2015	1939
7439-96-5	Manganese	1470		12/30/2015	1939
7440-02-0	Nickel	9.4		12/30/2015	1939
7440-09-7	Potassium	1750		12/30/2015	1939
7782-49-2	Selenium	0.55	J	12/30/2015	1939
7440-22-4	Silver	0.094	J	12/30/2015	1939
7440-23-5	Sodium	362000	D*	12/29/2015	1417
7440-28-0	Thallium	0.054	J	12/30/2015	1939
7440-62-2	Vanadium	12.9		12/30/2015	1939
7440-66-6	Zinc	13.7		12/30/2015	1939

NOTE: Hardness (total) is reported in mg/L

Comments:
Filtered

EPA SAMPLE NO.

MF6R45

FORM 1-IN
INORGANIC ANALYSIS DATA SHEET

Lab Name: Bonner Analytical Testing Co. Contract: EPW14029

Lab Code: BON Case No.: 45671 MA No.: 2542.1 SDG No.: MF6R32

Matrix: Water Lab Sample ID: 5120223-04

% Solids: Date Received: 12/16/2015

Analytical method: ICP-MS

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

CAS NO.	Analyte	Concentration	Q	Date Analyzed	Time Analyzed
7429-90-5	Aluminum	20.0	U	12/30/2015	1943
7440-36-0	Antimony	0.53	J	12/30/2015	1943
7440-38-2	Arsenic	9.9		12/30/2015	1943
7440-39-3	Barium	108		12/30/2015	1943
7440-41-7	Beryllium	1.0	U	12/30/2015	1943
7440-43-9	Cadmium	0.50	U	12/30/2015	1943
7440-70-2	Calcium	37500		12/30/2015	1943
7440-47-3	Chromium	0.33	J	01/04/2016	1417
7440-48-4	Cobalt	1.4		12/30/2015	1943
7440-50-8	Copper	0.30	J	12/30/2015	1943
7439-89-6	Iron	36800		12/30/2015	1943
7439-92-1	Lead	0.14	J	12/30/2015	1943
7439-95-4	Magnesium	6380		12/30/2015	1943
7439-96-5	Manganese	1660		12/30/2015	1943
7440-02-0	Nickel	0.92	J	12/30/2015	1943
7440-09-7	Potassium	1010		12/30/2015	1943
7782-49-2	Selenium	2.5	U	12/30/2015	1943
7440-22-4	Silver	1.0	U	12/30/2015	1943
7440-23-5	Sodium	3210	*	12/29/2015	1409
7440-28-0	Thallium	0.50	U	12/30/2015	1943
7440-62-2	Vanadium	5.0	U	12/30/2015	1943
7440-66-6	Zinc	1.0	J	12/30/2015	1943

NOTE: Hardness (total) is reported in mg/L

Comments:
Filtered

EPA SAMPLE NO.

MF6R46

FORM 1-IN
INORGANIC ANALYSIS DATA SHEET

Lab Name: Bonner Analytical Testing Co. Contract: EPW14029

Lab Code: BON Case No.: 45671 MA No.: 2542.1 SDG No.: MF6R32

Matrix: Water Lab Sample ID: 5120223-05

% Solids: Date Received: 12/16/2015

Analytical method: ICP-MS

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

CAS NO.	Analyte	Concentration	Q	Date Analyzed	Time Analyzed
7429-90-5	Aluminum	215		12/30/2015	1948
7440-36-0	Antimony	0.79	J	12/30/2015	1948
7440-38-2	Arsenic	0.78		12/30/2015	1948
7440-39-3	Barium	54.8		12/30/2015	1948
7440-41-7	Beryllium	1.0	U	12/30/2015	1948
7440-43-9	Cadmium	0.043	J	12/30/2015	1948
7440-70-2	Calcium	26000		12/30/2015	1948
7440-47-3	Chromium	0.77	J	01/04/2016	1420
7440-48-4	Cobalt	0.34	J	12/30/2015	1948
7440-50-8	Copper	3.9		12/30/2015	1948
7439-89-6	Iron	304		12/30/2015	1948
7439-92-1	Lead	11.1		12/30/2015	1948
7439-95-4	Magnesium	7300		12/30/2015	1948
7439-96-5	Manganese	36.0		12/30/2015	1948
7440-02-0	Nickel	2.8		12/30/2015	1948
7440-09-7	Potassium	4080		12/30/2015	1948
7782-49-2	Selenium	2.5	U	12/30/2015	1948
7440-22-4	Silver	1.0	U	12/30/2015	1948
7440-23-5	Sodium	8780	*	12/29/2015	1412
7440-28-0	Thallium	0.50	U	12/30/2015	1948
7440-62-2	Vanadium	0.35	J	12/30/2015	1948
7440-66-6	Zinc	9.2		12/30/2015	1948

NOTE: Hardness (total) is reported in mg/L

Comments:
Filtered

EPA SAMPLE NO.

MF6R47

FORM 1-IN
INORGANIC ANALYSIS DATA SHEET

Lab Name: Bonner Analytical Testing Co. Contract: EPW14029

Lab Code: BON Case No.: 45671 MA No.: 2542.1 SDG No.: MF6R32

Matrix: Water Lab Sample ID: 5120223-06

% Solids: Date Received: 12/16/2015

Analytical method: ICP-MS

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

CAS NO.	Analyte	Concentration	Q	Date Analyzed	Time Analyzed
7429-90-5	Aluminum	366		12/30/2015	1952
7440-36-0	Antimony	0.72	J	12/30/2015	1952
7440-38-2	Arsenic	0.68		12/30/2015	1952
7440-39-3	Barium	54.0		12/30/2015	1952
7440-41-7	Beryllium	1.0	U	12/30/2015	1952
7440-43-9	Cadmium	0.039	J	12/30/2015	1952
7440-70-2	Calcium	25100		12/30/2015	1952
7440-47-3	Chromium	0.91	J	01/04/2016	1424
7440-48-4	Cobalt	0.60		12/30/2015	1952
7440-50-8	Copper	3.7		12/30/2015	1952
7439-89-6	Iron	460		12/30/2015	1952
7439-92-1	Lead	14.9		12/30/2015	1952
7439-95-4	Magnesium	7130		12/30/2015	1952
7439-96-5	Manganese	37.4		12/30/2015	1952
7440-02-0	Nickel	2.6		12/30/2015	1952
7440-09-7	Potassium	3960		12/30/2015	1952
7782-49-2	Selenium	2.5	U	12/30/2015	1952
7440-22-4	Silver	1.0	U	12/30/2015	1952
7440-23-5	Sodium	8330	*	12/29/2015	1414
7440-28-0	Thallium	0.50	U	12/30/2015	1952
7440-62-2	Vanadium	0.65	J	12/30/2015	1952
7440-66-6	Zinc	9.9		12/30/2015	1952

NOTE: Hardness (total) is reported in mg/L

Comments:
Filtered

FORM 2-IN
INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: Bonner Analytical Testing Co. Contract: EPW14029

Lab Code: BON Case No.: 45671 MA No.: 2542.1 SDG No.: MF6R32

Initial Calibration Verification Source: QATS, Lot: EPA-ICV (0307)

Continuing Calibration Verification Source: In-House, Lot: B4J0060

Run Batch: BL52903M122915B Analytical method: ICP-MS

Concentration Units: ug/L

	Initial Calibration Verification				Continuing Calibration Verification						
	ID: ICV01				ID: CCV01				ID: CCV02		
Analyte	True	Found	%R	%RSD	True	Found	%R	%RSD	Found	%R	%RSD
Sodium	2019.0	1970	98	1	60000	65300	109	1	62700	105	5

FORM 2-IN
INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: Bonner Analytical Testing Co. Contract: EPW14029

Lab Code: BON Case No.: 45671 MA No.: 2542.1 SDG No.: MF6R32

Initial Calibration Verification Source: QATS, Lot: EPA-ICV (0307)

Continuing Calibration Verification Source: In-House, Lot: B4J0060

Run Batch: BL52904M123015B Analytical method: ICP-MS

Concentration Units: ug/L

	Initial Calibration Verification				Continuing Calibration Verification						
	ID: ICV01				ID: CCV01				ID: CCV02		
Analyte	True	Found	%R	%RSD	True	Found	%R	%RSD	Found	%R	%RSD
Aluminum	504.00	532	105	1	60500	61600	102	2	59900	99	1
Antimony	199.00	197	99	1	500.00	505	101	1	503	101	1
Arsenic	200.00	218	109	1	500.00	518	104	3	509	102	0
Barium	99.000	102	103	0	2500.0	2580	103	1	2560	103	1
Beryllium	99.000	96.6	98	1	500.00	485	97	2	476	95	2
Cadmium	99.000	99.1	100	1	500.00	476	95	1	474	95	1
Calcium	2005.0	2090	104	0	60000	60900	101	3	60800	101	0
Cobalt	100.00	102	102	2	500.00	488	98	1	491	98	0
Copper	98.000	108	110	2	500.00	479	96	1	478	96	1
Iron	1016.0	1060	105	1	60000	59700	100	2	59900	100	1
Lead	200.00	202	101	1	500.00	535	107	1	527	105	1
Magnesium	1215.0	1240	102	2	60000	61200	102	2	59400	99	1
Manganese	100.00	106	106	3	2500.0	2740	110	2	2680	107	0
Nickel	101.00	108	107	1	500.00	488	98	2	489	98	2
Potassium	2004.0	2070	103	2	60000	59100	99	3	58700	98	1
Selenium	206.00	222	108	0	500.00	511	102	4	500	100	1
Silver	100.00	105	105	1	65.000	62.1	96	1	63.0	97	1
Thallium	206.00	212	103	1	500.00	507	101	2	502	100	2
Vanadium	100.00	103	103	2	500.00	532	106	2	518	104	1
Zinc	205.00	209	102	1	2500.0	2320	93	1	2310	93	2

FORM 2-IN
INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: Bonner Analytical Testing Co. Contract: EPW14029

Lab Code: BON Case No.: 45671 MA No.: 2542.1 SDG No.: MF6R32

Initial Calibration Verification Source: QATS, Lot: EPA-ICV (0307)

Continuing Calibration Verification Source: In-House, Lot: B4J0060

Run Batch: BL52904M123015B Analytical method: ICP-MS

Concentration Units: ug/L

	Initial Calibration Verification				Continuing Calibration Verification						
	ID:				ID: CCV03				ID:		
Analyte	True	Found	%R	%RSD	True	Found	%R	%RSD	Found	%R	%RSD
Aluminum					60500	61600	102	0			
Antimony					500.00	503	101	0			
Arsenic					500.00	514	103	4			
Barium					2500.0	2560	102	1			
Beryllium					500.00	492	98	1			
Cadmium					500.00	473	95	1			
Calcium					60000	62100	104	1			
Cobalt					500.00	499	100	1			
Copper					500.00	487	97	0			
Iron					60000	61600	103	1			
Lead					500.00	532	106	1			
Magnesium					60000	61100	102	1			
Manganese					2500.0	2700	108	4			
Nickel					500.00	494	99	1			
Potassium					60000	59200	99	1			
Selenium					500.00	503	101	5			
Silver					65.000	62.7	97	2			
Thallium					500.00	505	101	0			
Vanadium					500.00	528	106	3			
Zinc					2500.0	2340	94	1			

FORM 2-IN
INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: Bonner Analytical Testing Co. Contract: EPW14029

Lab Code: BON Case No.: 45671 MA No.: 2542.1 SDG No.: MF6R32

Initial Calibration Verification Source: QATS, Lot: EPA-ICV (0307)

Continuing Calibration Verification Source: In-House, Lot: B4J0060

Run Batch: BA60402M010416B Analytical method: ICP-MS

Concentration Units: ug/L

	Initial Calibration Verification				Continuing Calibration Verification						
	ID: ICV01				ID: CCV01				ID: CCV02		
Analyte	True	Found	%R	%RSD	True	Found	%R	%RSD	Found	%R	%RSD
Cadmium	99.000	99.9	101	0	500.00	474	95	2	470	94	1
Chromium	98.000	102	104	1	500.00	506	101	1	502	100	0
Cobalt	100.00	104	104	1	500.00	493	99	1	493	99	0
Copper	98.000	106	108	1	500.00	464	93	1	461	92	1
Iron	1016.0	1070	105	2	60000	58300	97	1	58300	97	1
Lead	200.00	208	104	0	500.00	528	106	1	532	106	1
Nickel	101.00	106	105	1	500.00	470	94	1	470	94	1
Silver	100.00	104	104	1	65.000	62.1	96	1	60.9	94	1
Thallium	206.00	215	105	1	500.00	508	102	0	510	102	1
Vanadium	100.00	105	105	1	500.00	516	103	1	517	103	0
Zinc	205.00	210	102	1	2500.0	2330	93	1	2320	93	0

FORM 3-IN
BLANKS

Lab Name: Bonner Analytical Testing Co. Contract: EPW14029

Lab Code: BON Case No.: 45671 MA No.: 2542.1 SDG No.: MF6R32

Preparation Blank Matrix: Water

Preparation Blank Concentration Units (µg/L, mg/L, mg/kg dry weight, or µg): ug/L

Analytical method: ICP-MS Preparation Batch: PL21004

Run Batch: BL52903M122915B Preparation Method: 200.8

	Initial Calibration Blank (ug/L)		Continuing Calibration Blank (ug/L)						Preparation Blank/Leachate Extraction Blank	
Analyte	ID: ICB01	Q	ID: CCB01	Q	ID: CCB02	Q	ID:	Q	ID: PBW01	Q
Sodium	5.0	J	5.9	J	1.8	J			14.7	J

NOTE: Hardness (total) is reported in mg/L

FORM 3-IN
BLANKS

Lab Name: Bonner Analytical Testing Co. Contract: EPW14029

Lab Code: BON Case No.: 45671 MA No.: 2542.1 SDG No.: MF6R32

Preparation Blank Matrix: Water

Preparation Blank Concentration Units (µg/L, mg/L, mg/kg dry weight, or µg): ug/L

Analytical method: ICP-MS Preparation Batch: PL21004

Run Batch: BL52904M123015B Preparation Method: 200.8

	Initial Calibration Blank (ug/L)		Continuing Calibration Blank (ug/L)						Preparation Blank/Leachate Extraction Blank	
Analyte	ID: ICB01	Q	ID: CCB01	Q	ID: CCB02	Q	ID: CCB03	Q	ID: PBW01	Q
Aluminum	-0.95	J	3.4	J	1.3	J	3.0	J	20.0	U
Antimony	0.091	J	0.043	J	0.043	J	0.10	J	0.16	J
Arsenic	0.035	J	0.074	J	0.064	J	0.069	J	0.12	J
Barium	0.023	J	0.12	J	0.078	J	0.15	J	0.087	J
Beryllium	-0.011	J	0.011	J	0.0049	J	-0.0091	J	1.0	U
Cadmium	0.011	J	0.015	J	0.018	J	0.028	J	0.50	U
Calcium	-0.27	J	6.4	J	-0.080	J	3.3	J	500	U
Cobalt	-0.0024	J	0.023	J	0.014	J	0.029	J	0.50	U
Copper	0.059	J	0.12	J	0.030	J	0.087	J	0.18	J
Iron	2.2	J	5.2	J	3.4	J	5.9	J	5.0	J
Lead	-0.018	J	0.0070	J	-0.0045	J	0.0073	J	0.024	J
Magnesium	0.30	J	5.1	J	2.7	J	4.3	J	250	U
Manganese	0.027	J	0.14	J	0.11	J	0.18	J	1.0	U
Nickel	-0.030	J	0.044	J	0.013	J	0.066	J	0.52	J
Potassium	8.9	J	40.4	J	27.5	J	16.4	J	35.0	J
Selenium	0.14	J	0.11	J	0.011	J	0.0097	J	2.5	U
Silver	0.027	J	0.014	J	0.0022	J	0.0099	J	1.0	U
Thallium	0.015	J	0.17	J	0.18	J	0.17	J	0.032	J
Vanadium	-0.042	J	0.064	J	-0.038	J	-0.085	J	5.0	U
Zinc	0.0026	J	0.12	J	0.096	J	0.12	J	2.0	U

NOTE: Hardness (total) is reported in mg/L

FORM 3-IN
BLANKS

Lab Name: Bonner Analytical Testing Co. Contract: EPW14029

Lab Code: BON Case No.: 45671 MA No.: 2542.1 SDG No.: MF6R32

Preparation Blank Matrix: Water

Preparation Blank Concentration Units (µg/L, mg/L, mg/kg dry weight, or µg): ug/L

Analytical method: ICP-MS Preparation Batch:

Run Batch: BA60402M010416B Preparation Method:

	Initial Calibration Blank (ug/L)		Continuing Calibration Blank (ug/L)						Preparation Blank/Leachate Extraction Blank	
Analyte	ID: ICB01	Q	ID: CCB01	Q	ID: CCB02	Q	ID:	Q	ID: PBW01	Q
Cadmium	0.00070	J	0.0082	J	0.033	J				
Chromium	-0.020	J	-0.031	J	-0.0037	J			0.24	J
Cobalt	-0.0020	J	0.016	J	0.013	J				
Copper	-0.072	J	-0.039	J	0.024	J				
Iron	-2.5	J	-1.3	J	0.49	J				
Lead	0.0075	J	0.017	J	0.021	J				
Nickel	-0.091	J	-0.039	J	0.012	J				
Silver	0.014	J	0.0029	J	-0.00060	J				
Thallium	0.015	J	0.11	J	0.11	J				
Vanadium	0.014	J	0.034	J	0.046	J				
Zinc	-0.045	J	-0.044	J	-0.0089	J				

NOTE: Hardness (total) is reported in mg/L

FORM 4-IN
ICP INTERFERENCE CHECK SAMPLE

Lab Name: Bonner Analytical Testing Co. Contract: EPW14029

Lab Code: BON Case No.: 45671 MA No.: 2542.1 SDG No.: MF6R32

Analytical Method: ICP-MS ICSA Source: USEPA, Lot:ICSA-0803

Instrument ID: ICPMS01 ICSB Source: USEPA, Lot:ICSA-0803 & ICSB-0803

Run Batch: BL52903M122915B

Concentration Units: ug/L

Analyte	True		Found			
	ICSA	ICSAB	ICSA	%R	ICSAB	%R
Sodium	100000	100000	109000	109	102000	102

FORM 4-IN
ICP INTERFERENCE CHECK SAMPLE

Lab Name: Bonner Analytical Testing Co. Contract: EPW14029

Lab Code: BON Case No.: 45671 MA No.: 2542.1 SDG No.: MF6R32

Analytical Method: ICP-MS ICSA Source: USEPA, Lot:ICSA-0803

Instrument ID: ICPMS01 ICSB Source: USEPA, Lot:ICSA-0803 & ICSB-0803

Run Batch: BL52904M123015B

Concentration Units: ug/L

Analyte	True		Found			
	ICSA	ICSAB	ICSA	%R	ICSAB	%R
Aluminum	100000	100000	99200	99	99400	99
Antimony	1.5	22	1.1	73	20.3	92
Arsenic	0.1	19	0.43	430	20.8	109
Barium	1.2	22	1.7	142	22.5	102
Beryllium	0	19	0.31		18.9	99
Cadmium	0.7	20	0.58	83	18.2	91
Calcium	100000	100000	105000	105	104000	104
Cobalt	1	20	1.3	130	20.3	102
Copper	8	25	8.5	106	27.3	109
Iron	100000	100000	100000	100	99800	100
Lead	4	25	4.3	108	23.9	96
Magnesium	100000	100000	102000	102	102000	102
Manganese	7	27	6.1	87	28.0	104
Nickel	6	24	6.9	115	25.5	106
Potassium	100000	100000	101000	101	102000	102
Selenium	0.3	19	0.084	28	20.0	105
Silver	0	18	0.016		17.9	99
Thallium	0	21	0.059		20.5	98
Vanadium	0.5	19	-0.64	-128	21.5	113
Zinc	11	29	11.5	105	28.8	99

FORM 4-IN
ICP INTERFERENCE CHECK SAMPLE

Lab Name: Bonner Analytical Testing Co. Contract: EPW14029

Lab Code: BON Case No.: 45671 MA No.: 2542.1 SDG No.: MF6R32

Analytical Method: ICP-MS ICSA Source: USEPA, Lot:ICSA-0803

Instrument ID: ICPMS01 ICSB Source: USEPA, Lot:ICSA-0803 & ICSB-0803

Run Batch: BA60402M010416B

Concentration Units: ug/L

Analyte	True		Found			
	ICSA	ICSAB	ICSA	%R	ICSAB	%R
Cadmium	0.7	20	0.99	141	19.1	96
Chromium	21	40	20.9	100	40.9	102
Cobalt	1	20	1.5	150	20.2	101
Copper	8	25	8.7	109	26.5	106
Iron	100000	100000	99100	99	96700	97
Lead	4	25	4.3	108	24.5	98
Nickel	6	24	7.8	130	26.0	108
Silver	0	18	0.022		17.6	98
Thallium	0	21	0.088		20.5	98
Vanadium	0.5	19	-0.33	-66	20.0	105
Zinc	11	29	12.3	112	29.5	102

EPA SAMPLE NO.

MF6R42S

FORM 5A-IN
MATRIX SPIKE SAMPLE RECOVERY

Lab Name: Bonner Analytical Testing Co. Contract: EPW14029

Lab Code: BON Case No.: 45671 MA No.: 2542.1 SDG No.: MF6R32

Matrix: Water Analytical Method: ICP-MS

% Solids:

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

Analyte	Control Limit %R	Spiked Sample Result (SSR)	Q	Sample Result (SR)	Q	Spike Added (SA)	%R	Q
Aluminum	75-125	2000		29.6		2000	98	
Antimony	75-125	97.0		0.63	J	100	96	
Arsenic	75-125	43.0		1.1		40.0	104	
Barium	75-125	2100		37.9		2000	101	
Beryllium	75-125	50.0		1.0	U	50.0	100	
Cadmium	75-125	48.0		0.10	J	50.0	96	
Chromium	75-125	210		0.49	J	200	106	
Cobalt	75-125	490		3.6		500	97	
Copper	75-125	250		2.9		250	99	
Lead		130		106		20.0	104	
Manganese	75-125	1400		894		500	111	
Nickel	75-125	500		4.1		500	99	
Selenium	75-125	110		2.5	U	100	107	
Silver	75-125	48.0		0.014	J	50.0	96	
Thallium	75-125	51.0		0.50	U	50.0	101	
Vanadium	75-125	520		0.38	J	500	105	
Zinc	75-125	480		14.6		500	94	

EPA SAMPLE NO.

FORM 6-IN
DUPLICATES

MF6R42D

Lab Name: Bonner Analytical Testing Co. Contract: EPW14029

Lab Code: BON Case No.:45671 MA No.: 2542.1 SDG No.: MF6R32

Matrix: Water Analytical Method: ICP-MS

% Solids:

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

Analyte	Control Limit	Sample (S)	Q	Duplicate (D)	Q	RPD	Q
Aluminum	20.0	29.6		28.3		5	
Antimony		0.63	J	0.61	J	3	
Arsenic	0.50	1.1		1.1		3	
Barium	10	37.9		38.3		1	
Beryllium		1.0	U	1.0	U		
Cadmium		0.10	J	0.10	J	2	
Calcium		17400		17300		1	
Chromium		0.49	J	0.49	J	0	
Cobalt		3.6		3.6		1	
Copper	2.0	2.9		2.5		14	
Iron		1400		1390		1	
Lead		106		105		1	
Magnesium		7240		7120		2	
Manganese		894		888		1	
Nickel	1.0	4.1		4.0		3	
Potassium		3050		3000		2	
Selenium		2.5	U	2.5	U		
Silver		0.014	J	0.016	J	14	
Sodium		8410		8600		2	
Thallium		0.50	U	0.033	J	200	
Vanadium		0.38	J	0.34	J	12	
Zinc		14.6		14.5		0	

NOTE: Hardness (total) is reported in mg/L

EPA SAMPLE NO.

LCS01

FORM 7-IN
LABORATORY CONTROL SAMPLE

Lab Name: Bonner Analytical Testing Co. Contract: EPW14029

Lab Code: BON Case No.: 45671 MA No.: 2542.1 SDG No.: MF6R32

Matrix: Water Preparation Method: 200.8

Analytical method: ICP-MS Preparation Batch: PL21004

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

Analyte	True	Found	%R
Sodium	1000.0	1000	100

EPA SAMPLE NO.

LCS01

FORM 7-IN
LABORATORY CONTROL SAMPLE

Lab Name: Bonner Analytical Testing Co. Contract: EPW14029

Lab Code: BON Case No.: 45671 MA No.: 2542.1 SDG No.: MF6R32

Matrix: Water Preparation Method: 200.8

Analytical method: ICP-MS Preparation Batch: PL21004

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

Analyte	True	Found	%R
Barium	20.000	20.0	100
Beryllium	2.0000	2.1	105
Calcium	1000.0	1010	101
Copper	4.0000	4.5	113
Iron	400.00	423	106
Lead	2.0000	2.0	100
Manganese	2.0000	2.0	100
Nickel	2.0000	2.6	130
Potassium	1000.0	1050	105
Silver	2.0000	1.7	85
Vanadium	10.000	10.2	102
Zinc	4.0000	4.2	105

EPA SAMPLE NO.

LCS02

FORM 7-IN
LABORATORY CONTROL SAMPLE

Lab Name: Bonner Analytical Testing Co. Contract: EPW14029

Lab Code: BON Case No.: 45671 MA No.: 2542.1 SDG No.: MF6R32

Matrix: Water Preparation Method: 200.8

Analytical method: ICP-MS Preparation Batch: PL21004

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

Analyte	True	Found	%R
Antimony	2.0000	2.0	100
Arsenic	1.0000	1.2	120
Cadmium	1.0000	1.0	100
Cobalt	1.0000	1.0	100
Magnesium	500.00	510	102
Selenium	5.0000	5.0	100
Thallium	1.0000	1.0	100

EPA SAMPLE NO.

LCS03

FORM 7-IN
LABORATORY CONTROL SAMPLE

Lab Name: Bonner Analytical Testing Co. Contract: EPW14029

Lab Code: BON Case No.: 45671 MA No.: 2542.1 SDG No.: MF6R32

Matrix: Water Preparation Method: 200.8

Analytical method: ICP-MS Preparation Batch: PL21004

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

Analyte	True	Found	%R
Chromium	2.0000	2.4	120

EPA SAMPLE NO.

LCS03

FORM 7-IN
LABORATORY CONTROL SAMPLE

Lab Name: Bonner Analytical Testing Co. Contract: EPW14029

Lab Code: BON Case No.: 45671 MA No.: 2542.1 SDG No.: MF6R32

Matrix: Water Preparation Method: 200.8

Analytical method: ICP-MS Preparation Batch: PL21004

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

Analyte	True	Found	%R
Aluminum	40.000	42.2	106

EPA SAMPLE NO.

MF6R42L

FORM 8-IN
ICP-AES AND ICP-MS SERIAL DILUTIONS

Lab Name: Bonner Analytical Testing Co. Contract: EPW14029

Lab Code: BON Case No.: 45671 MA No.: 2542.1 SDG No.: MF6R32

Matrix: Water Analytical method: ICP-MS

% Solids:

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

Analyte	Initial Sample Result (I)	Q	Serial Dilution Result (S)	Q	% Difference	Q
Aluminum	29.6		19.1	J	35	
Antimony	0.63	J	5.0	U	100	
Arsenic	1.1		1.2	J	8	
Barium	37.9		35.3	J	7	
Beryllium	1.0	U	5.0	U		
Cadmium	0.10	J	2.5	U	100	
Calcium	17400		17000		2	
Chromium	0.49	J	5.0	U	100	
Cobalt	3.6		3.5		2	
Copper	2.9		3.1	J	10	
Iron	1400		1420		1	
Lead	106		102		4	
Magnesium	7240		6850		5	
Manganese	894		886		1	
Nickel	4.1		4.0	J	4	
Potassium	3050		3090		1	
Selenium	2.5	U	0.85	J		
Silver	0.014	J	5.0	U	0	
Sodium	8410		1630		81	*
Thallium	0.50	U	2.5	U		
Vanadium	0.38	J	25.0	U	100	
Zinc	14.6		15.8		8	

NOTE: Hardness (total) is reported in mg/L

FORM 9-IN
METHOD DETECTION LIMIT

Lab Name: Bonner Analytical Testing Co. Contract: EPW14029

Lab Code: BON Case No.: 45671 MA No.: 2542.1 SDG No.: MF6R32

Analytical Method: ICP-MS Instrument ID: ICPMS01

Preparation Method: 200.8

Concentration Units (µg/L, µg, or mg/kg): ug/L

Analyte	Wavelength/Mass		MDL	Date Analyzed
Aluminum	27.00	u	4.8	12/16/2015
Antimony	121.00	u	0.05	12/15/2015
Arsenic	75.00	u	0.11	12/15/2015
Barium	137.00	u	0.038	12/15/2015
Beryllium	9.00	u	0.038	12/15/2015
Cadmium	111.00	u	0.037	12/15/2015
Calcium	44.00	u	37.8	12/15/2015
Chromium	52.00	u	0.13	12/15/2015
Cobalt	59.00	u	0.0098	12/15/2015
Copper	65.00	u	0.11	12/15/2015
Iron	54.00	u	2.7	12/15/2015
Lead	208.00	u	0.021	12/15/2015
Magnesium	25.00	u	1	12/15/2015
Manganese	55.00	u	0.06	12/15/2015
Nickel	60.00	u	0.14	12/15/2015
Potassium	39.00	u	4.1	12/15/2015
Selenium	78.00	u	0.42	12/15/2015
Silver	107.00	u	0.01	12/15/2015
Sodium	23.00	u	8.4	12/17/2015
Thallium	205.00	u	0.0095	12/15/2015
Vanadium	51.00	u	0.32	12/15/2015
Zinc	66.00	u	0.31	12/15/2015

FORM 11-IN
ICP-MS INTERNAL STANDARD ASSOCIATION

Lab Name: Bonner Analytical Testing Co Contract: EPW14029

Lab Code: BON Case No.: 45671 MA No.: 2542.1 SDG No.: MF6R32

Instrument ID: ICPMS01 Date: 12/29/2015

Run Batch: BL52903M122915B

Analyte	Assoc. Internal Standard 1	Assoc. Internal Standard 2
Sodium	Li	Sc

FORM 11-IN
ICP-MS INTERNAL STANDARD ASSOCIATION

Lab Name: Bonner Analytical Testing Co Contract: EPW14029

Lab Code: BON Case No.: 45671 MA No.: 2542.1 SDG No.: MF6R32

Instrument ID: ICPMS01 Date: 12/30/2015

Run Batch: BL52904M123015B

Analyte	Assoc. Internal Standard 1	Assoc. Internal Standard 2
Aluminum	Li	Sc
Antimony	In	Tb
Arsenic	Rh	
Barium	In	Tb
Beryllium	Li	Sc
Cadmium	Y	In
Calcium	Li	Sc
Cobalt	Sc	Y
Copper	Sc	Y
Iron	Sc	Y
Lead	Ho	Bi
Magnesium	Li	Sc
Manganese	Rh	
Nickel	Sc	Y
Potassium	Li	Sc
Selenium	Rh	
Silver	Y	In
Thallium	Ho	Bi
Vanadium	Rh	
Zinc	Sc	Y

FORM 11-IN
ICP-MS INTERNAL STANDARD ASSOCIATION

Lab Name: Bonner Analytical Testing Co Contract: EPW14029

Lab Code: BON Case No.: 45671 MA No.: 2542.1 SDG No.: MF6R32

Instrument ID: ICPMS01 Date: 01/04/2016

Run Batch: BA60402M010416B

Analyte	Assoc. Internal Standard 1	Assoc. Internal Standard 2
Cadmium	Y	In
Chromium	Rh	
Cobalt	Sc	Y
Copper	Sc	Y
Iron	Sc	Y
Lead	Ho	Bi
Nickel	Sc	Y
Silver	Y	In
Thallium	Ho	Bi
Vanadium	Rh	
Zinc	Sc	Y

FORM 12-IN
ANALYSIS LOG

Lab Name: Bonner Analytical Testing Co. Contract: EPW14029

Lab Code: BON Case No.: 45671 MA No.: 2542.1 SDG No.: MF6R32

Instrument ID: ICPMS01 Analytical Method: ICP-MS

Start Date: 12/29/2015 End Date: 12/29/2015

Run Batch: BL52903M122915B

EPA Sample NO.	D/F	Time	Analytes																									
			Al	Sb	As	Ba	Be	Cd	Ca	Cr	Co	Cu	Fe	Pb	Mg	Mn	Hg	Ni	K	Se	Ag	Na	Tl	V	Zn	CN		
TUNE01	1.0	1312																										
S01	1.0	1320																				X						
S04	1.0	1322																				X						
S05	1.0	1325																				X						
S06	1.0	1327																				X						
S07	1.0	1330																				X						
S08	1.0	1332																				X						
S10	1.0	1335																				X						
ICV01	1.0	1337																				X						
ICB01	1.0	1340																				X						
ICSA01	1.0	1342																				X						
ICSAB01	1.0	1345																				X						
CCV01	1.0	1347																				X						
CCB01	1.0	1350																				X						
PBW01	1.0	1352																				X						
LCS01	1.0	1355																				X						
MF6R32	100.	1357																				X						
MF6R42	1.0	1400																				X						
MF6R42D	1.0	1402																				X						
MF6R42L	1.0	1405																				X						
MF6R44	1.0	1407																										
MF6R45	1.0	1409																				X						
MF6R46	1.0	1412																				X						
MF6R47	1.0	1414																				X						
MF6R44	4.0	1417																				X						
CCV02	1.0	1419																				X						
CCB02	1.0	1422																				X						

FORM 12-IN
ANALYSIS LOG

Lab Name: Bonner Analytical Testing Co. Contract: EPW14029

Lab Code: BON Case No.: 45671 MA No.: 2542.1 SDG No.: MF6R32

Instrument ID: ICPMS01 Analytical Method: ICP-MS

Start Date: 12/30/2015 End Date: 12/30/2015

Run Batch: BL52904M123015B

EPA Sample NO.	D/F	Time	Analytes																									
			Al	Sb	As	Ba	Be	Cd	Ca	Cr	Co	Cu	Fe	Pb	Mg	Mn	Hg	Ni	K	Se	Ag	Na	Tl	V	Zn	CN		
TUNE01	1.0	1731																										
S01	1.0	1742	X	X	X	X	X	X	X		X	X	X	X	X	X		X	X	X	X		X	X	X			
S02	1.0	1746	X																	X	X							
S03	1.0	1751		X	X			X			X									X			X					
S04	1.0	1755		X	X		X	X	X		X	X	X	X	X	X		X	X				X	X	X			
S05	1.0	1759	X	X	X	X	X	X	X		X	X	X	X	X	X		X	X	X	X		X	X	X			
S06	1.0	1803	X	X	X	X	X	X	X		X	X	X	X	X	X		X	X		X		X	X	X			
S07	1.0	1807	X	X	X	X	X	X	X		X	X	X	X	X	X		X	X	X	X		X	X	X			
S08	1.0	1811	X	X	X	X	X	X	X		X	X	X	X	X	X		X	X	X	X		X	X	X			
S09	1.0	1815				X										X									X			
S10	1.0	1819	X						X				X		X				X									
ICV01	1.0	1827	X	X	X	X	X	X	X		X	X	X	X	X	X		X	X	X	X		X	X	X			
ICB01	1.0	1832	X	X	X	X	X	X	X		X	X	X	X	X	X		X	X	X	X		X	X	X			
ICSA01	1.0	1836	X	X	X	X	X	X	X		X	X	X	X	X	X		X	X	X	X		X	X	X			
ICSAB01	1.0	1840	X	X	X	X	X	X	X		X	X	X	X	X	X		X	X	X	X		X	X	X			
CCV01	1.0	1844	X	X	X	X	X	X	X		X	X	X	X	X	X		X	X	X	X		X	X	X			
CCB01	1.0	1850	X	X	X	X	X	X	X		X	X	X	X	X	X		X	X	X	X		X	X	X			
CCV02	1.0	1854	X	X	X	X	X	X	X		X	X	X	X	X	X		X	X	X	X		X	X	X			
CCB02	1.0	1858	X	X	X	X	X	X	X		X	X	X	X	X	X		X	X	X	X		X	X	X			
PBW01	1.0	1903	X	X	X	X	X	X	X		X	X	X	X	X	X		X	X	X	X		X	X	X			
LCS01	1.0	1907				X	X		X			X	X	X		X		X	X		X			X	X			
LCS02	1.0	1911		X	X			X			X				X					X			X					
LCS03	1.0	1915	X																									
MF6R32	1.0	1919	X	X	X	X	X	X	X		X	X	X		X	X		X	X	X	X				X			
MF6R42	1.0	1923	X	X	X	X	X	X	X		X	X	X	X	X	X		X	X	X	X		X	X	X			
MF6R42S	1.0	1927	X	X	X	X	X	X	X		X	X	X	X	X	X		X	X	X	X		X	X	X			
MF6R42D	1.0	1931	X	X	X	X	X	X	X		X	X	X	X	X	X		X	X	X	X		X	X	X			
MF6R42L	5.0	1935	X	X	X	X	X	X	X		X	X	X	X	X	X		X	X	X	X		X	X	X			
MF6R44	1.0	1939	X	X	X	X	X	X	X		X	X	X		X	X		X	X	X	X		X	X	X			
MF6R45	1.0	1943	X	X	X	X	X	X	X		X	X	X	X	X	X		X	X	X	X		X	X	X			

FORM 12-IN
ANALYSIS LOG

Lab Name: Bonner Analytical Testing Co.
Contract: EPW14029
Lab Code: BON
Case No.: 45671
MA No.: 2542.1
SDG No.: MF6R32
Instrument ID: ICPMS01
Analytical Method: ICP-MS
Start Date: 12/30/2015
End Date: 12/30/2015
Run Batch: BL52904M123015B

EPA Sample NO.	D/F	Time	Analytes																								
			Al	Sb	As	Ba	Be	Cd	Ca	Cr	Co	Cu	Fe	Pb	Mg	Mn	Hg	Ni	K	Se	Ag	Na	Tl	V	Zn	CN		
MF6R46	1.0	1948	X	X	X	X	X	X	X		X	X	X	X	X	X		X	X	X	X		X	X	X			
MF6R47	1.0	1952	X	X	X	X	X	X	X		X	X	X	X	X	X		X	X	X	X		X	X	X			
ZZZZZZ	1.0	1956																										
CCV03	1.0	2000	X	X	X	X	X	X	X		X	X	X	X	X	X		X	X	X	X		X	X	X			
CCB03	1.0	2006	X	X	X	X	X	X	X		X	X	X	X	X	X		X	X	X	X		X	X	X			

FORM 12-IN
ANALYSIS LOG

Lab Name: Bonner Analytical Testing Co. Contract: EPW14029

Lab Code: BON Case No.: 45671 MA No.: 2542.1 SDG No.: MF6R32

Instrument ID: ICPMS01 Analytical Method: ICP-MS

Start Date: 01/04/2016 End Date: 01/04/2016

Run Batch: BA60402M010416B

EPA Sample NO.	D/F	Time	Analytes																									
			Al	Sb	As	Ba	Be	Cd	Ca	Cr	Co	Cu	Fe	Pb	Mg	Mn	Hg	Ni	K	Se	Ag	Na	Tl	V	Zn	CN		
TUNE01	1.0	1229																										
S01	1.0	1240						X		X	X	X	X	X				X			X		X	X	X			
S03	1.0	1248						X		X	X												X					
S04	1.0	1252						X		X	X	X	X	X				X			X		X	X	X			
S05	1.0	1256						X		X	X	X	X	X				X			X		X	X	X			
S06	1.0	1259						X		X	X	X	X	X				X			X		X	X	X			
S07	1.0	1303						X		X	X	X	X	X				X			X		X	X	X			
S08	1.0	1307						X		X	X	X	X	X				X			X		X	X	X			
S09	1.0	1311																							X			
ICV01	1.0	1318						X		X	X	X	X	X				X			X		X	X	X			
ICB01	1.0	1323						X		X	X	X	X	X				X			X		X	X	X			
ICSA01	1.0	1326						X		X	X	X	X	X				X			X		X	X	X			
ICSAB01	1.0	1330						X		X	X	X	X	X				X			X		X	X	X			
CCV01	1.0	1334						X		X	X	X	X	X				X			X		X	X	X			
CCB01	1.0	1338						X		X	X	X	X	X				X			X		X	X	X			
PBW01	1.0	1342								X																		
LCS03	1.0	1346								X																		
ZZZZZZ	1.0	1350																										
MF6R32	1.0	1354								X																		
MF6R42	1.0	1357								X																		
MF6R42S	1.0	1401								X																		
MF6R42D	1.0	1405								X																		
MF6R42L	5.0	1409								X																		
MF6R44	1.0	1413								X																		
MF6R45	1.0	1417								X																		
MF6R46	1.0	1420								X																		
MF6R47	1.0	1424								X																		
MF6R32	2.0	1428												X									X					
MF6R44	5.0	1432												X														
MF6R32	3.0	1436																						X				

FORM 12-IN
ANALYSIS LOG

Lab Name: Bonner Analytical Testing Co.
Contract: EPW14029
Lab Code: BON
Case No.: 45671
MA No.: 2542.1
SDG No.: MF6R32
Instrument ID: ICPMS01
Analytical Method: ICP-MS
Start Date: 01/04/2016
End Date: 01/04/2016
Run Batch: BA60402M010416B

EPA Sample NO.	D/F	Time	Analytes																									
			Al	Sb	As	Ba	Be	Cd	Ca	Cr	Co	Cu	Fe	Pb	Mg	Mn	Hg	Ni	K	Se	Ag	Na	Tl	V	Zn	CN		
CCV02	1.0	1440						X		X	X	X	X	X				X			X		X	X	X			
CCB02	1.0	1444						X		X	X	X	X	X				X			X		X	X	X			

EPA SAMPLE NO.

TUNE01

FORM 13-IN
ICP-MS TUNE

Lab Name: Bonner Analytical Testing Co. Contract: EPW14029

Lab Code: BON Case No.: 45671 MA No.: 2542.1 SDG No.: MF6R32

ICP-MS Instrument ID: ICPMS01 Date: 12/29/15

Run Batch: BL52903M122915B

Element - Mass	Avg. Measured Mass (u)	Average Peak Width (u)	%Height	%RSD
Be - 9	9.01	0.820	5.0%	0.9183
Mg - 24	23.99	0.820	5.0%	0.7692
Mg - 25	24.99	0.820	5.0%	1.4806
Mg - 26	25.98	0.820	5.0%	1.9348
Co - 59	58.93	0.820	5.0%	0.4207
In - 113	112.9	0.820	5.0%	1.3534
In - 115	114.9	0.820	5.0%	0.5941
Pb - 206	205.97	0.820	5.0%	1.1844
Pb - 207	206.98	0.820	5.0%	0.6592
Pb - 208	207.98	0.820	5.0%	0.8486

EPA SAMPLE NO.

TUNE01

FORM 13-IN
ICP-MS TUNE

Lab Name: Bonner Analytical Testing Co. Contract: EPW14029

Lab Code: BON Case No.: 45671 MA No.: 2542.1 SDG No.: MF6R32

ICP-MS Instrument ID: ICPMS01 Date: 12/30/15

Run Batch: BL52904M123015B

Element - Mass	Avg. Measured Mass (u)	Average Peak Width (u)	%Height	%RSD
Be - 9	9.01	0.820	5.0%	1.3158
Mg - 24	23.99	0.820	5.0%	1.8119
Mg - 25	24.99	0.820	5.0%	1.8174
Mg - 26	25.98	0.820	5.0%	1.9756
Co - 59	58.93	0.820	5.0%	1.3622
In - 113	112.9	0.770	5.0%	2.3965
In - 115	114.9	0.770	5.0%	0.8882
Pb - 206	205.97	0.820	5.0%	0.6099
Pb - 207	206.98	0.820	5.0%	1.0157
Pb - 208	207.98	0.820	5.0%	0.8002

EPA SAMPLE NO.

TUNE01

FORM 13-IN
ICP-MS TUNE

Lab Name: Bonner Analytical Testing Co. Contract: EPW14029

Lab Code: BON Case No.: 45671 MA No.: 2542.1 SDG No.: MF6R32

ICP-MS Instrument ID: ICPMS01 Date: 01/04/16

Run Batch: BA60402M010416B

Element - Mass	Avg. Measured Mass (u)	Average Peak Width (u)	%Height	%RSD
Be - 9	9.01	0.820	5.0%	0.9473
Mg - 24	23.99	0.820	5.0%	1.0627
Mg - 25	24.99	0.820	5.0%	0.8939
Mg - 26	25.98	0.770	5.0%	1.5457
Co - 59	58.93	0.770	5.0%	0.6287
In - 113	112.9	0.820	5.0%	1.119
In - 115	114.9	0.820	5.0%	0.2888
Pb - 206	205.97	0.820	5.0%	0.5535
Pb - 207	206.98	0.820	5.0%	0.1204
Pb - 208	207.98	0.820	5.0%	0.4351

FORM 14-IN
ICP-MS INTERNAL STANDARDS RELATIVE INTENSITY SUMMARY

Lab Name: Bonner Analytical Testing Co. Contract: EPW14029

Lab Code: BON Case No.: 45671 MA. No.: 2542.1 SDG No.: MF6R32

ICP-MS Instrument ID: ICPMS01 Start Date: 12/29/2015

Run Batch: BL52903M122915B End Date: 12/29/2015

EPA Sample NO.	Time	Internal Standards %RI For:									
		Element Li-6	Q	Element Sc-45	Q	Element Y-89	Q	Element Rh-103	Q	Element In-115	Q
S01	13:20	100		100		100		100		100	
S04	13:22	102		98		102		99		98	
S05	13:25	103		95		100		99		99	
S06	13:27	94		97		101		101		98	
S07	13:30	95		91		96		92		95	
S08	13:32	92		89		96		89		91	
S10	13:35	83		85		90		80		85	
ICV01	13:37	96		97		98		98		98	
ICB01	13:40	96		95		98		96		96	
ICSA01	13:42	79		81		89		80		86	
ICSAB01	13:45	85		86		92		85		87	
CCV01	13:47	91		94		98		89		94	
CCB01	13:50	99		102		100		100		99	
PBW01	13:52	97		98		97		96		94	
LCS01	13:55	99		95		95		93		93	
MF6R32	13:57	106		100		104		94		94	
MF6R42	14:00	94		95		93		89		91	
MF6R42D	14:02	92		91		94		87		89	
MF6R42L	14:05	98		93		94		91		93	
MF6R44	14:07	88		119		118		78		82	
MF6R45	14:09	93		89		93		88		87	
MF6R46	14:12	91		95		90		85		87	
MF6R47	14:14	95		93		89		87		85	
MF6R44	14:17	91		94		95		86		88	
CCV02	14:19	90		83		92		81		85	
CCB02	14:22	100		91		96		91		90	

FORM 14-IN
ICP-MS INTERNAL STANDARDS RELATIVE INTENSITY SUMMARY

Lab Name: Bonner Analytical Testing Co. Contract: EPW14029

Lab Code: BON Case No.: 45671 MA. No.: 2542.1 SDG No.: MF6R32

ICP-MS Instrument ID: ICPMS01 Start Date: 12/29/2015

Run Batch: BL52903M122915B End Date: 12/29/2015

EPA Sample NO.	Time	Internal Standards %RI For:									
		Element Tb-159	Q	Element Ho-165	Q	Element Bi-209	Q	Element	Q	Element	Q
S01	13:20	100									
S04	13:22	103									
S05	13:25	103									
S06	13:27	104									
S07	13:30	100									
S08	13:32	98									
S10	13:35	89									
ICV01	13:37	102									
ICB01	13:40	100									
ICSA01	13:42	94									
ICSAB01	13:45	95									
CCV01	13:47	97									
CCB01	13:50	102									
PBW01	13:52	98									
LCS01	13:55	97									
MF6R32	13:57	100									
MF6R42	14:00	96									
MF6R42D	14:02	96									
MF6R42L	14:05	95									
MF6R44	14:07	91									
MF6R45	14:09	92									
MF6R46	14:12	90									
MF6R47	14:14	94									
MF6R44	14:17	92									
CCV02	14:19	89									
CCB02	14:22	93									

FORM 14-IN
ICP-MS INTERNAL STANDARDS RELATIVE INTENSITY SUMMARY

Lab Name: Bonner Analytical Testing Co. Contract: EPW14029

Lab Code: BON Case No.: 45671 MA. No.: 2542.1 SDG No.: MF6R32

ICP-MS Instrument ID: ICPMS01 Start Date: 12/30/2015

Run Batch: BL52904M123015B End Date: 12/30/2015

EPA Sample NO.	Time	Internal Standards %RI For:									
		Element Li-6	Q	Element Sc-45	Q	Element Y-89	Q	Element Rh-103	Q	Element In-115	Q
S01	17:42	100		100		100		100		100	
S02	17:46	99		102		101		101		103	
S03	17:51	102		103		103		101		103	
S04	17:55	101		103		103		103		104	
S05	17:59	102		103		103		104		104	
S06	18:03	101		103		102		101		103	
S07	18:07	99		98		98		96		98	
S08	18:11	98		96		96		93		93	
S09	18:15	105		101		100		96		100	
S10	18:19	95		93		91		81		88	
ICV01	18:27	114		103		101		98		99	
ICB01	18:32	103		99		95		95		95	
ICSA01	18:36	91		91		90		84		88	
ICSAB01	18:40	90		91		90		82		90	
CCV01	18:44	88		91		90		83		89	
CCB01	18:50	98		92		91		91		92	
CCV02	18:54	91		88		88		84		85	
CCB02	18:58	96		93		90		90		92	
PBW01	19:03	95		93		91		91		90	
LCS01	19:07	97		97		93		94		95	
LCS02	19:11	103		100		96		98		95	
LCS03	19:15	104		100		97		96		96	
MF6R32	19:19	70		97		766	R	66		68	
MF6R42	19:23	102		99		96		91		95	
MF6R42S	19:27	97		97		91		87		91	
MF6R42D	19:31	95		93		89		87		88	
MF6R42L	19:35	103		94		90		88		92	
MF6R44	19:39	90		111		112		80		82	
MF6R45	19:43	91		90		91		87		89	
MF6R46	19:48	90		91		88		86		87	

FORM 14-IN
ICP-MS INTERNAL STANDARDS RELATIVE INTENSITY SUMMARY

Lab Name: Bonner Analytical Testing Co. Contract: EPW14029

Lab Code: BON Case No.: 45671 MA. No.: 2542.1 SDG No.: MF6R32

ICP-MS Instrument ID: ICPMS01 Start Date: 12/30/2015

Run Batch: BL52904M123015B End Date: 12/30/2015

EPA Sample NO.	Time	Internal Standards %RI For:									
		Element Li-6	Q	Element Sc-45	Q	Element Y-89	Q	Element Rh-103	Q	Element In-115	Q
MF6R47	19:52	93		92		90		84		87	
ZZZZZZ	19:56										
CCV03	20:00	86		83		85		80		84	
CCB03	20:06	99		91		90		91		90	

FORM 14-IN
ICP-MS INTERNAL STANDARDS RELATIVE INTENSITY SUMMARY

Lab Name: Bonner Analytical Testing Co. Contract: EPW14029

Lab Code: BON Case No.: 45671 MA. No.: 2542.1 SDG No.: MF6R32

ICP-MS Instrument ID: ICPMS01 Start Date: 12/30/2015

Run Batch: BL52904M123015B End Date: 12/30/2015

EPA Sample NO.	Time	Internal Standards %RI For:									
		Element Tb-159	Q	Element Ho-165	Q	Element Bi-209	Q	Element	Q	Element	Q
S01	17:42	100		100		100					
S02	17:46	103		102		102					
S03	17:51	102		102		103					
S04	17:55	103		103		103					
S05	17:59	103		103		102					
S06	18:03	104		104		104					
S07	18:07	101		101		97					
S08	18:11	98		99		95					
S09	18:15	101		100		100					
S10	18:19	89		89		80					
ICV01	18:27	98		97		97					
ICB01	18:32	94		94		95					
ICSA01	18:36	91		90		86					
ICSAB01	18:40	91		91		88					
CCV01	18:44	93		93		87					
CCB01	18:50	91		92		93					
CCV02	18:54	90		88		84					
CCB02	18:58	91		91		91					
PBW01	19:03	91		92		92					
LCS01	19:07	93		94		94					
LCS02	19:11	94		94		94					
LCS03	19:15	96		96		97					
MF6R32	19:19	101		102		172	R				
MF6R42	19:23	96		95		94					
MF6R42S	19:27	92		92		91					
MF6R42D	19:31	90		91		91					
MF6R42L	19:35	90		90		92					
MF6R44	19:39	88		89		86					
MF6R45	19:43	91		91		90					
MF6R46	19:48	90		91		89					

FORM 14-IN
ICP-MS INTERNAL STANDARDS RELATIVE INTENSITY SUMMARY

Lab Name: Bonner Analytical Testing Co. Contract: EPW14029

Lab Code: BON Case No.: 45671 MA. No.: 2542.1 SDG No.: MF6R32

ICP-MS Instrument ID: ICPMS01 Start Date: 12/30/2015

Run Batch: BL52904M123015B End Date: 12/30/2015

EPA Sample NO.	Time	Internal Standards %RI For:									
		Element Tb-159	Q	Element Ho-165	Q	Element Bi-209	Q	Element	Q	Element	Q
MF6R47	19:52	90		91		89					
ZZZZZZ	19:56										
CCV03	20:00	88		88		84					
CCB03	20:06	91		91		92					

FORM 14-IN
ICP-MS INTERNAL STANDARDS RELATIVE INTENSITY SUMMARY

Lab Name: Bonner Analytical Testing Co. Contract: EPW14029

Lab Code: BON Case No.: 45671 MA. No.: 2542.1 SDG No.: MF6R32

ICP-MS Instrument ID: ICPMS01 Start Date: 01/04/2016

Run Batch: BA60402M010416B End Date: 01/04/2016

EPA Sample NO.	Time	Internal Standards %RI For:									
		Element Li-6	Q	Element Sc-45	Q	Element Y-89	Q	Element Rh-103	Q	Element In-115	Q
S01	12:40	100		100		100		100		100	
S03	12:48	100		102		100		99		102	
S04	12:52	100		101		100		99		103	
S05	12:56	100		99		100		98		103	
S06	12:59	97		98		99		96		101	
S07	13:03	94		96		96		90		96	
S08	13:07	91		93		92		88		93	
S09	13:11	96		97		96		94		100	
ICV01	13:18	99		101		98		99		101	
ICB01	13:23	96		97		98		95		101	
ICSA01	13:26	85		92		91		85		93	
ICSAB01	13:30	86		95		95		87		96	
CCV01	13:34	88		97		96		87		97	
CCB01	13:38	94		99		99		96		103	
PBW01	13:42	91		97		98		92		102	
LCS03	13:46	96		98		97		93		100	
ZZZZZZ	13:50										
MF6R32	13:54	68		99		705	R	66		70	
MF6R42	13:57	95		104		99		94		99	
MF6R42S	14:01	94		99		95		92		96	
MF6R42D	14:05	94		97		93		89		95	
MF6R42L	14:09	98		97		94		96		95	
MF6R44	14:13	93		118		113		85		88	
MF6R45	14:17	92		96		96		88		95	
MF6R46	14:20	92		98		93		86		94	
MF6R47	14:24	92		97		92		85		92	
MF6R32	14:28	80		95		384	R	74		77	
MF6R44	14:32	95		105		104		95		101	
MF6R32	14:36	86		101		315	R	84		88	
CCV02	14:40	87		96		97		89		97	

FORM 14-IN
ICP-MS INTERNAL STANDARDS RELATIVE INTENSITY SUMMARY

Lab Name: Bonner Analytical Testing Co. Contract: EPW14029

Lab Code: BON Case No.: 45671 MA. No.: 2542.1 SDG No.: MF6R32

ICP-MS Instrument ID: ICPMS01 Start Date: 01/04/2016

Run Batch: BA60402M010416B End Date: 01/04/2016

EPA Sample NO.	Time	Internal Standards %RI For:									
		Element Li-6	Q	Element Sc-45	Q	Element Y-89	Q	Element Rh-103	Q	Element In-115	Q
CCB02	14:44	91		96		97		97		101	

FORM 14-IN
ICP-MS INTERNAL STANDARDS RELATIVE INTENSITY SUMMARY

Lab Name: Bonner Analytical Testing Co. Contract: EPW14029

Lab Code: BON Case No.: 45671 MA. No.: 2542.1 SDG No.: MF6R32

ICP-MS Instrument ID: ICPMS01 Start Date: 01/04/2016

Run Batch: BA60402M010416B End Date: 01/04/2016

EPA Sample NO.	Time	Internal Standards %RI For:									
		Element Tb-159	Q	Element Ho-165	Q	Element Bi-209	Q	Element	Q	Element	Q
S01	12:40	100		100		100					
S03	12:48	101		100		99					
S04	12:52	102		102		100					
S05	12:56	102		102		101					
S06	12:59	101		102		100					
S07	13:03	100		100		99					
S08	13:07	98		98		95					
S09	13:11	100		100		101					
ICV01	13:18	99		100		98					
ICB01	13:23	100		100		100					
ICSA01	13:26	95		95		90					
ICSAB01	13:30	98		99		92					
CCV01	13:34	101		103		95					
CCB01	13:38	103		102		103					
PBW01	13:42	104		104		105					
LCS03	13:46	103		103		104					
ZZZZZZ	13:50										
MF6R32	13:54	100		103		318	R				
MF6R42	13:57	101		102		101					
MF6R42S	14:01	99		100		98					
MF6R42D	14:05	97		98		97					
MF6R42L	14:09	95		95		96					
MF6R44	14:13	94		95		92					
MF6R45	14:17	98		99		96					
MF6R46	14:20	98		99		98					
MF6R47	14:24	97		97		96					
MF6R32	14:28	96		98		72					
MF6R44	14:32	102		103		99					
MF6R32	14:36	102		104		84					
CCV02	14:40	101		101		93					

FORM 14-IN
ICP-MS INTERNAL STANDARDS RELATIVE INTENSITY SUMMARY

Lab Name: Bonner Analytical Testing Co. Contract: EPW14029

Lab Code: BON Case No.: 45671 MA. No.: 2542.1 SDG No.: MF6R32

ICP-MS Instrument ID: ICPMS01 Start Date: 01/04/2016

Run Batch: BA60402M010416B End Date: 01/04/2016

EPA Sample NO.	Time	Internal Standards %RI For:									
		Element Tb-159	Q	Element Ho-165	Q	Element Bi-209	Q	Element	Q	Element	Q
CCB02	14:44	101		101		100					

FORM 15-IN
INITIAL CALIBRATION

Lab Name: Bonner Analytical Testing Co. Contract: EPW14029

Lab Code: BON Case No.: 45671 MA No.: 2542.1 SDG No.: MF6R32

Instrument ID: ICPMS01 Start Date: 12/29/2015

Analytical method: ICP-MS Run Batch: BL52903M122915B

Concentration Units: ug/L

Analyte	True	Found	%D	True	Found	%D	True	Found	%D
Sodium	0.0	0.050		500	523	-5	250	248	1

FORM 15-IN
INITIAL CALIBRATION

Lab Name: Bonner Analytical Testing Co. Contract: EPW14029

Lab Code: BON Case No.: 45671 MA No.: 2542.1 SDG No.: MF6R32

Instrument ID: ICPMS01 Start Date: 12/29/2015

Analytical method: ICP-MS Run Batch: BL52903M122915B

Concentration Units: ug/L

Analyte	True	Found	%D	True	Found	%D	True	Found	%D
Sodium	1250	1330	-6	12500	12300	2	25000	25000	0

FORM 15-IN
INITIAL CALIBRATION

Lab Name: Bonner Analytical Testing Co. Contract: EPW14029

Lab Code: BON Case No.: 45671 MA No.: 2542.1 SDG No.: MF6R32

Instrument ID: ICPMS01 Start Date: 12/29/2015

Analytical method: ICP-MS Run Batch: BL52903M122915B

Concentration Units: ug/L

Analyte	True	Found	%D	True	Found	%D	True	Found	%D
Sodium	125000	135000	-8						

FORM 15-IN
INITIAL CALIBRATION

Lab Name: Bonner Analytical Testing Co. Contract: EPW14029

Lab Code: BON Case No.: 45671 MA No.: 2542.1 SDG No.: MF6R32

Instrument ID: ICPMS01 Start Date: 12/30/2015

Analytical method: ICP-MS Run Batch: BL52904M123015B

Concentration Units: ug/L

Analyte	True	Found	%D	True	Found	%D	True	Found	%D
Aluminum	0.0	-0.79		4.0	4.3	-7			
Antimony	0.0	0.0025					1.0	0.98	2
Arsenic	0.0	0.016					0.50	0.50	0
Barium	0.0	0.0025							
Beryllium	0.0	-0.0096							
Cadmium	0.0	0.0011					0.50	0.50	-1
Calcium	0.0	0.39							
Cobalt	0.0	-0.0031					0.50	0.52	-4
Copper	0.0	0.0032							
Iron	0.0	-0.00090							
Lead	0.0	0.0015							
Magnesium	0.0	-0.0072							
Manganese	0.0	0.0							
Nickel	0.0	0.0029							
Potassium	0.0	-0.032							
Selenium	0.0	-0.034		1.0	1.1	-11	2.5	2.6	-4
Silver	0.0	0.00020		0.20	0.16	19			
Thallium	0.0	0.00030					0.50	0.48	5
Vanadium	0.0	0.0034							
Zinc	0.0	-0.0036							

FORM 15-IN
INITIAL CALIBRATION

Lab Name: Bonner Analytical Testing Co. Contract: EPW14029

Lab Code: BON Case No.: 45671 MA No.: 2542.1 SDG No.: MF6R32

Instrument ID: ICPMS01 Start Date: 12/30/2015

Analytical method: ICP-MS Run Batch: BL52904M123015B

Concentration Units: ug/L

Analyte	True	Found	%D	True	Found	%D	True	Found	%D
Aluminum				260	267	-3	1300	1360	-5
Antimony	2.0	1.9	4	10.0	9.8	2	50.0	49.2	2
Arsenic	1.0	1.0	-2	10.0	9.4	6	50.0	50.3	-1
Barium				10.0	10.0	0	50.0	49.2	2
Beryllium	1.0	1.1	-13	10.0	10.7	-7	50.0	50.6	-1
Cadmium	1.0	0.91	9	10.0	10.0	0	50.0	49.8	1
Calcium	500	497	1	250	249	1	1250	1240	1
Cobalt	1.0	1.0	0	10.0	9.9	1	50.0	49.1	2
Copper	2.0	2.0	0	10.0	10.4	-4	50.0	51.4	-3
Iron	200	205	-2	250	252	-1	1250	1250	0
Lead	1.0	0.97	3	10.0	9.9	1	50.0	49.4	1
Magnesium	500	517	-3	250	255	-2	1250	1250	0
Manganese	1.0	1.0	0	10.0	9.6	4	50.0	48.9	2
Nickel	1.0	0.97	3	10.0	10.6	-6	50.0	51.0	-2
Potassium	500	517	-3	250	249	0	1250	1220	2
Selenium				10.0	10.3	-3			
Silver				1.3	1.3	-3	6.5	6.7	-3
Thallium	1.0	0.97	3	10.0	10.0	0	50.0	50.7	-1
Vanadium	5.0	4.7	7	10.0	9.6	4	50.0	48.2	4
Zinc	2.0	2.1	-5	10.0	10	0	50.0	50.8	-2

FORM 15-IN
INITIAL CALIBRATION

Lab Name: Bonner Analytical Testing Co. Contract: EPW14029

Lab Code: BON Case No.: 45671 MA No.: 2542.1 SDG No.: MF6R32

Instrument ID: ICPMS01 Start Date: 12/30/2015

Analytical method: ICP-MS Run Batch: BL52904M123015B

Concentration Units: ug/L

Analyte	True	Found	%D	True	Found	%D	True	Found	%D
Aluminum	13000	12900	1	26000	25600	2			
Antimony	500	507	-1	1000	1030	-3			
Arsenic	500	500	0	1000	999	0			
Barium	500	504	-1	1000	1010	-1	5000	4920	2
Beryllium	500	489	2	1000	974	3			
Cadmium	500	494	1	1000	983	2			
Calcium	12500	12700	-2	25000	25400	-2			
Cobalt	500	494	1	1000	1000	0			
Copper	500	500	0	1000	978	2			
Iron	12500	13100	-5	25000	25200	-1			
Lead	500	526	-5	1000	997	0			
Magnesium	12500	12500	0	25000	24400	3			
Manganese	500	500	0	1000	1020	-2	5000	5150	-3
Nickel	500	500	0	1000	982	2			
Potassium	12500	12200	3	25000	24100	4			
Selenium	500	508	-2	1000	994	1			
Silver	65.0	66.0	-2	130	128	2			
Thallium	500	495	1	1000	979	2			
Vanadium	500	492	2	1000	1000	0			
Zinc	500	496	1	1000	955	5	5000	5230	-5

FORM 15-IN
INITIAL CALIBRATION

Lab Name: Bonner Analytical Testing Co. Contract: EPW14029

Lab Code: BON Case No.: 45671 MA No.: 2542.1 SDG No.: MF6R32

Instrument ID: ICPMS01 Start Date: 12/30/2015

Analytical method: ICP-MS Run Batch: BL52904M123015B

Concentration Units: ug/L

Analyte	True	Found	%D	True	Found	%D	True	Found	%D
Aluminum	125000	122000	3						
Antimony									
Arsenic									
Barium									
Beryllium									
Cadmium									
Calcium	125000	127000	-2						
Cobalt									
Copper									
Iron	125000	122000	2						
Lead									
Magnesium	125000	122000	2						
Manganese									
Nickel									
Potassium	125000	124000	1						
Selenium									
Silver									
Thallium									
Vanadium									
Zinc									

bb

FORM 15-IN
INITIAL CALIBRATION

Lab Name: Bonner Analytical Testing Co. Contract: EPW14029

Lab Code: BON Case No.: 45671 MA No.: 2542.1 SDG No.: MF6R32

Instrument ID: ICPMS01 Start Date: 01/04/2016

Analytical method: ICP-MS Run Batch: BA60402M010416B

Concentration Units: ug/L

Analyte	True	Found	%D	True	Found	%D	True	Found	%D
Cadmium	0.0	0.0024		0.50	0.46	9	1.0	1.1	-8
Chromium	0.0	0.0012		1.0	1.0	0	2.0	2.0	2
Cobalt	0.0	-0.00070		0.50	0.50	-1	1.0	1.0	-2
Copper	0.0	-0.056					2.0	2.1	-4
Iron	0.0	-1.2					200	202	-1
Lead	0.0	0.0					1.0	1.0	-2
Nickel	0.0	-0.0046					1.0	0.99	1
Silver	0.0	-0.00060					1.0	1.0	0
Thallium	0.0	0.0030		0.50	0.50	1	1.0	1.0	-1
Vanadium	0.0	0.0061					5.0	5.0	-1
Zinc	0.0	-0.024					2.0	2.0	-1

FORM 15-IN
INITIAL CALIBRATION

Lab Name: Bonner Analytical Testing Co. Contract: EPW14029

Lab Code: BON Case No.: 45671 MA No.: 2542.1 SDG No.: MF6R32

Instrument ID: ICPMS01 Start Date: 01/04/2016

Analytical method: ICP-MS Run Batch: BA60402M010416B

Concentration Units: ug/L

Analyte	True	Found	%D	True	Found	%D	True	Found	%D
Cadmium	10.0	9.8	2	50.0	49.1	2	500	491	2
Chromium	10.0	10	0	50.0	50.0	0	500	493	1
Cobalt	10.0	10.3	-3	50.0	50.9	-2	500	508	-2
Copper	10.0	10.4	-4	50.0	52.1	-4	500	488	2
Iron	250	260	-4	1250	1290	-3	12500	12500	0
Lead	10.0	9.9	1	50.0	49.8	0	500	515	-3
Nickel	10.0	10.5	-5	50.0	51.9	-4	500	491	2
Silver	1.3	1.3	0	6.5	6.6	-1	65.0	63.8	2
Thallium	10.0	10.0	0	50.0	50.6	-1	500	498	0
Vanadium	10.0	9.8	2	50.0	49.8	0	500	498	0
Zinc	10.0	10.3	-3	50.0	51.8	-4	500	492	2

FORM 15-IN
INITIAL CALIBRATION

Lab Name: Bonner Analytical Testing Co. Contract: EPW14029

Lab Code: BON Case No.: 45671 MA No.: 2542.1 SDG No.: MF6R32

Instrument ID: ICPMS01 Start Date: 01/04/2016

Analytical method: ICP-MS Run Batch: BA60402M010416B

Concentration Units: ug/L

Analyte	True	Found	%D	True	Found	%D	True	Found	%D
Cadmium	1000	1000	0						
Chromium	1000	1010	-1						
Cobalt	1000	1000	0						
Copper	1000	988	1						
Iron	25000	25000	0						
Lead	1000	1010	-1						
Nickel	1000	988	1						
Silver	130	126	3						
Thallium	1000	1020	-2						
Vanadium	1000	1020	-2						
Zinc	1000	980	2	5000	5190	-4			

FORM 16-IN
INITIAL CALIBRATION SUMMARY

Lab Name: Bonner Analytical Testing Co. Contract: EPW14029

Lab Code: BON Case No.: 45671 MA No.: 2542.1 SDG No.: MF6R32

Instrument ID: ICPMS01 Start Date: 12/29/2015

Analytical method: ICP-MS Run Batch: BL52903M122915B

Analyte	Corr. Coeff.	Slope	Intercept	Calib. Type	Weighting
Sodium	0.999872	1621.412012	27.083506	WLR	Standard Deviation

FORM 16-IN
INITIAL CALIBRATION SUMMARY

Lab Name: Bonner Analytical Testing Co. Contract: EPW14029

Lab Code: BON Case No.: 45671 MA No.: 2542.1 SDG No.: MF6R32

Instrument ID: ICPMS01 Start Date: 12/30/2015

Analytical method: ICP-MS Run Batch: BL52904M123015B

Analyte	Corr. Coeff.	Slope	Intercept	Calib. Type	Weighting
Aluminum	0.999997	921.925485	3.271894	WLR	Standard Deviation
Antimony	0.999980	1227.589497	0.045474	WLR	Standard Deviation
Arsenic	0.999999	69.672002	0.042361	WLR	Standard Deviation
Barium	0.999988	505.622064	0.063225	WLR	Standard Deviation
Beryllium	0.999998	167.727076	0.036189	WLR	Standard Deviation
Cadmium	0.999997	400.982919	0.018164	WLR	Standard Deviation
Calcium	1.000000	35.976406	21.839254	WLR	Standard Deviation
Cobalt	0.999972	1798.759192	0.029668	WLR	Standard Deviation
Copper	0.999940	421.330760	0.228829	WLR	Standard Deviation
Iron	0.999960	113.974025	28.935699	WLR	Standard Deviation
Lead	0.999672	8591.859292	0.066535	WLR	Standard Deviation
Magnesium	0.999997	99.717939	1.076669	WLR	Standard Deviation
Manganese	0.999995	544.996617	0.115381	WLR	Standard Deviation
Nickel	0.999967	347.212080	0.115492	WLR	Standard Deviation
Potassium	0.999983	922.499759	24.387632	WLR	Standard Deviation
Selenium	0.999948	16.729187	0.233850	WLR	Standard Deviation
Silver	0.999889	1606.455503	0.004650	WLR	Standard Deviation
Thallium	0.999987	6130.603099	0.024114	WLR	Standard Deviation
Vanadium	0.999972	371.322445	0.009439	WLR	Standard Deviation
Zinc	0.999838	333.320114	0.307011	WLR	Standard Deviation

FORM 16-IN
INITIAL CALIBRATION SUMMARY

Lab Name: Bonner Analytical Testing Co. Contract: EPW14029

Lab Code: BON Case No.: 45671 MA No.: 2542.1 SDG No.: MF6R32

Instrument ID: ICPMS01 Start Date: 01/04/2016

Analytical method: ICP-MS Run Batch: BA60402M010416B

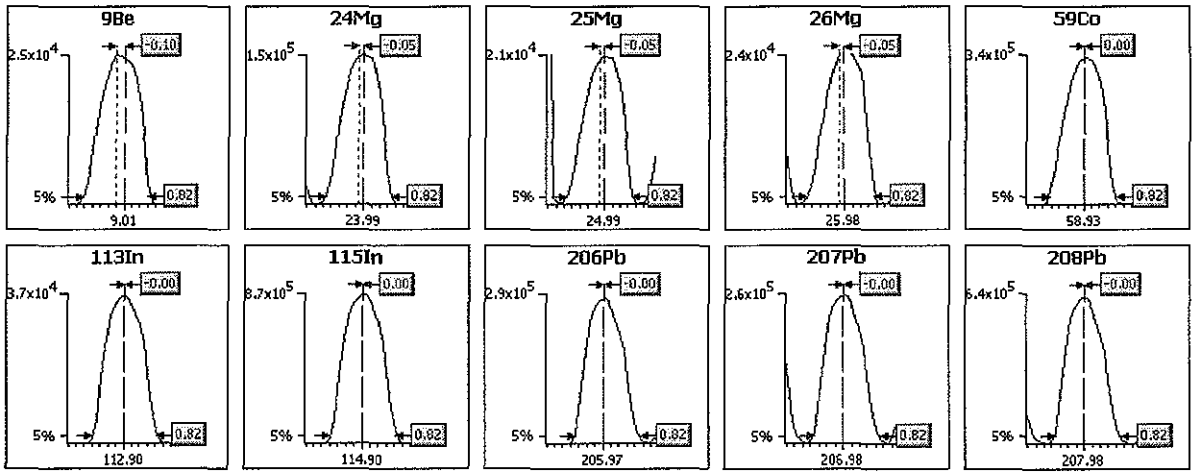
Analyte	Corr. Coeff.	Slope	Intercept	Calib. Type	Weighting
Cadmium	0.999956	650.427695	0.021550	WLR	Standard Deviation
Chromium	0.999938	686.023287	0.168229	WLR	Standard Deviation
Cobalt	0.999968	2954.793947	0.027829	WLR	Standard Deviation
Copper	0.999981	716.757629	0.504519	WLR	Standard Deviation
Iron	0.999992	185.867472	49.893528	WLR	Standard Deviation
Lead	0.999953	11438.194676	0.020818	WLR	Standard Deviation
Nickel	0.999991	589.187327	0.325279	WLR	Standard Deviation
Silver	0.999978	2748.599867	0.007072	WLR	Standard Deviation
Thallium	0.999949	8698.098406	0.010663	WLR	Standard Deviation
Vanadium	0.999918	506.545010	-0.098059	WLR	Standard Deviation
Zinc	0.999928	519.487496	0.474558	WLR	Standard Deviation

Performance Report

Sample details
Sample name : SEQ-TUN1@TUNE01
Acquired at : 12/29/2015 13:12:09
Report name : 200_8 + IS TEST_NO SCREEN [7/9/2015 09:58:10]

Mass Calibration verification

Acquisition parameters
Sweeps : 10
Dwell : 10.0 mSecs
Point spacing : 0.05 amu
Peak width measured at 5% of the peak maximum



Analyte	Limits			Results	
	Max. width	Min. width	Max. error	Peak width	Peak error
9Be	0.85	0.65	0.11	0.82	-0.10
24Mg	0.85	0.65	0.11	0.82	-0.05
25Mg	0.85	0.65	0.11	0.82	-0.05
26Mg	0.85	0.65	0.11	0.82	-0.05
59Co	0.85	0.65	0.11	0.82	0.00
113In	0.85	0.65	0.11	0.82	-0.00
115In	0.85	0.65	0.11	0.82	0.00
206Pb	0.85	0.65	0.11	0.82	-0.00
207Pb	0.85	0.65	0.11	0.82	-0.00
208Pb	0.85	0.65	0.11	0.82	-0.00

Sample details
Sample name : SEQ-TUN1@TUNE01
Acquired at : 12/29/2015 13:12:09
Report name : 200_8 + IS TEST_NO SCREEN [7/9/2015 09:58:10]

Tune conditions

Major	
Extraction	-106
Lens 1	1.2
Focus	15.7
D1	-50.2
Pole Bias	-0.9
Hexapole Bias	1.5
Nebuliser	0.84
Sampling Depth	130

Minor	
Lens 2	-26.7
Lens 3	-189.0
Forward power	1404
Horizontal	93
Vertical	400
D2	-160
DA	-38.4
Cool	13.0
Auxiliary	0.90

Global	
Standard resolution	n/a
High resolution	n/a
Analogue Detector	n/a
PC Detector	n/a

Add. Gases	
CCT 7% h2/He	0.00
Dont touch this thing	0.00

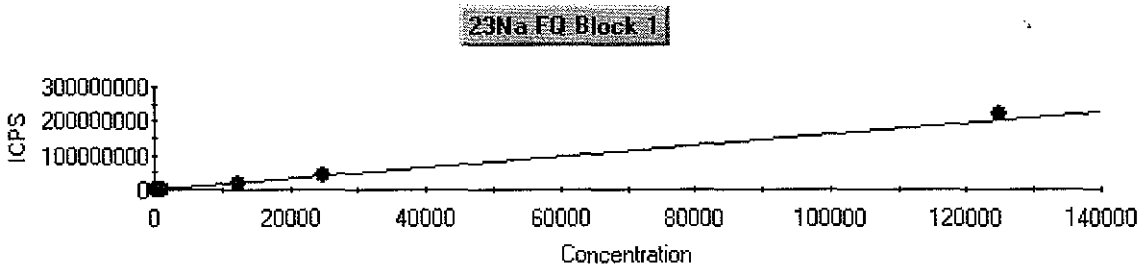
Sensitivity and stability results

Acquisition parameters
Sweeps : 30

Run	Time	6Li	9Be	24Mg	25Mg	26Mg	45Sc	59Co	89Y	113In	115In	159Tb	206Pb	207Pb	208Pb	209Bi
Dwell (mSecs)		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Limits	%RSD	3.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%
	Countrate	>4000	>4000	>4000	>4000	>4000	>5000	>4000	>5000	>10000	>20000	>20000	>20000	>20000	>20000	>20000
1	13:12:48	34351.445	23543.781	140947.57	20536.503	24462.870	441804.16	341021.85	41491.134	38307.206	893183.12	92791.156	301470.45	271593.94	663374.98	72561.769
2	13:12:55	33688.973	23142.753	140598.90	20967.485	25178.152	445865.40	339928.69	41102.709	37363.290	902176.11	92659.827	306349.56	271229.98	661806.63	71879.716
3	13:13:03	34103.849	23022.448	141211.62	20319.349	24900.723	442902.37	337379.66	41206.511	38360.765	896841.69	93289.552	301446.33	271738.15	670733.25	73818.492
4	13:13:10	34348.100	23366.658	142030.90	21000.896	25395.422	444861.30	340700.11	41397.375	38591.739	900189.58	93690.308	307617.99	275619.07	674084.70	74137.741
5	13:13:18	33481.542	23109.335	143327.69	20940.757	25743.064	445547.02	339793.79	42415.385	38641.952	907289.37	94343.680	309338.25	273025.88	673149.04	73173.308
x		33994.782	23236.995	141623.34	20752.998	25136.046	444196.05	339764.82	41522.623	38252.990	899935.98	93354.905	305244.52	272641.40	668629.72	73114.205
σ		393.98	213.39	1089.33	307.26	486.33	1764.17	1429.30	522.01	517.73	5346.27	688.37	3615.35	1797.18	5673.90	918.73
%RSD		1.1589	0.9183	0.7692	1.4806	1.9348	0.3972	0.4207	1.2572	1.3534	0.5941	0.7374	1.1844	0.6592	0.8486	1.2566

Result : The performance report passed.

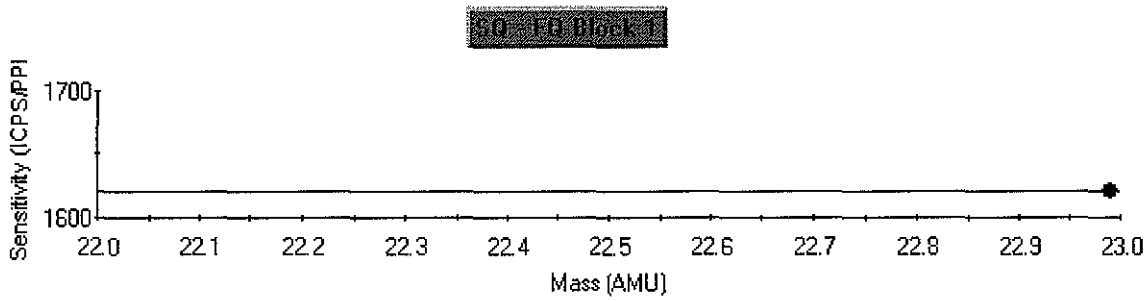
Fully Quant Calibration



Intercept CPS=43913.522171 Intercept Conc=27.083506
Sensitivity=1621.412012 Correlation Coeff=0.999872

Label	Defined	Measured	Error	Mean CPS	% Error
SEQ-CAL1@S01	0.000	0.049	0.049	43993.74	0.00
SEQ-CAL4@S04	500.000	523.357	23.357	892491.54	4.67
SEQ-CAL5@S05	250.000	248.072	1.928	446140.54	0.77
SEQ-CAL6@S06	1250.000	1325.373	75.373	2192889.11	6.03
SEQ-CAL7@S07	12500.000	12286.452	213.548	19965314.14	1.71
SEQ-CAL8@S08	25000.000	25021.828	21.828	40614605.93	0.09
SEQ-CALA@S10	125000.000	134844.181	9844.181	218681888.16	7.88

Semi Quant Calibration



Coeff 0=1621.412012 Coeff 1=0.000000 Coeff 2=0.000000

Symbol	Mass	RSF	Available	Excluded	Sensitivity Measured	Corrected	Calculated	%Error
23Na	22.99	1.0000	1	1	1621.41	1621.41	1621.41	0.0

Dilution Corrected Concentrations

SEQ-CAL1@S01 12/29/2015 13:20:20

User Pre-dilution: 1.000

Run	Time	6Li	23Na	45Sc	47Ti	53Cl O	83Kr	89Y	94Mo	95Mo	96Mo	97Mo	98Mo	103Rh	115In	118Sn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:20:20	v95.2%	v1.2470	v95.9%	v0.0282	v-1.1490	v-5.3160	v97.6%	v0.0098	v-0.0077	v-0.0092	v0.0278	v-0.0132	v100.4%	v99.6%	-0.0159
2	13:20:29	v103.7%	v-1.0940	v101.0%	v0.0592	v8.6160	7.6490	v101.1%	v-0.0188	v-0.0077	v0.0046	v-0.0197	0.0262	v98.5%	v101.9%	v-0.0045
3	13:20:38	v101.2%	v-0.0037	v103.1%	v-0.0874	-7.4670	-2.3330	v101.3%	v0.0090	0.0155	v0.0047	-0.0081	-0.0130	v101.2%	v98.5%	v0.0204
x		v100.0%	v0.0495	v100.0%	v-0.0000	v0.0000	v0.0000	v100.0%	v0.0000	v0.0000	v-0.0000	v-0.0000	v-0.0000	v100.0%	v100.0%	v-0.0000
σ		v4.4%	v1.1710	v3.7%	v0.0772	v8.1020	v6.7900	v2.0%	v0.0163	v0.0134	v0.0080	v0.0247	v0.0227	v1.4%	v1.7%	v0.0186
%RSD		v4.4	v2368.0000	v3.7	v0.0000	v0.0000	v0.0000	v2.0	v0.0000	v0.0000	v0.0000	v0.0000	v0.0000	v1.4	v1.7	v0.0000

Run	Time	159Tb	165Ho	209Bi
		ppb	ppb	ppb
1	13:20:20	v99.0%	v99.7%	v97.8%
2	13:20:29	v100.2%	v99.4%	v99.2%
3	13:20:38	v100.8%	v100.9%	v103.0%
x		v100.0%	v100.0%	v100.0%
σ		v0.9%	v0.8%	v2.7%
%RSD		v0.9	v0.8	v2.7

SEQ-CAL4@S04 12/29/2015 13:22:50

User Pre-dilution: 1.000

Run	Time	6Li	23Na	45Sc	47Ti	53Cl O	83Kr	89Y	94Mo	95Mo	96Mo	97Mo	98Mo	103Rh	115In	118Sn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:22:50	v99.3%	v535.1000	v98.0%	v0.0983	v866.0000	v2.6480	v101.1%	v-0.0188	v-0.0077	v-0.0092	-0.0080	v-0.0270	v97.2%	v96.0%	-0.0130
2	13:22:59	v95.2%	v546.1000	v98.5%	v0.1199	v842.2000	1.3990	v102.0%	-0.0049	0.0155	v-0.0092	v-0.0197	v-0.0250	v99.6%	v95.0%	0.0021
3	13:23:08	v110.4%	v488.8000	v97.6%	v0.0177	v998.4000	v6.2090	v103.1%	0.0152	v-0.0077	v-0.0092	v-0.0197	v-0.0273	v99.4%	v102.6%	-0.0047
x		v101.6%	v523.4000	v98.0%	v0.0786	v902.2000	v3.4190	v102.1%	v-0.0028	v0.0000	v-0.0092	v-0.0158	v-0.0264	v98.7%	v97.8%	-0.0052
σ		v7.9%	v30.4200	v0.4%	v0.0539	v84.1700	v2.4960	v1.0%	v0.0171	v0.0134	v0.0000	v0.0068	v0.0013	v1.4%	v4.1%	0.0076
%RSD		v7.7	v5.8120	v0.4	v68.5100	v9.3290	v73.0000	v1.0	v606.2000	v58290.0000	v0.0000	v42.8600	v4.8250	v1.4	v4.2	145.0000

Run	Time	159Tb	165Ho	209Bi
		ppb	ppb	ppb
1	13:22:50	v100.7%	v97.0%	v94.5%
2	13:22:59	v101.9%	v97.4%	v98.2%
3	13:23:08	v105.0%	v101.5%	v100.0%
x		v102.5%	v98.6%	v97.6%
σ		v2.2%	v2.5%	v2.8%
%RSD		v2.2	v2.6	v2.9

SEQ-CAL5@S05 12/29/2015 13:25:18

User Pre-dilution: 1.000

Run	Time	6Li	23Na	45Sc	47Ti	53Cl O	83Kr	89Y	94Mo	95Mo	96Mo	97Mo	98Mo	103Rh	115In	118Sn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:25:18	v103.9%	v242.8000	v93.3%	v0.4030	v1410.0000	0.4806	v100.3%	v2.8630	v5.0610	v5.2040	v3.5210	v9.0980	v99.3%	v98.5%	v11.1800
2	13:25:26	v103.6%	v248.3000	v94.8%	v0.0845	v1189.0000	v0.3774	v102.5%	v2.8310	v4.7110	v6.1000	v3.4950	v9.0270	v100.3%	v100.3%	v11.6500
3	13:25:35	v101.3%	v253.1000	v96.6%	v0.0910	v1535.0000	v-3.2560	v97.9%	v2.9070	v5.6720	v5.9690	v3.2840	v8.5480	v97.6%	v98.5%	v11.7200
x		v102.9%	v248.1000	v94.9%	v0.1928	v1378.0000	v-0.7994	v100.3%	v2.8670	v5.1480	v5.7580	v3.4330	v8.8910	v99.1%	v99.1%	v11.5200
σ		v1.4%	v5.1580	v1.7%	v0.1820	v175.2000	v2.1280	v2.3%	v0.0378	v0.4864	v0.4842	v0.1298	v0.2991	v1.4%	v1.0%	v0.2956
%RSD		v1.4	v2.0790	v1.8	v94.3900	v12.7100	v266.2000	v2.3	v1.3180	v9.4490	v8.4100	v3.7820	v3.3640	v1.4	v1.0	v2.5670

Run	Time	159Tb	165Ho	209Bi
		ppb	ppb	ppb
1	13:25:18	v100.6%	v96.4%	v96.2%
2	13:25:26	v103.8%	v103.3%	v99.5%
3	13:25:35	v103.7%	v100.5%	v103.8%
x		v102.7%	v100.1%	v99.8%
σ		v1.8%	v3.5%	v3.8%
%RSD		v1.8	v3.5	v3.8

SEQ-CAL6@S06 12/29/2015 13:27:45

User Pre-dilution: 1.000

Run	Time	6Li	23Na	45Sc	47Ti	53Cl O	83Kr	89Y	94Mo	95Mo	96Mo	97Mo	98Mo	103Rh	115In	118Sn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:27:45	v98.9%	tv1271.0000	v97.9%	v0.5657	v639.2000	v4.2220	v100.8%	v14.1100	v25.1600	v28.0000	v16.4200	v41.7700	v100.0%	v98.7%	v53.4700
2	13:27:54	v88.2%	tv1394.0000	v98.3%	v0.2506	v1591.0000	v4.8080	v98.4%	v14.9200	v26.8900	v28.8200	v17.7900	v44.8400	v95.8%	v93.9%	v59.2300
3	13:28:03	v94.6%	tv1311.0000	v95.4%	v-0.0257	v709.3000	v-5.5620	v103.2%	v14.4300	v27.7000	v29.3200	v17.4000	v43.1900	v107.4%	v100.5%	v55.6500
x		v93.9%	tv1325.0000	v97.2%	v0.2635	v979.9000	v1.1560	v100.8%	v14.4900	v26.5900	v28.7100	v17.2000	v43.2700	v101.0%	v97.7%	v56.1100
σ		v5.3%	tv63.0200	v1.6%	v0.2959	v530.6000	v5.8250	v2.4%	v0.4078	v1.2960	v0.6642	v0.7064	v1.5330	v5.9%	v3.4%	v2.9070
%RSD		v5.7	tv4.7550	v1.6	v112.3000	v54.1500	v503.9000	v2.4	v2.8140	v4.8730	v2.3130	v4.1070	v3.5430	v5.8	v3.5	v5.1800

Run	Time	159Tb	165Ho	209Bi
		ppb	ppb	ppb
1	13:27:45	v105.2%	v102.0%	v98.1%
2	13:27:54	v101.3%	v103.1%	v101.2%
3	13:28:03	v105.1%	v103.8%	v101.2%
x		v103.9%	v102.9%	v100.2%
σ		v2.3%	v0.9%	v1.8%
%RSD		v2.2	v0.9	v1.8

SEQ-CAL7@S07 12/29/2015 13:30:12

User Pre-dilution: 1.000

Run	Time	6Li	23Na	45Sc	47Ti	53Cl O	83Kr	89Y	94Mo	95Mo	96Mo	97Mo	98Mo	103Rh	115In	118Sn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:30:12	v95.8%	rv12140.0000	v91.2%	v0.2922	v155.2000	v9.1550	v94.1%	v145.7000	v264.9000	v291.0000	v168.7000	v429.8000	v93.8%	v95.0%	v554.7000
2	13:30:21	v94.9%	rv12450.0000	v91.5%	v0.2570	v1381.0000	1.2280	v96.1%	v147.9000	v266.0000	v292.1000	v165.3000	v441.0000	v92.1%	v96.3%	v568.7000
3	13:30:30	v93.7%	rv12270.0000	v89.6%	v0.1790	v3513.0000	v9.6410	v97.4%	v149.0000	v271.1000	v287.9000	v170.8000	v433.1000	v91.4%	v94.9%	v582.4000
x		v94.8%	rv12290.0000	v90.8%	v0.2428	v1683.0000	v6.6750	v95.8%	v147.5000	v267.3000	v290.3000	v168.3000	v434.6000	v92.4%	v95.4%	v568.6000
σ		v1.0%	rv158.4000	v1.0%	v0.0579	v1699.0000	v4.7230	v1.7%	v1.6690	v3.2740	v2.1750	v2.7780	v5.7290	v1.3%	v0.8%	v13.8500
%RSD		v1.1	rv1.2890	v1.1	v23.8600	v100.9000	v70.7600	v1.7	v1.1310	v1.2250	v0.7492	v1.6510	v1.3180	v1.4	v0.8	v2.4360

Run	Time	159Tb	165Ho	209Bi
		ppb	ppb	ppb
1	13:30:12	v99.4%	v97.9%	v97.6%
2	13:30:21	v99.6%	v98.2%	v97.6%
3	13:30:30	v100.9%	v97.6%	v99.6%
x		v99.9%	v97.9%	v98.3%
σ		v0.8%	v0.3%	v1.1%
%RSD		v0.8	v0.3	v1.2

SEQ-CAL8@S08 12/29/2015 13:32:39

User Pre-dilution: 1.000

Run	Time	6Li	23Na	45Sc	47Ti	53Cl O	83Kr	89Y	94Mo	95Mo	96Mo	97Mo	98Mo	103Rh	115In	118Sn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:32:39	v93.3%	rv24820.0000	v88.4%	v0.3861	v-6718.0000	v6.4880	v96.3%	v293.2000	v530.0000	v564.3000	v328.4000	v883.7000	v85.4%	v88.2%	v1177.0000
2	13:32:48	v84.5%	rv26950.0000	v88.1%	v0.1910	v4210.0000	v9.8200	v91.8%	v296.1000	v545.9000	v591.4000	v343.6000	v898.2000	v90.5%	v93.8%	v1149.0000
3	13:32:57	v97.5%	rv23300.0000	v89.0%	v0.2333	v-2741.0000	v5.2870	v99.7%	v283.6000	v528.5000	v556.7000	v330.9000	v866.5000	v92.6%	v91.0%	v1207.0000
x		v91.8%	rv25020.0000	v88.5%	v0.2701	v-1750.0000	v7.1980	v95.9%	v291.0000	v534.8000	v570.8000	v334.3000	v882.8000	v89.5%	v91.0%	v1178.0000
σ		v6.6%	rv1834.0000	v0.5%	v0.1026	v5531.0000	v2.3480	v4.0%	v6.5420	v9.6260	v18.2200	v8.1370	v15.8400	v3.7%	v2.8%	v28.7700
%RSD		v7.2	rv7.3310	v0.5	v38.0000	v316.1000	v32.6200	v4.2	v2.2490	v1.8000	v3.1920	v2.4340	v1.7940	v4.1	v3.1	v2.4430

Run	Time	159Tb	165Ho	209Bi
		ppb	ppb	ppb
1	13:32:39	v97.3%	v94.4%	v92.8%
2	13:32:48	v100.1%	v97.0%	v94.3%
3	13:32:57	v95.8%	v101.1%	v95.9%
x		v97.7%	v97.5%	v94.3%
σ		v2.2%	v3.4%	v1.5%
%RSD		v2.3	v3.5	v1.6

SEQ-CALA@S10 12/29/2015 13:35:05

User Pre-dilution: 1.000

Run	Time	6Li	23Na	45Sc	47Ti	53Cl O	83Kr	89Y	94Mo	95Mo	96Mo	97Mo	98Mo	103Rh	115In	118Sn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:35:05	v82.5%	rnv135600.0000	v84.1%	v0.5536	-663.0000	v40.7300	v91.8%	v0.1367	0.2004	v0.1632	v0.0983	0.1499	v80.2%	v82.9%	0.1511
2	13:35:14	v80.1%	rnv138200.0000	v84.1%	v0.3108	v-439.7000	v37.5800	v86.0%	v0.1610	v0.1886	0.1682	0.1375	0.2970	v81.6%	v83.6%	0.0856
3	13:35:23	v85.0%	rnv130800.0000	v85.9%	v0.1632	v-647.5000	v62.6300	v90.7%	0.1104	v0.1474	v0.1616	v0.0710	0.2574	v79.6%	v88.1%	v0.1201
x		v82.5%	rnv134800.0000	v84.7%	v0.3425	v-583.4000	v46.9800	v89.5%	v0.1360	v0.1788	v0.1643	v0.1023	0.2348	v80.5%	v84.9%	v0.1189
σ		v2.4%	rnv3740.0000	v1.0%	v0.1971	v124.7000	v13.6400	v3.1%	v0.0253	v0.0278	v0.0034	v0.0334	0.0761	v1.0%	v2.8%	v0.0328
%RSD		v2.9	rnv2.7740	v1.2	v57.5400	v21.3700	v29.0400	v3.4	v18.6100	v15.5600	v2.0940	v32.6500	32.4200	v1.2	v3.3	v27.5400

Run	Time	159Tb	165Ho	209Bi
		ppb	ppb	ppb
1	13:35:05	v86.1%	v84.5%	v76.4%
2	13:35:14	v87.5%	v89.9%	v82.1%
3	13:35:23	v93.6%	v87.5%	v80.4%
x		v89.1%	v87.3%	v79.6%
σ		v4.0%	v2.7%	v2.9%
%RSD		v4.5	v3.1	v3.7

SEQ-ICV1@ICV01 12/29/2015 13:37:39 QC Status: PASS (Initial: PASS)

User Pre-dilution: 1.000

Run	Time	6Li	23Na	45Sc	47Ti	53Cl O	83Kr	89Y	94Mo	95Mo	96Mo	97Mo	98Mo	103Rh	115In	118Sn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:37:49	v95.2%	rv1990.0000	v95.9%	v0.2168	v-1675.0000	v-5.2300	v96.9%	v0.2544	v0.5956	0.5888	v0.3030	v0.8043	v98.2%	v98.9%	v0.0803
2	13:37:57	v96.6%	rv1966.0000	v94.7%	v0.0014	v-996.6000	v4.6070	v96.7%	v0.3721	v0.4845	0.6906	v0.2941	v0.8399	v97.2%	v96.3%	0.0017
3	13:38:07	v95.6%	rv1963.0000	v99.0%	v-0.1663	v-1566.0000	v2.6280	v101.1%	v0.3291	v0.7027	v0.5347	v0.3294	0.8351	v97.3%	v98.1%	v0.0689
x		v95.8%	rv97.714%	v96.5%	v0.0173	v-1413.0000	v0.6681	v98.2%	v0.3185	v0.5943	v0.6047	v0.3088	v0.8264	v97.6%	v97.8%	v0.0503
σ		v0.7%	rv n/a	v2.2%	v0.1921	v364.5000	v5.2030	v2.5%	v0.0596	v0.1091	v0.0792	v0.0184	v0.0193	v0.6%	v1.3%	v0.0425
%RSD		v0.8	rv0.7648	v2.3	v1110.0000	v25.8000	v778.7000	v2.5	v18.7000	v18.3600	v13.0900	v5.9430	v2.3410	v0.6	v1.3	v84.4800

Run	Time	159Tb	165Ho	209Bi
		ppb	ppb	ppb
1	13:37:49	v101.4%	v98.1%	v103.3%
2	13:37:57	v102.3%	v102.5%	v101.6%
3	13:38:07	v102.9%	v100.9%	v105.0%
x		v102.2%	v100.5%	v103.3%
σ		v0.8%	v2.3%	v1.7%
%RSD		v0.8	v2.2	v1.6

SEQ-ICB@ICB01 12/29/2015 13:40:18 QC Status: PASS (Initial: PASS)

User Pre-dilution: 1.000

Run	Time	6Li	23Na	45Sc	47Ti	53Cl O	83Kr	89Y	94Mo	95Mo	96Mo	97Mo	98Mo	103Rh	115In	118Sn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:40:18	v92.7%	v6.3230	v93.3%	v0.3877	v-587.5000	v-5.2020	v99.9%	0.0107	v-0.0077	v-0.0092	v-0.0197	0.0362	v97.5%	v95.2%	0.0137
2	13:40:27	v93.6%	v5.4300	v95.1%	v0.0847	-597.8000	v-5.0170	v94.9%	v-0.0188	v-0.0077	v-0.0092	v0.0292	v-0.0250	v93.1%	v96.5%	0.0152
3	13:40:36	v101.1%	v3.1720	v97.3%	v-0.0463	-607.1000	3.5290	v98.3%	0.0050	v0.0208	v-0.0092	-0.0038	v-0.0107	v97.9%	v97.0%	-0.0034
x		v95.8%	v4.9750	v95.2%	v0.1420	v-597.5000	v-2.2300	v97.7%	v-0.0010	v0.0018	v-0.0092	v0.0019	v0.0002	v96.1%	v96.3%	0.0085
σ		v4.6%	v1.6240	v2.0%	v0.2226	v9.8480	v4.9880	v2.5%	v0.0156	v0.0165	v0.0000	v0.0249	v0.0320	v2.7%	v0.9%	0.0103
%RSD		v4.8	v32.6400	v2.1	v156.7000	v1.6480	v223.7000	v2.6	v1515.0000	v918.4000	v0.0000	v1317.0000	v16130.0000	v2.8	v0.9	121.4000

Run	Time	159Tb	165Ho	209Bi
		ppb	ppb	ppb
1	13:40:18	v98.9%	v93.8%	v99.9%
2	13:40:27	v99.9%	v95.9%	v96.1%
3	13:40:36	v100.9%	v100.4%	v98.6%
x		v99.9%	v96.7%	v98.2%
σ		v1.0%	v3.4%	v1.9%
%RSD		v1.0	v3.5	v1.9

SEQ-IFA@ICSA01 12/29/2015 13:42:46 QC Status: PASS (Initial: PASS)

User Pre-dilution: 1.000

Run	Time	6Li	23Na	45Sc	47Ti	53Cl O	83Kr	89Y	94Mo	95Mo	96Mo	97Mo	98Mo	103Rh	115In	118Sn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:42:46	v79.4%	rv105600.0000	v80.4%	v230.4000	-881.9000	v41.4200	v87.0%	v592.2000	v1104.0000	v1201.0000	v691.3000	v1847.0000	v75.3%	v80.9%	0.1398
2	13:42:55	v78.3%	rv113300.0000	v82.0%	v231.5000	v-823.6000	v37.6700	v88.9%	v609.4000	v1128.0000	v1190.0000	v690.5000	v1838.0000	v81.4%	v87.1%	0.2259
3	13:43:04	v80.6%	rv108800.0000	v81.2%	v242.0000	v-363.5000	v27.9900	v91.0%	v608.8000	v1115.0000	v1198.0000	v703.2000	rv1854.0000	v82.1%	v89.1%	0.2593
x		v79.4%	rv109200.0000	v81.2%	v234.7000	v-689.7000	v35.6900	v89.0%	v603.4000	v1116.0000	v1197.0000	v695.0000	rv1846.0000	v79.6%	v85.7%	0.2083
σ		v1.2%	rv3840.0000	v0.8%	v6.4230	v284.0000	v6.9280	v2.0%	v9.7570	v12.0500	v5.8710	v7.1290	rv8.0120	v3.7%	v4.3%	0.0617
%RSD		v1.5	rv3.5160	v1.0	v2.7370	v41.1700	v19.4100	v2.2	v1.6170	v1.0800	v0.4907	v1.0260	rv0.4339	v4.7	v5.0	29.6000

Run	Time	159Tb	165Ho	209Bi
		ppb	ppb	ppb
1	13:42:46	v93.5%	v86.5%	v83.5%
2	13:42:55	v93.3%	v90.3%	v92.8%
3	13:43:04	v94.9%	v94.6%	v90.5%
x		v93.9%	v90.4%	v88.9%
σ		v0.9%	v4.1%	v4.8%
%RSD		v0.9	v4.5	v5.5

SEQ-IFB@ICSAB01 12/29/2015 13:45:03 QC Status: PASS (Initial: PASS)

User Pre-dilution: 1.000

Run	Time	6Li	23Na	45Sc	47Ti	53Cl O	83Kr	89Y	94Mo	95Mo	96Mo	97Mo	98Mo	103Rh	115In	118Sn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:45:03	v84.8%	rv101300.0000	v81.0%	v229.8000	v-380.6000	25.1300	v91.4%	v570.1000	v1042.0000	v1153.0000	v667.8000	v1806.0000	v83.4%	v84.2%	v0.1407
2	13:45:12	v86.3%	rv101300.0000	v87.1%	v221.4000	v-310.9000	v32.9900	v90.7%	v590.2000	v1082.0000	v1157.0000	v680.9000	v1835.0000	v81.4%	v89.9%	0.1875
3	13:45:21	v84.7%	rv103500.0000	v91.0%	v218.9000	v-882.4000	v33.7500	v92.8%	v601.1000	v1129.0000	v1234.0000	v708.0000	rv1866.0000	v88.8%	v87.5%	0.2209
x		v85.3%	rv102000.0000	v86.4%	v223.3000	v-524.6000	v30.6200	v91.6%	v587.1000	v1084.0000	v1181.0000	v685.5000	rv1836.0000	v84.5%	v87.2%	v0.1830
σ		v0.9%	rv1230.0000	v5.1%	v5.6980	v311.8000	v4.7690	v1.1%	v15.7500	v43.8100	v45.9400	v20.5000	rv30.0900	v3.9%	v2.8%	v0.0403
%RSD		v1.1	rv1.2050	v5.9	v2.5510	v59.4300	v15.5700	v1.2	v2.6830	v4.0410	v3.8890	v2.9900	rv1.6390	v4.6	v3.3	v22.0200

Run	Time	159Tb	165Ho	209Bi
		ppb	ppb	ppb
1	13:45:03	v92.3%	v90.2%	v90.5%
2	13:45:12	v95.1%	v92.8%	v89.9%
3	13:45:21	v96.4%	v96.3%	v89.6%
x		v94.6%	v93.1%	v90.0%
σ		v2.1%	v3.0%	v0.4%
%RSD		v2.2	v3.3	v0.5

SEQ-CCV@CCV01 12/29/2015 13:47:39 QC Status: PASS (Initial: PASS)

User Pre-dilution: 1.000

Run	Time	6Li	23Na	45Sc	47Ti	53Cl O	83Kr	89Y	94Mo	95Mo	96Mo	97Mo	98Mo	103Rh	115In	118Sn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:47:48	v88.8%	rv66240.0000	v93.9%	v0.1577	v-1173.0000	2.7190	v98.1%	v0.0534	v0.0790	0.1559	0.1216	0.2036	v90.1%	v92.3%	v0.0107
2	13:47:57	v91.9%	rv65060.0000	v94.7%	v0.1052	-1041.0000	v15.3500	v95.3%	v0.0839	v0.0656	v0.1814	0.0496	v0.1338	v85.6%	v95.5%	v-0.0279
3	13:48:06	v91.4%	rv64680.0000	v94.4%	v0.0898	v-1115.0000	v5.3210	v101.8%	0.1385	0.0273	0.1862	0.0627	v0.1410	v92.3%	v93.2%	0.0571
x		v90.7%	rv108.881%	v94.3%	v0.1176	v-1110.0000	v7.7980	v98.4%	v0.0919	v0.0573	v0.1745	0.0780	v0.1595	v89.4%	v93.7%	v0.0133
σ		v1.7%	rv n/a	v0.4%	v0.0356	v66.1300	v6.6720	v3.3%	v0.0431	v0.0268	v0.0163	0.0384	v0.0384	v3.4%	v1.7%	v0.0425
%RSD		v1.8	rv1.2480	v0.4	v30.2500	v5.9600	v85.5600	v3.3	v46.9000	v46.8000	v9.3550	49.2100	v24.0600	v3.8	v1.8	v319.6000

Run	Time	159Tb	165Ho	209Bi
		ppb	ppb	ppb
1	13:47:48	v96.9%	v95.8%	v89.9%
2	13:47:57	v98.4%	v94.4%	v92.0%
3	13:48:06	v95.7%	v97.8%	v89.7%
x		v97.0%	v96.0%	v90.5%
σ		v1.4%	v1.7%	v1.3%
%RSD		v1.4	v1.8	v1.4

SEQ-CCB@CCB01 12/29/2015 13:50:16 QC Status: PASS (Initial: PASS)

User Pre-dilution: 1.000

Run	Time	6Li	23Na	45Sc	47Ti	53Cl O	83Kr	89Y	94Mo	95Mo	96Mo	97Mo	98Mo	103Rh	115In	118Sn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:50:16	v106.0%	v3.1080	v100.5%	v0.2729	v-630.0000	3.4600	v99.9%	0.0047	v-0.0077	v0.0330	0.0038	0.0040	v98.5%	v97.5%	v0.0087
2	13:50:25	v93.6%	v7.9630	v99.5%	v0.1504	-672.9000	-5.3220	v98.7%	-0.0046	0.0355	v-0.0092	v-0.0197	v-0.0250	v100.6%	v99.6%	-0.0040
3	13:50:34	v98.6%	v6.5500	v104.9%	v0.0250	v-655.1000	v4.1570	v100.3%	v0.0231	v0.0481	0.0024	v-0.0080	v0.0309	v100.5%	v99.7%	v0.0079
x		v99.4%	v5.8730	v101.6%	v0.1494	v-652.7000	v0.7650	v99.6%	v0.0077	v0.0253	v0.0087	v-0.0080	v0.0033	v99.8%	v98.9%	v0.0042
σ		v6.2%	v2.4970	v2.9%	v0.1239	v21.5900	v5.2830	v0.8%	v0.0141	v0.0293	v0.0218	v0.0118	v0.0279	v1.2%	v1.2%	v0.0071
%RSD		v6.3	v42.5200	v2.9	v82.9400	v3.3080	v690.6000	v0.8	v182.9000	v115.8000	v250.1000	v147.4000	v846.2000	v1.2	v1.3	v169.4000

Run	Time	159Tb	165Ho	209Bi
		ppb	ppb	ppb
1	13:50:16	v101.4%	v98.5%	v95.8%
2	13:50:25	v100.6%	v98.3%	v102.0%
3	13:50:34	v103.3%	v103.4%	v105.9%
x		v101.7%	v100.1%	v101.2%
σ		v1.4%	v2.8%	v5.1%
%RSD		v1.4	v2.8	v5.0

PL21004-BLK1@PBW01@MF6R32@45671@LEM 12/29/2015 13:52:45 QC Status: PASS (Initial: UNKNOWN)

User Pre-dilution: 1.000

Run	Time	6Li	23Na	45Sc	47Ti	53Cl O	83Kr	89Y	94Mo	95Mo	96Mo	97Mo	98Mo	103Rh	115In	118Sn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:52:45	v100.2%	v11.9000	v100.0%	0.2240	v4218.0000	v9.8830	v98.7%	v-0.0045	v0.0352	v0.0051	0.0185	v0.0160	v100.2%	v95.0%	v0.0097
2	13:52:55	v87.9%	v19.8500	v98.8%	v0.0777	v4606.0000	v4.9030	v94.3%	v-0.0039	v0.0221	0.0032	v0.0549	-0.0151	v95.1%	v92.7%	0.0020
3	13:53:04	v103.2%	v12.4000	v94.7%	v0.1607	v3873.0000	v5.2790	v97.9%	v-0.0044	v-0.0077	v-0.0092	-0.0077	-0.0034	v92.6%	v94.6%	v0.0347
x		v97.1%	v14.7200	v97.9%	v0.1541	v4232.0000	v6.6880	v97.0%	v-0.0043	v0.0165	v-0.0003	v0.0219	v-0.0008	v96.0%	v94.1%	v0.0155
σ		v8.1%	v4.4530	v2.8%	v0.0734	v366.7000	v2.7730	v2.4%	v0.0003	v0.0220	v0.0078	v0.0314	v0.0157	v3.9%	v1.3%	v0.0171
%RSD		v8.4	v30.2600	v2.8	v47.6100	v8.6640	v41.4600	v2.4	v7.6280	v133.2000	v2355.0000	v143.3000	v1911.0000	v4.0	v1.3	v110.6000

Run	Time	159Tb	165Ho	209Bi
		ppb	ppb	ppb
1	13:52:45	v97.2%	v93.9%	v94.0%
2	13:52:55	v96.1%	v98.3%	v98.5%
3	13:53:04	v101.2%	v99.8%	v97.1%
x		v98.2%	v97.3%	v96.5%
σ		v2.7%	v3.1%	v2.3%
%RSD		v2.7	v3.2	v2.4

PL21004-BS1@LCS01 12/29/2015 13:55:13 QC Status: PASS (Initial: PASS)

User Pre-dilution: 1.000

Run	Time	6Li	23Na	45Sc	47Ti	53Cl O	83Kr	89Y	94Mo	95Mo	96Mo	97Mo	98Mo	103Rh	115In	118Sn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:55:13	v96.0%	rv1020.0000	v96.5%	v0.1793	v4263.0000	v1.0560	v96.3%	v-0.0188	v-0.0077	0.0054	v-0.0197	v-0.0271	v93.6%	v92.7%	v0.0746
2	13:55:22	v98.3%	rv1028.0000	v92.2%	0.3097	v5065.0000	v-1.0280	v92.6%	v-0.0037	v0.0225	v-0.0092	v-0.0071	v0.0052	v94.2%	v92.7%	0.0491
3	13:55:31	v103.9%	rv954.5000	v97.1%	v0.2836	v4747.0000	v3.5100	v97.5%	v-0.0043	v-0.0077	v0.0053	v0.0167	v-0.0250	v90.5%	v93.4%	0.0166
x		v99.4%	rv100.076%	v95.3%	v0.2575	v4692.0000	v1.1790	v95.5%	v-0.0089	v0.0023	v0.0005	v-0.0034	v-0.0156	v92.8%	v92.9%	v0.0467
σ		v4.0%	rv n/a	v2.7%	v0.0690	v403.7000	v2.2720	v2.5%	v0.0085	v0.0174	v0.0084	v0.0185	v0.0181	v2.0%	v0.4%	v0.0291
%RSD		v4.1	rv4.0240	v2.8	v26.7900	v8.6050	v192.7000	v2.7	v95.8000	v743.7000	v1718.0000	v546.0000	v115.8000	v2.2	v0.5	v62.2000

Run	Time	159Tb	165Ho	209Bi
		ppb	ppb	ppb
1	13:55:13	v97.3%	v92.5%	v94.2%
2	13:55:22	v94.7%	v96.7%	v94.3%
3	13:55:31	v98.6%	v98.4%	v98.4%
x		v96.9%	v95.9%	v95.6%
σ		v2.0%	v3.0%	v2.4%
%RSD		v2.1	v3.1	v2.5

5120223-01@MF6R32@100X 12/29/2015 13:57:40

User Pre-dilution: 1.000

Run	Time	6Li	23Na	45Sc	47Ti	53Cl O	83Kr	89Y	94Mo	95Mo	96Mo	97Mo	98Mo	103Rh	115In	118Sn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:57:40	v103.4%	rv31700.0000	v101.0%	v0.8149	v14480.0000	v-2.8990	v99.3%	v0.6153	0.4265	0.6894	v0.3697	v0.7502	v92.0%	v88.8%	v0.3193
2	13:57:49	v110.5%	rv31260.0000	v98.7%	v0.5492	v13690.0000	-1.7310	v105.9%	v0.3847	v0.5052	v0.6680	v0.3088	v0.8032	v92.9%	v96.7%	v0.3035
3	13:57:58	v103.2%	rv34300.0000	v99.5%	v0.2287	v12370.0000	v4.5690	v106.1%	v0.5064	v0.4927	0.5982	v0.3213	v0.7791	v97.4%	v95.3%	v0.2701
x		v105.7%	rv32420.0000	v99.7%	v0.5309	v13510.0000	v-0.0201	v103.7%	v0.5021	v0.4748	v0.6518	v0.3332	v0.7775	v94.1%	v93.6%	v0.2976
σ		v4.2%	rv1641.0000	v1.2%	v0.2935	v1070.0000	v4.0170	v3.9%	v0.1153	v0.0423	v0.0477	v0.0322	v0.0265	v2.9%	v4.3%	v0.0251
%RSD		v3.9	rv5.0620	v1.2	v55.2900	v7.9160	v19950.0000	v3.7	v22.9700	v8.9060	v7.3190	v9.6510	v3.4120	v3.1	v4.6	v8.4350

Run	Time	159Tb	165Ho	209Bi
		ppb	ppb	ppb
1	13:57:40	v94.6%	v96.0%	v90.1%
2	13:57:49	v100.1%	v95.8%	v94.0%
3	13:57:58	v104.0%	v98.3%	v92.5%
x		v99.6%	v96.7%	v92.2%
σ		v4.7%	v1.4%	v2.0%
%RSD		v4.7	v1.5	v2.1

5120223-02@MF6R42 12/29/2015 14:00:08

User Pre-dilution: 1.000

Run	Time	6Li	23Na	45Sc	47Ti	53Cl O	83Kr	89Y	94Mo	95Mo	96Mo	97Mo	98Mo	103Rh	115In	118Sn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:00:08	v96.1%	rv8027.0000	v95.0%	v0.2647	v2279.0000	v-2.6800	v90.6%	v0.2136	v0.2404	0.2451	0.0994	v0.2392	v88.8%	v88.9%	v0.0656
2	14:00:17	v93.7%	rv8379.0000	v93.9%	v0.5880	v2787.0000	v3.6630	v94.7%	v0.2047	v0.1863	v0.2300	0.0968	v0.3030	v89.4%	v90.5%	v0.1031
3	14:00:26	v91.5%	rv8826.0000	v95.5%	v0.1518	v2191.0000	1.7240	v94.7%	v0.1439	v0.1994	v0.1831	v0.0543	0.3427	v87.9%	v93.9%	v0.1490
x		v93.8%	rv8411.0000	v94.8%	v0.3348	v2419.0000	v0.9022	v93.3%	v0.1874	v0.2087	v0.2194	v0.0835	v0.2950	v88.7%	v91.1%	v0.1059
σ		v2.3%	rv400.5000	v0.8%	v0.2264	v321.9000	v3.2500	v2.4%	v0.0379	v0.0282	v0.0323	v0.0253	v0.0522	v0.8%	v2.6%	v0.0418
%RSD		v2.4	rv4.7620	v0.9	v67.6200	v13.3100	v360.2000	v2.5	v20.2500	v13.5100	v14.7200	v30.2900	v17.7000	v0.9	v2.8	v39.4300

Run	Time	159Tb	165Ho	209Bi
		ppb	ppb	ppb
1	14:00:08	v92.5%	v96.4%	v93.5%
2	14:00:17	v96.3%	v95.5%	v91.7%
3	14:00:26	v98.9%	v96.5%	v92.5%
x		v95.9%	v96.1%	v92.6%
σ		v3.3%	v0.5%	v0.9%
%RSD		v3.4	v0.5	v1.0

PL21004-DUP1@MF6R42D 12/29/2015 14:02:35

User Pre-dilution: 1.000

Run	Time	6Li	23Na	45Sc	47Ti	53Cl O	83Kr	89Y	94Mo	95Mo	96Mo	97Mo	98Mo	103Rh	115In	118Sn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:02:35	v95.5%	rv8301.0000	v90.0%	0.2683	v1953.0000	v3.9300	v93.6%	v0.1025	v0.1899	v0.1737	0.1460	0.3051	v87.6%	v86.9%	v0.0812
2	14:02:44	v93.6%	rv8391.0000	v92.8%	0.5931	v2584.0000	v-9.1080	v91.5%	0.1131	0.1774	v0.2973	0.0485	v0.2621	v80.3%	v90.5%	0.0376
3	14:02:53	v85.9%	rv9100.0000	v90.7%	v0.2075	v1793.0000	v7.3820	v97.4%	v0.2003	0.2024	v0.1673	0.1341	0.3140	v92.4%	v89.2%	v0.0517
x		v91.7%	rv8597.0000	v91.2%	v0.3563	v2110.0000	v0.7348	v94.2%	v0.1387	v0.1899	v0.2128	0.1095	v0.2937	v86.8%	v88.9%	v0.0568
σ		v5.1%	rv437.5000	v1.5%	v0.2073	v418.1000	v8.6970	v3.0%	v0.0537	v0.0125	v0.0733	0.0532	v0.0278	v6.1%	v1.8%	v0.0223
%RSD		v5.6	rv5.0890	v1.6	v58.1900	v19.8100	v1184.0000	v3.2	v38.7100	v6.5720	v34.4500	48.5800	v9.4460	v7.0	v2.0	v39.1900

Run	Time	159Tb	165Ho	209Bi
		ppb	ppb	ppb
1	14:02:35	v91.9%	v89.5%	v91.7%
2	14:02:44	v97.1%	v94.9%	v91.5%
3	14:02:53	v98.6%	v98.2%	v95.0%
x		v95.9%	v94.2%	v92.7%
σ		v3.5%	v4.4%	v2.0%
%RSD		v3.6	v4.7	v2.1

SEQ-SRD1@MF6R42L@5X 12/29/2015 14:05:02

User Pre-dilution: 1.000

Run	Time	6Li	23Na	45Sc	47Ti	53Cl O	83Kr	89Y	94Mo	95Mo	96Mo	97Mo	98Mo	103Rh	115In	118Sn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:05:02	v99.0%	rv1580.0000	v86.2%	v0.6224	v-435.6000	5.6750	v92.6%	v0.0570	v0.0226	0.0076	v0.0308	v0.0010	v90.1%	v91.5%	-0.0123
2	14:05:11	v96.0%	rv1677.0000	v95.1%	v0.2603	v-412.6000	v-2.7070	v94.5%	v0.0406	0.0294	v0.0353	0.0051	v0.0302	v89.2%	v93.1%	-0.0151
3	14:05:20	v98.3%	rv1619.0000	v96.9%	v-0.1108	v-654.8000	v-3.1000	v93.5%	0.0434	v0.0221	v0.0504	v0.0176	0.0907	v95.1%	v94.7%	v0.0099
x		v97.7%	rv1625.0000	v92.7%	v0.2573	v-501.0000	v-0.0440	v93.5%	v0.0470	v0.0247	v0.0311	v0.0178	v0.0406	v91.5%	v93.1%	v-0.0058
σ		v1.5%	rv48.5600	v5.7%	v0.3666	v133.7000	v4.9570	v1.0%	v0.0088	v0.0041	v0.0217	v0.0129	v0.0458	v3.1%	v1.6%	v0.0137
%RSD		v1.6	rv2.9870	v6.2	v142.5000	v26.6800	v11280.0000	v1.1	v18.6300	v16.5000	v69.7800	v72.2700	v112.6000	v3.4	v1.7	v234.6000

Run	Time	159Tb	165Ho	209Bi
		ppb	ppb	ppb
1	14:05:02	v94.4%	v90.0%	v95.7%
2	14:05:11	v98.4%	v98.4%	v97.4%
3	14:05:20	v92.6%	v95.8%	v98.8%
x		v95.1%	v94.7%	v97.3%
σ		v3.0%	v4.3%	v1.5%
%RSD		v3.1	v4.5	v1.6

5120223-03@MF6R44 12/29/2015 14:07:29

User Pre-dilution: 1.000

Run	Time	6Li	23Na	45Sc	47Ti	53Cl O	83Kr	89Y	94Mo	95Mo	96Mo	97Mo	98Mo	103Rh	115In	118Sn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:07:29	v90.0%	rmv354300.0000	v116.9%	v4.3550	v1816.0000	13.1000	v117.0%	v8.1600	v10.0200	v10.7900	v6.4030	v17.5800	v78.9%	v80.9%	v0.5564
2	14:07:38	v87.8%	rmv372000.0000	v118.3%	v4.3760	2492.0000	12.9800	v121.6%	v7.0090	9.7120	v11.1600	v6.8970	v17.5500	v77.6%	v82.6%	0.4449
3	14:07:47	v86.8%	rmv381500.0000	v121.8%	v4.1290	v2386.0000	23.7500	v115.8%	v7.6850	v10.5300	v11.4500	v6.8200	v17.6500	v78.2%	v83.7%	v0.4377
x		v88.2%	rmv369300.0000	v119.0%	v4.2870	v2231.0000	16.6100	v118.1%	v7.6180	v10.0800	v11.1300	v6.7070	v17.5900	v78.2%	v82.4%	v0.4797
σ		v1.6%	rmv13810.0000	v2.5%	v0.1369	v363.3000	6.1840	v3.1%	v0.5787	v0.4112	v0.3343	v0.2659	v0.0491	v0.6%	v1.4%	v0.0665
%RSD		v1.9	rmv3.7400	v2.1	v3.1940	v16.2900	37.2300	v2.6	v7.5960	v4.0770	v3.0030	v3.9650	v0.2792	v0.8	v1.7	v13.8700

Run	Time	159Tb	165Ho	209Bi
		ppb	ppb	ppb
1	14:07:29	v89.9%	v85.6%	v89.5%
2	14:07:38	v90.8%	v93.2%	v89.7%
3	14:07:47	v93.7%	v92.1%	v93.3%
x		v91.5%	v90.3%	v90.8%
σ		v2.0%	v4.1%	v2.1%
%RSD		v2.2	v4.5	v2.3

5120223-04@MF6R45 12/29/2015 14:09:57

User Pre-dilution: 1.000

Run	Time	6Li	23Na	45Sc	47Ti	53Cl O	83Kr	89Y	94Mo	95Mo	96Mo	97Mo	98Mo	103Rh	115In	118Sn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:09:57	v91.2%	rv3207.0000	v91.6%	v0.4239	v1009.0000	v14.4800	v92.0%	0.3265	v0.6688	v0.6685	v0.4819	v1.0680	v88.8%	v87.6%	v0.0534
2	14:10:06	v91.6%	rv3295.0000	v89.0%	v0.5166	v1145.0000	v8.2230	v94.6%	0.3076	v0.5668	v0.6737	0.3992	v0.9796	v87.9%	v86.1%	0.0455
3	14:10:15	v97.1%	rv3136.0000	v86.6%	v0.5967	v991.6000	v10.3300	v93.0%	v0.4076	0.6367	0.6334	v0.3765	v1.3260	v88.1%	v87.4%	0.0753
x		v93.3%	rv3212.0000	v89.1%	v0.5124	v1049.0000	v11.0100	v93.2%	v0.3472	v0.6241	v0.6585	v0.4192	v1.1250	v88.3%	v87.0%	v0.0581
σ		v3.3%	rv79.5600	v2.5%	v0.0865	v83.8500	v3.1810	v1.3%	v0.0531	v0.0521	v0.0219	v0.0555	v0.1798	v0.5%	v0.8%	v0.0155
%RSD		v3.5	rv2.4770	v2.8	v16.8800	v7.9960	v28.9000	v1.4	v15.3000	v8.3520	v3.3290	v13.2300	v15.9900	v0.5	v0.9	v26.6200

Run	Time	159Tb	165Ho	209Bi
		ppb	ppb	ppb
1	14:09:57	v91.6%	v92.5%	v90.5%
2	14:10:06	v93.4%	v91.7%	v89.5%
3	14:10:15	v91.8%	v89.9%	v90.0%
x		v92.3%	v91.4%	v90.0%
σ		v1.0%	v1.3%	v0.5%
%RSD		v1.1	v1.4	v0.5

5120223-05@MF6R46 12/29/2015 14:12:07

User Pre-dilution: 1.000

Run	Time	6Li	23Na	45Sc	47Ti	53Cl O	83Kr	89Y	94Mo	95Mo	96Mo	97Mo	98Mo	103Rh	115In	118Sn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:12:07	v89.9%	rv8757.0000	v93.5%	v0.4553	v1343.0000	v16.2500	v86.7%	v0.1749	v0.0891	v0.1522	v0.0341	0.2819	v82.5%	v86.5%	v0.0544
2	14:12:16	v94.3%	rv8489.0000	v93.3%	v0.5895	1749.0000	5.5050	v88.9%	0.1523	v0.1345	0.2499	0.0396	0.1598	v86.8%	v87.3%	0.0335
3	14:12:26	v87.5%	rv9105.0000	v97.9%	v0.1467	v1669.0000	v15.2600	v93.5%	0.1661	0.1792	v0.1579	0.0945	v0.1276	v85.9%	v88.3%	v0.0796
x		v90.6%	rv8784.0000	v94.9%	v0.3971	v1587.0000	v12.3400	v89.7%	v0.1644	v0.1343	v0.1866	v0.0561	v0.1898	v85.1%	v87.4%	v0.0558
σ		v3.5%	rv309.2000	v2.6%	v0.2270	v215.0000	v5.9440	v3.5%	v0.0114	v0.0451	v0.0549	v0.0334	v0.0814	v2.3%	v0.9%	v0.0231
%RSD		v3.8	rv3.5200	v2.8	v57.1700	v13.5500	v48.1500	v3.9	v6.9270	v33.5600	v29.3900	v59.5200	v42.8800	v2.7	v1.0	v41.3700

Run	Time	159Tb	165Ho	209Bi
		ppb	ppb	ppb
1	14:12:07	v90.2%	v90.7%	v89.2%
2	14:12:16	v88.4%	v93.9%	v91.4%
3	14:12:26	v92.8%	v97.3%	v89.3%
x		v90.5%	v94.0%	v89.9%
σ		v2.2%	v3.3%	v1.3%
%RSD		v2.5	v3.5	v1.4

5120223-06@MF6R47 12/29/2015 14:14:36

User Pre-dilution: 1.000

Run	Time	6Li	23Na	45Sc	47Ti	53Cl O	83Kr	89Y	94Mo	95Mo	96Mo	97Mo	98Mo	103Rh	115In	118Sn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:14:36	v88.1%	rv8885.0000	v91.9%	v0.7398	v3452.0000	v-4.5480	v87.0%	v0.1760	0.1170	v0.1538	0.0529	0.1455	v83.5%	v82.6%	v0.1295
2	14:14:46	v103.3%	rv7669.0000	v93.4%	v0.5270	v2961.0000	4.0530	v90.4%	v0.2624	v0.2270	v0.1946	v0.0720	v0.1459	v92.6%	v86.1%	0.1207
3	14:14:55	v93.9%	rv8450.0000	v94.4%	v0.7429	v3874.0000	v-0.1736	v90.8%	v0.2303	v0.1015	v0.1159	v0.0587	v0.0827	v85.2%	v85.8%	v0.1373
x		v95.1%	rv8335.0000	v93.2%	v0.6699	v3429.0000	v-0.2229	v89.4%	v0.2229	v0.1485	v0.1547	v0.0612	v0.1247	v87.1%	v84.8%	v0.1292
σ		v7.7%	rv616.3000	v1.3%	v0.1238	v457.0000	v4.3010	v2.1%	v0.0437	v0.0684	v0.0394	v0.0098	v0.0364	v4.8%	v2.0%	v0.0083
%RSD		v8.1	rv7.3950	v1.4	v18.4800	v13.3300	v1929.0000	v2.3	v19.5900	v46.0900	v25.4400	v15.9600	v29.1500	v5.5	v2.3	v6.4600

Run	Time	159Tb	165Ho	209Bi
		ppb	ppb	ppb
1	14:14:36	v92.3%	v92.3%	v84.6%
2	14:14:46	v92.2%	v90.0%	v87.7%
3	14:14:55	v97.0%	v91.3%	v89.8%
x		v93.8%	v91.2%	v87.3%
σ		v2.7%	v1.2%	v2.6%
%RSD		v2.9	v1.3	v3.0

5120223-03RE1@MF6R44@4X 12/29/2015 14:17:05

User Pre-dilution: 1.000

Run	Time	6Li	23Na	45Sc	47Ti	53Cl O	83Kr	89Y	94Mo	95Mo	96Mo	97Mo	98Mo	103Rh	115In	118Sn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:17:05	v90.2%	rv90870.0000	v91.9%	v1.6390	v-271.6000	v2.4330	v93.4%	v1.7400	v3.0470	v3.0530	v1.9020	v4.7930	v82.5%	v87.9%	v0.1072
2	14:17:14	v100.2%	rv82140.0000	v95.5%	v1.6790	v-234.0000	v8.6710	v97.4%	v2.0700	v2.5490	v2.9150	v2.0560	v4.6210	v85.7%	v85.5%	v0.1230
3	14:17:23	v83.5%	rv98720.0000	v94.5%	v1.2500	v-20.7200	v-2.6520	v95.3%	v1.7760	v3.0690	v3.1930	v1.8580	v4.8210	v88.5%	v90.4%	v0.1034
x		v91.3%	rv90580.0000	v93.9%	v1.5060	v-175.5000	v2.8170	v95.3%	v1.8620	v2.8880	v3.0540	v1.9398	v4.7450	v85.5%	v88.3%	v0.1112
σ		v8.4%	rv8291.0000	v1.9%	v0.2220	v135.3000	v5.6710	v2.0%	v0.1808	v0.2945	v0.1390	v0.1038	v0.1085	v3.0%	v2.0%	v0.0104
%RSD		v9.2	rv9.1530	v2.0	v14.7400	v77.1200	v201.3000	v2.1	v9.7080	v10.2000	v4.5500	v5.3560	v2.2880	v3.5	v2.2	v9.3570

Run	Time	159Tb	165Ho	209Bi
		ppb	ppb	ppb
1	14:17:05	v91.3%	v89.7%	v85.5%
2	14:17:14	v89.9%	v88.7%	v93.5%
3	14:17:23	v93.9%	v92.5%	v88.9%
x		v91.7%	v90.3%	v89.3%
σ		v2.0%	v2.0%	v4.0%
%RSD		v2.2	v2.2	v4.5

SEQ-CCV@CCV02 12/29/2015 14:19:40 QC Status: PASS (Initial: PASS)

User Pre-dilution: 1.000

Run	Time	6Li	23Na	45Sc	47Ti	53Cl O	83Kr	89Y	94Mo	95Mo	96Mo	97Mo	98Mo	103Rh	115In	118Sn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:19:49	v93.5%	rv59550.0000	v82.1%	0.3313	v-1098.0000	17.8400	v95.1%	0.0375	v0.0375	0.0727	v0.0309	0.0555	v81.9%	v86.0%	v0.0136
2	14:19:58	v86.7%	rv65310.0000	v85.8%	v0.2118	v-1116.0000	v30.6300	v92.5%	v0.0734	v0.0231	v0.0371	v0.0191	0.1595	v81.4%	v85.3%	v0.0278
3	14:20:08	v90.8%	rv63240.0000	v81.3%	v-0.0460	v-1101.0000	17.5600	v89.1%	v0.0446	0.1457	v0.0861	0.0493	v0.0365	v80.9%	v85.1%	0.0232
x		v90.3%	rv104.496%	v83.1%	v0.1657	v-1105.0000	v22.0100	v92.2%	v0.0518	v0.0688	v0.0653	v0.0331	v0.0838	v81.4%	v85.5%	v0.0216
σ		v3.5%	rvn/a	v2.4%	v0.1928	v9.9180	v7.4640	v3.0%	v0.0190	v0.0670	v0.0253	v0.0152	v0.0662	v0.5%	v0.5%	v0.0072
%RSD		v3.8	rv4.6520	v2.9	v116.4000	v0.8974	v33.9100	v3.3	v36.6800	v97.4600	v38.7600	v46.0000	v78.9300	v0.6	v0.5	v33.5800

Run	Time	159Tb	165Ho	209Bi
		ppb	ppb	ppb
1	14:19:49	v87.1%	v91.0%	v84.9%
2	14:19:58	v88.1%	v90.0%	v84.8%
3	14:20:08	v90.8%	v93.6%	v86.8%
x		v88.7%	v91.5%	v85.5%
σ		v1.9%	v1.8%	v1.1%
%RSD		v2.2	v2.0	v1.3

SEQ-CCB@CCB02 12/29/2015 14:22:20 QC Status: PASS (Initial: PASS)

User Pre-dilution: 1.000

Run	Time	6Li	23Na	45Sc	47Ti	53Cl O	83Kr	89Y	94Mo	95Mo	96Mo	97Mo	98Mo	103Rh	115In	118Sn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:22:20	v94.5%	v4.1920	v87.8%	v0.6819	-329.6000	v9.9670	v93.4%	-0.0036	0.0075	v0.0212	v-0.0070	v0.0210	v89.8%	v87.8%	-0.0008
2	14:22:29	v106.6%	v-0.9194	v94.5%	v0.2682	v-427.2000	v1.2590	v96.3%	v-0.0188	v0.0070	v-0.0092	-0.0074	v-0.0101	v91.8%	v90.7%	v-0.0148
3	14:22:38	v98.0%	v2.1240	v90.0%	v0.3869	v-437.4000	v-9.1080	v97.1%	v-0.0188	v-0.0077	v0.0054	0.0047	v-0.0250	v92.8%	v92.0%	0.0110
x		v99.7%	v1.7990	v90.8%	v0.4457	v-398.1000	v0.7061	v95.6%	v-0.0137	v0.0023	v0.0058	v-0.0032	v-0.0047	v91.5%	v90.2%	v-0.0016
σ		v6.3%	v2.5710	v3.4%	v0.2130	v59.5100	v9.5500	v2.0%	v0.0088	v0.0086	v0.0152	v0.0069	v0.0234	v1.5%	v2.2%	v0.0129
%RSD		v6.3	v142.9000	v3.7	v47.8000	v14.9500	v1352.0000	v2.1	v63.8300	v383.4000	v263.3000	v214.6000	v496.9000	v1.7	v2.4	v827.6000

Run	Time	159Tb	165Ho	209Bi
		ppb	ppb	ppb
1	14:22:20	v92.7%	v92.8%	v92.5%
2	14:22:29	v94.3%	v92.4%	v94.0%
3	14:22:38	v91.3%	v92.6%	v92.4%
x		v92.8%	v92.6%	v92.9%
σ		v1.5%	v0.2%	v0.9%
%RSD		v1.7	v0.2	v0.9

Mass Uncorrected ICPS

SEQ-CAL1@S01 12/29/2015 13:20:20

User Pre-dilution: 1.00

Run	Time	6Li	23Na	45Sc	47Ti	53Cl O	83Kr	89Y	94Mo	95Mo	96Mo	97Mo	98Mo	103Rh	115In	118Sn
1	13:20:20	v11830.5540	v43716.0930	v48240.4200	v2022.4497	v2622.6213	v37.0375	v38191.7550	v44.4450	v0.0000	v0.0000	v74.0752	v22.2224	v41494.7770	v95141.1000	18.5186
2	13:20:29	v12876.7220	v43679.0950	v50786.7770	v2178.0570	v2600.3764	160.4954	v39549.0320	v0.0000	v0.0000	v22.2224	v0.0000	88.8897	v40690.9570	v97253.2910	v37.0375
3	13:20:38	v12565.6330	v44423.4770	v51814.2440	v1978.0020	2622.6204	66.6673	v39604.7880	v44.4447	37.0375	v22.2224	18.5186	22.2224	v41807.1900	v94062.8170	v74.0745
x		v12424.3030	v43939.5550	v50280.4800	v2059.5029	v2615.2060	v88.0667	v39115.1920	v29.6299	v12.3458	v14.8149	v30.8646	v44.4448	v41330.9750	v95485.7360	v43.2102
σ		v537.2129	v419.4970	v1839.9205	v105.0486	v12.8428	v64.4509	v800.2053	v25.6602	v21.3836	v12.8301	v38.5500	v38.4904	v575.8620	v1622.9179	v28.2877
%RSD		v4.3239	v0.9547	v3.6593	v5.1007	v0.4911	v73.1841	v2.0458	v86.6025	v173.2051	v86.6025	v124.9003	v86.6027	v1.3933	v1.6996	v65.4652

Run	Time	159Tb	165Ho	209Bi
1	13:20:20	v86319.5720	v91031.7110	v62791.6590
2	13:20:29	v87373.9670	v90717.2990	v63723.3550
3	13:20:38	v87890.4280	v92109.6000	v66185.9130
x		v87194.6560	v91286.2030	v64233.6420
σ		v800.6319	v730.2056	v1753.7205
%RSD		v0.9182	v0.7999	v2.7302

SEQ-CAL4@S04 12/29/2015 13:22:50

User Pre-dilution: 1.00

Run	Time	6Li	23Na	45Sc	47Ti	53Cl O	83Kr	89Y	94Mo	95Mo	96Mo	97Mo	98Mo	103Rh	115In	118Sn
1	13:22:50	v12342.8320	v905049.4500	v49288.8610	v2178.0573	v4467.8182	v111.1122	v39549.0040	v0.0000	v0.0000	v0.0000	18.5186	v0.0000	v40155.4860	v91640.3500	22.2224
2	13:22:59	v11830.8200	v885012.3200	v49512.4550	v2222.5072	v4578.9585	101.8527	v39902.3870	22.2224	37.0373	v0.0000	v0.0000	v0.0000	v41182.6750	v90699.0150	44.4450
3	13:23:08	v13722.5650	v923671.0800	v49088.4690	v2044.6976	v4801.3016	v148.1497	v40311.7720	55.5561	v0.0000	v0.0000	v0.0000	v0.0000	v41092.8000	v97925.5750	37.0373
x		v12632.0720	v904577.6200	v49296.5950	v2148.4207	v4616.0261	v120.3716	v39921.0540	v25.9262	v12.3458	v0.0000	v6.1729	v0.0000	v40810.3200	v93421.6470	34.5682
σ		v978.4783	v19333.6940	v212.0988	v92.5354	v169.8037	v24.4981	v381.7265	v27.9626	v21.3835	v0.0000	v10.6917	v0.0000	v568.8806	v3928.8113	11.3152
%RSD		v7.7460	v2.1373	v0.4303	v4.3071	v3.6786	v20.3520	v0.9562	v107.8549	v173.2051	v0.0000	v173.2051	v0.0000	v1.3940	v4.2055	32.7329

Run	Time	159Tb	165Ho	209Bi
1	13:22:50	v87822.4860	v88518.5180	v60702.3200
2	13:22:59	v88855.4630	v88900.9830	v63108.2670
3	13:23:08	v91547.9400	v92692.8320	v64207.8680
x		v89408.6300	v90037.4450	v62672.8180
σ		v1923.3430	v2307.5707	v1792.8824
%RSD		v2.1512	v2.5629	v2.8607

SEQ-CAL5@S05 12/29/2015 13:25:18

User Pre-dilution: 1.00

Run	Time	6Li	23Na	45Sc	47Ti	53Cl O	83Kr	89Y	94Mo	95Mo	96Mo	97Mo	98Mo	103Rh	115In	118Sn
1	13:25:18	v12921.5060	v454595.1100	v46899.0820	v2533.6971	v7625.4539	92.5934	v39251.3790	v4578.9596	v8048.0856	v8270.4407	v5612.9277	v14456.1440	v41026.1140	v94266.5560	v17201.5480
2	13:25:26	v12877.1450	v462493.2600	v47658.4890	v2089.1366	v7291.8280	v92.5938	v40107.1960	v4623.4081	v7647.6825	v9894.2953	v5686.9819	v14634.0880	v41472.3480	v95972.2170	v18259.0950
3	13:25:35	v12587.7670	v460237.0900	v48573.8990	v2133.5879	v7781.1572	v55.5559	v38303.0800	v4556.6986	v8848.8845	v9315.9105	v5149.6268	v13365.4390	v40334.0080	v94267.4950	v18073.5720
x		v12795.4730	v459108.4900	v47710.4900	v2252.1405	v7566.1464	v80.2477	v39220.5520	v4586.3554	v8181.5509	v9160.2155	v5483.1788	v14151.8900	v40944.1570	v94835.4230	v17844.7380
σ		v181.2406	v4068.2338	v838.6184	v244.8460	v249.9976	v21.3837	v902.4530	v33.9641	v611.6218	v823.0472	v291.2279	v686.8734	v573.5785	v984.4930	v564.6905
%RSD		v1.4164	v0.8861	v1.7577	v10.8717	v3.3042	v26.6472	v2.3010	v0.7405	v7.4756	v8.9850	v5.3113	v4.8536	v1.4009	v1.0381	v3.1645

Run	Time	159Tb	165Ho	209Bi
1	13:25:18	v87710.2320	v87979.6990	v61802.7650
2	13:25:26	v90538.3040	v94264.6350	v63928.7670
3	13:25:35	v90426.9050	v91772.8400	v66651.8050
x		v89558.4800	v91339.0580	v64127.7790
σ		v1601.5987	v3164.8428	v2430.6378
%RSD		v1.7883	v3.4649	v3.7903

SEQ-CAL6@S06 12/29/2015 13:27:45

User Pre-dilution: 1.00

Run	Time	6Li	23Na	45Sc	47Ti	53Cl O	83Kr	89Y	94Mo	95Mo	96Mo	97Mo	98Mo	103Rh	115In	118Sn
1	13:27:45	v12297.9800	rv2080269.2000	v49244.4460	v2911.5866	v16748.7590	v129.6311	v39418.7340	v22539.0780	v40110.5680	v44598.4150	v26148.9220	v66442.3980	v41315.9690	v95254.3140	v82484.0130
2	13:27:54	v10962.7520	rv2033578.3000	v49446.1800	v2422.5573	v18307.3590	v129.6313	v38470.4920	v23140.6940	v41584.1960	v44486.3910	v27430.2220	v68972.2300	v39575.3910	v90742.6030	v86989.4580
3	13:28:03	v11764.1200	rv2053032.9000	v47971.0400	v1933.5467	v17951.1720	v37.0373	v40386.3150	v23586.1840	v45179.0610	v47769.8850	v28340.5440	v70248.6560	v44375.2150	v97119.3310	v87382.2380
x		v11674.9510	rv2055626.8000	v48887.2230	v2422.5635	v17669.0970	v98.7666	v39425.1800	v23088.6520	v42291.2750	v45618.2300	v27306.5630	v68554.4280	v41755.5250	v94372.0830	v85618.5690
σ		v672.0652	rv23453.2540	v799.8228	v489.0200	v816.6907	v53.4591	v957.9282	v525.4897	v2607.1778	v1864.2292	v1101.0314	v1937.2193	v2429.9143	v3278.6301	v2721.7004
%RSD		v5.7565	rv1.1409	v1.6361	v20.1861	v4.6221	v54.1268	v2.4297	v2.2760	v6.1648	v4.0866	v4.0321	v2.8258	v5.8194	v3.4742	v3.1789

Run	Time	159Tb	165Ho	209Bi
1	13:27:45	v91750.6650	v93097.0120	v63033.0720
2	13:27:54	v88294.6030	v94085.2130	v65028.1990
3	13:28:03	v91682.6660	v94736.1440	v64991.0630
x		v90575.9780	v93972.7900	v64350.7780
σ		v1976.0212	v825.3291	v1141.3181
%RSD		v2.1816	v0.8783	v1.7736

SEQ-CAL7@S07 12/29/2015 13:30:12

User Pre-dilution: 1.00

Run	Time	6Li	23Na	45Sc	47Ti	53Cl O	83Kr	89Y	94Mo	95Mo	96Mo	97Mo	98Mo	103Rh	115In	118Sn
1	13:30:12	v11897.8270	tv18891374.0000	v45872.2050	v2311.4303	v128683.0400	v166.6688	v36796.5760	v218215.5400	v396904.5400	v436115.1400	v253011.3100	v644685.7500	v38771.6220	v101231.4700	v822619.4400
2	13:30:21	v11808.6650	tv19206372.0000	v45982.7530	v2266.9772	v134882.5800	92.5935	v37577.5930	v225955.8800	v406318.5100	v446226.9300	v252541.6900	v673760.1800	v38057.5620	v102893.2200	v854354.9400
3	13:30:30	v11652.7950	tv18689213.0000	v45045.1570	v2111.3794	v137476.6900	v166.6700	v38098.6520	v229418.4200	v417020.3800	v442503.7000	v262249.6400	v664361.8100	v37767.3980	v101682.4100	v863844.2600
x		v11786.4290	tv18928986.0000	v45633.3720	v2229.9289	v133680.7700	v141.9774	v37490.9410	v224529.9500	v406747.8100	v441615.2600	v255934.2100	v660935.9100	v38198.8610	v101935.7000	v846939.5500
σ		v124.0201	tv260623.0500	v512.3990	v105.0453	v4518.3348	v42.7677	v655.3487	v5735.9500	v10064.7910	v5114.1032	v5474.3568	v14836.8870	v516.8077	v859.3461	v21589.6400
%RSD		v1.0522	tv1.3768	v1.1229	v4.7107	v3.3799	v30.1229	v1.7480	v2.5546	v2.4745	v1.1580	v2.1390	v2.2448	v1.3529	v0.8430	v2.5491

Run	Time	159Tb	165Ho	209Bi
1	13:30:12	v86633.3040	v89326.2110	v62698.0550
2	13:30:21	v86812.9910	v89663.6570	v62716.8760
3	13:30:30	v87980.4100	v89057.8650	v63965.8200
x		v87142.2350	v89349.2450	v63126.9170
σ		v731.4200	v303.5521	v726.5722
%RSD		v0.8393	v0.3397	v1.1510

SEQ-CAL8@S08 12/29/2015 13:32:39

User Pre-dilution: 1.00

Run	Time	6Li	23Na	45Sc	47Ti	53Cl O	83Kr	89Y	94Mo	95Mo	96Mo	97Mo	98Mo	103Rh	115In	118Sn
1	13:32:39	v11586.5790	tv37584931.0000	v44442.0700	v2378.1044	v242594.7600	v129.6309	v37671.0860	v440943.7100	v794351.1100	v843006.9400	v488966.1700	v1311102.6000	v35312.9780	v105072.8900	v1625971.8000
2	13:32:48	v10517.9800	tv36983083.0000	v44286.1350	v2089.1301	v254422.6200	v166.6688	v35904.4420	v433711.3400	v800192.0300	v867596.3600	v504522.8500	v1319973.2000	v37410.2300	v111165.9600	v1685556.5000
3	13:32:57	v12120.4660	tv36890115.0000	v44754.4400	v2178.0440	v252549.3300	v129.6316	v39010.0320	v441380.7800	v819648.2800	v860211.0900	v509486.3000	v1329583.0000	v38258.2440	v108895.4000	v1715848.2000
x		v11408.3410	tv37152710.0000	v44494.2150	v2215.0928	v249855.5700	v141.9771	v37528.5200	v438678.6100	v804730.4800	v856938.1300	v500991.7700	v1320219.6000	v36993.8170	v108378.0800	v1675792.2000
σ		v815.9762	tv377189.9900	v238.4675	v148.0068	v6357.4222	v21.3837	v1557.6958	v4307.3307	v13245.1820	v12617.2160	v10706.0880	v9242.6816	v1516.1456	v3079.3031	v45726.9170
%RSD		v7.1525	tv1.0152	v0.5360	v6.6817	v2.5444	v15.0614	v4.1507	v0.9819	v1.6459	v1.4724	v2.1370	v0.7001	v4.0984	v2.8413	v2.7287

Run	Time	159Tb	165Ho	209Bi
1	13:32:39	v84883.6990	v86163.2510	v59621.9850
2	13:32:48	v87284.4360	v88519.3710	v60571.7510
3	13:32:57	v83493.7350	v92311.3520	v61579.2180
x		v85220.6230	v88997.9910	v60590.9850
σ		v1917.6787	v3101.8699	v978.7583
%RSD		v2.2503	v3.4853	v1.6154

SEQ-CAL9@S10 12/29/2015 13:35:05

User Pre-dilution: 1.00

Run	Time	6Li	23Na	45Sc	47Ti	53Cl O	83Kr	89Y	94Mo	95Mo	96Mo	97Mo	98Mo	103Rh	115In	118Sn
1	13:35:05	v10273.4210	tnv181315490.0000	v42276.3340	v2489.2469	1308.7496	v388.8987	v35904.1500	v222.2268	296.3021	v244.4484	v166.6684	271.6129	v33149.3350	v79165.4580	231.4654
2	13:35:14	v9984.1996	tnv179580810.0000	v42298.6760	v2155.8205	v1666.8271	v370.3808	v33654.8020	v244.4492	v266.6707	240.7450	212.9664	451.8657	v33707.0470	v79861.0720	148.1500
3	13:35:23	v10584.3720	tnv180305270.0000	v43191.5200	v2000.2249	v1355.6586	v555.5780	v35495.4750	185.1883	v222.2252	v244.4489	v129.6313	422.2330	v32904.0080	v84166.5040	v203.7086
x		v10280.6640	tnv180400520.0000	v42588.8430	v2215.0975	v1443.7451	v438.2858	v35018.1430	v217.2881	v261.7327	v243.2141	v169.7554	381.9039	v33253.4630	v81064.6780	v194.4480
σ		v300.1518	tnv871254.8000	v522.0529	v249.8418	v194.6132	v101.9991	v1198.2388	v29.9376	v37.2845	v2.1383	v41.7532	96.6572	v411.5212	v2708.6187	v42.4325
%RSD		v2.9196	tnv0.4830	v1.2258	v11.2790	v13.4797	v23.2723	v3.4218	v13.7778	v14.2453	v0.8792	v24.5961	25.3093	v1.2375	v3.3413	v21.8220

Run	Time	159Tb	165Ho	209Bi
1	13:35:05	v75109.3480	v77148.2180	v49076.7720
2	13:35:14	v76297.9600	v82102.6580	v52726.6770
3	13:35:23	v81632.0750	v79860.8170	v51628.0760
x		v77679.7940	v79703.8980	v51143.8420
σ		v3473.9878	v2480.9449	v1872.5151
%RSD		v4.4722	v3.1127	v3.6613

SEQ-ICV1@ICV01 12/29/2015 13:37:39 QC Status: PASS (Initial: PASS)

User Pre-dilution: 1.00

Run	Time	6Li	23Na	45Sc	47Ti	53Cl O	83Kr	89Y	94Mo	95Mo	96Mo	97Mo	98Mo	103Rh	115In	118Sn
1	13:37:49	v11831.4340	tv3114256.1000	v48216.6880	v2311.4113	v24121.0430	v37.0373	v37912.5100	v422.2338	v933.3860	925.9784	v500.0166	v1288.9840	v40579.5000	v94399.4030	v166.6693
2	13:37:57	v12008.7970	tv3122286.3000	v47613.2670	v1955.7710	v25034.5390	v129.6311	v37819.5060	v600.0219	v755.5898	1074.1411	v481.4962	v1333.4322	v40156.1870	v91977.4230	44.4450
3	13:38:07	v11875.2780	tv3083791.2000	v49780.8180	v1777.9562	v24945.3820	v111.1118	v39548.9500	v555.5736	v1133.4071	v866.7130	v555.5734	1370.4879	v40222.9610	v93660.9930	v148.1500
x		v11905.1700	tv3106777.9000	v48536.9580	v2015.0462	v24700.3210	v92.5934	v38426.9890	v525.9431	v940.7943	v955.6108	v512.3621	v1330.9680	v40319.5490	v93345.9400	v119.7547
σ		v92.3828	tv20307.9220	v1118.6555	v271.6224	v503.6463	v48.9950	v972.7588	v92.5237	v189.0176	v106.8418	v38.5508	v40.8078	v227.5859	v1241.3462	v65.8742
%RSD		v0.7760	tv0.6537	v2.3047	v13.4797	v2.0390	v52.9152	v2.5314	v17.5920	v20.0913	v11.1805	v7.5241	v3.0660	v0.5645	v1.3298	v55.0076

Run	Time	159Tb	165Ho	209Bi
1	13:37:49	v88383.3910	v89506.3730	v66334.4990
2	13:37:57	v89169.0990	v93569.9470	v65270.9500
3	13:38:07	v89752.1690	v92064.5750	v67434.7640
x		v89101.5530	v91713.6320	v66346.7380
σ		v686.8841	v2054.3927	v1081.9588
%RSD		v0.7709	v2.2400	v1.6308

SEQ-ICB@ICB01 12/29/2015 13:40:18 QC Status: PASS (Initial: PASS)

User Pre-dilution: 1.00

Run	Time	6Li	23Na	45Sc	47Ti	53Cl O	83Kr	89Y	94Mo	95Mo	96Mo	97Mo	98Mo	103Rh	115In	118Sn
1	13:40:18	v11519.6620	v50231.1690	v46921.0130	v2511.4668	v1600.1461	v37.0373	v39083.9240	46.2968	v0.0000	v0.0000	v0.0000	98.7665	v40289.6910	v90945.9630	61.7289
2	13:40:27	v11630.7690	v49356.3710	v47814.3360	v2089.1646	1503.8396	v37.0373	v37131.5870	v0.0000	v0.0000	v0.0000	v74.0748	v0.0000	v38459.2230	v92178.4800	64.8152
3	13:40:36	v12565.2060	v49598.1770	v48909.6130	v1933.5608	1564.9593	120.3713	v38433.3030	37.0373	v44.4447	v0.0000	24.6915	v22.2224	v40467.8980	v92605.6260	37.0373
x		v11905.2130	v49728.5720	v47881.6540	v2178.0641	v1556.3150	v64.8153	v38216.2710	v27.7780	v14.8149	v0.0000	v32.9221	v40.3296	v39738.9370	v91910.0230	54.5271
σ		v574.2648	v451.7407	v996.0076	v299.0337	v48.7317	v48.1129	v994.0988	v24.4979	v25.6602	v0.0000	v37.7170	v51.8132	v1111.8412	v861.7844	15.2251
%RSD		v4.8236	v0.9084	v2.0801	v13.7293	v3.1312	v74.2309	v2.6012	v88.1918	v173.2051	v0.0000	v114.5645	v128.4744	v2.7979	v0.9376	27.9220

Run	Time	159Tb	165Ho	209Bi
1	13:40:18	v86274.9460	v85602.1890	v64152.0380
2	13:40:27	v87104.3810	v87531.7180	v61747.2850
3	13:40:36	v87957.7530	v91683.4290	v63313.2980
x		v87112.3600	v88272.4450	v63070.8740
σ		v841.4318	v3107.5518	v1220.5685
%RSD		v0.9659	v3.5204	v1.9352

SEQ-IFA@ICSA01 12/29/2015 13:42:46 QC Status: PASS (Initial: PASS)

User Pre-dilution: 1.00

Run	Time	6Li	23Na	45Sc	47Ti	53Cl O	83Kr	89Y	94Mo	95Mo	96Mo	97Mo	98Mo	103Rh	115In	118Sn
1	13:42:46	v9895.1944	rv135933230.0000	v40423.4840	v299962.2100	5378.1624	v370.3801	v34026.7760	v806921.1100	v1500659.7000	v1627673.8000	v933982.9800	v2488339.4000	v31142.3290	v77240.5500	212.9673
2	13:42:55	v9761.3394	rv143821010.0000	v41249.0920	v307607.5600	v5557.3110	v370.3799	v34788.9970	v857786.0100	v1587199.5000	v1672425.0000	v969664.4600	v2579406.9000	v33640.0310	v83203.4910	345.6877
3	13:43:04	v10050.5610	rv142242870.0000	v40847.8800	v318784.0100	v6135.4379	v296.3017	v35588.4290	v876638.4600	v1603666.0000	v1722742.2000	v1010215.2000	rv2661583.3000	v33930.7040	v85110.6980	400.0110
x		v9902.3650	rv140665700.0000	v40840.1520	v308784.6000	v5690.3037	v345.6872	v34801.4010	v847115.2000	v1563841.7000	v1674280.3000	v971287.5600	rv2576443.2000	v32904.3550	v81851.5800	319.5553
σ		v144.7442	rv4173707.4000	v412.8582	v9465.9450	v395.7676	v42.7691	v780.9007	v36062.8190	v55333.2220	v47561.3510	v38142.0380	rv86659.9720	v1532.8645	v4105.5517	96.2211
%RSD		v1.4617	rv2.9671	v1.0109	v3.0655	v6.9551	v12.3722	v2.2439	v4.2571	v3.5383	v2.8407	v3.9270	rv3.3636	v4.6585	v5.0158	30.1109

Run	Time	159Tb	165Ho	209Bi
1	13:42:46	v81564.7580	v78919.1170	v53621.8650
2	13:42:55	v81385.1130	v82416.7020	v59602.7830
3	13:43:04	v82775.4410	v86341.6600	v58111.7950
x		v81908.4370	v82559.1600	v57112.1480
σ		v756.2012	v3713.3217	v3113.2485
%RSD		v0.9232	v4.4978	v5.4511

SEQ-IFB@ICSAB01 12/29/2015 13:45:03 QC Status: PASS (Initial: PASS)

User Pre-dilution: 1.00

Run	Time	6Li	23Na	45Sc	47Ti	53Cl O	83Kr	89Y	94Mo	95Mo	96Mo	97Mo	98Mo	103Rh	115In	118Sn
1	13:45:03	v10562.1730	rv139361780.0000	v40713.6810	v301800.1100	v10517.2150	277.7844	v35755.5100	v814792.6800	v1483854.9000	v1636810.5000	v945344.7700	v2549095.3000	v34465.3040	v80444.4420	v222.2256
2	13:45:12	v10740.7460	rv141859580.0000	v43816.8860	v312048.1700	v10850.9440	v333.3417	v35476.8520	v849219.3900	v1555615.7000	v1663518.2000	v978626.3100	v2636131.1000	v33640.4420	v85849.3140	302.4749
3	13:45:21	v10562.3380	rv142128220.0000	v45759.5140	v321891.6300	v10294.7930	v370.3794	v36313.4440	v876521.3600	v1642472.9000	v1791390.0000	v1025180.2000	rv2696617.6000	v36718.7870	v83540.2560	340.7489
x		v10621.7520	rv141116530.0000	v43430.0270	v311913.3000	v10554.3170	v327.1685	v35848.6020	v846844.4800	v1560647.8000	v1697239.5000	v983050.4300	rv2627281.3000	v34941.5110	v83278.0040	v288.4831
σ		v103.0512	rv1525576.0000	v2545.0644	v10046.4400	v279.9256	v46.6051	v425.9942	v30932.7940	v79428.6810	v82622.9470	v40101.1740	rv74158.2570	v1593.4652	v2711.9628	v60.4878
%RSD		v0.9702	rv1.0811	v5.8601	v3.2209	v2.6522	v14.2450	v1.1883	v3.6527	v5.0895	v4.8681	v4.0793	rv2.8226	v4.5604	v3.2565	v20.9675

Run	Time	159Tb	165Ho	209Bi
1	13:45:03	v80443.8910	v82327.3250	v58111.5670
2	13:45:12	v82887.6970	v84749.3180	v57757.2430
3	13:45:21	v84031.5740	v87868.0320	v57552.6770
x		v82454.3880	v84981.5580	v57807.1620
σ		v1832.6715	v2777.6447	v282.7688
%RSD		v2.2226	v3.2685	v0.4892

SEQ-CCV@CCV01 12/29/2015 13:47:39 QC Status: PASS (Initial: PASS)

User Pre-dilution: 1.00

Run	Time	6Li	23Na	45Sc	47Ti	53Cl O	83Kr	89Y	94Mo	95Mo	96Mo	97Mo	98Mo	103Rh	115In	118Sn
1	13:47:48	v11052.0570	rv95416343.0000	v47233.8580	v2178.0426	v644.4693	103.7052	v38377.2400	v111.1121	v133.3352	253.0911	216.0528	351.8614	v37254.1660	v88092.2810	v55.5561
2	13:47:57	v11430.2160	rv96995388.0000	v47591.3850	v2111.3663	824.1144	v203.7068	v37280.2540	v155.5576	v111.1121	v288.8999	104.9393	v244.4492	v35379.8810	v91167.3460	v0.0000
3	13:48:06	v11364.1240	rv95851876.0000	v47479.8950	v2089.1407	v777.8113	v129.6309	v39827.9100	250.0039	55.5566	308.6490	129.6310	v266.6718	v38169.0480	v89037.0740	123.4578
x		v11282.1330	rv96087869.0000	v47435.0460	v2126.1832	v748.7984	v145.6809	v38495.1350	v172.2245	v100.0013	v283.5467	150.2077	v287.6608	v36934.3650	v89432.2340	v59.6713
σ		v201.9726	rv815545.8200	v182.9345	v46.2660	v93.2706	v51.8969	v1277.9130	v70.9301	v40.0620	v28.1632	58.3447	v56.6987	v1421.8184	v1575.1573	v61.8317
%RSD		v1.7902	rv0.8488	v0.3857	v2.1760	v12.4560	v35.6236	v3.3197	v41.1847	v40.0615	v9.9325	38.8427	v19.7103	v3.8496	v1.7613	v103.6205

Run	Time	159Tb	165Ho	209Bi
1	13:47:48	v84457.9430	v87441.1420	v57757.2870
2	13:47:57	v85759.4680	v86162.0690	v59080.7950
3	13:48:06	v83403.9860	v89260.1450	v57608.3830
x		v84540.4650	v87621.1190	v58148.8220
σ		v1179.9072	v1556.8599	v810.5394
%RSD		v1.3957	v1.7768	v1.3939

SEQ-CCB@CCB01 12/29/2015 13:50:16 QC Status: PASS (Initial: PASS)

User Pre-dilution: 1.00

Run	Time	6Li	23Na	45Sc	47Ti	53Cl O	83Kr	89Y	94Mo	95Mo	96Mo	97Mo	98Mo	103Rh	115In	118Sn
1	13:50:16	v13166.3890	v51907.4560	v50540.4780	v2511.4625	v1555.6916	120.3718	v39084.0310	37.0373	v0.0000	v66.6671	37.0373	49.3830	v40691.3890	v93100.0900	v55.5559
2	13:50:25	v11652.9320	v53211.6310	v50004.3250	v2289.1867	1518.6518	37.0373	v38600.6740	22.2224	67.9019	v0.0000	v0.0000	v0.0000	v41561.5340	v95120.1910	37.0373
3	13:50:34	v12253.9960	v53769.8240	v52752.8940	v2200.2699	v1533.4742	v129.6316	v39232.7920	v66.6671	v88.8900	18.5186	v18.5186	v88.8894	v41517.3120	v95186.0160	v55.5561
x		v12357.7720	v52962.9700	v51099.2320	v2333.6397	v1535.9392	v95.6802	v38972.4990	v41.9756	v52.2640	v28.3952	v18.5186	v46.0908	v41256.7450	v94468.7660	v49.3831
σ		v762.0465	v955.7602	v1456.9875	v160.2881	v18.6425	v50.9969	v330.4885	v22.6301	v46.4625	v34.4134	v18.5186	v44.5361	v490.1113	v1185.7650	v10.6918
%RSD		v6.1665	v1.8046	v2.8513	v6.8686	v1.2138	v53.2993	v0.8480	v53.9127	v88.8997	v121.1944	v100.0000	v96.6268	v1.1880	v1.2552	v21.6507

Run	Time	159Tb	165Ho	209Bi
1	13:50:16	v88384.0350	v89932.2680	v61541.6140
2	13:50:25	v87688.2520	v89774.6500	v65495.1630
3	13:50:34	v90044.8880	v94354.3160	v67994.2910
x		v88705.7250	v91353.7440	v65010.3560
σ		v1210.8043	v2599.7658	v3253.5425
%RSD		v1.3650	v2.8458	v5.0047

PL21004-BLK1@PBW01@MF6R32@45671@LEM 12/29/2015 13:52:45 QC Status: PASS (Initial: UNKNOWN)

User Pre-dilution: 1.00

Run	Time	6Li	23Na	45Sc	47Ti	53Cl O	83Kr	89Y	94Mo	95Mo	96Mo	97Mo	98Mo	103Rh	115In	118Sn
1	13:52:45	v12453.4710	v63349.9340	v50294.8860	2420.0995	v9605.0934	v185.1875	v38619.0130	v22.2224	v66.6673	v22.2224	59.2599	v66.6673	v41427.7810	v90718.3040	v55.5559
2	13:52:55	v10918.3940	v56874.8370	v49691.4530	v2155.8336	v9716.3243	v129.6309	v36889.9410	v22.2224	v44.4447	18.5186	v111.1120	18.5186	v39307.1760	v88477.0770	43.2101
3	13:53:04	v12832.6040	v66072.7170	v47635.7120	v2200.2799	v8381.6786	v129.6313	v38302.8810	v22.2224	v0.0000	v0.0000	18.5186	37.0373	v38280.7670	v90360.9480	v92.5934
x		v12068.1560	v65432.4960	v49207.3540	v2258.7377	v9234.3654	v148.1499	v37937.2780	v22.2224	v37.0374	v13.5803	v62.9635	v40.7411	v39671.9080	v89852.1100	v63.7865
σ		v1013.6081	v1847.6057	v1394.1210	v141.4995	v740.5398	v32.0755	v920.6910	v0.0000	v33.9453	v11.9058	v46.4077	v24.2871	v1604.8978	v1204.1437	v25.6999
%RSD		v8.3990	v2.8237	v2.8332	v6.2645	v8.0194	v21.6507	v2.4269	v0.0000	v91.6516	v87.6696	v73.7056	v59.6133	v4.0454	v1.3401	v40.2905

Run	Time	159Tb	165Ho	209Bi
1	13:52:45	v84794.0950	v85691.0430	v60404.7050
2	13:52:55	v83762.6130	v89707.2600	v63256.6780
3	13:53:04	v88226.2590	v91144.0160	v62380.8370
x		v85594.3220	v88847.4400	v62014.0730
σ		v2336.9441	v2826.3400	v1460.9328
%RSD		v2.7303	v3.1811	v2.3558

PL21004-BS1@LCS01 12/29/2015 13:55:13 QC Status: PASS (Initial: PASS)

User Pre-dilution: 1.00

Run	Time	6Li	23Na	45Sc	47Ti	53Cl O	83Kr	89Y	94Mo	95Mo	96Mo	97Mo	98Mo	103Rh	115In	118Sn
1	13:55:13	v11942.2880	rv1629586.6000	v48529.3600	v2266.9712	v10072.3160	v92.5941	v37652.2490	v0.0000	v0.0000	22.2224	v0.0000	v0.0000	v38704.8490	v88475.1040	v148.1504
2	13:55:22	v12209.1940	rv1682072.4000	v46340.1810	2358.3452	v11295.9430	v74.0748	v36220.3430	v22.2224	v44.4447	v0.0000	v18.5186	v44.4447	v38950.1230	v88476.7380	111.1122
3	13:55:31	v12899.7100	rv1653014.8000	v48842.3280	v2444.7799	v10583.9660	v111.1122	v38135.8380	v22.2224	v0.0000	v22.2224	v55.5559	v0.0000	v37410.3350	v89215.6420	64.8154
x		v12350.3970	rv1654891.3000	v47903.9560	v2356.6988	v10650.7420	v92.5937	v37336.1430	v14.8149	v14.8149	v14.8149	v24.6915	v14.8149	v38355.1020	v88722.4950	v108.0260
σ		v494.0830	rv26293.1710	v1363.2801	v88.9158	v614.5405	v18.5187	v996.1034	v12.8301	v25.6602	v12.8301	v28.2877	v25.6602	v827.3324	v427.0789	v41.7531
%RSD		v4.0005	rv1.5888	v2.8459	v3.7729	v5.7699	v20.0000	v2.6679	v86.6025	v173.2051	v86.6025	v114.5644	v173.2051	v2.1570	v0.4814	v38.6510

Run	Time	159Tb	165Ho	209Bi
1	13:55:13	v84839.1420	v84457.9690	v60534.6370
2	13:55:22	v82551.8030	v88316.7580	v60590.5390
3	13:55:31	v85960.8050	v89797.5620	v63182.1900
x		v84450.5830	v87524.0960	v61435.7890
σ		v1737.3996	v2756.6374	v1512.6860
%RSD		v2.0573	v3.1496	v2.4622

5120223-01@MF6R32@100X 12/29/2015 13:57:40

User Pre-dilution: 1.00

Run	Time	6Li	23Na	45Sc	47Ti	53Cl O	83Kr	89Y	94Mo	95Mo	96Mo	97Mo	98Mo	103Rh	115In	118Sn
1	13:57:40	v12854.6190	rv53218251.0000	v50786.5670	v3400.6527	v25368.7660	v55.5559	v38823.6090	v977.8318	666.7016	1067.9683	v592.6170	v1177.8589	v38012.9920	v84750.7800	v481.4957
2	13:57:49	v13744.6520	rv56084688.0000	v49601.8450	v2911.5956	v24477.3950	66.6673	v41409.0530	v666.6960	v844.4925	v1111.1815	v537.0548	v1355.6592	v38392.4610	v92380.1340	v500.0148
3	13:57:58	v12832.4140	rv57442945.0000	v50026.3570	v2422.5543	v23452.4710	v129.6311	v41502.1070	v866.7094	v822.2634	993.8968	v555.5750	v1311.2082	v40267.0200	v91010.6330	v444.4560
x		v13143.8950	rv55581961.0000	v50138.2560	v2911.6009	v24432.8770	v83.9514	v40578.2560	v837.0791	v777.8192	v1057.6822	v561.7490	v1281.5754	v38890.8250	v89380.5160	v475.3222
σ		v520.3891	rv2156747.5000	v600.2357	v489.0492	v958.9232	v39.9480	v1520.2815	v157.6701	v96.8703	v59.3150	v28.2910	v92.5301	v1206.8283	v4067.5203	v28.2892
%RSD		v3.9592	rv3.8803	v1.1972	v16.7966	v3.9247	v47.5846	v3.7465	v18.8357	v12.4541	v5.6080	v5.0362	v7.2200	v3.1031	v4.5508	v5.9516

Run	Time	159Tb	165Ho	209Bi
1	13:57:40	v82506.7850	v87598.0260	v57887.5660
2	13:57:49	v87239.7360	v87418.6180	v60404.2860
3	13:57:58	v90695.3230	v89752.6080	v59434.4370
x		v86813.9480	v88256.4170	v59242.0960
σ		v4110.8403	v1298.8408	v1269.3368
%RSD		v4.7352	v1.4717	v2.1426

5120223-02@MF6R42 12/29/2015 14:00:08

User Pre-dilution: 1.00

Run	Time	6Li	23Na	45Sc	47Ti	53Cl O	83Kr	89Y	94Mo	95Mo	96Mo	97Mo	98Mo	103Rh	115In	118Sn
1	14:00:08	v11964.1630	TV12546469.0000	v47747.3570	v2355.8641	v5690.7255	v55.5561	v35439.4950	v333.3403	v355.5626	364.2059	170.3728	v377.7874	v36718.6360	v84862.8280	v129.6311
2	14:00:17	v11675.2130	TV12769658.0000	v47211.3840	v2822.6632	v6513.4669	v111.1125	v37038.3600	v333.3400	v288.8942	v355.5661	172.8423	v488.9033	v36964.6580	v86410.7490	v185.1872
3	14:00:26	v11408.0890	TV13138466.0000	v48015.4790	v2200.2720	v5535.0835	92.5941	v37057.0130	v244.4500	v311.1174	v288.8958	v111.1122	555.5774	v36316.9580	v89642.8660	v259.2640
x		v11682.4880	TV12818198.0000	v47658.0730	v2459.5998	v5913.0920	v86.4209	v36511.6230	v303.7101	v318.5247	v336.2226	v151.4424	v474.0894	v36666.7510	v86972.1480	v191.3608
σ		v278.1084	TV298968.4700	v409.4152	v323.9036	v525.7316	v28.2879	v928.5364	v51.3207	v33.9459	v41.2133	v34.9488	v89.8160	v326.9520	v2438.9684	v65.0366
%RSD		v2.3806	TV2.3324	v0.8591	v13.1690	v8.8910	v32.7328	v2.5431	v16.8979	v10.6572	v12.2577	v23.0773	v18.9449	v0.8917	v2.8043	v33.9864

Run	Time	159Tb	165Ho	209Bi
1	14:00:08	v80623.1740	v87980.4950	v60049.7360
2	14:00:17	v83964.0290	v87194.6300	v58894.3200
3	14:00:26	v85274.9360	v88069.3750	v59416.3820
x		v83620.7130	v87748.1670	v59453.4800
σ		v2841.4789	v481.4323	v578.6004
%RSD		v3.3981	v0.5487	v0.9732

PL21004-DUP1@MF6R42D 12/29/2015 14:02:35

User Pre-dilution: 1.00

Run	Time	6Li	23Na	45Sc	47Ti	53Cl O	83Kr	89Y	94Mo	95Mo	96Mo	97Mo	98Mo	103Rh	115In	118Sn
1	14:02:35	v11919.4770	TV12900293.0000	v45268.3310	2247.2173	v5179.2836	v111.1122	v36610.8040	v177.7800	v288.8966	v266.6735	240.7446	481.4985	v36205.3880	v83023.0390	v148.1497
2	14:02:44	v11675.3300	TV12779758.0000	v46697.8960	2796.7413	v5623.9647	v0.0000	v35792.7000	191.3608	268.5230	v444.4564	98.7665	v422.2351	v33193.9620	v86435.3020	92.5934
3	14:02:53	v10718.0700	TV12707569.0000	v45603.4030	v2178.0549	v5201.5195	v148.1502	v38117.1000	v333.3397	318.5265	v266.6707	231.4861	512.3615	v38169.3690	v85131.2980	v111.1120
x		v11437.6250	TV12795873.0000	v45856.5440	v2407.3378	v5334.9226	v86.4208	v36840.2010	v234.1601	v291.9821	v325.9335	190.3324	v472.0317	v35856.2400	v84863.2130	v117.2850
σ		v634.9977	TV97367.3910	v747.6459	v339.0017	v250.5646	v77.0997	v1179.0573	v86.1600	v25.1442	v102.6438	79.4334	v45.8029	v2506.0124	v1721.8556	v28.2879
%RSD		v5.5518	TV0.7609	v1.6304	v14.0820	v4.6967	v89.2143	v3.2005	v36.7953	v8.6115	v31.4923	41.7340	v9.7034	v6.9891	v2.0290	v24.1190

Run	Time	159Tb	165Ho	209Bi
1	14:02:35	v80174.5020	v81677.8600	v58875.7430
2	14:02:44	v84638.4540	v86634.5380	v58800.8490
3	14:02:53	v86005.1850	v89640.2760	v61019.3980
x		v83606.0470	v85984.2250	v59565.3300
σ		v3049.3627	v4020.8454	v1259.8160
%RSD		v3.6473	v4.6763	v2.1150

SEQ-SRD1@MF6R42L@5X 12/29/2015 14:05:02

User Pre-dilution: 1.00

Run	Time	6Li	23Na	45Sc	47Ti	53Cl O	83Kr	89Y	94Mo	95Mo	96Mo	97Mo	98Mo	103Rh	115In	118Sn
1	14:05:02	v12298.1660	TV2579298.3000	v43325.5000	v2644.8385	v1711.2862	129.6327	v36201.9380	v111.1123	v44.4447	24.6915	v74.0745	v44.4447	v37254.3660	v87397.6270	22.2224
2	14:05:11	v11942.2290	TV2652314.8000	v47792.5210	v2355.8677	v1711.2832	v55.5559	v36982.6010	v88.8897	55.5561	v66.6671	37.0373	v88.8897	v36875.1830	v88924.1870	18.5186
3	14:05:20	v12209.0030	TV2622926.1000	v48730.4470	v1822.4181	v1466.7962	v55.5559	v36573.9920	92.5934	v44.4450	v88.8897	v55.5561	179.0148	v39285.1190	v90405.8110	v55.5561
x		v12149.7990	TV2618179.7000	v46616.1560	v2274.3747	v1629.7885	v80.2482	v36586.1770	v97.5318	v48.1486	v60.0828	v55.5560	v104.1164	v37804.8890	v88909.2080	v32.0990
σ		v185.2067	TV36738.9360	v2888.1207	v417.2225	v141.1555	v42.7683	v390.4742	v11.9060	v6.4151	v32.6016	v18.5186	v68.5650	v1295.8608	v1504.1482	v20.3987
%RSD		v1.5244	TV1.4032	v6.1955	v18.3445	v8.6610	v53.2950	v1.0673	v12.2073	v13.3235	v54.2612	v33.3333	v65.8542	v3.4278	v1.6918	v63.5491

Run	Time	159Tb	165Ho	209Bi
1	14:05:02	v82282.6770	v82170.1290	v61485.3550
2	14:05:11	v85825.5480	v89842.1090	v62567.6200
3	14:05:20	v80735.8550	v87463.5170	v63461.8620
x		v82948.0270	v86491.9180	v62504.9460
σ		v2609.2644	v3927.1897	v989.7433
%RSD		v3.1457	v4.5405	v1.5835

5120223-03@MF6R44 12/29/2015 14:07:29

User Pre-dilution: 1.00

Run	Time	6Li	23Na	45Sc	47Ti	53Cl O	83Kr	89Y	94Mo	95Mo	96Mo	97Mo	98Mo	103Rh	115In	118Sn
1	14:07:29	v11430.3590	TMV517156450.0000	v58789.7740	v10583.9600	v6424.5579	170.3724	v45763.2790	v14010.8550	v16904.7240	v17928.8340	v10506.1060	v28377.6810	v32591.9550	v77283.3400	v740.7738
2	14:07:38	v11185.3560	TMV529405840.0000	v59483.2980	v10761.9760	7163.4380	166.6690	v47568.9900	v12453.0900	16942.1430	v19153.5410	v11674.1840	v29202.4980	v32056.5480	v78831.3640	611.1358
3	14:07:47	v11096.6800	TMV537072990.0000	v61250.5680	v10561.7020	v7158.4067	250.0049	v45298.4690	v13209.6640	v17817.6030	v19131.3510	v11266.3440	v28734.2840	v32324.1180	v79975.0800	v611.1411
x		v11237.4650	TMV527878420.0000	v59841.2140	v10635.8790	v6915.4675	195.6821	v46210.2460	v13224.5360	v17221.4900	v18737.9090	v11148.8780	v28771.4880	v32324.2070	v78696.5940	v654.3502
σ		v172.8349	TMV10045741.0000	v1268.8400	v109.7686	v425.1476	47.0814	v1199.4375	v778.9891	v516.5879	v700.7672	v592.8326	v413.6649	v267.7038	v1350.9209	v74.8450
%RSD		v1.5380	TMV1.9030	v2.1203	v1.0321	v6.1478	24.0601	v2.5956	v5.8905	v2.9997	v3.7398	v5.3174	v1.4378	v0.8282	v1.7166	v11.4381

Run	Time	159Tb	165Ho	209Bi
1	14:07:29	v78359.1500	v78157.9310	v57515.4260
2	14:07:38	v79210.4260	v85063.3350	v57608.1170
3	14:07:47	v81698.9650	v84031.6740	v59920.1380
x		v79756.1800	v82417.6470	v58347.8940
σ		v1735.5050	v3724.9114	v1362.3925
%RSD		v2.1760	v4.5196	v2.3349

5120223-04@MF6R45 12/29/2015 14:09:57

User Pre-dilution: 1.00

Run	Time	6Li	23Na	45Sc	47Ti	53Cl O	83Kr	89Y	94Mo	95Mo	96Mo	97Mo	98Mo	103Rh	115In	118Sn
1	14:09:57	v11341.4490	rv4783288.3000	v46050.0200	v2511.4709	v3823.0614	v203.7065	v35997.4330	500.0148	v977.8375	v977.8449	v722.2538	v1577.9243	v36696.4700	v83629.2160	v111.1122
2	14:10:06	v11407.7720	rv4935281.9000	v44732.2530	v2578.1480	v3956.4368	v148.1497	v37001.1340	481.4976	v844.4876	v1000.0591	611.1332	v1466.7892	v36317.4240	v82216.7490	98.7662
3	14:10:15	v12075.9110	rv4981807.1000	v43548.8360	v2622.6063	v3778.5974	v166.6690	v36369.1180	v622.2469	938.3258	933.3918	v574.0939	v1955.7745	v36428.6720	v83427.4310	140.7432
x		v11608.3770	rv4900125.8000	v44777.0360	v2570.7418	v3852.6985	v172.8418	v36455.8950	v534.5865	v920.2170	v970.4319	v635.8270	v1666.8293	v36480.8560	v83091.1320	v116.8739
σ		v406.2517	rv103623.8900	v1251.1931	v55.9367	v92.5499	v28.2881	v507.4459	v76.4787	v68.4945	v33.9462	v77.1050	v256.3293	v194.8367	v763.9294	v21.5735
%RSD		v3.4996	rv2.1188	v2.7943	v2.1759	v2.4022	v16.3665	v1.3919	v14.3061	v7.4433	v3.4981	v12.1267	v15.3783	v0.5341	v0.9194	v18.4588

Run	Time	159Tb	165Ho	209Bi
1	14:09:57	v79883.4010	v84413.4760	v58130.4750
2	14:10:06	v81453.1200	v83717.2860	v57515.3550
3	14:10:15	v80085.4540	v82081.1550	v57794.6260
x		v80473.9920	v83403.9730	v57813.4850
σ		v853.9473	v1197.3113	v307.9934
%RSD		v1.0611	v1.4356	v0.5327

5120223-05@MF6R46 12/29/2015 14:12:07

User Pre-dilution: 1.00

Run	Time	6Li	23Na	45Sc	47Ti	53Cl O	83Kr	89Y	94Mo	95Mo	96Mo	97Mo	98Mo	103Rh	115In	118Sn
1	14:12:07	v11207.9910	rv12798550.0000	v46987.8000	v2600.3788	v4112.0450	v203.7063	v33915.1600	v266.6713	v133.3352	v222.2255	v74.0748	435.1970	v34108.8100	v82597.4160	v111.1120
2	14:12:16	v11764.3600	rv13024057.0000	v46920.9520	v2800.4409	4914.9792	123.4578	v34770.2720	240.7453	v200.0037	364.2068	83.3343	259.2685	v35893.0330	v83316.7060	83.3352
3	14:12:26	v10940.6910	rv12955262.0000	v49244.6290	v2244.7377	v4734.5780	v203.7068	v36573.7280	271.6101	274.0797	v244.4484	166.6686	v222.2260	v35514.0100	v84325.1950	v148.1502
x		v11304.3480	rv12925956.0000	v47717.7940	v2548.5191	v4587.2007	v176.9570	v35086.3870	v259.6756	v202.4729	v276.9602	v108.0259	v305.5639	v35171.9510	v83413.1060	v114.1991
σ		v420.2034	rv115574.4900	v1322.7005	v281.4580	v421.2670	v46.3316	v1357.1817	v16.5791	v70.4047	v76.3704	v50.9967	v113.7831	v940.0085	v867.9141	v32.5176
%RSD		v3.7172	rv0.8941	v2.7719	v11.0440	v9.1835	v26.1824	v3.8681	v6.3845	v34.7724	v27.5745	v47.2078	v37.2371	v2.6726	v1.0405	v28.4745

Run	Time	159Tb	165Ho	209Bi
1	14:12:07	v78650.5810	v82820.3470	v57291.3780
2	14:12:16	v77059.5700	v85691.7060	v58708.1410
3	14:12:26	v80914.6590	v88811.6740	v57328.5750
x		v78874.9370	v85774.5760	v57776.0310
σ		v1937.3127	v2996.5233	v807.4446
%RSD		v2.4562	v3.4935	v1.3975

5120223-06@MF6R47 12/29/2015 14:14:36

User Pre-dilution: 1.00

Run	Time	6Li	23Na	45Sc	47Ti	53Cl O	83Kr	89Y	94Mo	95Mo	96Mo	97Mo	98Mo	103Rh	115In	118Sn
1	14:14:36	v11007.6960	rv12735136.0000	v46206.0680	v2978.2714	v7113.8986	v37.0373	v34045.3610	v266.6710	170.3724	v222.2268	98.7669	231.4858	v34510.0580	v78852.6450	v203.7063
2	14:14:46	v12876.6440	rv12889448.0000	v46965.7250	v2711.5221	v7069.4438	118.5195	v35346.6080	v400.0114	v333.3403	v288.8945	v129.6311	v244.4486	v38258.3940	v82260.5800	200.0031
3	14:14:55	v11719.7290	rv12904018.0000	v47479.6440	v3067.2092	v7825.6664	v74.0745	v35532.3770	v355.5645	v155.5576	v177.7802	v111.1122	v155.5573	v35223.8190	v81902.5750	v222.2265
x		v11868.0230	rv12842868.0000	v46883.8120	v2919.0009	v7336.3363	v76.5438	v34974.7820	v340.7490	v219.7568	v229.6338	v113.1701	v210.4973	v35997.4230	v81005.2660	v208.6453
σ		v943.2578	rv93581.8810	v640.7271	v185.1028	v424.3548	v40.7972	v810.2438	v67.8936	v98.6447	v55.9262	v15.5347	v48.0188	v1990.3149	v1872.7992	v11.9065
%RSD		v7.9479	rv0.7287	v1.3666	v6.3413	v5.7843	v53.2992	v2.3167	v19.9248	v44.8881	v24.3545	v13.7268	v22.8121	v5.5290	v2.3119	v5.7066

Run	Time	159Tb	165Ho	209Bi
1	14:14:36	v80510.9830	v84233.2180	v54310.5460
2	14:14:46	v80353.9970	v87125.6060	v56322.4410
3	14:14:55	v84547.3290	v83337.3160	v57682.9260
x		v81804.1030	v83232.0460	v56105.3040
σ		v2376.9998	v1057.7423	v1696.6428
%RSD		v2.9057	v1.2708	v3.0240

5120223-03RE1@MF6R44@4X 12/29/2015 14:17:05

User Pre-dilution: 1.00

Run	Time	6Li	23Na	45Sc	47Ti	53Cl O	83Kr	89Y	94Mo	95Mo	96Mo	97Mo	98Mo	103Rh	115In	118Sn
1	14:17:05	v11274.8390	rv132962740.0000	v46183.7610	v4312.1543	v2266.9636	v92.5938	v36517.8910	v2578.1540	v4467.8163	v4467.8549	v2796.7342	v7002.7091	v34086.2540	v83899.9720	v185.1877
2	14:17:14	v12520.5560	rv133442390.0000	v47993.9620	v4467.7684	v2378.0971	v148.1500	v38098.3790	v3156.1086	v3845.3006	v4378.8401	v3093.1254	v6891.5451	v35402.8160	v82620.4900	v203.7068
3	14:17:23	v10473.6010	rv133618150.0000	v47523.9230	v3845.2976	v2755.9758	v55.5561	v37261.7350	v2689.3139	v4601.1681	v4779.0545	v2796.7369	v7202.8843	v36562.5050	v86342.8150	v185.1890
x		v11422.9990	rv133341090.0000	v47233.8980	v4208.4068	v2467.0122	v98.7666	v37292.6680	v2807.8588	v4304.7616	v4541.9165	v2895.5322	v7032.3795	v35350.5250	v84287.7590	v191.3612
σ		v1031.4890	rv339244.9900	v939.3160	v323.9447	v256.3448	v46.6045	v790.6979	v306.6718	v403.4526	v210.1350	v171.1207	v157.7760	v1238.9533	v1891.2192	v10.6916
%RSD		v9.0299	rv0.2544	v1.9886	v7.6976	v10.3909	v47.1865	v2.1203	v10.9219	v9.3722	v4.6266	v5.9098	v2.2436	v3.5048	v2.2438	v5.5871

Run	Time	159Tb	165Ho	209Bi
1	14:17:05	v79636.6520	v81923.5110	v54943.8880
2	14:17:14	v78382.1230	v80936.6480	v60068.7960
3	14:17:23	v81879.8400	v84435.1730	v57105.1670
x		v79966.2050	v82431.7770	v57372.6170
σ		v1771.9933	v1803.7932	v2572.9006
%RSD		v2.2159	v2.1882	v4.4845

SEQ-CCV@CCV02 12/29/2015 14:19:40 QC Status: PASS (Initial: PASS)

User Pre-dilution: 1.00

Run	Time	6Li	23Na	45Sc	47Ti	53Cl O	83Kr	89Y	94Mo	95Mo	96Mo	97Mo	98Mo	103Rh	115In	118Sn
1	14:19:49	v11630.5320	rv90358914.0000	v41271.5660	2141.0065	v733.3642	214.8178	v37187.1840	83.3345	v66.6673	120.3716	v74.0748	133.3361	v33863.0360	v82081.9190	v55.5559
2	14:19:58	v10784.8130	rv91810717.0000	v43146.9440	v2066.9192	v688.9165	v314.8258	v36183.1050	v133.3344	v44.4447	v66.6671	v55.5561	266.6721	v33662.2960	v81455.0330	v74.0745
3	14:20:08	v11297.4770	rv93128492.0000	v40892.1320	v1622.3701	v711.1481	209.8800	v34844.6980	v88.8897	214.8188	v133.3347	96.2977	v88.8894	v33439.4150	v81252.3810	67.9019
x		v11237.6070	rv91766041.0000	v41770.2140	v1943.4319	v711.1429	v246.5079	v36071.6620	v101.8529	v108.6436	v106.7911	v75.3095	v162.9659	v33654.9160	v81596.4440	v65.8441
σ		v426.0267	rv1385329.6000	v1207.2824	v280.5044	v22.2239	v59.2165	v1175.2128	v27.4049	v92.6193	v35.3478	v20.3988	v92.5209	v211.9068	v432.4711	v9.4293
%RSD		v3.7911	rv1.5096	v2.8903	v14.4335	v3.1251	v24.0222	v3.2580	v26.9064	v85.2506	v33.0999	v27.0867	v56.7732	v0.6296	v0.5300	v14.3206

Run	Time	159Tb	165Ho	209Bi
1	14:19:49	v75916.9470	v83044.8260	v54552.5290
2	14:19:58	v76834.5320	v82170.5670	v54478.4750
3	14:20:08	v79210.4610	v85421.8250	v55726.4020
x		v77320.6470	v83545.7390	v54919.1350
σ		v1699.7173	v1682.5148	v700.0930
%RSD		v2.1983	v2.0139	v1.2748

SEQ-CCB@CCB02 12/29/2015 14:22:20 QC Status: PASS (Initial: PASS)

User Pre-dilution: 1.00

Run	Time	6Li	23Na	45Sc	47Ti	53Cl O	83Kr	89Y	94Mo	95Mo	96Mo	97Mo	98Mo	103Rh	115In	118Sn
1	14:22:20	v11764.2070	v47904.0220	v44151.6870	v2778.2074	1876.7398	v166.6693	v36517.8900	22.2224	22.2224	v44.4447	v18.5186	v66.6673	v37120.3850	v83808.1360	37.0373
2	14:22:29	v13255.7970	v45242.2850	v47501.7290	v2355.8620	v1755.7320	v92.5934	v37652.1500	v0.0000	v22.2224	v0.0000	18.5186	v22.2224	v37946.0100	v86635.7580	v18.5186
3	14:22:38	v12187.0340	v46414.7280	v45268.2660	v2422.5543	v1755.7336	v0.0000	v37986.8410	v0.0000	v0.0000	v22.2224	37.0375	v0.0000	v38347.4600	v87870.5990	55.5561
x		v12402.3460	v46520.3450	v45640.5610	v2518.8746	v1796.0685	v86.4209	v37385.6270	v7.4075	v14.8149	v22.2224	v24.6916	v29.6299	v37804.6180	v86104.8310	v37.0373
σ		v768.7515	v1334.0079	v1705.7690	v227.0509	v69.8634	v83.5059	v769.8898	v12.8301	v12.8301	v22.2224	v10.6919	v33.9454	v625.6371	v2082.6224	v18.5187
%RSD		v6.1984	v2.8676	v3.7374	v9.0140	v3.8898	v96.6270	v2.0593	v173.2051	v86.6025	v100.0000	v43.3017	v114.5645	v1.6549	v2.4187	v50.0002

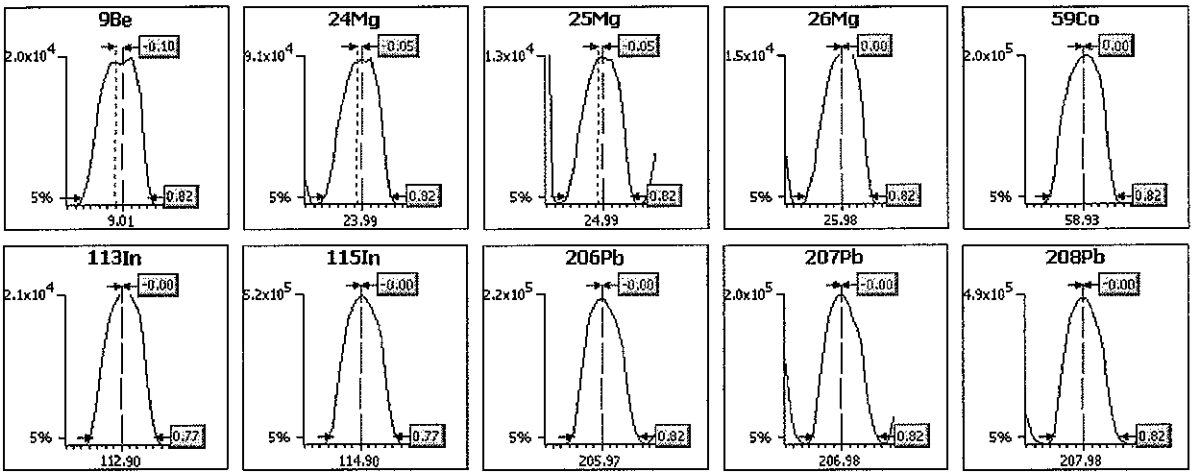
Run	Time	159Tb	165Ho	209Bi
1	14:22:20	v80803.2720	v84681.9130	v59397.4340
2	14:22:29	v82259.5880	v84323.0220	v60349.1060
3	14:22:38	v79591.5690	v84525.3380	v59360.3480
x		v80884.8100	v84510.0910	v59702.2960
σ		v1335.8771	v179.9304	v560.4606
%RSD		v1.6516	v0.2129	v0.9388

Performance Report

Sample details
Sample name : SEQ-TUN1@TUNE01
Acquired at : 12/30/2015 17:31:00
Report name : 200_8 + IS TEST_NO SCREEN [7/9/2015 09:58:10]

Mass Calibration verification

Acquisition parameters
Sweeps : 10
Dwell : 10.0 mSecs
Point spacing : 0.05 amu
Peak width measured at 5% of the peak maximum



Analyte	Limits			Results	
	Max. width	Min. width	Max. error	Peak width	Peak error
9Be	0.85	0.65	0.11	0.82	-0.10
24Mg	0.85	0.65	0.11	0.82	-0.05
25Mg	0.85	0.65	0.11	0.82	-0.05
26Mg	0.85	0.65	0.11	0.82	0.00
59Co	0.85	0.65	0.11	0.82	0.00
113In	0.85	0.65	0.11	0.77	-0.00
115In	0.85	0.65	0.11	0.77	-0.00
206Pb	0.85	0.65	0.11	0.82	-0.00
207Pb	0.85	0.65	0.11	0.82	-0.00
208Pb	0.85	0.65	0.11	0.82	-0.00

Sample details
Sample name : SEQ-TUN1@TUNE01
Acquired at : 12/30/2015 17:31:00
Report name : 200_8 + IS TEST_NO SCREEN [7/9/2015 09:58:10]

Tune conditions

Major	
Extraction	-106
Lens 1	0.3
Focus	16.7
D1	-45.5
Pole Bias	-0.9
Hexapole Bias	1.5
Nebuliser	0.84
Sampling Depth	130

Minor	
Lens 2	-26.7
Lens 3	-189.0
Forward power	1404
Horizontal	100
Vertical	375
D2	-160
DA	-27.5
Cool	13.0
Auxiliary	0.90

Global	
Standard resolution	n/a
High resolution	n/a
Analogue Detector	n/a
PC Detector	n/a

Add. Gases	
CCT 7% h2/He	0.00
Dont touch this thing	0.00

Sensitivity and stability results

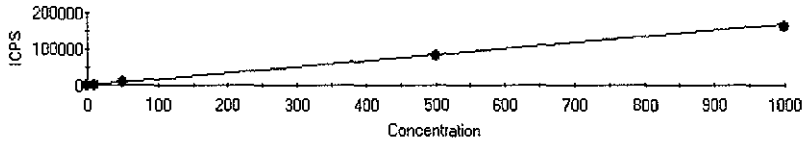
Acquisition parameters
Sweeps : 30

Run	Time	6Li	9Be	24Mg	25Mg	26Mg	45Sc	59Co	89Y	113In	115In	159Tb	206Pb	207Pb	208Pb	209Bi
Dwell (mSecs)		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Limits	%RSD	3.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%
	Countrate	>4000	>4000	>4000	>4000	>4000	>5000	>4000	>5000	>10000	>20000	>20000	>20000	>20000	>20000	>20000
1	17:31:39	33110.186	18291.717	84302.409	12078.018	14661.814	252995.39	200905.71	26826.189	21756.002	536917.29	69444.228	225652.89	200660.38	494679.09	57209.446
2	17:31:46	32738.845	18478.761	83750.677	12098.045	15212.718	255277.88	204092.19	28300.649	22314.018	544184.18	70028.686	226862.44	201815.53	500146.39	58484.185
3	17:31:54	33802.728	18909.646	84699.407	12315.002	15082.501	259460.49	207654.85	28457.805	22638.152	545595.09	69827.145	228092.66	203362.78	502722.84	58722.380
4	17:32:02	33668.899	18739.294	86250.555	12538.641	15105.873	256165.67	206979.71	28324.055	23216.274	544983.32	70905.443	229121.38	205537.54	505557.04	58984.066
5	17:32:09	33906.446	18472.081	87512.530	12531.965	15489.852	255490.39	206764.91	28310.680	22263.896	550377.51	71221.230	226370.40	200735.34	500948.82	57605.267
x		33445.421	18578.300	85303.116	12312.334	15110.552	255877.97	205279.47	28043.876	22437.668	544411.48	70285.346	227219.96	202422.31	500810.83	58201.069
σ		500.45	244.45	1545.57	223.77	298.53	2331.14	2796.39	683.69	537.72	4835.70	748.95	1385.85	2055.94	4007.52	758.83
%RSD		1.4963	1.3158	1.8119	1.8174	1.9756	0.9110	1.3622	2.4379	2.3965	0.8882	1.0656	0.6099	1.0157	0.8002	1.3038

Result : The performance report passed.

Fully Quant Calibration

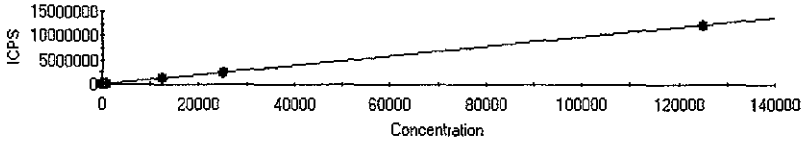
9Be FQ Block 1



Intercept CPS=6.069922 Intercept Conc=0.036189
Sensitivity=167.727076 Correlation Coeff=0.999998

Label	Defined	Measured	Error	Mean CPS	% Error
SEQ-CAL1@S01	0.000	-0.010	0.010	4.46	0.00
SEQ-CAL4@S04	1.000	1.128	0.128	195.31	12.83
SEQ-CAL5@S05	10.000	10.671	0.671	1795.90	6.71
SEQ-CAL6@S06	50.000	50.564	0.564	8487.07	1.13
SEQ-CAL7@S07	500.000	488.984	11.016	82021.86	2.20
SEQ-CAL8@S08	1000.000	974.518	25.482	163459.12	2.55

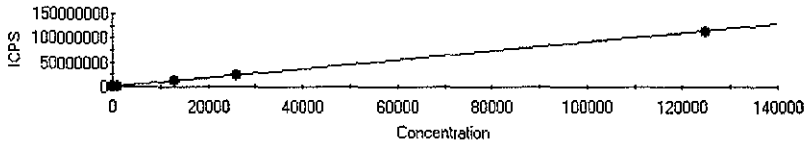
25Mg FQ Block 1



Intercept CPS=107.363193 Intercept Conc=1.076669
Sensitivity=99.717939 Correlation Coeff=0.999997

Label	Defined	Measured	Error	Mean CPS	% Error
SEQ-CAL1@S01	0.000	-0.007	0.007	106.65	0.00
SEQ-CAL4@S04	500.000	517.148	17.148	51676.28	3.43
SEQ-CAL5@S05	250.000	255.401	5.401	25575.40	2.16
SEQ-CAL6@S06	1250.000	1253.485	3.485	125102.27	0.28
SEQ-CAL7@S07	12500.000	12490.265	9.735	1245610.82	0.08
SEQ-CAL8@S08	25000.000	24366.223	633.777	2429856.85	2.54
SEQ-CALA@S10	125000.000	121927.682	3072.318	12158484.44	2.46

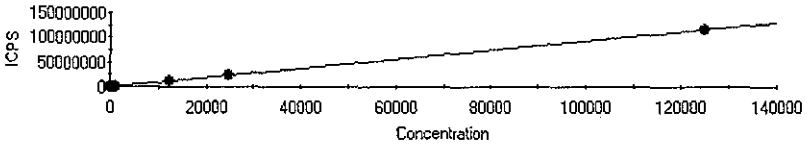
27Al FQ Block 1



Intercept CPS=3016.442399 Intercept Conc=3.271894
Sensitivity=921.925485 Correlation Coeff=0.999997

Label	Defined	Measured	Error	Mean CPS	% Error
SEQ-CAL1@S01	0.000	-0.791	0.791	2287.40	0.00
SEQ-CAL2@S02	4.000	4.294	0.294	6974.80	7.34
SEQ-CAL5@S05	260.000	267.146	7.146	249305.11	2.75
SEQ-CAL6@S06	1300.000	1360.675	60.675	1257457.36	4.67
SEQ-CAL7@S07	13000.000	12895.458	104.542	11891667.45	0.80
SEQ-CAL8@S08	26000.000	25566.036	433.964	23572996.72	1.67
SEQ-CALA@S10	125000.000	121655.008	3344.992	112159868.60	2.68

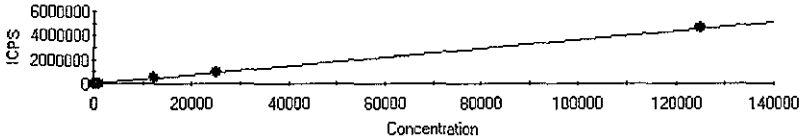
39K FQ Block 1



Intercept CPS=22497.584413 Intercept Conc=24.387632
Sensitivity=922.499759 Correlation Coeff=0.999983

Label	Defined	Measured	Error	Mean CPS	% Error
SEQ-CAL1@S01	0.000	-0.032	0.032	22468.29	0.00
SEQ-CAL4@S04	500.000	516.800	16.800	499245.25	3.36
SEQ-CAL5@S05	250.000	249.099	0.901	252291.05	0.36
SEQ-CAL6@S06	1250.000	1222.389	27.611	1150151.14	2.21
SEQ-CAL7@S07	12500.000	12162.815	337.185	11242691.49	2.70
SEQ-CAL8@S08	25000.000	24102.158	897.842	22256732.83	3.59
SEQ-CALA@S10	125000.000	123974.038	1025.962	114388517.88	0.82

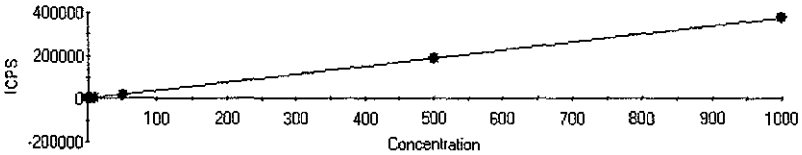
44Ca FQ Block 1



Intercept CPS=785.697877 Intercept Conc=21.839254
Sensitivity=35.976406 Correlation Coeff=1.000000

Label	Defined	Measured	Error	Mean CPS	% Error
SEQ-CAL1@S01	0.000	0.387	0.387	799.64	0.00
SEQ-CAL4@S04	500.000	497.305	2.695	18676.93	0.54
SEQ-CAL5@S05	250.000	248.673	1.327	9732.06	0.53
SEQ-CAL6@S06	1250.000	1240.511	9.489	45414.84	0.76
SEQ-CAL7@S07	12500.000	12716.615	216.615	458283.79	1.73
SEQ-CAL8@S08	25000.000	25402.044	402.044	914659.96	1.61
SEQ-CALA@S10	125000.000	127164.895	2164.895	4575721.58	1.73

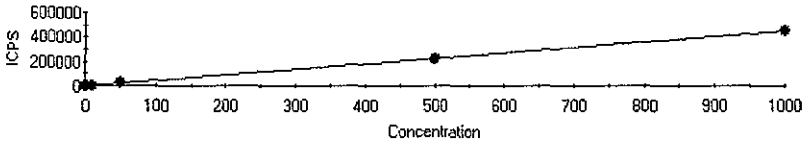
51V FQ Block 1



Intercept CPS=3.504755 Intercept Conc=0.009439
Sensitivity=371.322445 Correlation Coeff=0.999972

Label	Defined	Measured	Error	Mean CPS	% Error
SEQ-CAL1@S01	0.000	0.003	0.003	4.78	0.00
SEQ-CAL4@S04	5.000	4.655	0.345	1732.13	6.89
SEQ-CAL5@S05	10.000	9.587	0.413	3563.26	4.13
SEQ-CAL6@S06	50.000	48.245	1.755	17917.77	3.51
SEQ-CAL7@S07	500.000	491.990	8.010	182690.48	1.60
SEQ-CAL8@S08	1000.000	1000.138	0.138	371377.16	0.01

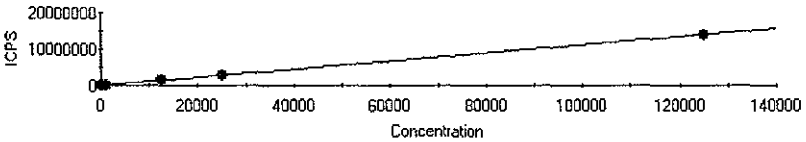
52Cr FQ Block 1



Intercept CPS=82.500429 Intercept Conc=0.184569
Sensitivity=446.988591 Correlation Coeff=0.999988

Label	Defined	Measured	Error	Mean CPS	% Error
SEQ-CAL1@S01	0.000	0.040	0.040	100.55	0.00
SEQ-CAL3@S03	1.000	0.989	0.011	524.62	1.09
SEQ-CAL4@S04	2.000	1.893	0.107	928.84	5.33
SEQ-CAL5@S05	10.000	9.703	0.297	4419.55	2.97
SEQ-CAL6@S06	50.000	49.237	0.763	22090.84	1.53
SEQ-CAL7@S07	500.000	496.360	3.640	221949.67	0.73
SEQ-CAL8@S08	1000.000	1003.311	3.311	448551.15	0.33

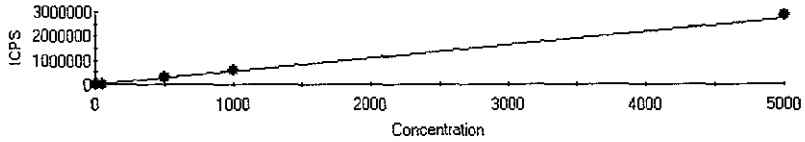
54Fe FQ Block 1



Intercept CPS=3297.918085 Intercept Conc=28.935693
Sensitivity=113.974025 Correlation Coeff=0.999960

Label	Defined	Measured	Error	Mean CPS	% Error
SEQ-CAL1@S01	0.000	-0.001	0.001	3297.81	0.00
SEQ-CAL4@S04	200.000	204.838	4.838	26644.16	2.42
SEQ-CAL5@S05	250.000	252.386	2.386	32063.31	0.95
SEQ-CAL6@S06	1250.000	1247.129	2.871	145438.25	0.23
SEQ-CAL7@S07	12500.000	13093.384	593.384	1495603.57	4.75
SEQ-CAL8@S08	25000.000	25157.607	157.607	2870611.69	0.63
SEQ-CALA@S10	125000.000	122012.524	2987.476	13909556.44	2.39

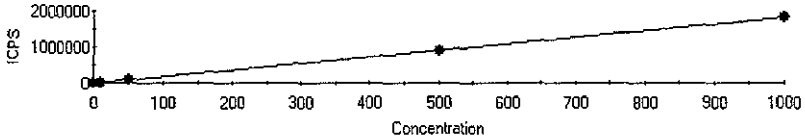
55Mn FQ Block 1



Intercept CPS=62.982108 Intercept Conc=0.115381
Sensitivity=544.996617 Correlation Coeff=0.999995

Label	Defined	Measured	Error	Mean CPS	% Error
SEQ-CAL1@S01	0.000	0.000	0.000	62.88	0.00
SEQ-CAL4@S04	1.000	1.005	0.005	610.53	0.49
SEQ-CAL5@S05	10.000	9.556	0.444	5271.02	4.44
SEQ-CAL6@S06	50.000	48.896	1.104	26711.03	2.21
SEQ-CAL7@S07	500.000	499.660	0.340	272376.05	0.07
SEQ-CAL8@S08	1000.000	1019.893	19.893	555901.27	1.99
SEQ-CAL9@S09	5000.000	5148.870	148.870	2806179.55	2.98

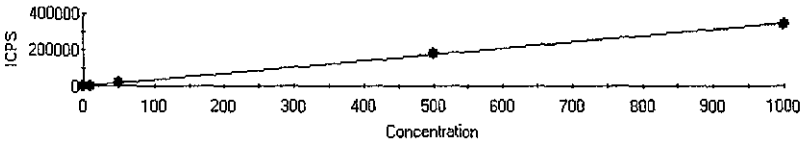
59Co FQ Block 1



Intercept CPS=53.365764 Intercept Conc=0.029668
Sensitivity=1798.759192 Correlation Coeff=0.999972

Label	Defined	Measured	Error	Mean CPS	% Error
SEQ-CAL1@S01	0.000	-0.003	0.003	47.78	0.00
SEQ-CAL3@S03	0.500	0.518	0.018	984.75	3.56
SEQ-CAL4@S04	1.000	1.004	0.004	1859.57	0.41
SEQ-CAL5@S05	10.000	9.927	0.073	17908.93	0.73
SEQ-CAL6@S06	50.000	49.136	0.864	88437.58	1.73
SEQ-CAL7@S07	500.000	494.117	5.883	888850.95	1.18
SEQ-CAL8@S08	1000.000	1004.567	4.567	1807027.29	0.46

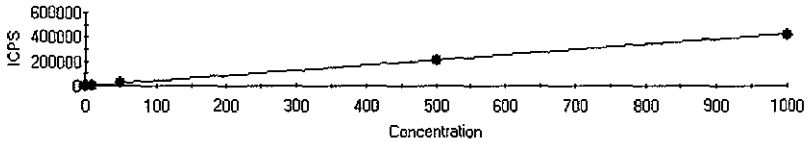
60Ni FQ Block 1



Intercept CPS=40.100095 Intercept Conc=0.115492
Sensitivity=347.212080 Correlation Coeff=0.999967

Label	Defined	Measured	Error	Mean CPS	% Error
SEQ-CAL1@S01	0.000	0.003	0.003	41.11	0.00
SEQ-CAL4@S04	1.000	0.974	0.026	378.22	2.62
SEQ-CAL5@S05	10.000	10.566	0.566	3708.60	5.66
SEQ-CAL6@S06	50.000	50.999	0.999	17747.57	2.00
SEQ-CAL7@S07	500.000	499.795	0.205	173575.05	0.04
SEQ-CAL8@S08	1000.000	982.420	17.580	341148.11	1.76

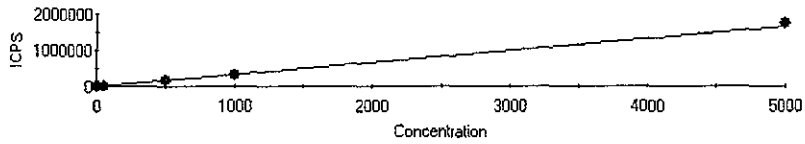
65Cu FQ Block 1



Intercept CPS=96.412837 Intercept Conc=0.228829
Sensitivity=421.330760 Correlation Coeff=0.999940

Label	Defined	Measured	Error	Mean CPS	% Error
SEQ-CAL1@S01	0.000	0.003	0.003	97.75	0.00
SEQ-CAL4@S04	2.000	1.998	0.002	938.25	0.10
SEQ-CAL5@S05	10.000	10.355	0.355	4459.19	3.55
SEQ-CAL6@S06	50.000	51.350	1.350	21731.63	2.70
SEQ-CAL7@S07	500.000	500.279	0.279	210879.48	0.06
SEQ-CAL8@S08	1000.000	977.618	22.382	411996.89	2.24

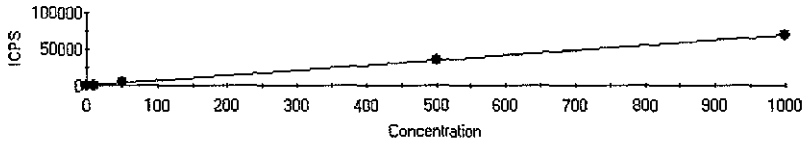
66Zn FQ Block 1



Intercept CPS=102.332912 Intercept Conc=0.307011
Sensitivity=333.320114 Correlation Coeff=0.999938

Label	Defined	Measured	Error	Mean CPS	% Error
SEQ-CAL1@S01	0.000	-0.004	0.004	101.11	0.00
SEQ-CAL4@S04	2.000	2.091	0.091	799.29	4.55
SEQ-CAL5@S05	10.000	9.959	0.041	3421.78	0.41
SEQ-CAL6@S06	50.000	50.849	0.849	17051.34	1.70
SEQ-CAL7@S07	500.000	496.434	3.566	165573.69	0.71
SEQ-CAL8@S08	1000.000	954.666	45.334	318311.86	4.53
SEQ-CAL9@S09	5000.000	5234.482	234.482	1744860.63	4.69

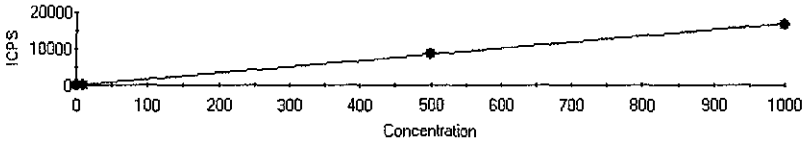
75As FQ Block 1



Intercept CPS=2.951407 Intercept Conc=0.042361
Sensitivity=69.672002 Correlation Coeff=0.999999

Label	Defined	Measured	Error	Mean CPS	% Error
SEQ-CAL1@S01	0.000	0.016	0.016	4.10	0.00
SEQ-CAL3@S03	0.500	0.499	0.001	37.72	0.20
SEQ-CAL4@S04	1.000	1.024	0.024	74.27	2.36
SEQ-CAL5@S05	10.000	9.391	0.609	657.25	6.09
SEQ-CAL6@S06	50.000	50.300	0.300	3507.48	0.60
SEQ-CAL7@S07	500.000	500.281	0.281	34858.55	0.06
SEQ-CAL8@S08	1000.000	998.742	1.258	69587.29	0.13

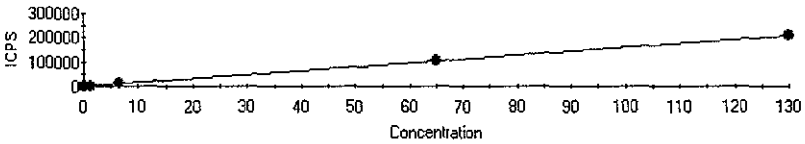
78Se FQ Block 1



Intercept CPS=3.912126 Intercept Conc=0.233850
Sensitivity=16.729187 Correlation Coeff=0.999948

Label	Defined	Measured	Error	Mean CPS	% Error
SEQ-CAL1@S01	0.000	-0.034	0.034	3.34	0.00
SEQ-CAL2@S02	1.000	1.107	0.107	22.43	10.68
SEQ-CAL3@S03	2.500	2.589	0.089	47.22	3.54
SEQ-CAL5@S05	10.000	10.347	0.347	177.01	3.47
SEQ-CAL7@S07	500.000	507.736	7.736	8497.92	1.55
SEQ-CAL8@S08	1000.000	993.719	6.281	16628.02	0.63

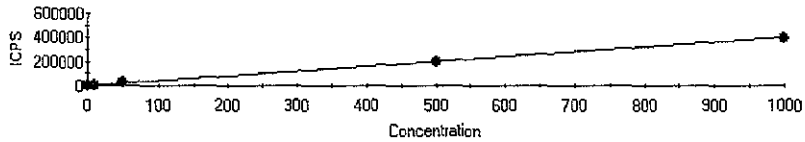
107Ag FQ Block 1



Intercept CPS=7.470736 Intercept Conc=0.004650
Sensitivity=1606.455503 Correlation Coeff=0.999889

Label	Defined	Measured	Error	Mean CPS	% Error
SEQ-CAL1@S01	0.000	0.000	0.000	7.80	0.00
SEQ-CAL2@S02	0.200	0.162	0.038	267.46	19.08
SEQ-CAL5@S05	1.300	1.333	0.033	2149.09	2.55
SEQ-CAL6@S06	6.500	6.711	0.211	10788.28	3.25
SEQ-CAL7@S07	65.000	66.042	1.042	106100.42	1.60
SEQ-CAL8@S08	130.000	128.010	1.990	205650.09	1.53

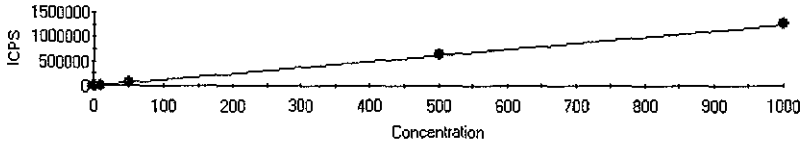
111Cd FQ Block 1



Intercept CPS=7.283460 Intercept Conc=0.018164
Sensitivity=400.992919 Correlation Coeff=0.999997

Label	Defined	Measured	Error	Mean CPS	% Error
SEQ-CAL1@S01	0.000	0.001	0.001	7.74	0.00
SEQ-CAL3@S03	0.500	0.503	0.003	208.87	0.55
SEQ-CAL4@S04	1.000	0.906	0.094	370.42	9.44
SEQ-CAL5@S05	10.000	10.022	0.022	4025.78	0.22
SEQ-CAL6@S06	50.000	49.749	0.251	19955.69	0.50
SEQ-CAL7@S07	500.000	494.220	5.780	198181.21	1.16
SEQ-CAL8@S08	1000.000	982.864	17.136	394119.04	1.71

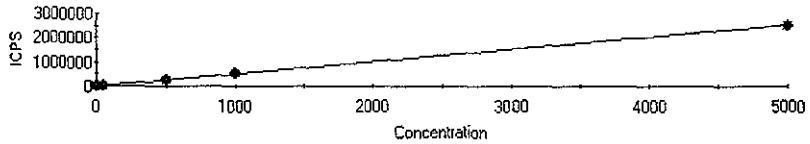
121Sb FQ Block 1



Intercept CPS=55.823238 Intercept Conc=0.045474
Sensitivity=1227.599497 Correlation Coeff=0.999980

Label	Defined	Measured	Error	Mean CPS	% Error
SEQ-CAL1@S01	0.000	0.002	0.002	58.89	0.00
SEQ-CAL3@S03	1.000	0.977	0.023	1255.51	2.27
SEQ-CAL4@S04	2.000	1.913	0.087	2404.75	4.33
SEQ-CAL5@S05	10.000	9.774	0.226	12053.82	2.26
SEQ-CAL6@S06	50.000	49.233	0.767	60494.32	1.53
SEQ-CAL7@S07	500.000	506.766	6.766	622156.04	1.35
SEQ-CAL8@S08	1000.000	1027.711	27.711	1261663.54	2.77

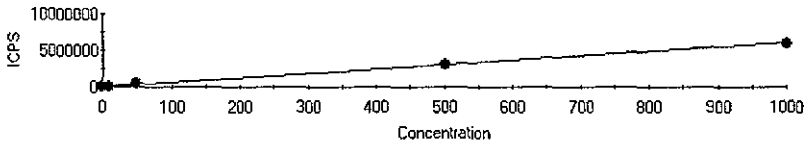
137Ba FQ Block 1



Intercept CPS=31.967824 Intercept Conc=0.063225
Sensitivity=505.622064 Correlation Coeff=0.999988

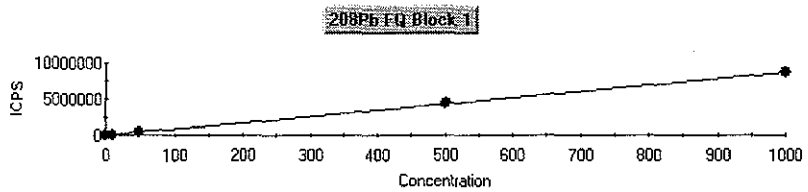
Label	Defined	Measured	Error	Mean CPS	% Error
SEQ-CAL1@S01	0.000	0.003	0.003	33.26	0.00
SEQ-CAL5@S05	10.000	10.009	0.009	5092.94	0.09
SEQ-CAL6@S06	50.000	49.188	0.812	24902.60	1.62
SEQ-CAL7@S07	500.000	503.606	3.606	254666.43	0.72
SEQ-CAL8@S08	1000.000	1005.997	5.997	508686.18	0.60
SEQ-CAL9@S09	5000.000	4918.683	81.317	2487026.65	1.63

205Tl FQ Block 1



Intercept CPS=147.830657 Intercept Conc=0.024114
Sensitivity=6130.603099 Correlation Coeff=0.999987

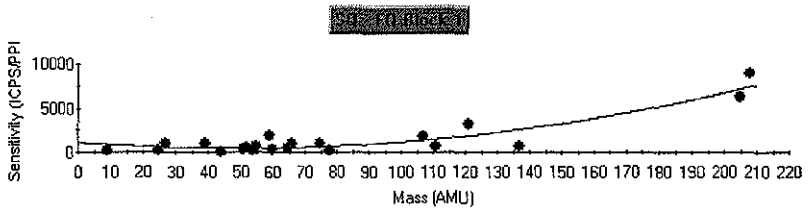
Label	Defined	Measured	Error	Mean CPS	% Error
SEQ-CAL1@S01	0.000	0.000	0.000	150.05	0.00
SEQ-CAL3@S03	0.500	0.475	0.025	3060.54	4.98
SEQ-CAL4@S04	1.000	0.970	0.030	6092.16	3.04
SEQ-CAL5@S05	10.000	10.009	0.009	61511.78	0.09
SEQ-CAL6@S06	50.000	50.665	0.665	310755.80	1.33
SEQ-CAL7@S07	500.000	494.686	5.314	3032871.56	1.06
SEQ-CAL8@S08	1000.000	978.833	21.167	6000986.38	2.12



Intercept CPS=571.659011 Intercept Conc=0.066535
Sensitivity=8591.859292 Correlation Coeff=0.999672

Label	Defined	Measured	Error	Mean CPS	% Error
SEQ-CAL1@S01	0.000	0.002	0.002	584.74	0.00
SEQ-CAL4@S04	1.000	0.973	0.027	8933.75	2.67
SEQ-CAL5@S05	10.000	9.951	0.049	86067.74	0.49
SEQ-CAL6@S06	50.000	49.373	0.627	424776.83	1.25
SEQ-CAL7@S07	500.000	525.513	25.513	4515702.47	5.10
SEQ-CAL8@S08	1000.000	997.034	2.966	8566945.11	0.30

Semi Quant Calibration



Coeff 0=1091.010593 Coeff 1=-27.009035 Coeff 2=0.276026

Symbol	Mass	RSF	Available	Excluded	Sensitivity Measured	Corrected	Calculated	%Error
9Be	9.01	0.7500	1	1	167.73	223.64	870.02	289.0
25Mg	24.99	0.9800	1	1	99.72	1006.46	588.49	-41.5
27Al	26.98	0.9800	1	1	921.93	940.74	563.21	-40.1
39K	38.96	1.0000	1	1	922.50	991.08	457.69	-53.8
44Ca	43.96	0.9900	1	1	35.98	1706.09	437.12	-74.4
51V	50.94	0.9900	1	1	371.32	375.98	431.43	14.7
52Cr	51.94	0.9800	1	1	446.99	544.54	432.81	-20.5
54Fe	53.94	0.9600	1	1	113.97	2012.25	437.24	-78.3
55Mn	54.94	0.9500	1	1	545.00	573.68	440.28	-23.3
59Co	58.93	0.9300	1	1	1798.76	1934.15	457.95	-76.3
60Ni	59.93	0.9100	1	1	347.21	1458.53	463.74	-68.2
65Cu	64.93	0.9000	1	1	421.33	1514.54	500.99	-66.9
66Zn	65.93	0.3750	1	1	333.32	3196.17	510.09	-84.0
75As	74.92	0.0700	1	1	69.67	995.31	616.85	-38.0
78Se	77.92	0.1000	1	1	16.73	708.56	662.32	-6.5
107Ag	106.91	0.9300	1	1	1606.46	3363.92	1358.22	-59.6
111Cd	110.90	0.5660	1	1	400.98	5508.95	1490.64	-72.9
121Sb	120.90	0.3900	1	1	1227.59	5498.11	1860.38	-66.2
137Ba	136.91	0.9100	1	1	505.62	4908.38	2566.92	-47.7
205Tl	204.97	1.0000	1	1	6130.60	8695.89	7151.72	-17.8
208Pb	207.98	0.9700	1	1	8591.86	16910.25	7413.05	-56.2

Dilution Corrected Concentrations

SEQ-CAL1@S01 12/30/2015 17:42:37

User Pre-dilution: 1.000

Run	Time	6Li	9Be	25Mg	27Al	39K	44Ca	45Sc	47Ti	51V	52Cr	53Cl O	54Fe	55Mn	59Co	60Ni
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:42:37	100.1%	0.0234	-0.1745	-1.0050	0.2281	0.5181	100.0%	0.1588	-0.0103	0.0223	1.5710	0.0770	-0.0064	-0.0019	0.0092
2	17:42:54	101.3%	-0.0362	0.1534	-0.7849	0.2329	-0.6818	99.8%	-0.0116	0.0036	0.0654	3.2170	-0.1169	0.0087	0.0037	-0.0099
3	17:43:10	98.6%	-0.0161	-0.0005	-0.5820	-0.5563	1.3260	100.3%	-0.1472	0.0169	0.0335	-4.7890	0.0371	-0.0023	-0.0111	0.0094
x		100.0%	-0.0096	-0.0072	-0.7908	-0.0318	0.3874	100.0%	-0.0000	0.0034	0.0404	-0.0000	-0.0010	0.0000	-0.0031	0.0029
σ		1.4%	0.0303	0.1641	0.2118	0.4542	1.0100	0.3%	0.1533	0.0136	0.0224	4.2280	0.1024	0.0078	0.0075	0.0111
%RSD		1.4	314.7000	2283.0000	26.7800	1431.0000	260.7000	0.3	0.0000	396.7000	55.3800	0.0000	10600.0000	413400.0000	241.1000	379.9000

Run	Time	65Cu	66Zn	75As	77Se	78Se	82Se	83Kr	89Y	94Mo	95Mo	96Mo	97Mo	98Mo	103Rh	106Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:42:37	0.1109	0.0026	0.0213	0.0686	-0.1676	0.0603	-0.2628	100.3%	0.0034	0.0146	-0.0044	0.0054	-0.0121	100.2%	0.0003
2	17:42:54	-0.0549	-0.0172	0.0391	-0.0343	0.0376	0.0517	-0.0664	100.4%	-0.0000	-0.0023	-0.0109	0.0021	0.0163	97.9%	-0.0045
3	17:43:10	-0.0465	0.0037	-0.0111	-0.0343	0.0268	-0.1120	0.3292	99.3%	-0.0034	-0.0123	0.0153	-0.0074	-0.0043	101.9%	0.0042
x		0.0032	-0.0037	0.0165	0.0000	-0.0344	0.0000	0.0000	100.0%	-0.0000	0.0000	0.0000	0.0000	-0.0000	100.0%	0.0000
σ		0.0934	0.0117	0.0254	0.0594	0.1155	0.0971	0.3015	0.6%	0.0034	0.0136	0.0136	0.0067	0.0147	2.0%	0.0043
%RSD		2943.0000	320.7000	154.7000	0.0000	335.9000	0.0000	0.0000	0.6	0.0000	0.0000	0.0000	0.0000	0.0000	2.0	0.0000

Run	Time	107Ag	108Cd	111Cd	115In	118Sn	121Sb	137Ba	159Tb	165Ho	205Tl	208Pb	209Bi
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:42:37	0.0016	0.0044	-0.0014	98.4%	-0.0009	-0.0042	-0.0034	99.9%	99.0%	0.0022	0.0083	99.0%
2	17:42:54	0.0016	-0.0043	-0.0099	100.1%	0.0026	0.0143	-0.0169	99.0%	98.9%	0.0007	-0.0015	100.9%
3	17:43:10	-0.0026	-0.0001	0.0147	101.5%	-0.0018	-0.0027	0.0279	101.1%	102.1%	-0.0019	-0.0022	100.1%
x		0.0002	0.0000	0.0011	100.0%	0.0000	0.0025	0.0025	100.0%	100.0%	0.0004	0.0015	100.0%
σ		0.0024	0.0043	0.0125	1.6%	0.0023	0.0103	0.0230	1.0%	1.8%	0.0021	0.0059	0.9%
%RSD		1193.0000	0.0000	1088.0000	1.6	0.0000	411.0000	901.2000	1.0	1.8	577.0000	386.7000	0.9

SEQ-CAL2@S02 12/30/2015 17:46:47

User Pre-dilution: 1.000

Run	Time	6Li	9Be	25Mg	27Al	39K	44Ca	45Sc	47Ti	51V	52Cr	53Cl O	54Fe	55Mn	59Co	60Ni
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:47:04	99.9%	0.0831	112.4000	4.2020	107.2000	113.9000	101.5%	0.1001	0.9928	0.4647	33.1800	44.3500	0.1822	0.2390	0.2089
2	17:47:20	100.9%	0.1407	107.8000	4.4430	104.0000	104.2000	103.4%	-0.1565	0.9983	0.4109	32.1300	45.0800	0.0863	0.1682	0.1922
3	17:47:36	97.3%	0.1673	107.4000	4.2360	108.4000	109.1000	102.0%	0.0041	0.9942	0.4367	50.4500	43.0800	0.1763	0.1927	0.3189
x		99.4%	0.1304	109.2000	4.2940	106.5000	109.1000	102.3%	-0.0174	0.9951	0.4374	38.5900	44.1700	0.1482	0.2000	0.2400
σ		1.8%	0.0431	2.7850	0.1303	2.2950	4.8500	0.9%	0.1297	0.0029	0.0269	10.2900	1.0100	0.0538	0.0360	0.0688
%RSD		1.8	33.0200	2.5510	3.0350	2.1550	4.4470	0.9	744.2000	0.2909	6.1520	26.6600	2.2870	36.2700	17.9800	28.6800

Run	Time	65Cu	66Zn	75As	77Se	78Se	82Se	83Kr	89Y	94Mo	95Mo	96Mo	97Mo	98Mo	103Rh	106Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:47:04	0.5361	0.2914	0.1811	0.0689	0.8960	-0.0284	2.7290	98.9%	0.0001	0.0012	-0.0011	0.0022	-0.0173	99.9%	0.0174
2	17:47:20	0.4789	0.2377	0.2705	0.0163	1.3950	0.3311	-3.3100	102.2%	0.0031	-0.0123	-0.0077	0.0019	-0.0199	101.9%	0.0559
3	17:47:36	0.4021	0.3725	0.1333	0.1722	1.0300	0.0590	-0.2346	101.1%	-0.0070	-0.0057	-0.0077	-0.0106	-0.0229	99.9%	0.0291
x		0.4724	0.3005	0.1949	0.0858	1.1070	0.1206	-0.2720	100.7%	-0.0013	-0.0056	-0.0055	-0.0022	-0.0200	100.6%	0.0342
σ		0.0672	0.0679	0.0697	0.0793	0.2582	0.1875	3.0200	1.7%	0.0052	0.0067	0.0038	0.0073	0.0028	1.2%	0.0198
%RSD		14.2300	22.5900	35.7300	92.4600	23.3300	155.5000	1110.0000	1.7	404.3000	120.2000	69.7200	330.7000	14.2300	1.2	57.8200

Run	Time	107Ag	108Cd	111Cd	115In	118Sn	121Sb	137Ba	159Tb	165Ho	205Tl	208Pb	209Bi
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:47:04	0.1559	0.0041	0.2199	101.7%	-0.0136	0.4104	2.0210	102.6%	101.5%	0.1888	0.1895	101.4%
2	17:47:20	0.1377	0.0122	0.1448	102.0%	-0.0234	0.4360	2.2740	102.8%	101.5%	0.2119	0.1733	100.1%
3	17:47:36	0.1920	-0.0005	0.1577	104.5%	-0.0160	0.4099	2.0500	103.3%	103.5%	0.1924	0.1933	104.6%
x		0.1618	0.0053	0.1741	102.7%	-0.0177	0.4188	2.1150	102.9%	102.2%	0.1977	0.1854	102.0%
σ		0.0276	0.0064	0.0401	1.5%	0.0051	0.0149	0.1384	0.3%	1.2%	0.0124	0.0106	2.3%
%RSD		17.0800	121.7000	23.0400	1.5	28.9900	3.5540	6.5450	0.3	1.2	6.2820	5.7190	2.3

SEQ-CAL3@S03 12/30/2015 17:51:11

User Pre-dilution: 1.000

Run	Time	6Li	9Be	25Mg	27Al	39K	44Ca	45Sc	47Ti	51V	52Cr	53Cl O	54Fe	55Mn	59Co	60Ni
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:51:11	102.0%	0.4898	262.2000	12.6500	258.3000	255.6000	101.9%	0.0351	2.4570	0.9753	82.2200	108.5000	0.4349	0.5572	0.5549
2	17:51:27	103.9%	0.6156	261.5000	13.7600	262.9000	256.1000	101.3%	0.1391	2.2610	0.9589	98.3100	106.8000	0.5171	0.5280	0.5523
3	17:51:44	99.3%	0.4024	272.3000	13.9800	254.6000	250.3000	104.5%	0.0091	2.3780	1.0330	129.4000	106.9000	0.4966	0.4682	0.4558
x		101.7%	0.5026	265.3000	13.4600	258.6000	254.0000	102.6%	0.0611	2.3650	0.9891	103.3000	107.4000	0.4829	0.5178	0.5210
σ		2.3%	0.1072	6.0430	0.7131	4.1390	3.1810	1.7%	0.0688	0.0989	0.0390	24.0000	0.9776	0.0428	0.0453	0.0565
%RSD		2.3	21.3200	2.2770	5.2970	1.6010	1.2530	1.7	112.6000	4.1810	3.9420	23.2300	0.9104	8.8630	8.7560	10.8500

Run	Time	65Cu	66Zn	75As	77Se	78Se	82Se	83Kr	89Y	94Mo	95Mo	96Mo	97Mo	98Mo	103Rh	106Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:51:11	1.0480	1.1110	0.4921	0.4230	3.1050	-0.0667	2.5610	101.2%	-0.0070	-0.0057	-0.0045	-0.0106	-0.0199	101.5%	0.0040
2	17:51:27	1.0230	1.0890	0.5007	0.2666	2.3510	0.2457	-1.1870	103.7%	-0.0104	0.0039	-0.0109	-0.0045	-0.0144	102.8%	0.0464
3	17:51:44	1.2310	1.0670	0.5042	0.1216	2.3100	0.6525	-1.6750	103.6%	0.1715	-0.0091	-0.0046	-0.0045	-0.0115	99.2%	0.0070
x		1.1010	1.0890	0.4990	0.2704	2.5890	0.2772	-0.1002	102.8%	0.0514	-0.0036	-0.0067	-0.0065	-0.0153	101.2%	0.0192
σ		0.1130	0.0219	0.0062	0.1507	0.4475	0.3606	2.3180	1.4%	0.1041	0.0067	0.0037	0.0035	0.0042	1.8%	0.0237
%RSD		10.2700	2.0070	1.2480	55.7500	17.2900	130.1000	2313.0000	1.4	202.5000	186.3000	55.1900	54.2700	27.7400	1.8	123.5000

Run	Time	107Ag	108Cd	111Cd	115In	118Sn	121Sb	137Ba	159Tb	165Ho	205Tl	208Pb	209Bi
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:51:11	0.4262	0.0250	0.4668	101.1%	-0.0135	0.9441	5.0750	100.1%	101.5%	0.5013	0.4688	100.3%
2	17:51:27	0.3978	0.0078	0.5307	102.9%	-0.0157	1.0440	5.2540	101.8%	102.8%	0.4721	0.4587	103.9%
3	17:51:44	0.3965	0.0236	0.5107	105.7%	-0.0180	0.9439	5.2130	103.8%	103.0%	0.4519	0.4572	105.9%
x		0.4069	0.0188	0.5027	103.2%	-0.0157	0.9773	5.1800	101.9%	102.4%	0.4751	0.4616	103.4%
σ		0.0168	0.0095	0.0327	2.3%	0.0023	0.0577	0.0940	1.9%	0.8%	0.0248	0.0063	2.9%
%RSD		4.1250	50.6900	6.4970	2.2	14.4000	5.8990	1.8140	1.8	0.8	5.2260	1.3680	2.8

SEQ-CAL4@S04 12/30/2015 17:55:18
User Pre-dilution: 1.000

Run	Time	6Li	9Be	25Mg	27Al	39K	44Ca	45Sc	47Ti	51V	52Cr	53Cl O	54Fe	55Mn	59Co	60Ni
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:55:18	102.8%	1.0640	494.2000	26.5300	510.0000	486.5000	105.3%	-0.0031	4.4590	1.9200	63.0400	196.5000	1.0020	0.9943	0.9555
2	17:55:35	99.6%	1.2780	524.5000	28.8100	521.3000	508.7000	102.3%	-0.0373	4.7350	1.8460	89.2800	205.3000	1.0360	1.0120	0.9581
3	17:55:51	99.2%	1.0430	532.7000	29.1700	519.2000	496.7000	102.6%	-0.0230	4.7720	1.9130	83.0700	212.7000	0.9769	1.0060	1.0080
x		100.5%	1.1280	517.1000	28.1700	516.8000	497.3000	103.4%	-0.0211	4.6550	1.8930	78.4600	204.8000	1.0050	1.0040	0.9738
σ		2.0%	0.1304	20.2500	1.4280	6.0120	11.1400	1.7%	0.0172	0.1713	0.0408	13.7100	8.1120	0.0296	0.0091	0.0295
%RSD		2.0	11.5600	3.9170	5.0700	1.1630	2.2410	1.6	81.1200	3.6790	2.1570	17.4800	3.9600	2.9490	0.9096	3.0290

Run	Time	65Cu	66Zn	75As	77Se	78Se	82Se	83Kr	89Y	94Mo	95Mo	96Mo	97Mo	98Mo	103Rh	106Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:55:18	2.0100	2.0520	1.1050	0.4170	4.7400	0.2946	2.4170	101.4%	0.0066	-0.0024	-0.0045	0.0114	-0.0199	102.8%	0.0565
2	17:55:35	2.0060	2.1580	0.8978	0.2148	4.5800	0.4673	-1.2350	103.8%	0.0027	-0.0123	-0.0109	-0.0015	-0.0175	103.5%	0.0571
3	17:55:51	1.9780	2.0630	1.0680	0.3145	5.0310	0.5123	-0.5165	102.6%	-0.0104	-0.0090	-0.0109	-0.0014	-0.0169	103.4%	0.0455
x		1.9980	2.0910	1.0240	0.3154	4.7840	0.4247	0.2218	102.6%	-0.0004	-0.0079	-0.0088	0.0028	-0.0181	103.2%	0.0531
σ		0.0179	0.0586	0.1106	0.1011	0.2285	0.1149	1.9350	1.2%	0.0089	0.0051	0.0037	0.0074	0.0016	0.4%	0.0065
%RSD		0.8953	2.8020	10.8100	32.0500	4.7770	27.0600	872.5000	1.2	2432.0000	63.9900	42.4800	260.9000	8.6090	0.4	12.2800

Run	Time	107Ag	108Cd	111Cd	115In	118Sn	121Sb	137Ba	159Tb	165Ho	205Tl	208Pb	209Bi
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:55:18	0.7366	0.0374	0.9336	101.3%	-0.0076	1.9650	9.5550	102.3%	101.5%	0.9419	1.0060	102.1%
2	17:55:35	0.7559	0.0272	0.8419	106.8%	-0.0051	1.8230	9.7000	104.6%	104.9%	0.9759	0.9501	103.5%
3	17:55:51	0.7864	0.0440	0.9414	105.3%	-0.0142	1.9520	9.9560	103.1%	103.1%	0.9911	0.9639	103.4%
x		0.7596	0.0362	0.9056	104.5%	-0.0089	1.9130	9.7370	103.4%	103.2%	0.9696	0.9733	103.0%
σ		0.0251	0.0084	0.0553	2.8%	0.0047	0.0783	0.2031	1.2%	1.7%	0.0252	0.0290	0.7%
%RSD		3.3020	23.3200	6.1110	2.7	52.3600	4.0890	2.0850	1.1	1.6	2.5990	2.9790	0.7

SEQ-CAL5@S05 12/30/2015 17:59:24
User Pre-dilution: 1.000

Run	Time	6Li	9Be	25Mg	27Al	39K	44Ca	45Sc	47Ti	51V	52Cr	53Cl O	54Fe	55Mn	59Co	60Ni
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:59:24	102.1%	10.2300	249.8000	260.3000	247.3000	247.1000	103.5%	0.2495	9.8980	9.8710	31.6100	241.3000	9.8110	9.8820	10.6300
2	17:59:40	101.0%	11.3300	257.1000	269.7000	251.0000	248.0000	103.6%	0.0307	9.5460	9.7950	187.5000	254.9000	9.6970	9.7720	10.1700
3	17:59:57	101.7%	10.4500	259.4000	271.5000	249.1000	250.9000	102.6%	-0.0534	9.3160	9.4420	123.5000	260.9000	9.1610	10.1300	10.9000
x		101.6%	10.6700	255.4000	267.1000	249.1000	248.7000	103.2%	0.0756	9.5870	9.7030	114.2000	252.4000	9.5560	9.9270	10.5700
σ		0.6%	0.5844	5.0050	6.0180	1.6380	2.0020	0.6%	0.1564	0.2932	0.2290	78.3800	10.0500	0.3470	0.1811	0.3669
%RSD		0.5	5.4760	1.9600	2.2530	0.7378	0.8050	0.5	206.8000	3.0580	2.3600	68.6200	3.9850	3.6310	1.8240	3.4730

Run	Time	65Cu	66Zn	75As	77Se	78Se	82Se	83Kr	89Y	94Mo	95Mo	96Mo	97Mo	98Mo	103Rh	106Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:59:24	10.1700	10.0600	9.2080	0.9141	11.2800	1.2640	0.2147	104.1%	2.8880	4.9270	5.4240	2.9130	7.4280	103.3%	0.5149
2	17:59:40	10.2400	9.6210	9.8570	1.2290	9.9920	0.8313	3.2330	103.2%	3.1190	5.2340	5.6350	3.0030	7.8330	102.0%	0.4970
3	17:59:57	10.6600	10.1900	9.1080	0.9245	9.7720	1.1880	-0.1267	102.5%	2.9420	5.3270	5.3020	3.0900	7.9510	107.5%	0.5985
x		10.3500	9.9590	9.3910	1.0230	10.3500	1.0950	1.1070	103.2%	2.9830	5.1630	5.4540	3.0020	7.7370	104.3%	0.5368
σ		0.2630	0.2990	0.4067	0.1792	0.8137	0.2311	1.8490	0.8%	0.1209	0.2091	0.1681	0.0884	0.2744	2.9%	0.0542
%RSD		2.5390	3.0030	4.3310	17.5200	7.8640	21.1200	167.0000	0.8	4.0520	4.0510	3.0820	2.9430	3.5470	2.8	10.0900

Run	Time	107Ag	108Cd	111Cd	115In	118Sn	121Sb	137Ba	159Tb	165Ho	205Tl	208Pb	209Bi
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:59:24	1.3180	0.2993	10.0000	102.8%	6.2200	9.5040	10.0100	100.9%	102.1%	9.9470	9.7090	101.5%
2	17:59:40	1.2880	0.3435	10.0100	103.5%	6.4810	10.1200	9.9770	102.7%	103.6%	10.1100	10.0400	102.5%
3	17:59:57	1.3940	0.3639	10.0600	105.4%	6.3760	9.6930	10.0400	104.9%	104.6%	9.9680	10.1000	103.3%
x		1.3330	0.3356	10.0200	103.9%	6.3590	9.7740	10.0100	102.8%	103.4%	10.0100	9.9510	102.4%
σ		0.0546	0.0331	0.0311	1.3%	0.1315	0.3181	0.0328	2.0%	1.2%	0.0898	0.2109	0.9%
%RSD		4.0980	9.8480	0.3099	1.3	2.0690	3.2550	0.3280	1.9	1.2	0.8970	2.1190	0.9

SEQ-CAL6@S06 12/30/2015 18:03:29
User Pre-dilution: 1.000

Run	Time	6Li	9Be	25Mg	27Al	39K	44Ca	45Sc	47Ti	51V	52Cr	53Cl O	54Fe	55Mn	59Co	60Ni
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:03:29	100.0%	49.7600	1240.0000	1340.0000	±1240.0000	1222.0000	103.6%	0.2197	48.0000	49.2000	281.0000	1232.0000	48.4600	48.4800	50.2300
2	18:03:46	100.6%	51.0800	1272.0000	1364.0000	±1236.0000	1254.0000	103.0%	0.1193	47.4900	48.8400	534.3000	1262.0000	48.4700	50.4900	51.3400
3	18:04:02	102.7%	50.8500	1248.0000	1378.0000	±1191.0000	1246.0000	102.8%	0.0203	49.2400	49.6700	368.8000	1248.0000	49.7600	48.4400	51.4300
x		101.1%	50.5600	1253.0000	1361.0000	±1222.0000	1241.0000	103.1%	0.1198	48.2400	49.2400	394.7000	1247.0000	48.9000	49.1400	51.0000
σ		1.4%	0.7088	16.6200	19.1700	±26.9000	16.9000	0.4%	0.0997	0.8992	0.4161	128.7000	15.0700	0.7487	1.1740	0.6693
%RSD		1.4	1.4020	1.3260	1.4090	±2.2010	1.3620	0.4	83.2300	1.8640	0.8450	32.6000	1.2080	1.5310	2.3900	1.3120

Run	Time	65Cu	66Zn	75As	77Se	78Se	82Se	83Kr	89Y	94Mo	95Mo	96Mo	97Mo	98Mo	103Rh	106Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:03:29	50.2500	49.7700	50.2500	4.8960	49.9300	6.4070	0.3713	100.6%	14.4900	25.9300	27.4700	15.5700	38.7800	101.4%	2.2020
2	18:03:46	52.9200	51.9500	50.0000	3.9140	47.2500	5.7560	0.3366	99.7%	15.2500	26.8000	28.6900	16.0800	40.3500	101.8%	2.5330
3	18:04:02	50.8800	50.8300	50.6500	2.8270	49.4700	6.0330	1.1540	104.8%	14.9000	26.3100	27.9500	15.5000	39.6600	100.9%	2.2330
x		51.3500	50.8500	50.3000	3.8790	48.8800	6.0650	0.6205	101.7%	14.8800	26.3500	28.0400	15.7200	39.6000	101.4%	2.3230
σ		1.3980	1.0920	0.3257	1.0350	1.4330	0.3266	0.4622	2.7%	0.3814	0.4339	0.6153	0.3205	0.7871	0.5%	0.1828
%RSD		2.7220	2.1470	0.6475	26.6700	2.9320	5.3850	74.4800	2.7	2.5630	1.6470	2.1950	2.0390	1.9880	0.5	7.8710

Run	Time	107Ag	108Cd	111Cd	115In	118Sn	121Sb	137Ba	159Tb	165Ho	205Tl	208Pb	209Bi
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:03:29	6.4530	1.6190	49.4400	101.8%	31.2400	48.7500	49.1600	101.2%	101.5%	50.8100	49.3200	101.4%
2	18:03:46	6.8500	1.7040	49.5600	103.8%	31.2100	48.4700	49.4400	104.3%	103.8%	50.9600	49.6200	103.5%
3	18:04:02	6.8290	1.7000	50.2500	103.1%	32.4000	50.4800	48.9700	105.1%	106.6%	50.2200	49.1800	106.0%
x		6.7110	1.6740	49.7500	102.9%	31.6200	49.2300	49.1900	103.5%	104.0%	50.6700	49.3700	103.6%
σ		0.2232	0.0480	0.4357	1.0%	0.6785	1.0920	0.2328	2.1%	2.6%	0.3946	0.2230	2.3%
%RSD		3.3260	2.8690	0.8758	1.0	2.1460	2.2170	0.4733	2.0	2.5	0.7789	0.4516	2.2

SEQ-CAL7@S07 12/30/2015 18:07:34

User Pre-dilution: 1.000

Run	Time	6Li	9Be	25Mg	27Al	39K	44Ca	45Sc	47Ti	51V	52Cr	53Cl O	54Fe	55Mn	59Co	60Ni
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:07:34	97.7%	490.8000	r 12500.0000	r 12850.0000	r 12290.0000	12750.0000	97.7%	0.1868	481.5000	487.5000	3568.0000	12840.0000	491.6000	488.3000	499.4000
2	18:07:50	99.6%	479.0000	r 12660.0000	r 13000.0000	r 12380.0000	12960.0000	94.9%	0.0563	491.4000	491.4000	3444.0000	13400.0000	494.1000	505.2000	502.6000
3	18:08:07	98.4%	497.2000	r 12310.0000	r 12840.0000	r 11810.0000	12440.0000	100.8%	-0.0875	503.0000	510.1000	3960.0000	13030.0000	513.3000	488.8000	497.4000
x		98.6%	489.0000	r 12490.0000	r 12900.0000	r 12160.0000	12720.0000	97.8%	0.0519	492.0000	496.4000	3657.0000	13090.0000	499.7000	494.1000	499.8000
σ		0.9%	9.2570	r 172.4000	r 88.5200	r 308.4000	262.8000	2.9%	0.1372	10.7600	12.0800	268.9000	284.1000	11.8400	9.6360	2.6310
%RSD		1.0	1.8930	r 1.3800	r 0.6865	r 2.5360	2.0670	3.0	264.4000	2.1860	2.4340	7.3520	2.1700	2.3700	1.9500	0.5263

Run	Time	65Cu	66Zn	75As	77Se	78Se	82Se	83Kr	89Y	94Mo	95Mo	96Mo	97Mo	98Mo	103Rh	106Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:07:34	493.9000	486.2000	490.3000	37.2600	494.6000	50.1300	8.4580	98.8%	145.1000	253.8000	271.9000	153.0000	384.8000	96.8%	21.9900
2	18:07:50	509.0000	506.4000	496.5000	40.0600	504.1000	53.0200	6.9160	97.7%	150.0000	269.1000	282.9000	156.3000	401.9000	96.8%	22.8000
3	18:08:07	497.9000	496.7000	514.1000	41.2900	524.5000	53.5900	-1.3060	97.5%	152.3000	272.5000	285.3000	160.2000	410.1000	94.1%	23.0800
x		500.3000	496.4000	500.3000	39.5400	507.7000	52.2500	4.6890	98.0%	149.2000	265.1000	280.0000	156.5000	398.9000	95.9%	22.6200
σ		7.8500	10.0800	12.3200	2.0670	15.2900	1.8540	5.2490	0.7%	3.6660	9.9450	7.1570	3.5910	12.9300	1.6%	0.5653
%RSD		1.5690	2.0300	2.4620	5.2270	3.0110	3.5480	111.9000	0.7	2.4580	3.7510	2.5560	2.2940	3.2410	1.6	2.4990

Run	Time	107Ag	108Cd	111Cd	115In	118Sn	121Sb	137Ba	159Tb	165Ho	205Tl	208Pb	209Bi
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:07:34	64.5700	16.1100	485.6000	97.0%	311.2000	493.9000	501.8000	98.2%	100.7%	r 498.9000	522.9000	95.4%
2	18:07:50	65.9900	16.7400	497.6000	98.4%	323.9000	511.6000	505.0000	100.8%	101.9%	r 500.2000	529.8000	96.6%
3	18:08:07	67.5600	16.7300	499.4000	98.6%	324.4000	514.8000	504.1000	104.9%	100.8%	r 485.0000	523.8000	99.9%
x		66.0400	16.5300	494.2000	98.0%	319.8000	506.8000	503.6000	101.3%	101.1%	r 494.7000	525.5000	97.3%
σ		1.4930	0.3636	7.4890	0.9%	7.5050	11.2600	1.6370	3.4%	0.7%	r 8.4140	3.7030	2.3%
%RSD		2.2610	2.2000	1.5150	0.9	2.3470	2.2210	0.3250	3.3	0.6	r 1.7010	0.7046	2.4

SEQ-CAL8@S08 12/30/2015 18:11:38

User Pre-dilution: 1.000

Run	Time	6Li	9Be	25Mg	27Al	39K	44Ca	45Sc	47Ti	51V	52Cr	53Cl O	54Fe	55Mn	59Co	60Ni
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:11:38	99.8%	932.7000	r 24370.0000	r 25290.0000	r 24800.0000	25720.0000	93.6%	0.1927	999.9000	n 1001.0000	6992.0000	r 25550.0000	1005.0000	n 1018.0000	996.8000
2	18:11:54	97.0%	990.7000	r 23860.0000	r 25850.0000	r 23560.0000	25020.0000	97.1%	0.1526	n 1001.0000	n 1006.0000	7407.0000	r 24950.0000	1018.0000	995.1000	978.0000
3	18:12:11	95.8%	n 1000.0000	r 24870.0000	r 25550.0000	r 23940.0000	25470.0000	96.9%	-0.1034	999.6000	n 1002.0000	8683.0000	r 24970.0000	1037.0000	n 1001.0000	972.5000
x		97.5%	n 974.5000	r 24370.0000	r 25570.0000	r 24100.0000	25400.0000	95.9%	0.0806	n 1000.0000	n 1003.0000	7694.0000	r 25160.0000	1020.0000	n 1005.0000	982.4000
σ		2.1%	n 36.5500	r 506.8000	r 278.7000	r 632.1000	355.4000	1.9%	0.1606	n 0.7428	n 2.7930	881.1000	r 339.0000	16.3600	n 12.0500	12.7200
%RSD		2.1	n 3.7510	r 2.0800	r 1.0900	r 2.6230	1.3990	2.0	199.3000	n 0.0743	n 0.2783	11.4500	r 1.3470	1.6040	n 1.2000	1.2950

Run	Time	65Cu	66Zn	75As	77Se	78Se	82Se	83Kr	89Y	94Mo	95Mo	96Mo	97Mo	98Mo	103Rh	106Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:11:38	995.2000	976.2000	995.8000	80.1800	978.4000	105.3000	12.3700	94.4%	296.4000	521.4000	555.1000	314.5000	811.4000	92.8%	44.6600
2	18:11:54	960.9000	939.4000	n 1003.0000	79.0600	992.3000	101.8000	10.6900	97.8%	291.5000	527.8000	553.2000	310.6000	802.9000	93.2%	44.4700
3	18:12:11	976.7000	948.5000	997.6000	81.6200	n 1010.0000	105.1000	15.4200	96.5%	304.7000	542.5000	569.7000	320.7000	814.0000	93.4%	45.3400
x		977.6000	954.7000	n 998.7000	80.2900	n 993.7000	104.0000	12.8300	96.2%	297.5000	530.6000	559.3000	315.3000	809.4000	93.1%	44.8300
σ		17.1700	19.1700	n 3.6500	1.2830	n 16.0100	1.9730	2.3970	1.8%	6.6740	10.8100	8.9960	5.1070	5.8270	0.3%	0.4563
%RSD		1.7570	2.0080	n 0.3655	1.5980	n 1.6110	1.8960	18.6900	1.8	2.2430	2.0370	1.6080	1.6200	0.7199	0.3	1.0180

Run	Time	107Ag	108Cd	111Cd	115In	118Sn	121Sb	137Ba	159Tb	165Ho	205Tl	208Pb	209Bi
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:11:38	127.4000	33.2600	972.1000	92.7%	642.9000	n 1011.0000	1003.0000	96.6%	98.9%	r 976.3000	r 994.2000	92.9%
2	18:11:54	126.3000	32.8000	976.6000	94.5%	654.4000	n 1021.0000	1000.0000	98.7%	98.5%	r 993.2000	TM 1001.0000	94.6%
3	18:12:11	n 130.3000	33.8200	999.9000	92.5%	667.1000	n 1051.0000	1014.0000	99.1%	99.1%	r 967.0000	r 996.1000	96.3%
x		n 128.0000	33.2900	982.9000	93.2%	654.8000	n 1028.0000	1006.0000	98.1%	98.8%	r 978.8000	TM 997.0000	94.6%
σ		n 2.0370	0.5096	14.9300	1.1%	12.0800	n 20.9800	7.3950	1.3%	0.3%	r 13.3000	TM 3.3990	1.7%
%RSD		n 1.5920	1.5310	1.5190	1.2	1.8450	n 2.0420	0.7351	1.4	0.3	r 1.3590	TM 0.3409	1.8

SEQ-CAL9@S09 12/30/2015 18:15:41

User Pre-dilution: 1.000

Run	Time	6Li	9Be	25Mg	27Al	39K	44Ca	45Sc	47Ti	51V	52Cr	53Cl O	54Fe	55Mn	59Co	60Ni
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:15:41	104.3%	0.1166	5.2370	2.5680	7.0940	8.4440	101.1%	0.2035	0.2026	0.2038	-89.2000	4.9320	TM 5099.0000	0.1208	0.1507
2	18:15:58	105.1%	0.0776	4.4570	3.2310	7.3160	11.0000	101.5%	0.0697	0.1844	0.2011	-85.7300	4.2820	TM 5057.0000	0.1157	0.1230
3	18:16:14	104.6%	0.0401	6.3020	3.6140	6.8590	8.1250	100.2%	0.0010	0.2988	0.1605	-87.0100	5.5700	TM 5280.0000	0.1902	0.1907
x		104.7%	0.0781	5.3320	3.1380	7.0900	9.1880	100.9%	0.0914	0.2286	0.1885	-87.3100	4.9280	TM 5149.0000	0.1422	0.1548
σ		0.4%	0.0382	0.9261	0.5291	0.2283	1.5730	0.7%	0.1030	0.0615	0.0243	1.7560	0.6440	TM 114.6000	0.0416	0.0340
%RSD		0.4	48.9700	17.3700	16.8600	3.2200	17.1300	0.7	112.7000	26.8900	12.8800	2.0120	13.0700	TM 2.2260	29.2400	21.9800

Run	Time	65Cu	66Zn	75As	77Se	78Se	82Se	83Kr	89Y	94Mo	95Mo	96Mo	97Mo	98Mo	103Rh	106Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:15:41	1.3310	n 5078.0000	0.3382	0.0727	0.0418	-0.6012	12.3700	100.8%	0.0308	0.0713	0.1098	0.0563	0.1388	96.4%	0.0046
2	18:15:58	1.5930	n 5265.0000	0.1867	0.0186	0.1069	-0.3626	6.8160	99.0%	0.0797	0.1023	0.1304	0.0694	0.1247	97.5%	0.0131
3	18:16:14	1.3320	n 5360.0000	0.2092	0.0199	0.4646	-0.5220	10.3100	100.6%	0.0682	0.1109	0.1222	0.0622	0.1633	95.1%	0.0436
x		1.4180	n 5234.0000	0.2447	0.0371	0.2044	-0.4953	9.8330	100.1%	0.0596	0.0948	0.1208	0.0626	0.1422	96.3%	0.0205
σ		0.1509	n 143.5000	0.0817	0.0308	0.2276	0.1215	2.8080	1.0%	0.0256	0.0208	0.0103	0.0066	0.0195	1.2%	0.0205
%RSD		10.6400	n 2.7420	33.4000	83.2100	111.4000	24.5300	28.5500	1.0	42.9400	21.9800	8.5560	10.5100	13.7300	1.2	100.3000

Run	Time	107Ag	108Cd	111Cd	115In	118Sn	121Sb	137Ba	159Tb	165Ho	205Tl	208Pb	209Bi
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:15:41	0.0204	0.0086	0.1075	98.8%	0.0997	0.2097	r 4894.0000	100.1%	99.8%	0.2364	0.1273	98.9%
2	18:15:58	0.0263	0.0083	0.1545	101.3%	0.1083	0.2357	r 4877.0000	101.8%	101.4%	0.2308	0.1207	101.1%
3	18:16:14	0.0241	0.0166	0.1788	101.3%	0.1321	0.2793	r 4985.0000	100.6%	99.2%	0.2420	0.1308	101.1%
x		0.0236	0.0112	0.1469	100.5%	0.1134	0.2416	r 4919.0000	100.8%	100.2%	0.2364	0.1263	100.3%
σ		0.0030	0.0047	0.0363	1.5%	0.0168	0.0352	r 58.0000	0.9%	1.1%	0.0056	0.0051	1.3%
%RSD		12.6300	42.1500	24.6700	1.4	14.7900	14.5500	r 1.1790	0.9	1.1	2.3830	4.0470	1.3

SEQ-CALA@S10 12/30/2015 18:19:45

User Pre-dilution: 1.000

Run	Time	6Li	9Be	25Mg	27Al	39K	44Ca	45Sc	47Ti	51V	52Cr	53Cl O	54Fe	55Mn	59Co	60Ni
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:19:45	95.9%	0.0469	τ 117400.0000	τ 116000.0000	τ 120900.0000	τ 122500.0000	93.4%	0.1132	0.0780	0.7487	-71.9800	τ 120100.0000	-0.3857	0.4474	2.2330
2	18:20:01	94.4%	0.1114	τ 123800.0000	τ 123400.0000	TM 125300.0000	TM 129700.0000	92.3%	0.1482	0.0319	0.6496	-74.8700	τ 123400.0000	-0.4700	0.4396	2.3180
3	18:20:17	94.5%	0.0270	τ 124600.0000	TM 125600.0000	TM 125700.0000	TM 129400.0000	93.8%	-0.1828	0.1883	0.6969	-102.6000	τ 122500.0000	-0.5206	0.4329	2.1680
x		94.9%	0.0617	τ 121900.0000	TM 121700.0000	TM 124000.0000	TM 127200.0000	93.2%	0.0262	0.0994	0.6984	-83.1500	τ 122000.0000	-0.4588	0.4400	2.2400
σ		0.8%	0.0441	τ 3935.0000	TM 5031.0000	TM 2707.0000	TM 4060.0000	0.8%	0.1819	0.0803	0.0495	16.9200	τ 1689.0000	0.0682	0.0072	0.0749
%RSD		0.9	71.4900	τ 3.2280	TM 4.1350	TM 2.1830	TM 3.1930	0.8	695.0000	80.8200	7.0940	20.3400	τ 1.3840	14.8500	1.6470	3.3430

Run	Time	65Cu	66Zn	75As	77Se	78Se	82Se	83Kr	89Y	94Mo	95Mo	96Mo	97Mo	98Mo	103Rh	106Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:19:45	1.0770	1.4540	0.3227	0.0313	0.2730	-3.8490	63.2700	90.6%	0.0704	0.1297	0.1570	0.0536	0.1651	78.6%	0.0142
2	18:20:01	0.9480	1.1270	0.2086	-0.0343	0.3290	-4.1850	68.8000	88.9%	0.0985	0.1539	0.2065	0.0792	0.1791	82.6%	0.0290
3	18:20:17	1.1130	1.2720	0.3053	-0.0343	0.0879	-4.2910	73.3200	92.3%	0.0727	0.1235	0.1684	0.0665	0.1710	82.6%	0.0135
x		1.0460	1.2840	0.2789	-0.0124	0.2300	-4.1080	68.4700	90.6%	0.0808	0.1357	0.1773	0.0664	0.1717	81.3%	0.0189
σ		0.0869	0.1639	0.0615	0.0379	0.1262	0.2311	5.0320	1.7%	0.0156	0.0160	0.0259	0.0128	0.0071	2.3%	0.0088
%RSD		8.3020	12.7600	22.0400	304.3000	54.8700	5.6250	7.3500	1.9	19.3800	11.8100	14.6000	19.3300	4.1130	2.8	46.5100

Run	Time	107Ag	108Cd	111Cd	115In	118Sn	121Sb	137Ba	159Tb	165Ho	205Tl	208Pb	209Bi
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:19:45	0.0165	0.0258	0.0384	87.1%	0.0282	0.5240	0.7200	87.9%	88.1%	0.0957	0.1898	79.1%
2	18:20:01	0.0211	0.0160	0.0660	88.5%	0.0722	0.4811	0.7925	90.3%	88.9%	0.0995	0.1849	81.2%
3	18:20:17	0.0324	-0.0032	0.0657	88.3%	0.0319	0.4671	0.9674	89.5%	90.1%	0.0948	0.2069	80.1%
x		0.0234	0.0128	0.0567	88.0%	0.0441	0.4907	0.8266	89.3%	89.0%	0.0967	0.1939	80.1%
σ		0.0082	0.0148	0.0158	0.7%	0.0244	0.0297	0.1272	1.2%	1.0%	0.0025	0.0116	1.0%
%RSD		35.0600	115.1000	27.9300	0.8	55.4000	6.0460	15.3900	1.4	1.1	2.5760	5.9560	1.3

SEQ-ICV@ICV01 12/30/2015 18:27:52 QC Status: PASS (Initial: FAIL)

User Pre-dilution: 1.000

Run	Time	6Li	9Be	25Mg	27Al	39K	44Ca	45Sc	47Ti	51V	52Cr	53Cl O	54Fe	55Mn	59Co	60Ni
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:28:09	114.4%	96.2900	1240.0000	523.9000	τ 2074.0000	2092.0000	103.8%	0.1352	101.9000	99.3400	898.9000	1055.0000	105.3000	100.4000	107.2000
2	18:28:25	112.2%	98.1700	1262.0000	534.5000	τ 2032.0000	2084.0000	103.0%	-0.0709	105.6000	104.1000	685.3000	1071.0000	108.9000	102.9000	107.6000
3	18:28:41	114.1%	95.4400	1218.0000	536.1000	τ 2097.0000	2086.0000	102.3%	-0.0054	101.9000	100.7000	1027.0000	1064.0000	103.7000	103.2000	108.7000
x		113.6%	97.609%	102.063%	105.454%	τ 103.198%	104.106%	103.0%	0.0196	103.112%	103.467%	870.4000	1063.0000	105.995%	103.195%	110.021%
σ		1.2%	n/a	n/a	n/a	τ n/a	n/a	0.7%	0.1053	n/a	n/a	172.6000	7.5870	n/a	n/a	n/a
%RSD		1.0	1.4460	1.8000	1.2460	τ 1.5910	0.2004	0.7	536.4000	2.0740	2.4360	19.8300	0.7136	2.5220	1.4690	0.7316

Run	Time	65Cu	66Zn	75As	77Se	78Se	82Se	83Kr	89Y	94Mo	95Mo	96Mo	97Mo	98Mo	103Rh	106Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:28:09	105.4000	208.5000	217.0000	17.7700	221.0000	22.3600	2.0830	101.7%	0.0101	-0.0023	0.0118	-0.0075	0.0008	99.0%	4.5320
2	18:28:25	109.2000	211.5000	217.7000	16.5000	223.0000	20.9000	5.3680	100.0%	-0.0034	0.0045	0.0153	0.0085	-0.0053	96.9%	4.6070
3	18:28:41	109.6000	208.4000	219.4000	16.7300	221.5000	23.6300	1.3060	101.0%	0.0067	-0.0023	0.0313	-0.0011	-0.0235	99.3%	4.9710
x		110.251%	104.730%	109.572%	17.0000	110.372%	22.3000	2.9190	100.9%	0.0044	-0.0001	0.0195	-0.0000	-0.0093	98.4%	4.7040
σ		n/a	n/a	n/a	0.6755	n/a	1.3630	2.1560	0.9%	0.0070	0.0039	0.0104	0.0081	0.0126	1.3%	0.2347
%RSD		2.1060	0.8476	0.5658	3.9730	0.4497	6.1150	73.8500	0.8	158.0000	7595.0000	53.3300	32260.0000	135.0000	1.3	4.9910

Run	Time	107Ag	108Cd	111Cd	115In	118Sn	121Sb	137Ba	159Tb	165Ho	205Tl	208Pb	209Bi
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:28:09	105.5000	3.2460	97.6300	98.3%	0.0013	195.2000	102.1000	95.8%	97.8%	214.1000	204.7000	94.7%
2	18:28:25	106.3000	3.3810	99.9300	99.5%	0.0069	198.6000	101.8000	98.2%	96.1%	212.0000	200.3000	97.4%
3	18:28:41	104.3000	3.3420	99.8300	100.5%	-0.0014	196.9000	102.1000	98.5%	98.5%	209.0000	199.9000	98.6%
x		106.397%	3.3230	100.133%	99.4%	0.0022	99.438%	101.977%	97.5%	97.4%	103.281%	100.821%	96.9%
σ		n/a	0.0695	n/a	1.1%	0.0042	n/a	n/a	1.5%	1.2%	n/a	n/a	2.0%
%RSD		0.9597	2.0920	1.3160	1.1	189.6000	0.8725	0.1782	1.5	1.3	1.2100	1.3230	2.0

SEQ-ICB@ICB01 12/30/2015 18:32:16 QC Status: PASS (Initial: PASS)

User Pre-dilution: 1.000

Run	Time	6Li	9Be	25Mg	27Al	39K	44Ca	45Sc	47Ti	51V	52Cr	53Cl O	54Fe	55Mn	59Co	60Ni
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:32:16	105.7%	0.0017	0.2065	-1.1170	8.8980	-1.4740	97.6%	0.2206	-0.0713	0.0432	-4.6900	1.7400	0.0225	-0.0029	0.0329
2	18:32:33	102.3%	-0.0167	0.0816	-0.8665	9.0260	-0.2672	99.7%	0.0539	0.0377	0.0709	-25.1700	2.2670	0.0220	0.0026	-0.0565
3	18:32:49	101.9%	-0.0167	0.6152	-0.8574	8.7210	0.9445	99.6%	0.0625	-0.0937	0.0916	7.2770	2.5930	0.0363	-0.0069	-0.0664
x		103.3%	-0.0106	0.3011	-0.9470	8.8820	-0.2656	98.9%	0.1123	-0.0424	0.0686	-7.5280	2.2000	0.0269	-0.0024	-0.0300
σ		2.1%	0.0106	0.2791	0.1473	0.1529	1.2090	1.2%	0.0939	0.0703	0.0243	16.4100	0.4303	0.0081	0.0048	0.0547
%RSD		2.0	100.2000	92.6900	15.5600	1.7210	455.3000	1.2	83.5800	165.8000	35.4100	218.0000	19.5600	30.2000	195.0000	182.3000

Run	Time	65Cu	66Zn	75As	77Se	78Se	82Se	83Kr	89Y	94Mo	95Mo	96Mo	97Mo	98Mo	103Rh	106Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:32:16	0.0978	-0.0282	0.0728	-0.0343	0.0403	0.2336	-2.2800	96.0%	-0.0030	-0.0123	0.0028	-0.0006	-0.0072	96.9%	0.0158
2	18:32:33	0.0241	0.0441	-0.0080	-0.0343	0.1955	0.0320	0.3861	93.9%	0.0009	0.0055	-0.0074	0.0131	-0.0130	92.8%	-0.0029
3	18:32:49	0.0564	-0.0080	0.0406	-0.0343	0.1807	0.2777	-3.7740	94.3%	0.0117	-0.0017	0.0064	0.0062	0.0115	96.1%	0.0202
x		0.0594	0.0026	0.0351	-0.0343	0.1388	0.1811	-1.8890	94.7%	0.0032	-0.0028	0.0006	0.0062	-0.0029	95.3%	0.0111
σ		0.0370	0.0373	0.0407	0.0000	0.0857	0.1310	2.1070	1.1%	0.0076	0.0090	0.0072	0.0068	0.0128	2.2%	0.0123
%RSD		62.2200	1410.0000	115.8000	0.0000	61.7000	72.3200	111.5000	1.2	237.4000	319.0000	1267.0000	109.9000	440.3000	2.3	110.8000

Run	Time	107Ag	108Cd	111Cd	115In	118Sn	121Sb	137Ba	159Tb	165Ho	205Tl	208Pb	209Bi
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:32:16	0.0195	0.0052	0.0259	94.0%	0.0048	0.0991	0.0213	93.2%	92.2%	0.0118	-0.0149	93.9%
2	18:32:33	0.0217	-0.0127	-0.0006	94.7%	-0.0039	0.0719	0.0060	95.9%	94.8%	0.0152	-0.0186	95.5%
3	18:32:49	0.0389	-0.0127	0.0079	95.8%	0.0042	0.1025	0.0415	93.2%	94.2%	0.0181	-0.0210	95.4%
x		0.0267	-0.0068	0.0111	94.8%	0.0017	0.0912	0.0229	94.1%	93.7%	0.0151	-0.0182	94.9%
σ		0.0106	0.0104	0.0135	0.9%	0.0049	0.0168	0.0178	1.5%	1.4%	0.0031	0.0031	0.9%
%RSD		39.8100	153.3000	122.4000	0.9	282.6000	18.4100	77.7200	1.6	1.4	20.8600	16.9300	0.9

SEQ-IFA@ICSA01 12/30/2015 18:36:23 QC Status: PASS (Initial: PASS)

User Pre-dilution: 1.000

Run	Time	6Li	9Be	25Mg	27Al	39K	44Ca	45Sc	47Ti	51V	52Cr	53Cl O	54Fe	55Mn	59Co	60Ni
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:36:23	89.8%	0.2959	r103000.0000	r99030.0000	r104600.0000	r105200.0000	89.5%	502.9000	-0.3800	21.0800	81.2500	r100100.0000	6.4580	1.2940	7.1730
2	18:36:39	94.3%	0.2591	r99280.0000	r95790.0000	r97950.0000	r101400.0000	93.5%	501.2000	-0.6981	21.7400	166.3000	r97340.0000	6.0950	1.3840	6.4960
3	18:36:55	88.5%	0.3894	r104100.0000	r102800.0000	r101100.0000	r107300.0000	91.4%	516.2000	-0.8498	21.4200	235.2000	r103300.0000	5.8610	1.2860	7.1350
x		90.9%	1.#IO%	r102100.0000	r99200.0000	r101200.0000	r104600.0000	91.5%	506.8000	-128.533%	101.976%	160.9000	r100300.0000	87.684%	132.136%	115.575%
σ		3.0%	n/a	r2512.0000	r3506.0000	r3316.0000	r3011.0000	2.0%	8.2240	n/a	n/a	77.1400	r2991.0000	n/a	n/a	n/a
%RSD		3.3	21.3300	r2.4600	r3.5340	r3.2760	r2.8780	2.1	1.6230	37.3000	1.5550	47.9400	r2.9840	4.9000	4.1080	5.4890

Run	Time	65Cu	66Zn	75As	77Se	78Se	82Se	83Kr	89Y	94Mo	95Mo	96Mo	97Mo	98Mo	103Rh	106Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:36:23	8.1850	11.2000	0.3710	-0.0343	0.1574	-2.5870	42.2700	88.9%	600.9000	1085.0000	1140.0000	635.6000	1647.0000	84.9%	-0.0010
2	18:36:39	8.9500	10.9800	0.5171	-0.0343	0.1679	-3.1540	51.7100	89.9%	613.4000	1106.0000	1179.0000	643.2000	1682.0000	82.7%	0.0040
3	18:36:55	8.2570	12.3700	0.3980	-0.0343	-0.0744	-3.2320	54.8100	90.6%	611.8000	1105.0000	1173.0000	649.6000	1706.0000	83.3%	0.0386
x		105.796%	104.694%	428.723%	-0.0343	27.883%	-2.9910	49.6000	89.8%	608.7000	1099.0000	1164.0000	642.8000	1678.0000	83.6%	0.0139
σ		n/a	n/a	n/a	0.0000	n/a	0.3522	6.5290	0.8%	6.8000	11.8300	20.8500	6.9870	29.4600	1.1%	0.0216
%RSD		4.9910	6.4720	18.1400	0.0000	163.7000	11.7700	13.1700	0.9	1.1170	1.0770	1.7910	1.0870	1.7560	1.4	155.4000

Run	Time	107Ag	108Cd	111Cd	115In	118Sn	121Sb	137Ba	159Tb	165Ho	205Tl	208Pb	209Bi
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:36:23	0.0118	1.2210	0.6066	88.4%	0.1084	1.0440	1.5660	88.8%	87.6%	0.0552	4.2620	83.3%
2	18:36:39	0.0188	1.1230	0.5820	87.8%	0.0956	1.1810	1.8390	90.4%	90.1%	0.0560	4.2180	87.3%
3	18:36:55	0.0163	1.3000	0.5621	88.5%	0.1078	1.1940	1.6020	93.7%	91.9%	0.0644	4.3860	88.1%
x		1.#IO%	1.2150	83.365%	88.3%	0.1039	75.967%	139.088%	91.0%	89.9%	1.#IO%	107.217%	86.2%
σ		n/a	0.0884	n/a	0.4%	0.0072	n/a	n/a	2.5%	2.2%	n/a	n/a	2.6%
%RSD		22.9200	7.2790	3.8220	0.4	6.9580	7.2730	8.8780	2.8	2.5	8.7170	2.0280	3.0

SEQ-IFB@ICSAB01 12/30/2015 18:40:27 QC Status: PASS (Initial: PASS)

User Pre-dilution: 1.000

Run	Time	6Li	9Be	25Mg	27Al	39K	44Ca	45Sc	47Ti	51V	52Cr	53Cl O	54Fe	55Mn	59Co	60Ni
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:40:27	90.9%	18.5200	r99950.0000	r97660.0000	r100800.0000	r101600.0000	92.5%	482.6000	21.5400	42.7700	115.2000	r96590.0000	27.8400	19.9200	25.0400
2	18:40:43	90.7%	18.4400	r102200.0000	r100000.0000	r102100.0000	r103900.0000	90.5%	502.4000	20.9200	42.7800	321.8000	r101000.0000	27.8000	20.2400	26.0700
3	18:40:59	87.3%	19.7800	r104100.0000	r100400.0000	r103100.0000	r107000.0000	89.7%	513.1000	22.1700	44.4100	248.4000	r101700.0000	28.3100	20.6100	25.3700
x		89.6%	99.555%	r102100.0000	r99370.0000	r102000.0000	r104200.0000	90.9%	499.3000	113.386%	108.301%	228.5000	r99760.0000	103.629%	101.293%	106.206%
σ		2.0%	n/a	r2071.0000	r1493.0000	r1174.0000	r2736.0000	1.5%	15.4800	n/a	n/a	104.8000	r2770.0000	n/a	n/a	n/a
%RSD		2.3	3.9710	r2.0290	r1.5020	r1.1510	r2.6270	1.6	3.1000	2.9020	2.1700	45.8500	r2.7760	1.0110	1.7140	2.0620

Run	Time	65Cu	66Zn	75As	77Se	78Se	82Se	83Kr	89Y	94Mo	95Mo	96Mo	97Mo	98Mo	103Rh	106Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:40:27	27.0000	28.5200	20.5200	1.3440	20.3500	-1.5150	45.6700	91.0%	593.1000	1064.0000	1121.0000	612.9000	1609.0000	82.3%	0.8255
2	18:40:43	27.4300	28.5000	20.6900	1.0270	20.5900	-1.8240	57.1300	90.2%	611.9000	1101.0000	1175.0000	645.3000	1666.0000	82.6%	0.8218
3	18:40:59	27.6000	29.3300	21.1000	1.2490	19.1900	-1.3270	52.5100	90.0%	613.5000	1103.0000	1170.0000	651.9000	1672.0000	80.4%	0.8391
x		109.360%	99.255%	109.320%	1.2060	105.493%	-1.5560	51.7700	90.4%	606.1000	1089.0000	1156.0000	636.7000	1649.0000	81.7%	0.8288
σ		n/a	n/a	n/a	0.1628	n/a	0.2511	5.7670	0.5%	11.3600	21.9500	29.8300	20.8600	35.0500	1.2%	0.0091
%RSD		1.1270	1.6520	1.4150	13.5000	3.7380	16.1400	11.1400	0.6	1.8730	2.0150	2.5810	3.2770	2.1260	1.5	1.0970

Run	Time	107Ag	108Cd	111Cd	115In	118Sn	121Sb	137Ba	159Tb	165Ho	205Tl	208Pb	209Bi
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:40:27	17.6400	1.6790	17.4100	87.4%	0.1144	19.9000	22.5900	89.0%	89.5%	20.2900	23.6000	86.1%
2	18:40:43	18.1100	1.6720	18.3000	90.0%	0.1082	20.4600	22.7900	90.2%	91.4%	20.7300	23.9400	88.8%
3	18:40:59	17.8300	1.7020	18.7500	91.3%	0.1301	20.4300	22.2400	92.5%	93.4%	20.5200	24.2800	90.3%
x		99.216%	1.6840	90.774%	89.5%	0.1176	92.118%	102.447%	90.6%	91.4%	97.687%	95.747%	88.4%
σ		n/a	0.0156	n/a	2.0%	0.0113	n/a	n/a	1.8%	2.0%	n/a	n/a	2.2%
%RSD		1.3270	0.9288	3.7420	2.2	9.5840	1.5450	1.2200	2.0	2.1	1.0730	1.4180	2.4

SEQ-CCV@CCV01 12/30/2015 18:44:33 QC Status: PASS (Initial: FAIL)

User Pre-dilution: 1.000

Run	Time	6Li	9Be	25Mg	27Al	39K	44Ca	45Sc	47Ti	51V	52Cr	53Cl O	54Fe	55Mn	59Co	60Ni
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:46:17	88.3%	487.4000	r61320.0000	r62220.0000	r61210.0000	r62820.0000	88.1%	0.0633	524.7000	518.8000	4140.0000	r61060.0000	2696.0000	495.4000	495.6000
2	18:46:33	86.8%	492.5000	r62060.0000	r62590.0000	r58340.0000	r60050.0000	91.7%	-0.2127	541.6000	534.1000	5061.0000	r59790.0000	2808.0000	485.2000	488.8000
3	18:46:49	89.2%	476.3000	r60120.0000	r59980.0000	r57840.0000	r59800.0000	92.8%	-0.2355	529.1000	520.5000	3424.0000	r58320.0000	2719.0000	483.0000	479.3000
x		88.1%	97.080%	r101.948%	r100.981%	r98.555%	r101.485%	90.9%	-0.1283	106.357%	104.893%	4208.0000	r99.542%	109.647%	97.575%	97.579%
σ		1.2%	n/a	r n/a	r n/a	r n/a	r n/a	2.5%	0.1663	n/a	n/a	820.7000	r n/a	n/a	n/a	n/a
%RSD		1.4	1.7140	r1.6010	r2.2910	r3.0720	r2.7560	2.7	129.7000	1.6530	1.6020	19.5000	r2.2960	2.1410	1.3580	1.6760

Run	Time	65Cu	66Zn	75As	77Se	78Se	82Se	83Kr	89Y	94Mo	95Mo	96Mo	97Mo	98Mo	103Rh	106Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:46:17	483.2000	2343.0000	500.7000	39.3300	498.6000	51.3800	34.1300	90.4%	153.5000	270.8000	287.4000	158.9000	414.3000	83.7%	21.6200
2	18:46:33	477.2000	2315.0000	533.7000	42.7000	531.8000	52.9300	32.6400	88.0%	153.9000	273.9000	292.5000	160.2000	416.3000	81.3%	22.1800
3	18:46:49	475.8000	2307.0000	518.2000	41.0000	502.0000	51.8300	33.8200	90.5%	151.6000	268.1000	285.1000	159.2000	406.4000	84.3%	21.4900
x		95.744%	92.869%	103.511%	41.0100	102.154%	52.0500	33.5300	89.6%	153.0000	270.9000	288.3000	159.4000	412.3000	83.1%	21.7600
σ		n/a	n/a	n/a	1.6880	n/a	0.7981	0.7851	1.4%	1.2270	2.9180	3.8000	0.6857	5.2120	1.6%	0.3682
%RSD		0.8224	0.8061	3.1900	4.1160	3.5760	1.5330	2.3420	1.6	0.8024	1.0770	1.3180	0.4301	1.2640	1.9	1.6920

Run	Time	107Ag	108Cd	111Cd	115In	118Sn	121Sb	137Ba	159Tb	165Ho	205Tl	208Pb	209Bi
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:46:17	62.0900	16.1700	477.8000	88.0%	329.1000	505.7000	2572.0000	94.4%	92.0%	r504.4000	531.5000	86.7%
2	18:46:33	62.9900	16.0400	478.5000	88.5%	323.5000	508.0000	2608.0000	91.9%	92.8%	r515.6000	542.6000	85.9%
3	18:46:49	61.2000	16.2300	472.3000	89.8%	322.2000	500.1000	r2556.0000	92.1%	93.7%	r500.8000	530.8000	87.9%
x		95.527%	16.1400	95.242%	88.8%	324.9000	100.917%	r103.158%	92.8%	92.8%	r101.385%	106.992%	86.8%
σ		n/a	0.0963	n/a	0.9%	3.6470	n/a	r n/a	1.4%	0.9%	r n/a	n/a	1.0%
%RSD		1.4400	0.5967	0.7190	1.0	1.1230	0.8094	r1.0330	1.5	0.9	r1.5200	1.2310	1.2

SEQ-CCB@CCB01 12/30/2015 18:50:23 QC Status: PASS (Initial: PASS)

User Pre-dilution: 1.000

Run	Time	6Li	9Be	25Mg	27Al	39K	44Ca	45Sc	47Ti	51V	52Cr	53Cl O	54Fe	55Mn	59Co	60Ni
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:50:23	100.7%	0.0234	3.2620	2.1650	38.8000	5.8560	93.6%	0.1203	-0.0143	0.0577	-17.7300	5.3150	0.1986	0.0166	0.0930
2	18:50:39	97.6%	0.0457	5.2700	3.7390	42.3300	4.9360	91.0%	0.0992	0.2021	0.0700	-67.6000	4.3180	0.1281	0.0292	0.0213
3	18:50:56	95.5%	-0.0362	6.7340	4.2490	40.1700	8.3040	92.8%	-0.0261	0.0046	0.0839	-28.1600	6.0600	0.0916	0.0222	0.0188
x		97.9%	0.0110	5.0890	3.3840	40.4300	6.3650	92.5%	0.0644	0.0641	0.0705	-37.8300	5.2310	0.1394	0.0227	0.0444
σ		2.6%	0.0423	1.7430	1.0860	1.7800	1.7410	1.3%	0.0792	0.1198	0.0131	26.3000	0.8744	0.0544	0.0063	0.0421
%RSD		2.7	386.2000	34.2600	32.1000	4.4010	27.3500	1.4	122.8000	186.9000	18.5900	69.5200	16.7200	39.0300	28.0000	94.9700

Run	Time	65Cu	66Zn	75As	77Se	78Se	82Se	83Kr	89Y	94Mo	95Mo	96Mo	97Mo	98Mo	103Rh	106Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:50:23	0.1598	0.1847	0.1005	0.0235	0.0637	-0.0353	-0.0960	89.4%	0.0399	0.0736	0.0546	0.0461	0.0583	89.3%	0.0228
2	18:50:39	0.0656	0.1307	0.1299	-0.0343	0.3402	0.1305	1.2120	91.8%	0.0537	0.0973	0.0996	0.0380	0.0646	92.6%	0.0173
3	18:50:56	0.1372	0.0481	-0.0074	-0.0343	-0.0881	0.0740	-0.2639	93.1%	0.0269	0.0563	0.0947	0.0409	0.0798	91.1%	-0.0023
x		0.1209	0.1212	0.0744	-0.0150	0.1053	0.0564	0.2840	91.4%	0.0402	0.0757	0.0830	0.0417	0.0676	91.0%	0.0126
σ		0.0492	0.0689	0.0723	0.0333	0.2171	0.0843	0.8079	1.9%	0.0134	0.0206	0.0247	0.0041	0.0111	1.6%	0.0132
%RSD		40.6900	56.8200	97.2000	221.6000	206.3000	149.4000	284.5000	2.1	33.2700	27.1900	29.7300	9.8710	16.3800	1.8	105.0000

Run	Time	107Ag	108Cd	111Cd	115In	118Sn	121Sb	137Ba	159Tb	165Ho	205Tl	208Pb	209Bi
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:50:23	0.0137	-0.0081	-0.0001	91.3%	0.0583	0.0289	0.1177	90.9%	90.0%	0.1881	0.0099	91.9%
2	18:50:39	0.0180	-0.0035	0.0088	91.8%	0.0295	0.0521	0.1301	92.4%	91.8%	0.1688	0.0160	93.1%
3	18:50:56	0.0088	-0.0036	0.0356	92.5%	0.0723	0.0487	0.1094	90.8%	93.2%	0.1673	-0.0049	93.8%
x		0.0135	-0.0050	0.0148	91.8%	0.0534	0.0432	0.1191	91.4%	91.7%	0.1747	0.0070	92.9%
σ		0.0046	0.0026	0.0186	0.6%	0.0218	0.0125	0.0104	0.9%	1.6%	0.0116	0.0107	0.9%
%RSD		34.0800	51.7200	125.8000	0.6	40.8300	28.9400	8.7170	1.0	1.7	6.6240	153.4000	1.0

SEQ-CCV@CCV02 12/30/2015 18:54:31 QC Status: PASS (Initial: PASS)

User Pre-dilution: 1.000

Run	Time	6Li	9Be	25Mg	27Al	39K	44Ca	45Sc	47Ti	51V	52Cr	53Cl O	54Fe	55Mn	59Co	60Ni
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:54:47	91.5%	470.1000	r58970.0000	r59610.0000	r59280.0000	r60660.0000	88.2%	-0.0518	523.9000	513.3000	4866.0000	r59650.0000	2685.0000	491.8000	481.5000
2	18:55:04	89.5%	486.0000	r59650.0000	r59480.0000	r58240.0000	r60820.0000	89.5%	0.0875	515.6000	510.2000	4384.0000	r59550.0000	2674.0000	488.9000	489.6000
3	18:55:20	92.5%	473.0000	r59490.0000	r60460.0000	r58580.0000	r61050.0000	87.3%	0.1426	513.2000	510.0000	4853.0000	r60570.0000	2677.0000	491.2000	496.4000
x		91.2%	95.277%	r98.956%	r98.112%	r97.839%	r101.402%	88.3%	0.0594	103.517%	102.237%	4701.0000	r99.875%	107.155%	98.124%	97.838%
σ		1.5%	n/a	rn/a	rn/a	rn/a	rn/a	1.1%	0.1002	n/a	n/a	275.1000	rn/a	n/a	n/a	n/a
%RSD		1.7	1.7810	r0.5981	r0.8879	r0.9019	r0.3188	1.2	168.5000	1.0800	0.3654	5.8520	r0.9380	0.2132	0.3185	1.5230

Run	Time	65Cu	66Zn	75As	77Se	78Se	82Se	83Kr	89Y	94Mo	95Mo	96Mo	97Mo	98Mo	103Rh	106Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:54:47	479.1000	2306.0000	508.6000	41.4700	497.4000	48.8900	23.9200	88.6%	149.3000	267.9000	279.1000	156.2000	397.1000	82.6%	21.3900
2	18:55:04	474.6000	2282.0000	508.9000	39.5100	498.7000	50.3700	16.1400	88.0%	151.1000	269.1000	285.4000	161.5000	412.0000	84.6%	22.1200
3	18:55:20	480.9000	2353.0000	510.7000	36.4800	504.5000	47.6000	32.0600	87.3%	153.5000	275.6000	285.3000	159.1000	410.4000	84.3%	22.0100
x		95.638%	92.543%	101.887%	39.1500	100.043%	48.9600	24.0400	88.0%	151.3000	270.9000	283.3000	158.9000	406.5000	83.8%	21.8400
σ		n/a	n/a	n/a	2.5170	n/a	1.3860	7.9640	0.6%	2.0930	4.1710	3.5980	2.6600	8.2120	1.1%	0.3912
%RSD		0.6792	1.5630	0.2250	6.4280	0.7552	2.8310	33.1300	0.7	1.3830	1.5400	1.2700	1.6740	2.0200	1.3	1.7910

Run	Time	107Ag	108Cd	111Cd	115In	118Sn	121Sb	137Ba	159Tb	165Ho	205Tl	208Pb	209Bi
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:54:47	63.6600	15.9500	472.8000	85.0%	320.7000	498.5000	2578.0000	89.5%	87.5%	r505.0000	531.1000	82.6%
2	18:55:04	63.2100	15.7100	472.0000	85.7%	327.5000	503.3000	2567.0000	90.0%	89.1%	r507.9000	526.5000	83.9%
3	18:55:20	62.0900	15.2400	478.1000	85.5%	327.7000	506.9000	r2547.0000	89.9%	88.2%	r492.0000	524.5000	86.4%
x		96.902%	15.6400	94.856%	85.4%	325.3000	100.580%	r102.560%	89.8%	88.3%	r100.328%	105.482%	84.3%
σ		n/a	0.3611	n/a	0.3%	3.9580	n/a	rn/a	0.3%	0.8%	rn/a	n/a	1.9%
%RSD		1.2760	2.3090	0.6987	0.4	1.2170	0.8451	r0.6059	0.3	0.9	r1.6900	0.6427	2.3

SEQ-CCB@CCB02 12/30/2015 18:58:54 QC Status: PASS (Initial: PASS)

User Pre-dilution: 1.000

Run	Time	6Li	9Be	25Mg	27Al	39K	44Ca	45Sc	47Ti	51V	52Cr	53Cl O	54Fe	55Mn	59Co	60Ni
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:58:54	94.7%	-0.0362	2.3950	0.8183	28.3500	0.0676	94.1%	0.1248	0.0355	0.0712	-19.1900	1.4580	0.1647	0.0065	-0.0530
2	18:59:11	98.7%	0.0245	3.1280	1.3080	27.3700	1.8370	92.2%	-0.0631	-0.1301	0.0580	32.4300	4.7420	0.0392	0.0269	0.0415
3	18:59:27	95.4%	0.0264	2.6730	1.7580	26.6700	-2.1440	93.5%	-0.0554	-0.0189	0.0406	-20.3400	3.9940	0.1311	0.0083	0.0505
x		96.3%	0.0049	2.7320	1.2950	27.4600	-0.0797	93.2%	0.0021	-0.0378	0.0566	-2.3660	3.3980	0.1117	0.0139	0.0130
σ		2.1%	0.0356	0.3700	0.4700	0.8428	1.9940	1.0%	0.1063	0.0844	0.0154	30.1400	1.7220	0.0650	0.0113	0.0573
%RSD		2.2	725.2000	13.5400	36.3000	3.0690	2502.0000	1.0	5060.0000	223.3000	27.1100	1274.0000	50.6600	58.1700	81.0400	440.8000

Run	Time	65Cu	66Zn	75As	77Se	78Se	82Se	83Kr	89Y	94Mo	95Mo	96Mo	97Mo	98Mo	103Rh	106Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:58:54	0.0047	-0.0224	0.0291	-0.0343	-0.0105	-0.1357	1.5720	88.6%	0.0249	0.0667	0.0440	0.0072	0.0419	89.2%	0.0327
2	18:59:11	0.0130	0.1844	0.1517	-0.0343	0.0601	0.2700	-2.6580	90.9%	0.0202	0.0392	0.0321	0.0313	0.0876	90.4%	0.0221
3	18:59:27	0.0714	0.1270	0.0100	-0.0343	-0.0159	0.2227	-1.9120	90.7%	0.0240	0.0429	0.0465	0.0383	0.0651	91.4%	0.0172
x		0.0297	0.0963	0.0636	-0.0343	0.0112	0.1190	-0.9995	90.1%	0.0230	0.0496	0.0409	0.0256	0.0649	90.3%	0.0240
σ		0.0364	0.1068	0.0769	0.0000	0.0424	0.2219	2.2580	1.3%	0.0025	0.0149	0.0077	0.0163	0.0229	1.1%	0.0079
%RSD		122.5000	110.8000	120.9000	0.0000	377.5000	186.5000	225.9000	1.5	10.8200	30.0900	18.8700	63.7400	35.2400	1.2	33.0700

Run	Time	107Ag	108Cd	111Cd	115In	118Sn	121Sb	137Ba	159Tb	165Ho	205Tl	208Pb	209Bi
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:58:54	0.0022	0.0060	0.0182	91.5%	0.0429	0.0141	0.0096	89.5%	89.8%	0.1869	-0.0116	89.6%
2	18:59:11	0.0044	0.0011	0.0358	92.4%	0.0508	0.0547	0.1099	90.4%	92.2%	0.1730	0.0002	91.2%
3	18:59:27	-0.0001	-0.0127	-0.0003	92.6%	0.0506	0.0602	0.1156	91.7%	91.1%	0.1723	-0.0022	91.1%
x		0.0022	-0.0019	0.0179	92.2%	0.0481	0.0430	0.0784	90.5%	91.1%	0.1774	-0.0045	90.6%
σ		0.0023	0.0097	0.0181	0.6%	0.0045	0.0252	0.0596	1.1%	1.2%	0.0082	0.0062	0.9%
%RSD		104.9000	511.3000	100.7000	0.6	9.3340	58.6500	76.0700	1.2	1.3	4.6440	138.0000	1.0

PL21004-BLK2@P8W01@MF6R32@45671@LEM 12/30/2015 19:03:01 QC Status: PASS (Initial: PASS)

User Pre-dilution: 1.000

Run	Time	6Li	9Be	25Mg	27Al	39K	44Ca	45Sc	47Ti	51V	52Cr	53Cl O	54Fe	55Mn	59Co	60Ni
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:03:01	96.1%	-0.0154	-0.3324	-0.9824	34.8400	7.1760	92.5%	0.1722	-0.0387	0.5718	314.8000	3.9440	0.0103	-0.0114	0.3805
2	19:03:18	97.1%	-0.0362	-0.1288	-1.1030	35.3900	7.6390	93.3%	-0.0125	-0.4191	0.5389	382.4000	4.3890	-0.0105	-0.0017	0.6502
3	19:03:34	92.8%	-0.0362	-0.1080	-1.0260	34.8000	9.3760	93.6%	0.0190	-0.3938	0.4972	444.6000	6.6300	-0.0050	0.0062	0.5243
x		95.3%	-0.0293	-0.1897	-1.0370	35.0100	8.0640	93.1%	0.0596	-0.2839	0.5359	380.6000	4.9880	-0.0017	-0.0023	0.5183
σ		2.2%	0.0120	0.1240	0.0610	0.3291	1.1590	0.6%	0.0988	0.2127	0.0374	64.9500	1.4400	0.0108	0.0088	0.1349
%RSD		2.3	40.9100	65.3500	5.8810	0.9400	14.3800	0.6	165.9000	74.9400	6.9720	17.0600	28.8600	625.1000	381.5000	26.0300

Run	Time	65Cu	66Zn	75As	77Se	78Se	82Se	83Kr	89Y	94Mo	95Mo	96Mo	97Mo	98Mo	103Rh	106Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:03:01	0.1385	0.2132	0.0968	-0.0343	-0.0166	-0.2184	2.9200	88.1%	-0.0060	-0.0009	0.0186	0.0182	-0.0066	91.7%	0.0484
2	19:03:18	0.1214	0.3303	0.1476	0.0215	-0.0181	0.0815	2.0360	91.8%	0.0013	-0.0013	0.0178	0.0244	0.0049	92.4%	0.0083
3	19:03:34	0.2824	0.2532	0.1031	0.0245	-0.0067	-0.1951	3.4320	92.0%	0.0199	0.0315	0.0033	0.0171	-0.0010	87.7%	0.0220
x		0.1808	0.2656	0.1158	0.0039	-0.0138	-0.1107	2.7960	90.6%	0.0051	0.0098	0.0132	0.0199	-0.0009	90.6%	0.0263
σ		0.0884	0.0596	0.0277	0.0331	0.0062	0.1668	0.7066	2.2%	0.0133	0.0188	0.0086	0.0040	0.0058	2.5%	0.0204
%RSD		48.9000	22.4300	23.9100	848.7000	44.7900	150.7000	25.2700	2.4	262.8000	192.7000	65.0900	19.9000	636.7000	2.8	77.6900

Run	Time	107Ag	108Cd	111Cd	115In	118Sn	121Sb	137Ba	159Tb	165Ho	205Tl	208Pb	209Bi
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:03:01	0.0023	0.0015	-0.0182	90.0%	0.0219	0.1599	0.1059	89.3%	90.1%	0.0301	0.0079	90.2%
2	19:03:18	0.0092	0.0014	0.0189	89.3%	0.0245	0.1788	0.0389	91.5%	93.1%	0.0376	0.0291	92.5%
3	19:03:34	0.0066	0.0057	-0.0092	92.0%	0.0013	0.1408	0.1172	90.7%	91.9%	0.0283	0.0351	92.4%
x		0.0060	0.0029	-0.0028	90.4%	0.0159	0.1598	0.0873	90.5%	91.7%	0.0320	0.0240	91.7%
σ		0.0035	0.0025	0.0193	1.4%	0.0127	0.0190	0.0423	1.1%	1.5%	0.0049	0.0143	1.3%
%RSD		57.4500	86.0700	680.0000	1.5	79.9400	11.8700	48.4800	1.2	1.6	15.3900	59.6000	1.4

PL21004-BS2@LCS01 12/30/2015 19:07:07 QC Status: FAIL (Initial: FAIL)

User Pre-dilution: 1.000

Run	Time	6Li	9Be	25Mg	27Al	39K	44Ca	45Sc	47Ti	51V	52Cr	53Cl O	54Fe	55Mn	59Co	60Ni
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:07:07	96.0%	2.3230	1033.0000	58.2700	r 1037.0000	990.1000	97.2%	0.3074	9.8410	4.6950	303.7000	410.5000	2.0190	1.9750	2.6580
2	19:07:23	98.5%	2.1060	1058.0000	59.5600	1065.0000	1020.0000	96.8%	0.2775	10.2300	4.6500	240.7000	425.3000	1.8990	2.1240	2.6210
3	19:07:40	96.9%	1.7700	1089.0000	61.6300	r 1049.0000	1023.0000	95.7%	-0.0304	10.4500	4.5430	248.4000	433.9000	2.1350	2.1080	2.5230
x		97.1%	103.302%	105.994%	149.550%	r 105.034%	101.117%	96.6%	0.1848	101.748%	115.736%	264.3000	423.3000	100.887%	103.461%	130.026%
σ		1.3%	n/a	n/a	n/a	r n/a	n/a	0.7%	0.1870	n/a	n/a	34.3800	11.8400	n/a	n/a	n/a
%RSD		1.3	13.4800	2.6400	2.8370	r 1.3010	1.8140	0.8	101.2000	3.0270	1.6850	13.0100	2.7990	5.8670	3.9700	2.6750

Run	Time	65Cu	66Zn	75As	77Se	78Se	82Se	83Kr	89Y	94Mo	95Mo	96Mo	97Mo	98Mo	103Rh	106Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:07:07	4.5990	4.2780	1.8980	1.1110	10.6600	1.0040	0.2281	91.6%	0.0049	0.0314	0.0139	0.0101	-0.0134	94.5%	0.0975
2	19:07:23	4.4550	4.1600	2.3570	0.6758	9.6890	0.6734	5.7410	93.9%	0.0009	0.0127	0.0030	-0.0072	-0.0103	94.4%	0.1011
3	19:07:40	4.5090	4.1070	1.7560	0.9066	10.2500	0.8718	5.1330	94.6%	-0.0029	0.0019	0.0167	0.0062	0.0060	93.1%	0.0949
x		113.019%	104.540%	100.178%	0.8978	101.986%	0.8498	3.7010	93.3%	0.0010	0.0153	0.0112	0.0030	-0.0059	94.0%	0.0979
σ		n/a	n/a	n/a	0.2177	n/a	0.1664	3.0230	1.5%	0.0039	0.0149	0.0072	0.0091	0.0104	0.8%	0.0031
%RSD		1.6110	2.1030	15.6900	24.2500	4.7680	19.5900	81.6800	1.6	395.5000	97.4900	64.5400	301.9000	177.3000	0.8	3.1850

Run	Time	107Ag	108Cd	111Cd	115In	118Sn	121Sb	137Ba	159Tb	165Ho	205Tl	208Pb	209Bi
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:07:07	1.6590	0.0644	2.3060	94.1%	0.0048	3.8960	19.3400	92.9%	93.6%	1.9410	1.9460	92.6%
2	19:07:23	1.6880	0.0458	1.9960	94.1%	0.0196	3.9380	20.2100	92.4%	93.8%	2.0090	2.0000	94.0%
3	19:07:40	1.6960	0.0585	1.9270	95.5%	0.0273	3.8540	20.4700	93.7%	95.8%	1.9910	1.9800	96.1%
x		84.049%	0.0562	103.827%	94.6%	0.0172	97.397%	100.026%	93.0%	94.4%	99.024%	98.760%	94.2%
σ		n/a	0.0095	n/a	0.8%	0.0114	n/a	n/a	0.7%	1.3%	n/a	n/a	1.8%
%RSD		1.1600	16.8500	9.7360	0.8	66.2700	1.0840	2.9600	0.7	1.3	1.7860	1.3920	1.9

PL21004-BS3@LCS02 12/30/2015 19:11:13

User Pre-dilution: 1.000

Run	Time	6Li	9Be	25Mg	27Al	39K	44Ca	45Sc	47Ti	51V	52Cr	53Cl O	54Fe	55Mn	59Co	60Ni
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:11:13	102.3%	-0.0362	507.4000	-0.8858	7.3150	7.0230	99.8%	0.2094	-0.0434	3.1880	473.8000	13.8700	0.1370	1.0060	1.3220
2	19:11:30	102.9%	-0.0362	510.9000	-0.8685	7.2650	3.2730	100.4%	0.0315	-0.0517	3.0690	419.0000	13.6500	0.0127	0.9515	1.2290
3	19:11:46	102.9%	-0.0362	511.0000	-0.9085	6.7090	7.5830	99.9%	0.2238	-0.4944	3.0050	584.5000	13.6200	0.0835	1.1130	1.3030
x		102.7%	-0.0362	509.7000	-0.8876	7.0960	5.9600	100.1%	0.1549	-0.1965	3.0870	492.4000	13.7100	0.0777	1.0230	1.2840
σ		0.3%	0.0000	2.0760	0.0201	0.3362	2.3440	0.3%	0.1071	0.2580	0.0928	84.2900	0.1333	0.0623	0.0823	0.0492
%RSD		0.3	0.0000	0.4073	2.2590	4.7370	39.3200	0.3	69.1200	131.3000	3.0070	17.1200	0.9724	80.2000	8.0430	3.8330

Run	Time	65Cu	66Zn	75As	77Se	78Se	82Se	83Kr	89Y	94Mo	95Mo	96Mo	97Mo	98Mo	103Rh	106Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:11:13	0.2978	0.4516	1.0660	0.3400	5.8970	0.2847	1.5960	95.2%	0.0406	0.0655	0.0719	0.0399	0.1058	96.4%	0.0585
2	19:11:30	0.3712	0.3306	1.3240	0.2774	4.0490	0.3362	2.8060	97.1%	0.0643	0.0604	0.1039	0.0421	0.1275	99.2%	0.0745
3	19:11:46	0.3874	0.3805	1.1000	0.5458	5.2020	0.0112	5.2540	94.9%	0.0333	0.0830	0.0923	0.0363	0.0735	97.7%	0.0248
x		0.3521	0.3876	1.1630	0.3877	5.0490	0.2107	3.2190	95.7%	0.0461	0.0696	0.0894	0.0394	0.1023	97.8%	0.0526
σ		0.0478	0.0608	0.1400	0.1405	0.9331	0.1747	1.8630	1.2%	0.0162	0.0119	0.0162	0.0029	0.0272	1.4%	0.0254
%RSD		13.5700	15.6900	12.0400	36.2300	18.4800	82.9200	57.8900	1.3	35.1500	17.0400	18.1000	7.3180	26.5700	1.4	48.2800

Run	Time	107Ag	108Cd	111Cd	115In	118Sn	121Sb	137Ba	159Tb	165Ho	205Tl	208Pb	209Bi
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:11:13	-0.0024	0.0548	1.0530	93.7%	-0.0014	2.0960	0.0851	93.0%	91.7%	1.0100	0.0009	92.6%
2	19:11:30	-0.0004	0.0574	1.0060	96.5%	0.0019	2.0220	0.0480	93.3%	94.9%	1.0730	-0.0023	95.5%
3	19:11:46	0.0019	0.0183	0.9475	95.7%	0.0146	2.0270	0.0534	96.6%	96.3%	1.0240	0.0016	93.9%
x		-0.0003	0.0435	1.0020	95.3%	0.0050	2.0480	0.0621	94.3%	94.3%	1.0360	0.0001	94.0%
σ		0.0022	0.0218	0.0527	1.4%	0.0084	0.0415	0.0200	2.0%	2.4%	0.0329	0.0021	1.4%
%RSD		696.7000	50.1900	5.2610	1.5	168.4000	2.0240	32.2500	2.1	2.5	3.1770	2716.0000	1.5

PLZ1004-BS4 LCS03

SEQ-[illegible]@ZZZZZZ 12/30/2015 19:15:19

User Pre-dilution: 1.000

Run	Time	6Li	9Be	25Mg	27Al	39K	44Ca	45Sc	47Ti	51V	52Cr	53Cl O	54Fe	55Mn	59Co	60Ni
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:15:19	105.6%	-0.0362	-0.2373	39.3100	3.5370	9.2050	101.4%	0.2721	-0.0548	0.5281	488.8000	6.3980	-0.0176	-0.0092	1.3160
2	19:15:35	103.8%	-0.0170	0.3985	43.5300	4.3990	9.8060	100.1%	0.2687	-0.0089	0.5095	513.8000	7.4350	0.0359	0.0078	1.1190
3	19:15:52	102.5%	-0.0362	-0.4811	43.7700	3.2430	10.8000	99.5%	0.1629	-0.1886	0.4954	503.8000	7.1970	0.0071	-0.0185	1.4420
x		104.0%	-0.0298	-0.1066	42.2000	3.7260	9.9380	100.4%	0.2346	-0.0841	0.5110	502.1000	7.0100	0.0085	-0.0066	1.2920
σ		1.6%	0.0111	0.4541	2.5090	0.6012	0.8073	1.0%	0.0621	0.0933	0.0164	12.5900	0.5431	0.0268	0.0133	0.1626
%RSD		1.5	37.2000	425.9000	5.9460	16.1300	8.1230	1.0	26.4600	111.0000	3.2140	2.5070	7.7480	316.0000	202.0000	12.5800

Run	Time	65Cu	66Zn	75As	77Se	78Se	82Se	83Kr	89Y	94Mo	95Mo	96Mo	97Mo	98Mo	103Rh	106Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:15:19	0.3008	0.0892	0.2329	-0.0343	0.0527	-0.6937	10.8000	95.4%	0.0007	0.0053	-0.0006	-0.0040	-0.0045	92.7%	0.0060
2	19:15:35	0.4069	0.1816	0.1233	-0.0343	-0.1649	-0.0035	-1.4700	96.3%	-0.0102	-0.0018	-0.0007	-0.0040	-0.0036	96.3%	0.0012
3	19:15:52	0.3615	0.3788	0.0866	0.1220	0.1690	0.0547	-0.9058	98.7%	-0.0068	-0.0020	0.0024	0.0024	-0.0225	98.9%	0.0055
x		0.3564	0.2165	0.1476	0.0178	0.0190	-0.2142	2.8070	96.8%	-0.0054	0.0005	0.0003	-0.0019	-0.0102	96.0%	0.0042
σ		0.0532	0.1480	0.0761	0.0903	0.1695	0.4163	6.9240	1.7%	0.0055	0.0042	0.0018	0.0037	0.0107	3.1%	0.0027
%RSD		14.9300	68.3200	51.5600	506.5000	894.4000	194.4000	246.7000	1.8	102.1000	912.5000	516.4000	197.9000	104.7000	3.3	62.9400

Run	Time	107Ag	108Cd	111Cd	115In	118Sn	121Sb	137Ba	159Tb	165Ho	205Tl	208Pb	209Bi
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:15:19	0.0040	-0.0039	-0.0095	95.9%	-0.0167	0.1330	0.0748	95.2%	94.3%	0.0036	-0.0102	96.5%
2	19:15:35	0.0018	-0.0039	-0.0096	96.4%	-0.0043	0.1491	0.0399	95.3%	95.5%	-0.0043	-0.0005	96.4%
3	19:15:52	0.0018	0.0091	-0.0182	96.3%	-0.0044	0.1204	0.0654	98.5%	97.6%	0.0009	-0.0018	97.7%
x		0.0025	0.0004	-0.0124	96.2%	-0.0085	0.1342	0.0600	96.3%	95.8%	0.0000	-0.0042	96.8%
σ		0.0013	0.0075	0.0050	0.3%	0.0071	0.0144	0.0180	1.9%	1.6%	0.0040	0.0053	0.7%
%RSD		50.9200	1738.0000	40.1400	0.3	84.1300	10.7200	30.0200	2.0	1.7	8164.0000	126.4000	0.8

5120223-01RE1@MF6R32 12/30/2015 19:19:23

User Pre-dilution: 1.000

Run	Time	6Li	9Be	25Mg	27Al	39K	44Ca	45Sc	47Ti	51V	52Cr	53Cl O	54Fe	55Mn	59Co	60Ni
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:19:23	70.6%	6.4210	T38240.0000	606.2000	745.9000	33770.0000	94.8%	40.7000	x2331.0000	335.2000	3619.0000	8138.0000	670.0000	34.3800	449.4000
2	19:19:40	70.5%	6.8860	T39190.0000	630.7000	771.9000	34080.0000	99.0%	41.2100	x2386.0000	344.8000	4069.0000	8286.0000	681.5000	34.1100	454.1000
3	19:19:56	68.8%	7.5290	T41100.0000	669.1000	814.0000	36040.0000	96.9%	44.2700	x2391.0000	347.1000	3127.0000	8638.0000	699.0000	36.2600	475.2000
x		70.0%	6.9450	T39510.0000	635.3000	777.3000	34630.0000	96.9%	42.0600	x2369.0000	342.4000	3605.0000	8354.0000	683.5000	34.9100	459.6000
σ		1.0%	0.5564	T1454.0000	31.6900	34.3700	1230.0000	2.1%	1.9330	x33.3900	6.2890	471.1000	257.1000	14.5900	1.1730	13.7700
%RSD		1.4	8.0120	T3.6800	4.9880	4.4220	3.5530	2.2	4.5960	x1.4090	1.8370	13.0700	3.0780	2.1340	3.3610	2.9960

Run	Time	65Cu	66Zn	75As	77Se	78Se	82Se	83Kr	89Y	94Mo	95Mo	96Mo	97Mo	98Mo	103Rh	106Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:19:23	18.7500	17.8400	347.5000	2.1340	30.0000	-2.2980	126.4000	747.3%	18.1400	17.8300	22.6300	12.6800	35.7500	66.6%	0.8772
2	19:19:40	19.2000	17.0800	358.5000	3.3590	27.6200	-1.3720	128.9000	765.8%	19.0000	18.0600	23.9100	13.3500	36.9500	65.3%	0.8531
3	19:19:56	20.5000	18.9100	354.3000	3.7510	30.1500	-1.6600	120.9000	784.9%	19.1600	18.6500	23.7300	13.7500	37.5000	65.4%	0.9349
x		19.4800	17.9400	353.4000	3.0810	29.2600	-1.7770	125.4000	766.0%	18.7600	18.1800	23.4200	13.2600	36.7300	65.8%	0.8884
σ		0.9098	0.9198	5.5400	0.8436	1.4180	0.4740	4.0880	18.8%	0.5503	0.4185	0.6934	0.5394	0.8959	0.7%	0.0420
%RSD		4.6690	5.1260	1.5680	27.3800	4.8460	26.6800	3.2590	2.5	2.9320	2.3020	2.9600	4.0680	2.4390	1.1	4.7300

Run	Time	107Ag	108Cd	111Cd	115In	118Sn	121Sb	137Ba	159Tb	165Ho	205Tl	208Pb	209Bi
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:19:23	0.1965	0.3383	0.5062	68.0%	3.0540	6.4190	369.7000	99.1%	100.5%	0.0340	143.9000	166.5%
2	19:19:40	0.2027	0.3003	0.4615	68.1%	3.1430	6.7150	376.0000	100.7%	101.9%	0.0267	142.8000	174.5%
3	19:19:56	0.1744	0.3105	0.4920	68.9%	3.1250	6.8720	382.7000	102.1%	103.6%	0.0285	143.4000	174.6%
x		0.1912	0.3164	0.4866	68.3%	3.1070	6.6690	376.1000	100.6%	102.0%	0.0297	143.4000	171.9%
σ		0.0149	0.0197	0.0229	0.5%	0.0469	0.2302	6.5050	1.5%	1.6%	0.0038	0.5401	4.6%
%RSD		7.7870	6.2180	4.6970	0.7	1.5100	3.4530	1.7290	1.5	1.5	12.9200	0.3767	2.7

5120223-02RE1@MF6R42 12/30/2015 19:23:28

User Pre-dilution: 1.000

Run	Time	6Li	9Be	25Mg	27Al	39K	44Ca	45Sc	47Ti	51V	52Cr	53Cl O	54Fe	55Mn	59Co	60Ni
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:23:28	102.2%	-0.0167	7206.0000	29.4700	T3057.0000	17280.0000	99.8%	0.4288	0.4854	0.7970	359.9000	1370.0000	918.8000	3.5280	4.0550
2	19:23:45	102.3%	-0.0362	7235.0000	29.4400	T3090.0000	17610.0000	98.6%	0.4972	0.3690	0.7959	321.9000	1444.0000	886.2000	3.6530	4.4960
3	19:24:01	102.8%	-0.0362	7285.0000	29.9600	T3015.0000	17320.0000	99.7%	0.4293	0.2877	0.7176	335.7000	1399.0000	877.4000	3.4770	3.8330
x		102.4%	-0.0297	7242.0000	29.6200	T3054.0000	17400.0000	99.3%	0.4518	0.3807	0.7702	339.2000	1404.0000	894.1000	3.5530	4.1280
σ		0.3%	0.0113	39.9600	0.2963	T37.2500	178.0000	0.7%	0.0394	0.0994	0.0455	19.2300	37.1200	21.7900	0.0909	0.3375
%RSD		0.3	37.8800	0.5518	1.0000	T1.2200	1.0230	0.7	8.7100	26.1000	5.9120	5.6700	2.6430	2.4370	2.5590	8.1750

Run	Time	65Cu	66Zn	75As	77Se	78Se	82Se	83Kr	89Y	94Mo	95Mo	96Mo	97Mo	98Mo	103Rh	106Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:23:28	2.8860	13.6600	1.0300	0.0813	0.2129	-2.0390	34.0000	95.5%	0.2575	0.1890	0.1683	0.1374	0.2349	89.2%	0.0256
2	19:23:45	2.8930	15.0500	1.0990	0.0216	0.1984	-0.5545	8.4900	95.8%	0.2591	0.2048	0.2179	0.0993	0.2185	92.2%	0.0060
3	19:24:01	2.8130	15.0800	1.2260	-0.0343	0.0557	-1.3860	23.1200	96.2%	0.2013	0.1521	0.2006	0.0859	0.2722	91.8%	0.0015
x		2.8640	14.5900	1.1190	0.0229	0.1557	-1.3270	21.8700	95.8%	0.2393	0.1819	0.1956	0.1075	0.2419	91.0%	0.0110
σ		0.0443	0.8120	0.0994	0.0578	0.0869	0.7443	12.8000	0.3%	0.0329	0.0271	0.0252	0.0267	0.0275	1.6%	0.0128
%RSD		1.5470	5.5640	8.8870	252.7000	55.8200	56.1000	58.5300	0.3	13.7600	14.8700	12.8600	24.8500	11.3700	1.8	116.3000

Run	Time	107Ag	108Cd	111Cd	115In	118Sn	121Sb	137Ba	159Tb	165Ho	205Tl	208Pb	209Bi
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:23:28	0.0174	0.0279	0.1056	93.3%	0.0242	0.5784	38.0100	95.2%	94.1%	-0.0001	105.2000	92.6%
2	19:23:45	0.0127	0.0005	0.0942	95.8%	0.0332	0.6345	37.4300	96.2%	95.2%	-0.0018	106.9000	95.1%
3	19:24:01	0.0127	-0.0038	0.1036	95.1%	0.0232	0.6763	38.3500	95.5%	96.0%	-0.0042	106.6000	95.4%
x		0.0143	0.0082	0.1011	94.7%	0.0269	0.6298	37.9300	95.6%	95.1%	-0.0020	106.3000	94.3%
σ		0.0027	0.0172	0.0061	1.3%	0.0055	0.0491	0.4635	0.5%	1.0%	0.0021	0.8933	1.6%
%RSD		19.0600	209.9000	6.0400	1.3	20.5500	7.8020	1.2220	0.6	1.0	102.4000	0.8406	1.6

QM 1/4

PL21004-MS1@MF6R42S 12/30/2015 19:27:34 QC Status: PASS (Initial: PASS)

User Pre-dilution: 1.000

Run	Time	6Li	9Be	25Mg	27Al	39K	44Ca	45Sc	47Ti	51V	52Cr	53Cl O	54Fe	55Mn	59Co	60Ni
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:27:34	97.2%	49.8800	6956.0000	r 1925.0000	r 2892.0000	16340.0000	99.7%	0.5884	523.2000	204.3000	1606.0000	1391.0000	1434.0000	477.1000	485.2000
2	19:27:50	95.5%	51.0400	7258.0000	r 1994.0000	r 2978.0000	17300.0000	95.9%	0.6795	515.6000	202.9000	2046.0000	1483.0000	1450.0000	500.9000	501.4000
3	19:28:07	99.3%	49.2100	7153.0000	r 2019.0000	r 2994.0000	17270.0000	95.6%	0.7652	530.1000	206.1000	1782.0000	1487.0000	1460.0000	496.3000	507.5000
x		97.3%	100.147%	7122.0000	r 1979.0000	r 2955.0000	16970.0000	97.1%	0.6777	104.514%	101.828%	1811.0000	1454.0000	110.798%	97.582%	98.780%
σ		1.9%	n/a	152.9000	r 48.6000	r 54.7300	543.6000	2.3%	0.0884	n/a	n/a	221.4000	54.5500	n/a	n/a	n/a
%RSD		1.9	1.8470	2.1460	r 2.4550	r 1.8520	3.2040	2.3	13.0500	1.3920	0.7680	12.2200	3.7530	0.9156	2.5670	2.3070

Run	Time	65Cu	66Zn	75As	77Se	78Se	82Se	83Kr	89Y	94Mo	95Mo	96Mo	97Mo	98Mo	103Rh	106Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:27:34	244.6000	459.0000	42.2500	8.0800	109.4000	9.9340	18.0100	92.6%	0.3042	0.1740	0.2316	0.1043	0.2328	87.0%	2.3330
2	19:27:50	256.3000	489.6000	42.4500	7.8620	106.3000	13.0200	16.0000	90.3%	0.2789	0.1877	0.1732	0.1125	0.2413	88.1%	2.3750
3	19:28:07	253.0000	499.3000	43.7600	8.0880	106.7000	9.9980	19.7400	91.3%	0.2424	0.1163	0.1861	0.1256	0.3160	86.9%	2.2360
x		99.377%	93.612%	104.262%	8.0100	107.342%	10.9800	17.9200	91.4%	0.2751	0.1593	0.1970	0.1142	0.2633	87.4%	2.3150
σ		n/a	n/a	n/a	0.1281	n/a	1.7650	1.8730	1.2%	0.0311	0.0379	0.0307	0.0107	0.0458	0.7%	0.0716
%RSD		2.4080	4.3550	1.9150	1.5990	1.5710	16.0700	10.4500	1.3	11.2800	23.8000	15.5900	9.3960	17.4000	0.8	3.0950

Run	Time	107Ag	108Cd	111Cd	115In	118Sn	121Sb	137Ba	159Tb	165Ho	205Tl	208Pb	209Bi
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:27:34	47.1600	1.5680	47.3700	89.4%	0.0178	95.6000	2017.0000	89.9%	90.9%	48.6400	123.5000	91.6%
2	19:27:50	48.6900	1.6300	48.4900	91.6%	0.0209	97.3800	2092.0000	92.9%	94.0%	51.7300	128.7000	90.2%
3	19:28:07	48.5500	1.5840	48.7400	91.6%	0.0144	97.6700	2076.0000	92.7%	92.3%	51.2800	127.6000	92.3%
x		96.238%	1.5940	96.192%	90.9%	0.0177	96.255%	101.187%	91.9%	92.4%	101.104%	101.743%	91.4%
σ		n/a	0.0322	n/a	1.3%	0.0032	n/a	n/a	1.7%	1.5%	n/a	n/a	1.1%
%RSD		1.7560	2.0180	1.5160	1.4	18.3400	1.1540	1.9280	1.8	1.6	3.2990	2.2000	1.2

PL21004-DUP2@MF6R42D 12/30/2015 19:31:40

User Pre-dilution: 1.000

Run	Time	6Li	9Be	25Mg	27Al	39K	44Ca	45Sc	47Ti	51V	52Cr	53Cl O	54Fe	55Mn	59Co	60Ni
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:31:40	97.1%	-0.0362	6984.0000	27.3100	r 2954.0000	16930.0000	94.5%	0.5609	0.3077	0.6768	257.4000	1357.0000	897.5000	3.5400	4.2870
2	19:31:56	95.3%	-0.0362	7250.0000	28.3600	r 3035.0000	17680.0000	91.8%	0.6217	0.2861	0.7433	262.3000	1420.0000	893.3000	3.5330	4.0800
3	19:32:13	92.5%	-0.0147	7118.0000	29.2600	r 3012.0000	17150.0000	92.5%	0.5934	0.4214	0.7098	212.8000	1379.0000	872.2000	3.7410	3.6350
x		95.0%	-0.0290	7117.0000	28.3100	r 3000.0000	17250.0000	92.9%	0.5920	0.3384	0.7100	244.2000	1385.0000	887.7000	3.6040	4.0010
σ		2.3%	0.0124	133.1000	0.9767	r 41.7100	386.8000	1.4%	0.0304	0.0727	0.0333	27.2600	31.7200	13.5600	0.1182	0.3332
%RSD		2.4	42.7200	1.8700	3.4500	r 1.3900	2.2420	1.5	5.1410	21.4700	4.6840	11.1700	2.2890	1.5280	3.2790	8.3290

Run	Time	65Cu	66Zn	75As	77Se	78Se	82Se	83Kr	89Y	94Mo	95Mo	96Mo	97Mo	98Mo	103Rh	106Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:31:40	2.2780	14.4000	1.2360	0.1454	0.0749	-1.2450	21.7500	87.6%	0.2138	0.1713	0.2353	0.0439	0.2242	86.1%	-0.0008
2	19:31:56	2.7440	14.4500	0.9827	0.0249	-0.0051	-0.4537	9.4730	88.4%	0.1922	0.1620	0.1812	0.0974	0.2317	87.1%	0.0089
3	19:32:13	2.4110	14.7300	1.0500	0.0815	0.2137	-0.6347	13.2500	90.8%	0.2300	0.1067	0.2177	0.0850	0.2630	89.0%	0.0087
x		2.4770	14.5300	1.0900	0.0839	0.0945	-0.7777	14.8300	88.9%	0.2120	0.1467	0.2114	0.0755	0.2397	87.4%	0.0056
σ		0.2399	0.1787	0.1314	0.0603	0.1107	0.4144	6.2930	1.6%	0.0190	0.0350	0.0276	0.0280	0.0206	1.5%	0.0055
%RSD		9.6850	1.2300	12.0600	71.8500	117.2000	53.2900	42.4400	1.8	8.9490	23.8300	13.0600	37.1100	8.5940	1.7	98.3900

Run	Time	107Ag	108Cd	111Cd	115In	118Sn	121Sb	137Ba	159Tb	165Ho	205Tl	208Pb	209Bi
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:31:40	0.0048	0.0017	0.1232	88.0%	0.0185	0.6073	38.0700	89.1%	89.6%	0.0365	102.5000	89.7%
2	19:31:56	0.0327	0.0016	0.1031	88.9%	0.0135	0.6367	38.6900	90.6%	90.9%	0.0357	104.3000	91.9%
3	19:32:13	0.0116	-0.0080	0.0844	88.5%	0.0204	0.5870	38.0900	91.1%	91.9%	0.0259	107.2000	91.2%
x		0.0164	-0.0016	0.1036	88.5%	0.0175	0.6103	38.2800	90.2%	90.8%	0.0327	104.6000	90.9%
σ		0.0146	0.0056	0.0194	0.4%	0.0036	0.0250	0.3505	1.0%	1.2%	0.0059	2.3830	1.1%
%RSD		88.9100	357.4000	18.7000	0.5	20.3900	4.1000	0.9156	1.2	1.3	18.0600	2.2770	1.3

SEQ-SRD1@MF6R42L@5X 12/30/2015 19:35:45

User Pre-dilution: 1.000

Run	Time	6Li	9Be	25Mg	27Al	39K	44Ca	45Sc	47Ti	51V	52Cr	53Cl O	54Fe	55Mn	59Co	60Ni
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:35:45	107.9%	-0.0176	1308.0000	3.3690	619.5000	3319.0000	93.6%	0.3125	-0.0041	-0.0031	-26.7600	281.9000	176.1000	0.7240	0.7206
2	19:36:02	100.6%	-0.0362	1388.0000	3.8780	616.4000	3435.0000	94.2%	0.1221	0.0357	0.0323	-0.0992	279.8000	185.8000	0.6657	0.7908
3	19:36:18	100.5%	-0.0362	1412.0000	4.2220	619.6000	3451.0000	94.0%	0.2238	-0.0436	-0.0254	-26.8600	287.6000	169.5000	0.7062	0.8667
x		103.0%	-0.0300	1369.0000	3.8230	618.5000	3402.0000	94.0%	0.2194	-0.0040	0.0013	-17.9100	283.1000	177.1000	0.6986	0.7927
σ		4.3%	0.0108	54.2700	0.4295	1.8060	72.2100	0.3%	0.0953	0.0396	0.0291	15.4200	4.0440	8.2240	0.0299	0.0730
%RSD		4.1	35.8900	3.9640	11.2300	0.2920	2.1230	0.3	43.4100	984.6000	2295.0000	86.1200	1.4280	4.6440	4.2780	9.2140

Run	Time	65Cu	66Zn	75As	77Se	78Se	82Se	83Kr	89Y	94Mo	95Mo	96Mo	97Mo	98Mo	103Rh	106Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:35:45	0.6466	2.9950	0.2297	-0.0343	0.3704	-0.7529	12.6800	88.6%	0.0133	0.0065	0.0221	0.0394	0.0362	87.9%	0.0181
2	19:36:02	0.5974	3.0660	0.3317	0.0262	0.1556	-0.6854	10.7300	91.3%	0.0427	0.0464	0.0392	0.0312	0.0275	85.3%	0.0077
3	19:36:18	0.6439	3.3950	0.1660	0.0218	-0.0169	-0.1191	2.0950	90.6%	0.0241	0.0356	0.0322	0.0034	0.0413	91.8%	0.0173
x		0.6293	3.1520	0.2425	0.0046	0.1697	-0.5191	8.5020	90.2%	0.0267	0.0295	0.0311	0.0247	0.0350	88.3%	0.0144
σ		0.0277	0.2136	0.0836	0.0337	0.1941	0.3481	5.6340	1.4%	0.0149	0.0206	0.0086	0.0189	0.0070	3.3%	0.0058
%RSD		4.3930	6.7750	34.4600	738.2000	114.4000	67.0600	66.2700	1.5	55.8000	69.9400	27.6200	76.5900	19.9000	3.7	40.4100

Run	Time	107Ag	108Cd	111Cd	115In	118Sn	121Sb	137Ba	159Tb	165Ho	205Tl	208Pb	209Bi
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:35:45	0.0022	0.0201	0.0185	91.1%	0.0016	0.0053	6.9220	89.6%	88.5%	-0.0092	20.1700	91.3%
2	19:36:02	0.0021	0.0011	-0.0002	91.8%	-0.0095	0.0228	7.3390	89.2%	90.3%	-0.0082	20.2600	92.5%
3	19:36:18	-0.0001	0.0011	-0.0002	92.4%	-0.0096	-0.0042	6.9440	90.3%	90.0%	-0.0088	20.6500	92.8%
x		0.0014	0.0074	0.0060	91.8%	-0.0058	0.0080	7.0680	89.7%	89.6%	-0.0087	20.3600	92.2%
σ		0.0013	0.0109	0.0108	0.7%	0.0065	0.0137	0.2345	0.6%	1.0%	0.0005	0.2576	0.8%
%RSD		94.8300	147.3000	179.0000	0.7	110.7000	172.1000	3.3170	0.6	1.1	5.6670	1.2650	0.9

5120223-03RE2@MF6R44 12/30/2015 19:39:51

User Pre-dilution: 1.000

Run	Time	6Li	9Be	25Mg	27Al	39K	44Ca	45Sc	47Ti	51V	52Cr	53Cl O	54Fe	55Mn	59Co	60Ni
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:39:51	90.6%	0.3962	7905.0000	r 4336.0000	r 1707.0000	15410.0000	111.4%	9.7360	12.4500	9.0740	615.0000	6322.0000	1456.0000	5.8920	8.9040
2	19:40:07	89.3%	0.1829	7971.0000	r 4498.0000	r 1767.0000	15970.0000	111.3%	9.8030	12.8600	9.0260	635.9000	6501.0000	1477.0000	5.9120	9.6830
3	19:40:24	88.8%	0.3387	8337.0000	r 4457.0000	r 1765.0000	16040.0000	110.1%	10.4800	13.3500	8.9960	565.5000	6648.0000	1463.0000	6.0840	9.7360
x		89.6%	0.3059	8071.0000	r 4430.0000	r 1746.0000	15810.0000	110.9%	10.0100	12.8900	9.0320	605.5000	6490.0000	1465.0000	5.9630	9.4410
σ		0.9%	0.1104	232.8000	r 84.4200	r 34.3200	341.8000	0.7%	0.4095	0.4517	0.0392	36.1800	163.0000	10.6600	0.1054	0.4657
%RSD		1.0	36.0800	2.8840	r 1.9060	r 1.9660	2.1620	0.7	4.0930	3.5050	0.4339	5.9750	2.5110	0.7275	1.7680	4.9330

Run	Time	65Cu	66Zn	75As	77Se	78Se	82Se	83Kr	89Y	94Mo	95Mo	96Mo	97Mo	98Mo	103Rh	106Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:39:51	5.8760	13.5800	7.6840	0.0306	0.6856	-1.1520	25.1900	111.0%	7.1910	9.5070	10.6300	5.7060	15.5800	79.5%	0.0875
2	19:40:07	5.9470	13.4800	8.8990	0.0953	0.5176	-1.2650	25.1600	111.5%	6.8390	10.1700	10.8700	6.1620	15.6300	79.6%	0.0575
3	19:40:24	5.9540	14.0800	8.2650	0.0951	0.4331	-1.0930	23.2500	112.4%	7.1710	10.0100	10.8700	6.2200	15.1000	79.7%	0.0514
x		5.9260	13.7100	8.2830	0.0737	0.5454	-1.1700	24.5300	111.6%	7.0670	9.8960	10.7900	6.0290	15.4400	79.6%	0.0655
σ		0.0428	0.3176	0.6075	0.0373	0.1285	0.0874	1.1140	0.7%	0.1976	0.3455	0.1412	0.2816	0.2901	0.1%	0.0194
%RSD		0.7217	2.3160	7.3340	50.6500	23.5600	7.4690	4.5390	0.6	2.7960	3.4910	1.3090	4.6700	1.8790	0.1	29.5600

Run	Time	107Ag	108Cd	111Cd	115In	118Sn	121Sb	137Ba	159Tb	165Ho	205Tl	208Pb	209Bi
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:39:51	0.0841	0.0066	0.0344	81.5%	0.3460	1.2960	113.8000	86.9%	87.8%	0.0565	TM 3430.0000	85.5%
2	19:40:07	0.1139	-0.0031	0.0712	81.9%	0.3370	1.3420	117.8000	87.7%	88.1%	0.0557	TM 3637.0000	84.2%
3	19:40:24	0.0824	0.0629	0.0987	83.3%	0.3642	1.2900	119.8000	89.0%	89.8%	0.0511	TM 3483.0000	89.6%
x		0.0935	0.0221	0.0681	82.2%	0.3490	1.3090	117.1000	87.9%	88.6%	0.0544	TM 3517.0000	86.4%
σ		0.0177	0.0357	0.0322	0.9%	0.0138	0.0286	3.0390	1.0%	1.0%	0.0029	TM 107.6000	2.8%
%RSD		18.9800	161.3000	47.3200	1.1	3.9620	2.1840	2.5950	1.2	1.2	5.2860	TM 3.0590	3.3

5120223-04RE1@MF6R45 12/30/2015 19:43:57

User Pre-dilution: 1.000

Run	Time	6Li	9Be	25Mg	27Al	39K	44Ca	45Sc	47Ti	51V	52Cr	53Cl O	54Fe	55Mn	59Co	60Ni
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:43:57	93.0%	-0.0362	6474.0000	0.7342	1022.0000	37380.0000	88.8%	0.3808	0.1586	0.5382	34.0700	r 36840.0000	1641.0000	1.3270	0.9497
2	19:44:13	91.6%	-0.0362	6294.0000	0.6772	996.6000	37160.0000	91.6%	0.2474	0.0895	0.5315	74.4000	r 36670.0000	1650.0000	1.3440	0.7951
3	19:44:30	87.8%	-0.0136	6379.0000	0.6317	1017.0000	38100.0000	90.3%	-0.0148	0.0772	0.4497	53.1500	r 37010.0000	1689.0000	1.4560	1.0060
x		90.8%	-0.0287	6383.0000	0.6810	1012.0000	37550.0000	90.2%	0.2045	0.1084	0.5064	53.6700	r 36840.0000	1660.0000	1.3760	0.9168
σ		2.7%	0.0130	89.6500	0.0513	13.4600	489.7000	1.4%	0.2012	0.0439	0.0493	20.1800	r 169.3000	25.2400	0.0702	0.1091
%RSD		2.9	45.4800	1.4050	7.5380	1.3310	1.3040	1.5	98.4100	40.4800	9.7320	37.4500	r 0.4595	1.5200	5.1040	11.9000

Run	Time	65Cu	66Zn	75As	77Se	78Se	82Se	83Kr	89Y	94Mo	95Mo	96Mo	97Mo	98Mo	103Rh	106Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:43:57	0.3214	1.0170	9.9510	0.2019	0.2227	-0.6579	11.9900	92.8%	0.4365	0.6479	0.7743	0.3995	0.9700	87.3%	0.0287
2	19:44:13	0.2884	0.9568	9.7760	0.0249	0.3764	-0.9185	15.4500	92.0%	0.4066	0.6763	0.6362	0.4536	1.0160	87.1%	0.0325
3	19:44:30	0.2998	1.1300	10.0300	0.0261	0.2330	-0.7366	11.5800	89.2%	0.4060	0.7424	0.8128	0.4713	1.0970	85.4%	0.0135
x		0.3032	1.0340	9.9180	0.0843	0.2774	-0.7710	13.0000	91.4%	0.4163	0.6889	0.7411	0.4415	1.0280	86.6%	0.0249
σ		0.0168	0.0880	0.1289	0.1019	0.0860	0.1337	2.1260	1.9%	0.0174	0.0485	0.0929	0.0374	0.0643	1.1%	0.0100
%RSD		5.5340	8.5110	1.3000	120.8000	30.9900	17.3400	16.3500	2.1	4.1870	7.0370	12.5300	8.4720	6.2570	1.2	40.2800

Run	Time	107Ag	108Cd	111Cd	115In	118Sn	121Sb	137Ba	159Tb	165Ho	205Tl	208Pb	209Bi
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:43:57	0.0000	0.0064	-0.0103	87.3%	0.0075	0.5542	105.9000	91.6%	90.1%	-0.0167	0.1396	87.7%
2	19:44:13	-0.0046	0.0153	0.0079	90.1%	0.0152	0.5300	108.0000	90.1%	91.8%	-0.0141	0.1249	91.8%
3	19:44:30	0.0092	0.0298	-0.0013	89.8%	0.0176	0.5041	110.7000	91.1%	90.8%	-0.0134	0.1486	91.1%
x		0.0015	0.0172	-0.0012	89.1%	0.0134	0.5294	108.2000	90.9%	90.9%	-0.0147	0.1377	90.2%
σ		0.0071	0.0118	0.0091	1.5%	0.0053	0.0251	2.3940	0.8%	0.9%	0.0018	0.0120	2.2%
%RSD		460.1000	68.9300	734.7000	1.7	39.4100	4.7360	2.2140	0.9	1.0	11.9500	8.6840	2.4

5120223-05RE1@MF6R46 12/30/2015 19:48:03

User Pre-dilution: 1.000

Run	Time	6Li	9Be	25Mg	27Al	39K	44Ca	45Sc	47Ti	51V	52Cr	53Cl O	54Fe	55Mn	59Co	60Ni
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:48:03	92.7%	-0.0362	7088.0000	205.9000	r 4008.0000	24810.0000	93.0%	0.8759	0.1248	0.9930	544.7000	293.8000	36.3200	0.4095	2.8950
2	19:48:19	90.8%	-0.0362	7263.0000	216.7000	r 4163.0000	26550.0000	90.4%	0.8747	0.5332	0.9504	390.2000	306.8000	36.1400	0.2578	2.7900
3	19:48:36	87.5%	-0.0362	7551.0000	223.3000	r 4072.0000	26660.0000	90.5%	0.8816	0.4048	0.9479	402.5000	312.0000	35.3900	0.3412	2.7570
x		90.3%	-0.0362	7301.0000	215.3000	r 4081.0000	26010.0000	91.3%	0.8774	0.3543	0.9638	445.8000	304.2000	35.9500	0.3362	2.8140
σ		2.6%	0.0000	233.7000	8.7950	r 77.8000	1034.0000	1.5%	0.0037	0.2088	0.0253	85.8700	9.3810	0.4947	0.0760	0.0723
%RSD		2.9	0.0000	3.2010	4.0850	r 1.9070	3.9770	1.6	0.4215	58.9400	2.6250	19.2600	3.0840	1.3760	22.6000	2.5680

Run	Time	65Cu	66Zn	75As	77Se	78Se	82Se	83Kr	89Y	94Mo	95Mo	96Mo	97Mo	98Mo	103Rh	106Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:48:03	3.9840	9.0020	0.7833	0.0264	0.0787	-0.0021	2.0680	86.1%	0.1781	0.0813	0.1450	0.0524	0.1357	85.0%	0.0206
2	19:48:19	3.9290	9.1010	0.8669	0.0257	0.5390	-0.8330	13.1700	87.9%	0.1659	0.0905	0.1710	0.0762	0.1670	85.9%	0.0141
3	19:48:36	3.6780	9.4740	0.6994	0.1455	-0.0794	-0.4152	7.1190	88.8%	0.1970	0.0982	0.0970	0.0694	0.1257	86.0%	0.0202
x		3.8640	9.1920	0.7832	0.0659	0.1794	-0.4168	7.4520	87.6%	0.1803	0.0900	0.1377	0.0660	0.1428	85.6%	0.0183
σ		0.1633	0.2488	0.0838	0.0690	0.3212	0.4154	5.5580	1.4%	0.0157	0.0085	0.0375	0.0123	0.0216	0.6%	0.0037
%RSD		4.2270	2.7070	10.6900	104.8000	179.0000	99.6800	74.5800	1.6	8.6780	9.4400	27.2400	18.5500	15.1000	0.7	20.0700

Run	Time	107Ag	108Cd	111Cd	115In	118Sn	121Sb	137Ba	159Tb	165Ho	205Tl	208Pb	209Bi
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:48:03	0.0050	0.0021	0.0204	85.8%	0.0383	0.7455	53.7300	88.8%	90.0%	-0.0087	10.9500	88.2%
2	19:48:19	-0.0023	0.0112	0.0097	88.9%	0.0180	0.8354	53.4900	90.3%	90.1%	-0.0103	11.0400	90.2%
3	19:48:36	0.0049	0.0069	0.0976	85.4%	0.0199	0.7753	57.2200	90.0%	93.2%	-0.0078	11.4100	89.7%
x		0.0026	0.0067	0.0426	86.7%	0.0254	0.7854	54.8100	89.7%	91.1%	-0.0089	11.1400	89.4%
σ		0.0042	0.0046	0.0480	1.9%	0.0112	0.0458	2.0860	0.8%	1.8%	0.0012	0.2456	1.1%
%RSD		165.0000	67.8400	112.7000	2.2	44.0600	5.8360	3.8060	0.9	2.0	13.6800	2.2060	1.2

5120223-06RE1@MF6R47 12/30/2015 19:52:09

User Pre-dilution: 1.000

Run	Time	6Li	9Be	25Mg	27Al	39K	44Ca	45Sc	47Ti	51V	52Cr	53Cl O	54Fe	55Mn	59Co	60Ni
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:52:09	92.9%	-0.0362	6908.0000	360.0000	r3928.0000	24170.0000	93.7%	1.2030	0.7499	1.0980	552.6000	448.4000	37.6300	0.5846	2.6640
2	19:52:25	93.6%	-0.0149	7062.0000	359.7000	r3890.0000	25080.0000	91.8%	1.0810	0.7790	1.1750	494.4000	469.7000	37.7500	0.5873	2.7230
3	19:52:42	91.6%	0.0072	7406.0000	377.9000	r4061.0000	26010.0000	92.0%	1.2090	0.4250	1.1520	526.1000	461.2000	36.7000	0.6204	2.4720
x		92.7%	-0.0147	7125.0000	365.9000	r3959.0000	25090.0000	92.5%	1.1640	0.6513	1.1420	524.4000	459.8000	37.3600	0.5974	2.6200
σ		1.0%	0.0217	255.0000	10.4000	r90.1200	922.0000	1.1%	0.0723	0.1965	0.0400	29.1300	10.7200	0.5702	0.0199	0.1314
%RSD		1.1	148.0000	3.5790	2.8420	r2.2760	3.6760	1.1	6.2090	30.1700	3.5040	5.5560	2.3310	1.5260	3.3380	5.0170

Run	Time	65Cu	66Zn	75As	77Se	78Se	82Se	83Kr	89Y	94Mo	95Mo	96Mo	97Mo	98Mo	103Rh	106Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:52:09	3.4110	9.4420	0.6680	0.1519	0.0860	-0.2842	4.0970	89.4%	0.1605	0.1201	0.1442	0.0579	0.1484	83.1%	0.0450
2	19:52:25	3.7780	9.9870	0.7038	0.0276	0.0052	-0.7656	11.1700	88.4%	0.2596	0.0982	0.1267	0.0620	0.1543	83.4%	0.0553
3	19:52:42	3.8590	10.1700	0.6761	0.0253	-0.0037	-0.5657	8.7290	93.1%	0.2368	0.0718	0.1141	0.0837	0.0932	86.6%	-0.0013
x		3.6830	9.8650	0.6826	0.0682	0.0292	-0.5385	7.9990	90.3%	0.2190	0.0967	0.1283	0.0679	0.1320	84.3%	0.0330
σ		0.2386	0.3777	0.0188	0.0725	0.0494	0.2418	3.5930	2.5%	0.0519	0.0242	0.0151	0.0139	0.0337	1.9%	0.0302
%RSD		6.4780	3.8280	2.7530	106.2000	169.4000	44.9100	44.9200	2.7	23.7000	25.0100	11.7500	20.4400	25.5400	2.3	91.3400

Run	Time	107Ag	108Cd	111Cd	115In	118Sn	121Sb	137Ba	159Tb	165Ho	205Tl	208Pb	209Bi
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:52:09	0.0025	0.0115	0.0389	86.5%	0.0355	0.7222	52.4200	87.6%	89.5%	-0.0060	14.6000	87.1%
2	19:52:25	0.0049	0.0018	0.0580	86.8%	0.0328	0.7428	53.8000	92.4%	91.1%	-0.0083	15.0300	89.1%
3	19:52:42	0.0023	0.0063	0.0192	87.6%	0.0550	0.6861	55.7600	90.3%	92.6%	-0.0096	15.0800	90.0%
x		0.0032	0.0066	0.0387	87.0%	0.0411	0.7170	53.9900	90.1%	91.1%	-0.0080	14.9100	88.7%
σ		0.0014	0.0049	0.0194	0.6%	0.0121	0.0287	1.6770	2.4%	1.5%	0.0018	0.2613	1.5%
%RSD		44.2100	73.9700	50.0600	0.7	29.4900	3.9980	3.1060	2.7	1.7	22.7300	1.7530	1.7

SEQ-IBL2@ZZZZZZ 12/30/2015 19:56:15

User Pre-dilution: 1.000

Run	Time	6Li	9Be	25Mg	27Al	39K	44Ca	45Sc	47Ti	51V	52Cr	53Cl O	54Fe	55Mn	59Co	60Ni
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:56:15	99.9%	-0.0362	-0.8714	-2.6440	-14.1500	-12.7300	134.0%	-0.3103	0.0282	-0.1739	-165.1000	58.1500	-0.0876	-0.0231	-0.0471
2	19:56:32	101.5%	-0.0362	-0.7826	-2.7160	-13.7700	-13.5700	130.1%	-0.3817	-0.0215	-0.1677	-156.3000	53.0100	-0.0962	-0.0229	-0.1014
3	19:56:48	93.7%	-0.0154	-0.8601	-2.5570	-14.3900	-12.6300	129.0%	-0.4392	0.0040	-0.1609	-166.3000	59.7200	-0.0757	-0.0229	-0.0592
x		98.4%	-0.0293	-0.8380	-2.6390	-14.1000	-12.9800	131.0%	-0.3771	0.0036	-0.1675	-162.6000	56.9600	-0.0865	-0.0229	-0.0693
σ		4.1%	0.0120	0.0484	0.0793	0.3109	0.5191	2.6%	0.0646	0.0249	0.0065	5.4560	3.5120	0.0103	0.0001	0.0285
%RSD		4.2	40.9700	5.7700	3.0060	2.2040	4.0000	2.0	17.1300	695.5000	3.9050	3.3570	6.1660	11.9200	0.4837	41.2000

Run	Time	65Cu	66Zn	75As	77Se	78Se	82Se	83Kr	89Y	94Mo	95Mo	96Mo	97Mo	98Mo	103Rh	106Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:56:15	-0.1290	-0.1953	-0.0196	-0.0343	-0.0919	-0.8864	17.4900	154.9%	-0.0116	-0.0080	-0.0109	-0.0106	-0.0229	140.3%	-0.0143
2	19:56:32	-0.1321	-0.2210	-0.0424	0.0021	-0.0462	-0.7816	14.6400	151.7%	-0.0070	-0.0101	-0.0088	-0.0106	-0.0193	141.6%	-0.0085
3	19:56:48	-0.1150	-0.1995	-0.0313	-0.0343	-0.0962	-0.9114	15.6800	153.4%	-0.0071	-0.0123	-0.0088	-0.0066	-0.0233	144.7%	-0.0116
x		-0.1254	-0.2053	-0.0311	-0.0222	-0.0781	-0.8598	15.9400	153.3%	-0.0086	-0.0101	-0.0095	-0.0093	-0.0218	142.2%	-0.0115
σ		0.0091	0.0138	0.0114	0.0210	0.0277	0.0689	1.4400	1.6%	0.0026	0.0021	0.0012	0.0024	0.0022	2.3%	0.0029
%RSD		7.2670	6.7230	36.5300	94.8900	35.4700	8.0080	9.0350	1.0	30.2500	21.1800	12.8100	25.4200	10.2100	1.6	25.2300

Run	Time	107Ag	108Cd	111Cd	115In	118Sn	121Sb	137Ba	159Tb	165Ho	205Tl	208Pb	209Bi
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:56:15	-0.0046	-0.0127	-0.0182	161.1%	-0.0287	-0.0438	-0.0515	176.1%	178.7%	-0.0222	-0.0488	168.1%
2	19:56:32	-0.0020	-0.0127	-0.0077	160.8%	-0.0300	-0.0371	-0.0593	178.3%	179.4%	-0.0207	-0.0532	173.8%
3	19:56:48	-0.0046	-0.0048	-0.0182	163.0%	-0.0276	-0.0389	-0.0594	181.7%	182.1%	-0.0207	-0.0501	174.0%
x		-0.0038	-0.0101	-0.0147	161.6%	-0.0288	-0.0400	-0.0567	178.7%	180.1%	-0.0212	-0.0507	172.0%
σ		0.0015	0.0046	0.0060	1.2%	0.0012	0.0035	0.0046	2.8%	1.8%	0.0009	0.0022	3.4%
%RSD		40.2200	45.4000	41.0300	0.7	4.1910	8.6480	8.0280	1.6	1.0	4.0790	4.4300	1.9

SEQ-CCV@CCV03 12/30/2015 20:00:22 QC Status: PASS (Initial: PASS)

User Pre-dilution: 1.000

Run	Time	6Li	9Be	25Mg	27Al	39K	44Ca	45Sc	47Ti	51V	52Cr	53Cl O	54Fe	55Mn	59Co	60Ni
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:02:06	86.0%	485.6000	r60650.0000	r61290.0000	r59790.0000	r62430.0000	83.5%	-0.0143	518.9000	507.1000	4884.0000	r61320.0000	2596.0000	498.4000	501.1000
2	20:02:22	86.1%	493.7000	r60590.0000	r61530.0000	r58610.0000	r61780.0000	83.2%	-0.1535	543.5000	534.7000	4830.0000	r61570.0000	2806.0000	493.7000	493.2000
3	20:02:38	84.5%	495.7000	r61920.0000	r61840.0000	r59250.0000	r62140.0000	83.3%	-0.1350	520.6000	515.1000	4412.0000	r61950.0000	2692.0000	504.3000	488.1000
x		85.6%	98.329%	r101.756%	r100.904%	r98.692%	r103.528%	83.3%	-0.1009	105.528%	103.797%	4709.0000	r102.689%	107.909%	99.758%	98.827%
σ		0.9%	n/a	r n/a	r n/a	r n/a	r n/a	0.1%	0.0756	n/a	n/a	258.1000	r n/a	n/a	n/a	n/a
%RSD		1.1	1.0920	r1.2290	r0.4491	r0.9917	r0.5257	0.2	74.9200	2.6040	2.7380	5.4810	r0.5156	3.8990	1.0610	1.3230

Run	Time	65Cu	66Zn	75As	77Se	78Se	82Se	83Kr	89Y	94Mo	95Mo	96Mo	97Mo	98Mo	103Rh	106Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:02:06	488.5000	2354.0000	497.2000	38.0800	482.7000	49.8200	32.7100	83.6%	151.9000	269.7000	283.4000	159.7000	408.5000	81.2%	22.3300
2	20:02:22	487.7000	2326.0000	538.5000	38.8300	529.3000	49.5600	29.8300	85.6%	149.0000	268.2000	279.8000	158.1000	407.0000	77.6%	22.3200
3	20:02:38	484.9000	2352.0000	504.8000	40.3200	498.4000	49.2100	25.4200	84.5%	154.2000	274.2000	288.5000	159.9000	414.3000	81.1%	21.8300
x		97.409%	93.774%	102.704%	39.0800	100.692%	49.5300	29.3200	84.6%	151.7000	270.7000	283.9000	159.2000	410.0000	80.0%	22.1600
σ		n/a	n/a	n/a	1.1380	n/a	0.3061	3.6750	1.0%	2.6360	3.1020	4.4060	0.9885	3.8500	2.1%	0.2850
%RSD		0.3980	0.6628	4.2810	2.9130	4.7120	0.6181	12.5400	1.2	1.7380	1.1460	1.5520	0.6208	0.9390	2.6	1.2860

Run	Time	107Ag	108Cd	111Cd	115In	118Sn	121Sb	137Ba	159Tb	165Ho	205Tl	208Pb	209Bi
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:02:06	62.2500	15.7000	467.0000	84.4%	322.8000	502.7000	2543.0000	87.7%	87.2%	r503.7000	529.2000	83.6%
2	20:02:22	61.8200	15.5100	472.7000	84.8%	322.0000	503.7000	2526.0000	89.8%	89.4%	r506.7000	537.3000	83.4%
3	20:02:38	64.0200	16.1200	478.9000	83.8%	324.5000	502.9000	2599.0000	87.7%	88.8%	r504.6000	529.8000	84.3%
x		96.455%	15.7800	94.576%	84.3%	323.1000	100.622%	102.254%	88.4%	88.5%	r100.998%	106.424%	83.7%
σ		n/a	0.3157	n/a	0.5%	1.2490	n/a	n/a	1.2%	1.1%	r n/a	n/a	0.5%
%RSD		1.8630	2.0010	1.2610	0.6	0.3865	0.1098	1.4990	1.4	1.3	r0.3112	0.8458	0.6

SEQ-CCB@CCB03 12/30/2015 20:06:12 QC Status: PASS (Initial: PASS)

User Pre-dilution: 1.000

Run	Time	6Li	9Be	25Mg	27Al	39K	44Ca	45Sc	47Ti	51V	52Cr	53Cl O	54Fe	55Mn	59Co	60Ni
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:06:12	101.6%	-0.0362	2.9930	2.5200	17.8900	3.0060	89.4%	0.1659	-0.1834	0.0677	88.6900	5.6390	0.1472	0.0262	0.1095
2	20:06:29	99.5%	0.0242	3.5350	2.8280	15.7800	5.0140	90.6%	-0.1729	-0.0347	0.1093	53.8500	6.7460	0.2067	0.0154	0.0650
3	20:06:45	95.6%	-0.0153	6.3180	3.5910	15.6300	1.8290	91.6%	-0.0329	-0.0369	0.0794	36.7100	5.3210	0.1726	0.0439	0.0222
x		98.9%	-0.0091	4.2820	2.9800	16.4300	3.2830	90.5%	-0.0133	-0.0850	0.0855	59.7500	5.9020	0.1755	0.0285	0.0656
σ		3.1%	0.0307	1.7840	0.5517	1.2660	1.6100	1.1%	0.1703	0.0852	0.0215	26.4900	0.7479	0.0298	0.0144	0.0437
%RSD		3.1	337.0000	41.6600	18.5100	7.7050	49.0500	1.2	1262.0000	100.3000	25.1400	44.3300	12.6700	17.0000	50.4300	66.6300

Run	Time	65Cu	66Zn	75As	77Se	78Se	82Se	83Kr	89Y	94Mo	95Mo	96Mo	97Mo	98Mo	103Rh	106Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:06:12	0.0182	0.0832	0.0634	-0.0343	-0.2339	-0.3249	5.5340	90.0%	0.0245	0.0734	0.0291	0.0567	0.0444	90.5%	0.0133
2	20:06:29	0.1126	0.2132	0.0805	0.0792	0.1317	-0.0266	0.5782	90.0%	0.0472	0.0917	0.0615	0.0494	0.0700	90.8%	0.0080
3	20:06:45	0.1301	0.0695	0.0628	-0.0343	0.1312	-0.0760	0.5640	89.0%	0.0634	0.0892	0.0734	0.0608	0.0902	91.0%	0.0036
x		0.0870	0.1220	0.0689	0.0035	0.0097	-0.1425	2.2250	89.7%	0.0450	0.0848	0.0547	0.0556	0.0682	90.8%	0.0083
σ		0.0602	0.0793	0.0101	0.0655	0.2109	0.1599	2.8650	0.6%	0.0196	0.0099	0.0229	0.0058	0.0230	0.3%	0.0049
%RSD		69.2300	65.0300	14.6000	1849.0000	2177.0000	112.2000	128.8000	0.7	43.4500	11.7000	41.9800	10.4400	33.6400	0.3	58.7500

Run	Time	107Ag	108Cd	111Cd	115In	118Sn	121Sb	137Ba	159Tb	165Ho	205Tl	208Pb	209Bi
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:06:12	0.0069	0.0061	0.0371	90.0%	0.0839	0.0541	0.1345	90.0%	91.2%	0.1874	-0.0039	90.4%
2	20:06:29	0.0159	0.0059	-0.0001	91.2%	0.0693	0.1215	0.1405	89.9%	89.8%	0.1774	0.0132	92.5%
3	20:06:45	0.0069	0.0061	0.0463	90.1%	0.0637	0.1348	0.1757	92.0%	91.0%	0.1515	0.0127	92.0%
x		0.0099	0.0060	0.0278	90.5%	0.0723	0.1035	0.1502	90.7%	90.7%	0.1721	0.0073	91.7%
σ		0.0052	0.0001	0.0246	0.7%	0.0104	0.0433	0.0223	1.2%	0.8%	0.0185	0.0097	1.1%
%RSD		52.5600	2.0410	88.6100	0.8	14.4000	41.8300	14.8100	1.3	0.9	10.7600	132.5000	1.2

Mass Uncorrected ICPS

SEQ-CAL1@S01 12/30/2015 17:42:37

User Pre-dilution: 1.00

Run	Time	6Li	9Be	25Mg	27Al	39K	44Ca	45Sc	47Ti	51V	52Cr	53Cl O	54Fe	55Mn	59Co	60Ni
1	17:42:37	31929.3060	10.0000	90.0004	2090.2403	22704.9850	803.3688	29430.8960	373.3410	246.0033	92.6671	92.6671	3310.6027	60.0002	50.0001	43.3334
2	17:42:54	32313.9950	0.0000	123.3342	2303.6252	22711.6680	760.0318	29370.7020	300.0050	247.3367	109.3340	93.3338	3283.9264	66.6669	60.0002	36.6667
3	17:43:10	31437.5970	3.3333	106.6673	2467.0014	21986.5550	836.7052	29524.5320	243.3366	252.0035	99.3339	92.0005	3307.2681	63.3336	33.3334	43.3334
x		31893.6330	4.4444	106.6673	2286.9556	22467.7360	800.0353	29442.0430	305.5609	248.4478	100.4450	92.6671	3300.5991	63.3336	47.7779	41.1112
σ		439.2868	5.0918	16.6669	188.9329	416.7281	38.4452	77.5187	65.1800	3.1506	8.3888	0.6667	14.5349	3.3334	13.4716	3.8490
%RSD		1.3773	114.5644	15.6251	8.2613	1.8548	4.8054	0.2633	21.3313	1.2681	8.3516	0.7194	0.4404	5.2632	28.1962	9.3625

Run	Time	65Cu	66Zn	75As	77Se	78Se	82Se	83Kr	89Y	94Mo	95Mo	96Mo	97Mo	98Mo	103Rh	106Cd
1	17:42:37	143.3345	103.3339	4.4444	6.6667	1.1111	10.0000	36.6667	26752.6390	16.6667	26.6667	6.6667	16.6667	13.3333	11617.4180	23.3334
2	17:42:54	73.3336	96.6672	5.5556	0.0000	4.4444	10.0000	36.6667	26766.0120	13.3333	10.0000	0.0000	13.3333	43.3334	11343.7400	20.0000
3	17:43:10	76.6670	103.3339	2.2222	0.0000	4.4444	0.0000	40.0001	26461.7900	10.0000	0.0000	26.6667	3.3333	20.0000	11814.3390	26.6667
x		97.7784	101.1117	4.0741	2.2222	3.3333	6.6667	37.7779	26660.1470	13.3333	12.2222	11.1111	11.1111	25.5556	11591.8320	23.3334
σ		39.4879	3.8490	1.6973	3.8490	1.9245	5.7735	1.9245	171.9124	3.3333	13.4715	13.8778	6.9389	15.7528	236.3404	3.3333
%RSD		40.3851	3.8067	41.6598	173.2051	57.7350	86.6025	5.0943	0.6448	25.0000	110.2215	124.9000	62.4500	61.6412	2.0389	14.2857

Run	Time	107Ag	108Cd	111Cd	115In	118Sn	121Sb	137Ba	159Tb	165Ho	205Tl	208Pb	209Bi
1	17:42:37	10.0000	13.3333	6.6667	57729.3840	50.0001	50.0001	30.0000	67056.4020	67358.6240	160.0014	366.6741	55415.0490
2	17:42:54	10.0000	6.6667	3.3333	58725.7350	56.6668	73.3336	23.3334	66438.5570	67328.4010	153.3346	326.6725	56454.7500
3	17:43:10	3.3333	10.0000	13.3333	59567.8540	50.0001	53.3335	46.6668	67805.2590	69471.0990	136.6677	300.0050	56028.7940
x		7.7778	10.0000	7.7778	58674.3240	52.2224	58.8891	33.3334	67100.0730	68052.7080	150.0012	331.1172	55966.1980
σ		3.8490	3.3333	5.0918	920.3127	3.8490	12.6199	12.0186	684.3968	1228.4555	12.0187	33.5561	522.6694
%RSD		49.4872	33.3333	65.4654	1.5685	7.3705	21.4299	36.0556	1.0200	1.8052	8.0124	10.1342	0.9339

SEQ-CAL2@S02 12/30/2015 17:46:47

User Pre-dilution: 1.00

Run	Time	6Li	9Be	25Mg	27Al	39K	44Ca	45Sc	47Ti	51V	52Cr	53Cl O	54Fe	55Mn	59Co	60Ni
1	17:47:04	31849.0260	20.0000	11390.4650	6942.6500	122908.6100	4954.6832	29895.7430	353.3402	658.6905	290.0046	128.6676	8443.9197	163.3348	486.6797	113.3340
2	17:47:20	32186.8790	30.0000	11080.0810	7269.5721	121928.8900	4684.5400	30430.8470	246.6700	672.6916	271.3374	128.0009	8707.5015	113.3340	366.6741	110.0007
3	17:47:36	31046.2560	33.3334	10766.3720	6905.9554	124026.9800	4797.9324	30026.1710	313.3387	681.3589	277.3376	134.6677	8363.8457	160.0014	406.6758	153.3346
x		31694.0530	27.7778	11078.9730	7039.3925	122954.8300	4812.3852	30117.5870	304.4497	670.9137	279.5599	130.4454	8505.0889	145.5568	420.0098	125.5564
σ		585.8904	6.9389	312.0481	200.1839	1049.8116	135.6503	279.0193	53.8878	11.4383	9.5300	3.6718	179.8085	27.9554	61.1039	24.1143
%RSD		1.8486	24.9800	2.8166	2.8438	0.8538	2.8188	0.9264	17.7001	1.7049	3.4089	2.8148	2.1141	19.2059	14.5482	19.2059

Run	Time	65Cu	66Zn	75As	77Se	78Se	82Se	83Kr	89Y	94Mo	95Mo	96Mo	97Mo	98Mo	103Rh	106Cd
1	17:47:04	323.3391	200.0022	15.5556	6.6667	18.8889	16.6667	50.0001	26368.1850	13.3333	13.3333	10.0000	13.3333	6.6667	11584.0420	36.6667
2	17:47:20	306.6718	186.6686	22.2222	3.3333	27.7778	16.6667	23.3334	27254.1250	16.6667	0.0000	3.3333	13.3333	3.3333	11817.6760	66.6669
3	17:47:36	270.0040	230.0029	12.2222	13.3333	21.1111	10.0000	36.6667	26946.5440	6.6667	6.6667	3.3333	0.0000	0.0000	11577.3670	46.6668
x		300.0050	205.5579	16.6667	7.7778	22.5926	14.4445	36.6667	26856.2850	12.2222	6.6667	5.5556	8.8889	3.3333	11659.6950	50.0001
σ		27.2854	22.1949	5.0918	5.0918	4.6259	3.8490	13.3334	449.8140	5.0918	6.6667	3.8490	7.6980	3.3333	136.8562	15.2753
%RSD		9.0950	10.7974	30.5505	65.4654	20.4754	26.6470	36.3637	1.6749	41.6598	100.0000	69.2821	86.6025	100.0000	1.1738	30.5506

Run	Time	107Ag	108Cd	111Cd	115In	118Sn	121Sb	137Ba	159Tb	165Ho	205Tl	208Pb	209Bi
1	17:47:04	260.0037	13.3333	96.6672	59688.6430	30.0000	570.0179	1076.7304	68853.0910	69054.6110	1323.4297	1250.0859	56739.8500
2	17:47:20	233.3363	20.0000	66.6669	59832.9200	13.3333	603.3534	1210.0805	68990.7960	69068.0450	1450.1156	1086.7316	56022.0860
3	17:47:36	326.6725	10.0000	73.3336	61322.7980	26.6667	583.3521	1110.0678	69283.0050	70455.2970	1386.7724	1216.7481	58517.7340
x		273.3375	14.4445	78.8892	60281.4530	23.3334	585.5744	1132.2929	69042.2970	69525.9840	1386.7726	1184.5219	57093.2230
σ		48.0755	5.0918	15.7529	904.7116	8.8192	16.7785	69.3976	219.5357	804.8362	63.3430	86.3137	1284.8031
%RSD		17.5883	35.2506	19.9683	1.5008	37.7965	2.8653	6.1289	0.3180	1.1576	4.5677	7.2868	2.2504

SEQ-CAL3@S03 12/30/2015 17:51:11

User Pre-dilution: 1.00

Run	Time	6Li	9Be	25Mg	27Al	39K	44Ca	45Sc	47Ti	51V	52Cr	53Cl O	54Fe	55Mn	59Co	60Ni
1	17:51:11	32541.4710	90.0004	26772.6980	14965.6420	265834.0500	10172.3550	30009.4500	326.6725	1285.4242	526.0152	178.6684	15957.3260	306.6718	1073.3967	236.6698
2	17:51:27	33130.2590	113.3340	26862.9640	16087.5550	269441.2800	10132.3100	29815.4800	370.0075	1248.7524	525.3485	187.3353	15750.2990	356.6737	1023.3909	236.6698
3	17:51:44	31678.4310	73.3336	27745.6090	16227.8040	266849.8400	10219.0740	30771.9920	323.3391	1288.7580	540.0160	198.0022	16164.3580	333.3394	933.3813	206.6690
x		32450.0540	92.2227	27127.0900	15760.3340	267375.0600	10174.5790	30198.9740	340.0064	1274.3115	530.4599	188.0020	15957.3280	332.2283	1010.0563	226.6695
σ		730.2184	20.0926	537.5508	691.7869	1860.0863	43.4246	505.6370	26.0352	22.1975	8.2825	9.6841	207.0296	25.0194	70.9538	17.3209
%RSD		2.2503	21.7870	1.9816	4.3894	0.6957	0.4268	1.6744	7.6573	1.7419	1.5614	5.1511	1.2974	7.5308	7.0247	7.6415

Run	Time	65Cu	66Zn	75As	77Se	78Se	82Se	83Kr	89Y	94Mo	95Mo	96Mo	97Mo	98Mo	103Rh	106Cd
1	17:51:11	546.6831	480.0127	37.7779	30.0000	56.6668	13.3333	50.0001	26973.2900	6.6667	6.6667	6.6667	0.0000	3.3333	11760.9360	26.6667
2	17:51:27	540.0160	476.6792	38.8890	20.0000	44.4446	20.0000	33.3334	27645.3040	3.3333	16.6667	0.0000	6.6667	10.0000	11914.4690	60.0002
3	17:51:44	640.0225	476.6792	37.7779	10.0000	42.2223	46.6668	30.0000	27615.2130	186.6686	3.3333	6.6667	6.6667	13.3333	11500.6030	30.0000
x		575.5739	477.7903	38.1482	20.0000	47.7779	26.6667	37.7779	27411.2690	65.5562	8.8889	4.4444	4.4444	8.8889	11725.3360	38.8890
σ		55.9136	1.9246	0.6415	10.0000	7.7778	17.6384	10.7152	379.5993	104.8997	6.9389	3.8490	3.8490	5.0918	209.2170	18.3587
%RSD		9.7144	0.4028	1.6816	50.0000	16.2791	66.1439	28.3637	1.3848	160.0149	78.0625	86.6025	86.6025	57.2822	1.7843	47.2079

Run	Time	107Ag	108Cd	111Cd	115In	118Sn	121Sb	137Ba	159Tb	165Ho	205Tl	208Pb	209Bi
1	17:51:11	700.0270	30.0000	196.6688	59329.6370	30.0000	1226.7494	2613.7090	67173.9320	69071.4040	3233.9084	2483.6726	56126.0580
2	17:51:27	666.6911	16.6667	226.6695	60349.6520	26.6667	1373.4371	2750.4160	68278.7840	69958.1460	3157.2148	2610.3747	58142.0010
3	17:51:44	676.6919	30.0000	223.3361	61990.6380	23.3334	1280.0901	2793.7625	69652.4790	70089.1490	3083.8563	2623.7119	59292.7310
x		681.1366	25.5556	215.5581	60556.6420	26.6667	1293.4255	2719.2959	68368.3980	69706.2330	3158.3265	2572.5864	57853.5970
σ		17.1066	7.6980	16.4433	1342.5219	3.3333	74.2475	93.9743	1241.7014	553.6663	75.0322	77.2899	1602.9155
%RSD		2.5115	30.1227	7.6283	2.2170	12.5000	5.7404	3.4558	1.8162	0.7943	2.3757	3.0044	2.7706

SEQ-CAL4@S04 12/30/2015 17:55:18

User Pre-dilution: 1.00

Run	Time	6Li	9Be	25Mg	27Al	39K	44Ca	45Sc	47Ti	51V	52Cr	53Cl O	54Fe	55Mn	59Co	60Ni
1	17:55:18	32785.6800	190.0020	51374.7560	28618.3080	517283.2100	19250.3600	31016.1530	320.0056	2040.8957	967.3848	222.0027	26886.3660	630.0218	1916.8687	386.6749
2	17:55:35	31765.4000	220.0027	52883.3700	29889.0540	512958.1800	19520.9360	30133.1910	296.6715	2195.5984	939.3819	231.3363	27424.6370	653.3568	1926.8709	383.3414
3	17:55:51	31651.6710	180.0018	53661.2410	30200.0790	511548.6600	19113.4050	30193.3900	303.3384	2200.9331	970.0518	232.0030	28273.8990	620.0211	1910.2007	400.0088
x		32067.5840	196.6688	52639.7890	29569.1470	513930.0200	19294.9000	30447.5780	306.6718	2145.8091	958.9395	228.4473	27528.3010	634.4666	1917.9801	390.0084
σ		624.4837	20.8171	1162.5414	838.0068	2988.2504	207.3844	493.3195	12.0189	90.8968	16.9898	5.5911	699.5511	17.1065	8.3905	8.8196
%RSD		1.9474	10.5849	2.2085	2.8341	0.5815	1.0748	1.6202	3.9191	4.2360	1.7717	2.4475	2.5412	2.6962	0.4375	2.2614

Run	Time	65Cu	66Zn	75As	77Se	78Se	82Se	83Kr	89Y	94Mo	95Mo	96Mo	97Mo	98Mo	103Rh	106Cd
1	17:55:18	976.7191	813.3697	82.2226	30.0000	85.5560	40.0001	50.0001	27040.1550	20.0000	10.0000	6.6667	23.3334	3.3333	11917.8070	66.6669
2	17:55:35	970.0518	846.7061	67.7780	16.6667	83.3337	36.6667	33.3334	27675.3950	16.6667	0.0000	0.0000	10.0000	6.6667	11994.5740	70.0003
3	17:55:51	953.3833	810.0361	80.0004	23.3334	91.1116	43.3334	36.6667	27344.3960	3.3333	3.3333	0.0000	10.0000	6.6667	11991.2370	60.0002
x		966.7181	823.3706	76.6670	23.3334	86.6671	40.0001	40.0001	27353.3150	13.3333	4.4444	2.2222	14.4445	5.5556	11967.8730	65.5558
σ		12.0198	20.2777	7.7778	6.6667	4.0062	3.3333	8.8192	317.7143	8.8192	5.0918	3.8490	7.6980	1.9245	43.3903	5.0918
%RSD		1.2434	2.4628	10.1450	28.5715	4.6225	8.3334	22.0480	1.1615	66.1438	114.5644	173.2051	53.2939	34.6410	0.3626	7.7671

Run	Time	107Ag	108Cd	111Cd	115In	118Sn	121Sb	137Ba	159Tb	165Ho	205Tl	208Pb	209Bi
1	17:55:18	1206.7468	40.0001	386.6749	59437.0020	40.0001	2503.6780	4951.3480	68661.6510	69094.9150	6045.3427	5178.1410	57162.4850
2	17:55:35	1293.4253	33.3334	366.6741	62671.9520	46.6668	2443.6617	5218.1638	70189.9220	71389.2070	6352.2185	4821.2781	57917.2400
3	17:55:51	1326.7635	46.6668	403.3423	61762.4260	30.0000	2573.6976	5278.1985	69195.6770	70186.5630	6432.2748	5008.0457	57853.5030
x		1275.6452	40.0001	385.5637	61290.4600	38.8890	2507.0125	5149.2368	69349.0840	70223.5620	6276.6120	5002.4883	57644.4090
σ		61.9524	6.6667	18.3593	1668.3194	8.3887	65.0820	173.9857	775.5988	1147.5932	204.2459	178.4963	418.5733
%RSD		4.8566	16.6667	4.7617	2.7220	21.5710	2.5960	3.3789	1.1184	1.6342	3.2541	3.5682	0.7261

SEQ-CAL5@S05 12/30/2015 17:59:24

User Pre-dilution: 1.00

Run	Time	6Li	9Be	25Mg	27Al	39K	44Ca	45Sc	47Ti	51V	52Cr	53Cl O	54Fe	55Mn	59Co	60Ni
1	17:59:24	32574.9240	1760.1704	25712.9790	249922.1100	258832.9800	10075.5800	30470.9810	426.6767	4093.5881	4641.8514	627.3550	32043.0390	5591.7192	18485.4420	3867.4892
2	17:59:40	32227.0210	1930.2049	26318.0400	257615.8000	262001.8400	10108.9510	30487.7040	330.0060	4116.2650	4549.1379	684.6925	33605.3310	5458.3048	18234.9370	3694.0837
3	17:59:57	32441.1140	1790.1762	26518.6220	258750.6900	258359.8000	10132.3100	30193.3900	290.0046	4158.9511	4627.1773	672.6916	34003.4740	5441.6281	18729.2730	3920.8453
x		32414.3530	1826.8505	26183.2140	255429.5300	259731.5400	10105.6140	30384.0250	348.8958	4122.9348	4606.0556	661.5797	33217.2810	5497.2174	18483.2170	3827.4727
σ		175.4887	90.7562	419.4028	4803.2023	1980.3211	28.5117	165.3060	70.2668	33.1880	49.8352	30.2407	1036.2257	82.2646	247.1759	118.5588
%RSD		0.5414	4.9679	1.6018	1.8804	0.7624	0.2821	0.5441	20.1398	0.8050	1.0819	4.5710	3.1195	1.4965	1.3373	3.0976

Run	Time	65Cu	66Zn	75As	77Se	78Se	82Se	83Kr	89Y	94Mo	95Mo	96Mo	97Mo	98Mo	103Rh	106Cd
1	17:59:24	4544.4689	3587.3743	665.5799	63.3336	198.8911	103.3339	40.0001	27752.2960	2920.4690	5094.7605	5745.1481	3167.2183	8270.4270	11971.2100	423.3432
2	17:59:40	4561.1439	3420.6434	703.3605	83.3337	174.4461	83.3337	53.3335	27501.5360	3133.8734	5381.5924	5938.6057	3250.5810	8687.4823	11821.0140	410.0093
3	17:59:57	4701.2153	3587.3743	685.5814	66.6669	180.0018	100.0006	40.0001	27320.9920	2950.4787	5471.6461	5588.3838	3347.2828	8834.2904	12465.2070	493.3467
x		4602.2760	3531.7974	684.8406	71.1114	184.4463	95.5561	44.4446	27524.9410	3001.6070	5315.9997	5757.3792	3255.0274	8597.3999	12085.8100	442.2331
σ		86.0886	96.2621	18.9012	10.7153	12.8142	10.7153	7.6980	216.6023	115.5246	196.8184	175.4310	90.1146	292.5263	337.0401	44.7650
%RSD		1.8706	2.7256	2.7599	15.0683	6.9474	11.2136	17.3206	0.7869	3.8498	3.7024	3.0471	2.7685	3.4025	2.7887	10.1225

Run	Time	107Ag	108Cd	111Cd	115In	118Sn	121Sb	137Ba	159Tb	165Ho	205Tl	208Pb	209Bi
1	17:59:24	2193.5980	253.3369	4144.2777	60477.1620	10746.3480	12024.6140	5188.1467	67711.2290	69501.3290	62098.0340	45352.8470	56820.3510
2	17:59:40	2146.9201	290.0046	4164.2869	60896.6140	11280.3280	12912.4970	5234.8401	68913.5460	70498.9670	63742.6910	48267.7990	57350.3300
3	17:59:57	2346.9696	310.0053	4244.3239	61990.6380	11300.3520	12592.0480	5371.5865	70354.5210	71174.1970	63356.6740	48217.5330	57816.6020
x		2229.1626	284.4489	4184.2962	61121.4710	11109.0090	12509.7200	5264.8578	68993.0990	70391.4980	63065.8000	47279.3930	57329.0940
σ		104.6593	28.7398	52.9395	781.3918	314.2335	449.6305	95.3328	1323.4403	841.5964	860.0468	1668.6270	498.4653
%RSD		4.6950	10.1037	1.2652	1.2784	2.8286	3.5942	1.8107	1.9182	1.1956	1.3637	3.5293	0.8695

SEQ-CAL6@S06 12/30/2015 18:03:29

User Pre-dilution: 1.00

Run	Time	6Li	9Be	25Mg	27Al	39K	44Ca	45Sc	47Ti	51V	52Cr	53Cl O	54Fe	55Mn	59Co	60Ni
1	18:03:29	31909.2360	8377.1913	125929.5400	1262205.9000	r 1201628.1000	46622.5790	30504.4260	413.3427	18701.2160	22388.8690	2759.0853	148594.5700	26872.9930	89569.0810	17931.0000
2	18:03:46	32103.2510	8644.1077	129198.2600	1284532.9000	r 1192996.2000	47577.5070	30320.4790	366.6741	18919.6670	22316.0230	2863.7843	151095.2900	26986.6630	92609.3160	18191.5160
3	18:04:02	32765.6080	8767.5592	128004.8900	1308324.6000	r 1152740.9000	47215.6280	30263.6230	323.3391	19180.2120	22481.7640	2807.1000	150824.1800	27444.6980	90161.5610	18518.8430
x		32259.3650	8596.2860	127710.9000	1285021.1000	r 1182455.1000	47138.5720	30362.8430	367.7853	18933.6980	22395.5520	2809.9899	150171.3500	27101.4510	90779.9860	18213.7860
σ		449.0231	199.5293	1654.0737	23063.2010	r 26092.6260	482.1051	125.8671	45.0121	239.8063	83.0724	52.4093	1372.2368	302.6445	1611.7054	294.5538
%RSD		1.3919	2.3211	1.2952	1.7948	r 2.2066	1.0227	0.4145	12.2387	1.2666	0.3709	1.8651	0.9138	1.1167	1.7754	1.6172

Run	Time	65Cu	66Zn	75As	77Se	78Se	82Se	83Kr	89Y	94Mo	95Mo	96Mo	97Mo	98Mo	103Rh	106Cd
1	18:03:29	21742.6360	17052.6450	3554.0279	323.3391	851.1510	483.3462	40.0001	26829.5320	14177.7130	26013.8330	28263.8680	16431.5030	41976.6890	11757.5960	1700.1590
2	18:03:46	22718.3510	17657.1310	3550.6933	260.0037	808.9249	436.6772	40.0001	26568.7680	14858.8000	26796.1000	29457.6490	16962.4770	43681.3590	11804.3260	1970.2135
3	18:04:02	22330.7260	17683.8490	3552.9203	186.6686	838.9276	456.6781	43.3334	27942.8780	15099.1950	27314.3060	29721.8400	16895.6860	44287.6140	11694.1830	1763.5044
x		22263.9050	17464.5420	3555.8805	256.6705	833.0011	458.9005	41.1112	27113.7260	14711.9030	26708.0800	29147.7860	16763.2220	43315.2210	11752.0360	1811.2923
σ		491.2777	356.9630	6.3205	68.3962	21.7279	23.4138	1.9245	729.8080	477.9815	654.6892	776.8089	289.2116	1198.1806	55.2814	141.2272
%RSD		2.2066	2.0439	0.1777	26.6475	2.6084	5.1021	4.6812	2.6917	3.2489	2.4513	2.6651	1.7253	2.7662	0.4704	7.7970

Run	Time	107Ag	108Cd	111Cd	115In	118Sn	121Sb	137Ba	159Tb	165Ho	205Tl	208Pb	209Bi
1	18:03:29	10526.0900	1303.4268	20182.3780	60433.5400	53285.7090	60946.9500	25261.7160	67892.5740	69081.4800	316081.0000	232577.5000	56753.2670
2	18:03:46	11287.0020	1386.7724	20529.8220	61621.4740	54315.1070	61876.5310	26043.9190	69974.9410	70670.2890	323653.9200	237379.2500	57930.6580
3	18:04:02	11380.4520	1396.7740	20867.2550	61238.9020	56062.3330	64138.7960	25809.9200	70502.3250	72575.2090	326734.5700	242248.5300	59336.3480
x		11064.5150	1362.3244	20526.4850	61097.9720	54554.3830	62320.7590	25705.1850	69456.6140	70775.6590	322156.5000	237401.7600	58006.7580
σ		468.6246	51.2514	342.4507	606.3771	1403.6915	1641.6377	401.4813	1379.9271	1749.2461	5482.3642	4835.5562	1293.2208
%RSD		4.2354	3.7621	1.6683	0.9925	2.5730	2.6342	1.5619	1.9867	2.4715	1.7018	2.0369	2.2294

SEQ-CAL7@S07 12/30/2015 18:07:34

User Pre-dilution: 1.00

Run	Time	6Li	9Be	25Mg	27Al	39K	44Ca	45Sc	47Ti	51V	52Cr	53Cl O	54Fe	55Mn	59Co	60Ni
1	18:07:34	31176.7010	80457.8050	τ1218207.4000	τ11579753.0000	τ11101561.0000	451920.3300	28762.0940	376.6745	177760.4400	210946.6800	25632.0840	1442312.1000	259525.6500	861138.0300	170072.7900
2	18:07:50	31768.7450	79714.6340	τ1227804.7000	τ11630195.0000	τ10946874.0000	447366.5200	27949.5660	313.3387	181272.7800	212768.4000	25788.5260	1467538.4000	261027.7500	870565.6600	167298.6800
3	18:08:07	31397.4590	82250.4060	τ1222690.3000	τ11802543.0000	τ10954377.0000	454931.7600	29678.3650	270.0040	180775.0200	214551.5900	26158.9150	1496522.7000	263387.7000	876822.9600	172124.1900
x		31447.6350	80807.6150	τ1222900.8000	τ11670830.0000	τ11004271.0000	451406.2100	28796.6750	320.0057	179936.0800	212755.5600	25859.8420	1463791.1000	261313.7000	869508.8800	169831.8900
σ		299.1945	1303.5761	τ4802.1004	τ116821.5100	τ84709.1570	3808.7365	864.9186	53.6468	1900.5267	1802.4871	270.5590	27127.0280	1946.8426	7895.6846	2421.7551
%RSD		0.9514	1.6132	τ0.3927	τ1.0010	τ0.7698	0.8437	3.0035	16.7643	1.0562	0.8472	1.0463	1.8469	0.7450	0.9081	1.4260

Run	Time	65Cu	66Zn	75As	77Se	78Se	82Se	83Kr	89Y	94Mo	95Mo	96Mo	97Mo	98Mo	103Rh	106Cd
1	18:07:34	204392.1500	159252.7700	33058.8890	2333.6328	8010.1941	3587.3743	73.3336	26331.4120	138432.7000	248038.2200	272218.8800	156987.2000	404325.7600	11216.9160	16134.3050
2	18:07:50	206335.3100	162509.6500	33494.9250	2510.3466	8169.2244	3787.4555	66.6669	26043.9190	142210.3400	261586.8100	282089.7400	159846.3800	421349.9800	11223.5910	16822.2170
3	18:08:07	208336.8600	164321.7900	33690.0890	2513.6808	8257.0815	3684.0797	30.0000	25987.0900	144208.1100	264639.9600	284193.7700	163693.9500	429749.7900	10903.2010	17039.2870
x		206354.7700	162028.0700	33414.6340	2452.5534	8145.5000	3686.3032	56.6669	26120.8070	141617.0500	258088.3300	279500.8000	160175.8500	418475.1800	11114.5690	16665.2690
σ		1972.4271	2568.5957	323.1691	103.0017	125.1419	100.0591	23.3335	184.5894	2933.0594	8836.5114	6393.4684	3365.4880	12953.5180	183.0805	472.4643
%RSD		0.9558	1.5853	0.9671	4.1998	1.5363	2.7143	41.1766	0.7067	2.0711	3.4238	2.2875	2.1011	3.0954	1.6472	2.8350

Run	Time	107Ag	108Cd	111Cd	115In	118Sn	121Sb	137Ba	159Tb	165Ho	205Tl	208Pb	209Bi
1	18:07:34	101159.7200	12361.7320	189583.0600	63356.6740	505426.7500	588863.5000	247531.3500	65864.4020	68510.5170	τ2932616.4000	2340669.0000	53409.7670
2	18:07:50	104072.3200	12945.8780	196310.2700	64558.4170	534271.3600	619873.2800	254239.3800	67633.9910	69319.9520	τ2977435.8000	2397376.0000	54083.7340
3	18:08:07	106631.7200	12952.5540	197335.4400	64729.6280	537479.0700	628150.1100	259031.8600	70357.8800	68601.1970	τ2973176.7000	2455573.8000	55914.7610
x		103954.5900	12753.3880	194409.5900	64214.9060	525725.7300	612295.6300	253600.8600	67952.0910	68810.5550	τ2961076.3000	2397872.9000	54469.4210
σ		2737.9016	339.2003	4211.2078	748.1650	17652.4420	20710.5050	5776.7809	2263.5650	443.4741	τ24738.8520	57453.9980	1296.2697
%RSD		2.6337	2.6597	2.1662	1.1651	3.3577	3.3824	2.2779	3.3311	0.6445	τ0.8355	2.3960	2.3798

SEQ-CAL8@S08 12/30/2015 18:11:38

User Pre-dilution: 1.00

Run	Time	6Li	9Be	25Mg	27Al	39K	44Ca	45Sc	47Ti	51V	52Cr	53Cl O	54Fe	55Mn	59Co	60
1	18:11:38	31842.3360	155410.4600	τ2351033.7000	τ22485192.0000	τ21652042.0000	874680.5900	27568.4040	363.3406	353317.6200	μ415494.1500	50271.9500	τ2745531.1000	508635.1400	μ1719005.3000	324942.00
2	18:11:54	30955.9490	161230.5100	τ2308666.7000	τ23131297.0000	τ21120888.0000	880647.4700	28578.1820	360.0071	μ355738.6800	μ419483.2200	50907.4720	τ2779773.9000	517716.8900	1741689.8000	330503.88
3	18:12:11	30544.5610	μ160799.6400	τ2388775.6000	τ22708578.0000	τ21388507.0000	894966.3600	28534.7120	253.3369	357462.3600	μ418470.0900	51315.7580	τ2770742.5000	528364.0100	μ1741729.9000	326796.74
x		31114.2820	μ159146.8700	τ2349492.0000	τ22775023.0000	τ21387146.0000	883431.4700	28227.1000	325.5615	μ355506.2200	μ417815.8200	50831.7260	τ2765349.2000	518238.6800	μ1734141.6000	327414.21
σ		663.2171	μ3242.9904	τ40076.6830	τ328137.2200	τ265579.1400	10425.5050	570.8608	62.5706	μ2082.1220	μ2073.4577	526.0101	τ17747.0610	9874.7767	μ13108.5050	2831.88
%RSD		2.1316	μ2.0377	τ1.7058	τ1.4408	τ1.2418	1.1801	2.0224	19.2193	μ0.5857	μ0.4963	1.0348	τ0.6418	1.9054	μ0.7559	0.86

Run	Time	65Cu	66Zn	75As	77Se	78Se	82Se	83Kr	89Y	94Mo	95Mo	96Mo	97Mo	98Mo	103Rh	106
1	18:11:38	394076.7800	305873.9400	64402.8760	4814.6079	15197.1360	7196.1804	86.6671	25154.7540	270079.8200	486856.6400	530997.6700	308231.6000	814674.4000	10759.6970	31297.11
2	18:11:54	394459.5200	305153.6600	μ65138.0860	4767.9167	15479.8350	6982.6807	80.0004	26080.6910	274444.3200	508920.4700	546228.1300	313990.4000	830906.1200	10806.4190	31959.41
3	18:12:11	398110.2700	305822.2400	64916.5090	4931.3371	μ15790.3680	7242.8841	100.0006	25719.6650	282502.2600	514981.2100	553530.5700	318996.9100	828613.7200	10826.4430	31976.12
x		395548.8500	305616.6100	μ64819.1570	4837.9539	μ15489.1130	7140.5817	88.8893	25651.7030	275675.4600	503586.1100	543585.4600	313739.6300	824731.4100	10797.5200	31744.22
σ		2226.4901	401.7604	μ377.1494	84.1745	μ296.7248	138.7259	10.1836	466.6947	6302.0670	14801.6730	11496.5520	5387.0377	8784.7250	34.2513	387.29
%RSD		0.5629	0.1315	μ0.5818	1.7399	μ1.9157	1.9428	11.4565	1.8194	2.2860	2.9393	2.1149	1.7170	1.0652	0.3172	1.22

Run	Time	107Ag	108Cd	111Cd	115In	118Sn	121Sb	137Ba	159Tb	165Ho	205Tl	208Pb	209Bi
1	18:11:38	190767.4600	24389.3390	362742.1100	67184.0060	1000144.0000	μ1156224.1000	479865.9200	64813.5560	67318.3270	τ5591968.8000	τ4226431.5000	51998.2860
2	18:11:54	193865.3000	24633.3290	372550.3800	68738.8980	1038080.8000	μ1191794.9000	488462.7800	66247.1680	67002.6750	τ5782942.4000	τμ4406198.6000	52963.8360
3	18:12:11	μ196136.5800	24910.7500	373834.8700	67563.4690	1037551.9000	μ1204508.3000	490719.5800	66478.8500	67422.4280	τ5722035.6000	τ4455601.3000	53879.1910
x		μ193589.7800	24644.4730	369709.1200	67828.7910	1025258.9000	μ1184175.8000	486349.4300	65846.5250	67247.8100	τ5698982.3000	τμ4362743.6000	52947.1050
σ		μ2695.1441	260.8840	6067.6938	810.6907	21751.7750	μ25027.5750	5727.1439	902.0460	218.5810	τ97551.6310	τμ120606.5700	940.5643
%RSD		μ1.3922	1.0586	1.6412	1.1952	2.1216	μ2.1135	1.1776	1.3699	0.3250	τ1.7117	τμ2.7645	1.7764

SEQ-CAL9@S09 12/30/2015 18:15:41

User Pre-dilution: 1.00

Run	Time	6Li	9Be	25Mg	27Al	39K	44Ca	45Sc	47Ti	51V	52Cr	53Cl O	54Fe	55Mn	59Co	60Ni
1	18:15:41	33284.1530	26.6667	646.6897	5521.6764	29497.7790	1100.0666	29758.6270	396.6753	198.6688	167.3349	60.0002	3904.1715	τμ2678898.1000	273.3374	93.3338
2	18:15:58	33504.9620	20.0000	570.0179	6182.1013	29842.2340	1200.0792	29882.3650	340.0064	198.6688	168.0016	62.0002	3827.4722	τμ2691502.3000	263.3372	83.3337
3	18:16:14	33351.0640	13.3333	753.3646	6485.6460	29069.7370	1080.0642	29497.7790	306.6718	232.6696	146.6679	58.0002	3947.5235	τμ2736486.7000	396.6753	106.6673
x		33380.0600	20.0000	656.6907	6063.1412	29469.9170	1126.7366	29712.9240	347.7845	210.0024	160.6681	60.0002	3893.0558	τμ2702295.7000	311.1166	94.4449
σ		113.2241	6.6667	92.0816	492.8722	387.0015	64.2991	196.3243	45.5031	19.6304	12.1291	2.0000	60.7927	τμ30273.4910	74.2645	11.7064
%RSD		0.3392	33.3334	14.0221	8.1290	1.3132	5.7067	0.6607	13.0837	9.3477	7.5492	3.3333	1.5616	τμ1.1203	23.8703	12.3950

Run	Time	65Cu	66Zn	75As	77Se	78Se	82Se	83Kr	89Y	94Mo	95Mo	96Mo	97Mo	98Mo	103Rh	106Cd
1	18:15:41	663.3575	μ1708787.3000	25.5556	6.6667	4.4444	16.6667	90.0004	26876.3370	43.3334	83.3337	123.3342	70.0003	173.3350	11173.5290	26.6667
2	18:15:58	770.0326	μ1759998.2000	15.5556	3.3333	5.5556	10.0000	66.6669	26384.9000	90.0004	113.3340	143.3345	83.3337	160.0014	11297.0150	33.3334
3	18:16:14	660.0240	μ1793565.4000	16.6667	3.3333	11.1111	13.3333	80.0004	26819.5020	80.0004	123.3342	136.6677	76.6670	203.3356	11023.3460	56.6668
x		697.8047	μ1754117.0000	19.2593	4.4444	7.0370	13.3333	78.8892	26693.5800	71.1114	106.6673	134.4454	76.6670	178.8907	11164.6300	38.8890
σ		62.5734	μ42693.9280	5.4810	1.9245	3.5717	3.3333	11.7064	268.8305	24.5706	20.8169	10.1837	6.6667	22.1949	137.0514	15.7528
%RSD		8.9672	μ2.4339	28.4590	43.3013	50.7561	25.0000	14.8390	1.0071	34.5522	19.5157	7.5746	8.6957	12.4069	1.2275	40.5071

Run	Time	107Ag	108Cd	111Cd	115In	118Sn	121Sb	137Ba	159Tb	165Ho	205Tl	208Pb	209Bi
1	18:15:41	40.0001	16.6667	50.0001	57960.8500	216.6693	310.0053	τ2461233.1000	67197.4380	67936.2320	1580.1373	903.3782	55324.5000
2	18:15:58	50.0001	16.6667	70.0003	59453.7780	236.6698	350.0067	τ2504930.6000	68339.2350	69000.8720	1580.1373	820.0370	56578.8510
3	18:16:14	46.6658	23.3334	80.0004	59423.5810	276.6709	403.3423	τ2543537.4000	67472.7990	67533.2460	1646.8158	920.0466	56582.2050
x		45.5557	18.8889	66.6669	58946.0700	243.3366	354.4514	τ2503233.7000	67669.8240	68156.7830	1602.3635	881.1539	56161.8520
σ		5.0918	3.8490	15.2754	853.3589	30.5513	46.8270	τ41178.3810	595.8519	758.2635	38.4968	53.5809	725.1703
%RSD		11.1770	20.3771	22.9130	1.4477	12.5552	13.2111	τ1.6450	0.8805	1.1125	2.4025	6.0808	1.2912

SEQ-CALA@S10 12/30/2015 18:19:45

User Pre-dilution: 1.00

Run	Time	6Li	9Be	25Mg	27Al	39K	44Ca	45Sc	47Ti	51V	52Cr	53Cl O	54Fe	55Mn	59Co	60Ni
1	18:19:45	30594.7290	13.3333	ŕ11080375.0000	ŕ101062880.0000	ŕ104540320.0000	ŕ4117921.7000	27488.1620	330.0060	143.3345	328.0059	76.6670	ŕ12706843.0000	1790.1762	793.3680	753.3646
2	18:20:01	30133.1910	23.3334	ŕ11527722.0000	ŕ106131860.0000	ŕM107140290.0000	ŕM4310108.1000	27180.5720	340.0064	133.3343	308.0052	75.3336	ŕ12887656.0000	1773.5063	770.0326	770.0326
3	18:20:17	30146.5690	10.0000	ŕ11699132.0000	ŕM108980230.0000	ŕM108962480.0000	ŕM4368101.6000	27625.2430	213.3358	151.3346	325.3392	67.3336	ŕ13061411.0000	1776.8403	776.6998	740.0301
x		30291.4960	15.5556	ŕ11435743.0000	ŕM105391660.0000	ŕM106881030.0000	ŕM4265377.1000	27431.3260	294.4494	142.6678	320.4501	73.1114	ŕ12885303.0000	1780.1743	780.0335	754.4758
σ		262.6923	6.9389	ŕ319468.2200	ŕM4010245.7000	ŕM2222452.5000	ŕM130950.8900	227.7186	70.4241	9.0186	10.8598	5.0480	ŕ177295.4900	8.8209	12.0195	15.0321
%RSD		0.8672	44.6072	ŕ2.7936	ŕM3.8051	ŕM2.0794	ŕM3.0701	0.8301	23.9172	6.3214	3.3889	6.9045	ŕ1.3760	0.4955	1.5409	1.9924

Run	Time	65Cu	66Zn	75As	77Se	78Se	82Se	83Kr	89Y	94Mo	95Mo	96Mo	97Mo	98Mo	103Rh	106Cd
1	18:19:45	506.6808	540.0160	20.0000	3.3333	6.6667	3.3333	253.3369	24145.3560	73.3336	126.6676	153.3346	60.0002	183.3352	9114.5669	30.0000
2	18:20:01	450.0111	433.3437	14.4445	0.0000	7.7778	3.3333	286.6712	23710.8810	96.6672	146.6679	196.6688	83.3337	196.6688	9575.0398	40.0001
3	18:20:17	526.6819	490.0132	20.0000	0.0000	4.4444	13.3333	303.3384	24616.6170	76.6670	123.3342	166.6682	73.3336	193.3354	9571.7030	30.0000
x		494.4580	487.7910	18.1482	1.1111	6.2963	6.6667	281.1155	24157.6180	82.2226	132.2232	172.2239	72.2225	191.1131	9420.4366	33.3334
σ		39.7700	53.3709	3.2075	1.9245	1.6973	5.7735	25.4595	452.9925	12.6199	12.6200	22.1949	11.7064	6.9390	264.8962	5.7735
%RSD		8.0431	10.9413	17.6740	173.2051	26.9563	86.6026	9.0566	1.8752	15.3485	9.5445	12.8872	16.2088	3.6309	2.8119	17.3205

Run	Time	107Ag	108Cd	111Cd	115In	118Sn	121Sb	137Ba	159Tb	165Ho	205Tl	208Pb	209Bi
1	18:19:45	30.0000	26.6667	20.0000	51133.4010	86.6671	610.0205	346.6733	59014.2610	59957.0670	586.6856	946.7160	44277.5660
2	18:20:01	36.6667	20.0000	30.0000	51901.0660	153.3346	573.3514	386.6749	60604.6730	60477.1620	620.0211	970.0518	45423.1970
3	18:20:17	53.3335	6.6667	30.0000	51813.9050	93.3338	556.6837	463.3451	60074.5050	61292.5950	590.0192	1003.3887	44833.6140
x		40.0001	17.7778	26.6667	51616.1240	111.1118	580.0185	398.8978	59897.8130	60575.6080	598.9086	973.3855	44844.7920
σ		12.0186	10.1835	5.7735	420.3156	36.7176	27.2863	59.2865	809.7948	673.1849	18.3598	28.4831	572.8974
%RSD		30.0463	57.2822	21.6507	0.8143	33.0456	4.7044	14.8631	1.3520	1.1113	3.0655	2.9262	1.2775

SEQ-ICV@ICV01 12/30/2015 18:27:52 QC Status: PASS (Initial: FAIL)

User Pre-dilution: 1.00

Run	Time	6Li	9Be	25Mg	27Al	39K	44Ca	45Sc	47Ti	51V	52Cr	53Cl O	54Fe	55Mn	59Co	60Ni
1	18:28:09	36489.7530	18335.1380	134846.0600	526923.9300	ŕ2038389.6000	79146.3680	30547.9050	376.6745	38862.2210	44047.1170	5489.6570	128941.3200	56900.8520	186333.5700	38390.8920
2	18:28:25	35790.3140	18358.5180	135519.2900	530972.9500	ŕ1980423.8000	78268.8200	30337.2010	283.3378	39110.6160	45203.4390	5521.6764	129600.5900	57638.8120	188892.2400	38143.1850
3	18:28:41	36399.3910	18114.6970	131308.1700	534183.0600	ŕ2034687.9000	77818.3100	30109.7810	310.0053	39138.7370	44784.7070	5630.4097	128265.1900	56223.3220	189110.0300	38471.2300
x		36226.4860	18269.4510	133891.1700	530693.3100	ŕ2017833.8000	78411.1660	30331.6290	323.3392	39037.1910	44678.4210	5547.2477	128935.7000	56920.9950	188111.9500	38335.1020
σ		380.4287	134.5301	2262.1346	3637.6380	ŕ32450.7800	675.3750	219.1155	48.0758	152.1797	585.4423	73.7784	667.7211	707.9598	1543.9618	170.9902
%RSD		1.0501	0.7364	1.6895	0.6855	ŕ1.6082	0.8613	0.7224	14.8685	0.3898	1.3103	1.3300	0.5179	1.2438	0.8208	0.4460

Run	Time	65Cu	66Zn	75As	77Se	78Se	82Se	83Kr	89Y	94Mo	95Mo	96Mo	97Mo	98Mo	103Rh	106Cd
1	18:28:09	45774.9550	71537.0290	14975.6580	1140.0715	3665.1831	1633.4801	46.6668	27120.3930	23.3334	10.0000	23.3334	3.3333	26.6667	11477.2400	3407.3051
2	18:28:25	46847.0620	71718.4500	14704.1040	1036.7258	3619.6093	1510.1254	60.0002	26665.7180	10.0000	16.6667	26.6667	20.0000	20.0000	11236.9400	3470.6624
3	18:28:41	47031.3430	70700.5230	15183.7810	1076.7304	3684.0797	1726.8307	43.3334	26919.7980	20.0000	10.0000	43.3334	10.0000	0.0000	11510.6160	3780.7860
x		46551.1200	71318.6670	14954.5140	1084.5092	3656.2907	1623.4787	50.0001	26901.9700	17.7778	12.2222	31.1112	11.1111	15.5556	11408.2660	3552.9178
σ		678.4647	542.9596	240.5362	52.1101	33.1423	108.6983	8.8192	227.8614	6.9389	3.8490	10.7152	8.3887	13.8778	149.3074	199.8661
%RSD		1.4575	0.7613	1.6085	4.8050	0.9064	6.6954	17.6384	0.8470	39.0313	31.4919	34.4417	75.4984	89.2143	1.3088	5.6254

Run	Time	107Ag	108Cd	111Cd	115In	118Sn	121Sb	137Ba	159Tb	165Ho	205Tl	208Pb	209Bi
1	18:28:09	168286.6700	2543.6892	38682.1220	57655.5850	53.3335	234690.7800	50121.1200	64299.9280	66525.8590	1246771.1000	902381.7600	53000.7170
2	18:28:25	170093.1600	2660.3892	39897.3570	58356.7040	63.3336	242145.8500	50895.4040	65921.4800	65391.0030	1264729.9000	907645.7900	54509.5990
3	18:28:41	168578.6700	2657.0549	40268.9900	58967.2910	50.0001	242293.0300	51378.1080	66092.7170	67022.8230	1263006.5000	915435.1100	55160.1730
x		168986.1700	2620.3778	39616.1570	58326.5260	55.5557	239709.8900	50798.2110	65438.0420	66313.2280	1258169.2000	908487.5500	54223.4960
σ		969.7375	66.4352	829.9657	656.3738	6.9389	4347.2963	634.1053	989.3468	836.4315	9908.5567	6567.2602	1107.7922
%RSD		0.5739	2.5353	2.0950	1.1253	12.4900	1.8136	1.2483	1.5119	1.2613	0.7875	0.7229	2.0430

SEQ-ICB@ICB01 12/30/2015 18:32:16 QC Status: PASS (Initial: PASS)

User Pre-dilution: 1.00

Run	Time	6Li	9Be	25Mg	27Al	39K	44Ca	45Sc	47Ti	51V	52Cr	53Cl O	54Fe	55Mn	59Co	60Ni
1	18:32:16	33702.3560	6.6667	130.0009	2010.2222	30333.8570	716.6949	28738.6870	390.0084	208.0024	98.6672	88.0004	3403.9705	73.3336	46.6668	50.0001
2	18:32:33	32631.7940	3.3333	116.6674	2236.9418	30845.5740	773.3662	29343.9490	326.6725	212.0025	106.0006	77.3337	3504.0085	70.0003	56.6668	20.0000
3	18:32:49	32511.3640	3.3333	170.0016	2240.2760	30517.8040	816.7034	29310.5080	330.0060	213.3358	118.6674	94.6672	3540.6894	80.0004	40.0001	16.6667
x		32948.5050	4.4444	138.8900	2162.4800	30565.7450	768.9215	29131.0480	348.8956	211.1136	107.7784	86.6671	3482.8895	74.4447	47.7779	28.8889
σ		655.6255	1.9245	27.7560	131.8697	259.2054	50.1522	340.2059	35.6437	2.7756	10.1179	8.7433	70.7639	5.0918	8.3887	18.3586
%RSD		1.9898	43.3013	19.9842	6.0981	0.8480	6.5224	1.1678	10.2161	1.3148	9.3877	10.0884	2.0318	6.8397	17.5578	63.5490

Run	Time	65Cu	66Zn	75As	77Se	78Se	82Se	83Kr	89Y	94Mo	95Mo	96Mo	97Mo	98Mo	103Rh	106Cd
1	18:32:16	133.3343	90.0004	7.7778	0.0000	4.4444	13.3333	26.6667	25595.9830	10.0000	0.0000	13.3333	10.0000	16.6667	11233.6030	33.3334
2	18:32:33	103.3339	113.3340	2.2222	0.0000	6.6667	10.0000	36.6667	25037.7650	13.3333	16.6667	3.3333	23.3334	10.0000	10759.6970	20.0000
3	18:32:49	116.6674	96.6672	5.5556	0.0000	6.6667	10.0000	20.0000	25138.0410	23.3334	10.0000	16.6667	16.6667	36.6667	11143.4920	36.6667
x		117.7786	100.0006	5.1852	0.0000	5.9259	11.1111	27.7778	25257.2630	15.5556	8.8889	11.1111	16.6667	21.1111	11045.5970	30.0001
σ		15.0310	12.0186	2.7962	0.0000	1.2830	1.9245	8.3887	297.5941	6.9389	8.3887	6.9389	6.6667	13.8778	251.6630	8.8192
%RSD		12.7621	12.0186	53.9274	0.0000	21.6506	17.3205	30.1994	1.1783	44.6072	94.3729	62.4500	40.0000	65.7369	2.2784	29.3973

Run	Time	107Ag	108Cd	111Cd	115In	118Sn	121Sb	137Ba	159Tb	165Ho	205Tl	208Pb	209Bi
1	18:32:16	36.6667	13.3333	16.6667	55146.7580	56.6668	166.6682	40.0001	62551.1240	62762.5740	206.6690	256.6703	52558.1590
2	18:32:33	40.0001	0.0000	6.6667	55559.2590	43.3334	136.6677	33.3334	64326.7840	64514.7760	230.0029	200.0022	53463.4140
3	18:32:49	66.6669	0.0000	10.0000	56183.0750	56.6668	173.3350	50.0001	62517.5610	64118.6550	246.6700	176.6684	53382.9430
x		47.7779	4.4444	11.1111	55629.6970	52.2224	158.8903	41.1112	63131.8230	63798.6680	227.7807	211.1136	53134.8390
σ		16.4430	7.6980	5.0918	521.7367	7.6980	19.5319	8.3887	1035.0026	918.8832	20.0929	41.1421	501.0379
%RSD		34.4156	173.2051	45.8258	0.9379	14.7409	12.2927	20.4050	1.6394	1.4403	8.8212	19.4881	0.9430

SEQ-IFA@ICSA01 12/30/2015 18:36:23 QC Status: PASS (Initial: PASS)

User Pre-dilution: 1.00

Run	Time	6Li	9Be	25Mg	27Al	39K	44Ca	45Sc	47Ti	51V	52Cr	53Cl O	54Fe	55Mn	59Co	60Ni
1	18:36:23	28655.0900	50.0001	r9206111.9000	r81842878.0000	r86426834.0000	r3388699.3000	26358.1560	192476.2500	180.0018	8066.9109	1018.7237	r10204357.0000	4571.1490	2126.9154	2260.2810
2	18:36:39	30093.0590	46.6668	r9294555.3000	r82872876.0000	r84582381.0000	r3409834.5000	27514.9090	199989.1600	169.3349	8102.2756	1050.7274	r10288913.0000	4341.0362	2346.9696	2116.9131
3	18:36:55	28250.4940	63.3336	r9328366.7000	r85321807.0000	r84841256.0000	r3525358.2000	26903.0820	201648.5500	198.6688	8044.2241	1070.0630	r10743723.0000	4324.3616	2156.9225	2293.6226
x		28999.5470	53.3335	r9276344.6000	r83345854.0000	r85283490.0000	r3441297.4000	26925.3830	198037.9900	182.6685	8071.1369	1046.5047	r10412331.0000	4412.1823	2210.2692	2223.6056
σ		968.3747	8.8192	r63129.0800	r1787042.0000	r998588.7100	r73561.8260	578.6990	4887.5469	14.8477	29.2556	25.9288	r290090.9300	137.9214	119.3330	93.8902
%RSD		3.3393	16.5360	r0.6805	r2.1441	r1.1709	r2.1376	2.1493	2.4680	8.1282	0.3625	2.4777	r2.7860	3.1259	5.3990	4.2224

Run	Time	65Cu	66Zn	75As	77Se	78Se	82Se	83Kr	89Y	94Mo	95Mo	96Mo	97Mo	98Mo	103Rh	106Cd
1	18:36:23	3163.8838	3423.9780	24.4445	0.0000	5.5556	3.3333	193.3354	23707.5390	517209.1800	957428.0300	1031229.6000	589328.9200	1565005.6000	9838.6544	20.0000
2	18:36:39	3550.6933	3450.6548	32.2223	0.0000	5.5556	3.3333	223.3361	23971.5630	531989.9000	982914.7500	1072638.5000	599655.8400	1605654.1000	9581.7135	23.3334
3	18:36:55	3253.9156	3844.1459	25.5556	0.0000	2.2222	10.0000	236.6698	24148.6980	534582.1900	988916.2700	1075939.9000	610207.7800	1640953.5000	9655.1245	46.6668
x		3322.8309	3572.9262	27.4074	0.0000	4.4444	5.5556	217.7804	23942.6000	527927.0900	976419.6800	1059936.0000	599730.8500	1603871.0000	9691.8308	30.0001
σ		202.4040	235.2616	4.2066	0.0000	1.9245	3.8490	22.1949	222.0010	9372.0468	16718.7520	24915.2260	10439.6290	38005.3500	132.3449	14.5297
%RSD		6.0913	6.5846	15.3484	0.0000	43.3013	69.2821	10.1914	0.9272	1.7753	1.7123	2.3506	1.7407	2.3696	1.3655	48.4323

Run	Time	107Ag	108Cd	111Cd	115In	118Sn	121Sb	137Ba	159Tb	165Ho	205Tl	208Pb	209Bi
1	18:36:23	23.3334	860.0407	1083.3979	51884.3040	206.6690	1183.4104	730.0293	59594.6960	59584.6300	406.6758	16281.2330	46625.9300
2	18:36:39	33.3334	790.0343	1096.7328	51522.2540	186.6686	1326.7635	856.7070	60655.0070	61346.2890	430.0102	16671.9400	48854.2520
3	18:36:55	30.0000	920.0466	1096.7328	51944.6470	206.6690	1356.7679	766.6990	62893.4740	62571.2620	480.0127	18034.5370	49326.7940
x		28.8889	856.7072	1092.2878	51783.7350	200.0022	1288.9806	784.4785	61047.7260	61167.3940	438.8995	16995.9030	48268.9920
σ		5.0918	65.0702	7.6989	228.4506	11.5473	92.6492	65.1835	1684.0889	1501.3311	37.4679	920.4528	1442.4160
%RSD		17.6253	7.5954	0.7048	0.4412	5.7736	7.1878	8.3092	2.7586	2.4545	8.5368	5.4157	2.9883

SEQ-IFB@ICSAB01 12/30/2015 18:40:27 QC Status: PASS (Initial: PASS)

User Pre-dilution: 1.00

Run	Time	6Li	9Be	25Mg	27Al	39K	44Ca	45Sc	47Ti	51V	52Cr	53Cl O	54Fe	55Mn	59Co	60Ni
1	18:40:27	29019.5770	2833.7749	r9137605.0000	r82624503.0000	r85766315.0000	r3380440.6000	27234.0660	190777.6700	6908.6241	15799.7180	1909.5339	r10152564.0000	14057.5270	33023.2040	8033.5480
2	18:40:43	28946.0100	2810.4344	r9231383.7000	r83507252.0000	r85273821.0000	r3383436.2000	26635.6300	194359.0100	6967.3356	15864.4970	1991.5515	r10412008.0000	14127.6360	32959.6400	8217.0452
3	18:40:59	27859.2890	2907.1314	r9178393.5000	r82000098.0000	r84949593.0000	r3452369.8000	26404.9580	196810.9200	7074.0846	16016.0960	1978.2152	r10405225.0000	14007.4500	33337.6820	7943.4669
x		28608.2920	2850.4469	r9182460.7000	r82710618.0000	r85329910.0000	r3405415.5000	26758.2180	193982.5300	6983.3481	15893.4370	1959.7668	r10323266.0000	14064.2040	33106.8420	8064.6874
σ		649.6976	50.4584	r47021.4570	r757258.2700	r411239.5500	r40691.1430	427.9318	3034.1940	83.8844	111.0541	44.0111	r147871.2900	60.3705	202.4237	139.4211
%RSD		2.2710	1.7702	r0.5121	r0.9156	r0.4819	r1.1949	1.5993	1.5642	1.2012	0.6987	2.2457	r1.4324	0.4292	0.6114	1.7288

Run	Time	65Cu	66Zn	75As	77Se	78Se	82Se	83Kr	89Y	94Mo	95Mo	96Mo	97Mo	98Mo	103Rh	106Cd
1	18:40:27	10532.7650	8817.6075	1178.9653	73.3336	283.3378	80.0004	200.0022	24262.3330	518915.7600	953022.5400	1028371.4000	575340.8400	1545452.1000	9538.3346	570.0179
2	18:40:43	10529.4280	8677.4728	1193.4117	56.6668	287.7823	103.3339	243.3366	24058.4590	534751.7400	986111.3900	1079620.3000	607619.4100	1607679.7000	9575.0398	576.6850
3	18:40:59	10529.4280	8874.3293	1183.4104	66.6669	261.1149	113.3340	220.0027	23988.2740	536341.4100	989453.6200	1077013.2000	615322.5200	1618932.5000	9314.7696	593.3527
x		10530.5400	8789.8032	1185.2624	65.5558	277.4117	98.8894	221.1138	24103.0220	530002.9700	976195.8500	1061668.3000	599427.5900	1590688.1000	9476.0480	580.0185
σ		1.9267	101.3308	7.3991	8.3888	14.2873	17.1055	21.6886	142.3605	9634.6497	20138.1300	28865.4290	21212.3350	39577.4760	140.8718	12.0193
%RSD		0.0183	1.1528	0.6243	12.7964	5.1502	17.2976	9.8088	0.5906	1.8178	2.0629	2.7189	3.5388	2.4881	1.4866	2.0722

Run	Time	107Ag	108Cd	111Cd	115In	118Sn	121Sb	137Ba	159Tb	165Ho	205Tl	208Pb	209Bi
1	18:40:27	25081.2180	1176.7428	7006.0319	51290.9520	213.3358	21458.6290	10098.9400	59708.7740	60883.1920	107576.0800	93356.9040	48170.6190
2	18:40:43	26201.0360	1193.4117	7499.7589	52782.7880	210.0024	22654.8600	10409.2890	60550.9840	62208.7870	113325.3000	97301.2760	49712.2180
3	18:40:59	26037.2330	1226.7494	7743.2963	53560.6510	246.6700	22985.6890	10362.5690	62061.1160	63554.7160	114084.7100	101582.1600	50550.1530
x		25773.1620	1198.9680	7416.3624	52544.7970	223.3361	22366.3930	10290.2660	60773.6250	62215.5650	111662.0300	97446.7810	49477.6630
σ		604.8127	25.4621	375.6407	1153.4138	20.2764	803.3601	167.3322	1191.8705	1335.7749	3558.8499	4164.5364	1206.9829
%RSD		2.3467	2.1237	5.0650	2.1951	9.0789	3.5918	1.6261	1.9612	2.1470	3.1872	4.2737	2.4395

SEQ-CCV@CCV01 12/30/2015 18:44:33 QC Status: PASS (Initial: FAIL)

User Pre-dilution: 1.00

Run	Time	6Li	9Be	25Mg	27Al	39K	44Ca	45Sc	47Ti	51V	52Cr	53Cl O	54Fe	55Mn	59Co	60Ni
1	18:46:17	28163.5580	72175.3780	r5392929.5000	r50582725.0000	r49775614.0000	r1994686.3000	25933.6040	293.3381	167788.2500	194139.7300	23710.2130	r6170689.7000	1230939.0000	791389.5700	152928.9000
2	18:46:33	27695.4560	72007.3870	r5516257.7000	r51584224.0000	r48963296.0000	r1982389.2000	27010.0650	196.6688	169088.0000	194179.9100	23995.6270	r6206559.6000	1245096.5000	790166.4000	153522.1100
3	18:46:49	28441.0860	71446.3190	r5448508.4000	r50361128.0000	r49210173.0000	r1997284.8000	27310.9620	190.0020	169579.7000	196211.5000	23695.5080	r6144143.8000	1250368.6000	799694.6100	153132.2800
x		28100.0330	71876.3610	r5452565.2000	r50842692.0000	r49316361.0000	r1991453.4000	26751.5440	226.6696	168818.6500	194843.7100	23800.4490	r6173797.7000	1242134.7000	793750.1900	153194.4300
σ		376.8522	381.7817	r61764.1030	r651673.5600	r416439.7100	r7956.6602	724.1573	57.8327	925.6004	1184.7109	169.1687	r31323.8000	10047.7220	5184.2190	301.4471
%RSD		1.3411	0.5312	r1.1328	r1.2817	r0.8444	r0.3995	2.7070	25.5141	0.5483	0.6080	0.7109	r0.5074	0.8089	0.6531	0.1968

Run	Time	65Cu	66Zn	75As	77Se	78Se	82Se	83Kr	89Y	94Mo	95Mo	96Mo	97Mo	98Mo	103Rh	106Cd
1	18:46:17	181510.7900	696421.0800	29200.1540	2130.2496	6983.7926	3273.9227	160.0014	24098.5650	133736.5200	241752.2500	262773.6400	148763.9800	397313.1800	9701.8408	14441.4610
2	18:46:33	181051.7800	694002.9100	30235.7530	2246.9443	7236.2121	3267.2537	150.0012	23463.5740	131392.7100	239849.5000	262698.1800	147520.6300	393099.1200	9424.8830	14735.2660
3	18:46:49	183989.8900	705215.0600	30440.8800	2236.9418	7082.7580	3323.9409	160.0014	24135.3290	132755.6300	240650.2500	262327.7100	150149.8200	392789.4900	9771.9158	14544.9600
x		182184.1500	698546.3500	29958.9290	2204.7119	7100.9209	3288.3724	156.6680	23899.1560	132628.2900	240750.6700	262599.8400	148811.4700	394400.5900	9632.8799	14573.8960
σ		1580.5650	5900.4825	665.0746	64.6799	127.1862	30.9831	5.7736	377.6728	1177.0815	955.3412	238.6787	1315.2376	2527.1163	183.5065	149.0242
%RSD		0.8676	0.8447	2.2200	2.9337	1.7911	0.9422	3.6852	1.5803	0.8875	0.3968	0.0909	0.8838	0.6407	1.9050	1.0225

Run	Time	107Ag	108Cd	111Cd	115In	118Sn	121Sb	137Ba	159Tb	165Ho	205Tl	208Pb	209Bi
1	18:46:17	88532.3330	11293.6770	169600.7600	57890.4030	487092.0900	551538.1100	1184829.9000	63329.8210	62581.3310	r2694329.7000	2160963.9000	48505.7270
2	18:46:33	89437.7980	11166.8540	169967.5100	58105.1000	480589.3400	554935.8100	1189278.5000	61655.0340	63121.7140	r2732308.1000	2179863.2000	48049.9830
3	18:46:49	88488.5770	11497.2660	170429.3700	58869.9970	484931.0300	552911.2000	r1174929.7000	61795.9860	63752.7620	r2713462.4000	2191562.9000	49182.6830
x		88819.5690	11319.2660	169999.2100	58288.5000	484204.1600	553128.3700	r1183012.7000	62260.2800	63151.9360	r2713366.7000	2177463.3000	48579.4640
σ		535.8486	166.6854	415.2162	514.9057	3311.7530	1709.2304	r7344.9606	928.9267	586.2998	r18989.4080	15440.0260	569.9387
%RSD		0.6033	1.4726	0.2442	0.8834	0.6840	0.3090	r0.6209	1.4920	0.9284	r0.6998	0.7091	1.1732

SEQ-CCB@CCB01 12/30/2015 18:50:23 QC Status: PASS (Initial: PASS)

User Pre-dilution: 1.00

Run	Time	6Li	9Be	25Mg	27Al	39K	44Ca	45Sc	47Ti	51V	52Cr	53Cl O	54Fe	55Mn	59Co	60Ni
1	18:50:23	32103.2510	10.0000	420.0097	4847.9590	55150.1120	933.3813	27548.3440	333.3394	195.3354	96.6672	76.6670	3620.7209	153.3346	76.6670	66.6669
2	18:50:39	31139.9090	13.3333	596.6863	6072.0271	56592.2680	876.7089	26782.7280	316.6722	216.6693	105.3339	60.0002	3457.3240	123.3342	96.6672	43.3334
3	18:50:56	30444.2250	0.0000	733.3629	6519.0032	55515.6600	1006.7224	27327.6790	273.3374	193.3354	109.3340	75.3336	3707.4225	103.3339	86.6671	43.3334
x		31229.1280	7.7778	583.3530	5812.9964	55752.6800	938.9375	27219.5830	307.7830	201.7800	103.7784	70.6669	3595.1558	126.6676	86.6671	51.1113
σ		833.1037	6.9389	157.1015	865.1126	749.7248	65.1846	394.0882	30.9729	12.9332	6.4751	9.2617	126.9941	25.1665	10.0001	13.4716
%RSD		2.6677	89.2143	26.9308	14.8824	1.3447	6.9424	1.4478	10.0632	6.4095	6.2394	13.1061	3.5324	19.8681	11.5385	26.3574

Run	Time	65Cu	66Zn	75As	77Se	78Se	82Se	83Kr	89Y	94Mo	95Mo	96Mo	97Mo	98Mo	103Rh	106Cd
1	18:50:23	150.0012	150.0012	8.8889	3.3333	4.4444	3.3333	33.3334	23821.1690	46.6668	76.6670	60.0002	53.3335	80.0004	10349.2210	36.6667
2	18:50:39	113.3340	133.3343	11.1111	0.0000	8.8889	20.0000	40.0001	24486.2660	60.0002	100.0006	103.3339	46.6668	86.6671	10729.6620	33.3334
3	18:50:56	143.3345	110.0007	2.2222	0.0000	2.2222	10.0000	33.3334	24817.1610	36.6667	63.3336	100.0006	50.0001	103.3339	10562.8000	20.0000
x		135.5566	131.1121	7.4074	1.1111	5.1852	11.1111	35.5556	24374.8650	47.7779	80.0004	87.7782	50.0001	90.0005	10547.2270	30.0001
σ		19.5318	20.0927	4.6259	1.9245	3.3945	8.3887	3.8490	507.2551	11.7063	18.5594	24.1141	3.3334	12.0186	190.6978	8.8192
%RSD		14.4086	15.3248	62.4500	173.2051	65.4654	75.4984	10.8253	2.0811	24.5016	23.1991	27.4717	6.6667	13.3540	1.8080	29.3973

Run	Time	107Ag	108Cd	111Cd	115In	118Sn	121Sb	137Ba	159Tb	165Ho	205Tl	208Pb	209Bi
1	18:50:23	26.6667	3.3333	6.6667	53570.7100	136.6677	83.3337	83.3337	60963.7290	61279.1720	1193.4117	340.0064	51441.8000
2	18:50:39	33.3334	6.6667	10.0000	53835.6010	93.3338	110.0007	90.0004	62020.8430	62497.4230	1100.0666	350.0067	52122.3270
3	18:50:56	20.0000	6.6667	20.0000	54264.8080	160.0014	106.6673	80.0004	60926.8160	63430.5190	1100.0666	276.6709	52487.7540
x		26.6667	5.5556	12.2222	53890.3730	130.0010	100.0006	84.4448	61303.7960	62402.3720	1131.1816	322.2280	52017.2940
σ		6.6667	1.9245	6.9389	350.2758	33.8301	14.5298	5.0918	621.2553	1078.8187	53.8928	39.7692	530.8282
%RSD		25.0000	34.6410	56.7727	0.6500	26.0230	14.5297	6.0297	1.0134	1.7288	4.7643	12.3419	1.0205

SEQ-CCV@CCV02 12/30/2015 18:54:31 QC Status: PASS (Initial: PASS)

User Pre-dilution: 1.00

Run	Time	6Li	9Be	25Mg	27Al	39K	44Ca	45Sc	47Ti	51V	52Cr	53Cl O	54Fe	55Mn	59Co	60Ni
1	18:54:47	29183.4340	71930.1120	r5283350.0000	r49283797.0000	r48509558.0000	r1929642.2000	25957.0040	250.0034	166134.9700	189603.4800	23433.4970	r6007812.4000	1209781.1000	781169.8600	147673.0700
2	18:55:04	28561.4630	72981.7770	r5324106.9000	r49076763.0000	r48101868.0000	r1961469.2000	26344.7840	306.6718	167051.5400	193042.0600	23692.1660	r6061617.3000	1234180.9000	782816.1700	151308.8000
3	18:55:20	29511.1560	73062.4210	r5333735.7000	r49964894.0000	r47622426.0000	r1924213.6000	25706.2930	320.0056	166204.8900	192249.5200	23767.6960	r6035674.7000	1230958.0000	771395.8100	150519.1800
x		29085.3510	72658.1040	r5313730.9000	r49441818.0000	r48077951.0000	r1938441.7000	26002.6940	292.2270	166463.8000	191631.6900	23631.1190	r6035034.8000	1224973.3000	778460.6100	149833.6800
σ		482.3839	631.7473	r26747.4550	r464673.9500	r444049.5800	r20126.2660	321.6881	37.1694	510.1941	1800.6217	175.2635	r26908.1600	13255.1620	6173.4258	1912.3421
%RSD		1.6585	0.8695	r0.5034	r0.9398	r0.9236	r1.0383	1.2371	12.7194	0.3065	0.9396	0.7417	r0.4459	1.0821	0.7930	1.2763

Run	Time	65Cu	66Zn	75As	77Se	78Se	82Se	83Kr	89Y	94Mo	95Mo	96Mo	97Mo	98Mo	103Rh	106Cd
1	18:54:47	178434.1100	679169.7100	29274.8380	2216.9369	6877.0446	3043.8428	120.0008	23613.9630	127176.7200	233545.1700	249100.0000	142664.0300	371234.8400	9575.0398	13870.5740
2	18:55:04	177682.9500	675422.0300	30004.9900	2163.5908	7062.7425	3180.5563	93.3338	23470.2580	128265.1900	233904.2300	254129.7100	147253.0100	384749.7300	9808.6220	14381.3660
3	18:55:20	176965.8300	684820.9500	30000.5310	1990.2178	7118.3414	3057.1806	153.3346	23273.0850	129363.9200	237974.5100	252344.3300	144150.5400	380909.6500	9771.9158	14257.8390
x		177694.2900	679804.2300	29760.1200	2123.5818	7019.3761	3093.8599	122.2231	23452.4350	128268.6100	235141.3000	251858.0100	144689.2000	378964.7400	9718.5259	14169.9260
σ		734.2084	4731.4795	420.2725	118.5366	126.3587	75.3768	30.0621	171.1361	1093.6060	2460.1836	2549.8751	2341.4270	6964.1972	125.6106	266.5029
%RSD		0.4132	0.6960	1.4122	5.5819	1.8001	2.4363	24.5961	0.7297	0.8526	1.0463	1.0124	1.6182	1.8377	1.2925	1.8808

Run	Time	107Ag	108Cd	111Cd	115In	118Sn	121Sb	137Ba	159Tb	165Ho	205Tl	208Pb	209Bi
1	18:54:47	88051.0260	10799.7440	162435.0000	55750.4230	458010.7300	523797.4500	1136301.1000	60030.8850	59547.7230	r2570154.9000	2052267.1000	46223.8840
2	18:55:04	87738.0210	10682.9400	163059.3600	56303.8180	471248.9100	532897.4700	1139726.0000	60423.4730	60644.9400	r2627001.2000	2056338.4000	46960.9810
3	18:55:20	85873.6790	10325.8610	164729.0600	56216.6140	470733.2000	535878.6100	r1129195.9000	60346.2960	60044.3070	r2611774.6000	2138401.7000	48368.3310
x		87220.9090	10602.8480	163407.8100	56090.2850	466664.2800	530857.8500	r1135074.3000	60266.8850	60078.9900	r2602976.9000	2082335.7000	47184.3990
σ		1177.1845	246.8853	1186.0612	297.5412	7498.6275	6293.5402	r5371.2137	207.9927	549.4304	r29426.5970	48597.2440	1089.5409
%RSD		1.3497	2.3285	0.7258	0.5305	1.6069	1.1855	r0.4732	0.3451	0.9145	r1.1305	2.3338	2.3091

SEQ-CCB@CCB02 12/30/2015 18:58:54 QC Status: PASS (Initial: PASS)

User Pre-dilution: 1.00

Run	Time	6Li	9Be	25Mg	27Al	39K	44Ca	45Sc	47Ti	51V	52Cr	53Cl O	54Fe	55Mn	59Co	60Ni
1	18:58:54	30196.7350	0.0000	326.6725	3557.3625	45801.7560	740.0301	27692.1130	336.6729	210.0024	102.0006	76.6670	3220.5704	136.6677	60.0002	20.0000
2	18:59:11	31467.7010	10.0000	400.0088	4014.2194	44465.1450	786.7007	27133.7660	256.6703	218.0026	98.0005	97.3339	3530.6855	76.6670	93.3338	50.0001
3	18:59:27	30444.2250	10.0000	353.3402	4377.7205	44187.1270	663.3575	27534.9700	263.3372	195.3354	92.0005	76.6670	3490.6700	123.3342	63.3336	53.3335
x		30702.8870	6.6667	360.0072	3983.1008	44818.0090	730.0295	27453.6160	285.5601	207.7802	97.3339	83.5559	3413.9753	112.2230	72.2225	41.1112
σ		673.8088	5.7735	37.1199	411.0633	863.2157	62.2768	287.9262	44.3903	11.4958	5.0333	11.9320	168.6844	31.5058	18.3587	18.3586
%RSD		2.1946	86.6025	10.3109	10.3202	1.9260	8.5307	1.0488	15.5450	5.5327	5.1711	14.2803	4.9410	28.0743	25.4197	44.6560

Run	Time	65Cu	66Zn	75As	77Se	78Se	82Se	83Kr	89Y	94Mo	95Mo	96Mo	97Mo	98Mo	103Rh	106Cd
1	18:58:54	90.0004	86.6671	4.4444	0.0000	3.3333	3.3333	40.0001	23610.6210	33.3334	70.0003	50.0001	16.6667	63.3336	10342.5470	43.3334
2	18:59:11	93.3338	150.0012	12.2222	0.0000	4.4444	13.3333	23.3334	24245.6220	30.0000	46.6668	40.0001	40.0001	110.0007	10476.0330	36.6667
3	18:59:27	116.6674	133.3343	3.3333	0.0000	3.3333	13.3333	26.6667	24182.1200	33.3334	50.0001	53.3335	46.6668	86.6671	10596.1720	33.3334
x		100.0006	123.3342	6.6667	0.0000	3.7037	10.0000	30.0001	24012.7880	32.2223	55.5557	47.7779	34.4445	86.6671	10471.5840	37.7779
σ		14.5298	32.8299	4.8432	0.0000	0.6415	5.7735	8.8192	349.7310	1.9245	12.6199	6.9389	15.7528	23.3336	126.8711	5.0918
%RSD		14.5297	26.6187	72.6483	0.0000	17.3205	57.7350	29.3973	1.4564	5.9726	22.7157	14.5233	45.7338	26.9232	1.2116	13.4782

Run	Time	107Ag	108Cd	111Cd	115In	118Sn	121Sb	137Ba	159Tb	165Ho	205Tl	208Pb	209Bi
1	18:58:54	10.0000	13.3333	13.3333	53684.7130	113.3340	66.6669	33.3334	60084.5710	61138.2280	1160.0740	230.0029	50171.3970
2	18:59:11	13.3333	10.0000	20.0000	54237.9820	126.6676	113.3340	80.0004	60631.5180	62755.8610	1103.4003	263.3372	51039.5430
3	18:59:27	6.6667	0.0000	6.6667	54335.2270	126.6676	120.0008	83.3337	61534.2200	62004.0620	1096.7328	283.3378	50972.5010
x		10.0000	7.7778	13.3333	54085.9740	122.2231	100.0006	65.5558	60750.1030	61966.0510	1120.0690	258.8926	50727.8130
σ		3.3333	6.9389	6.6667	350.8876	7.6981	29.0596	27.9552	732.0634	809.4864	34.8053	26.9438	483.0356
%RSD		33.3333	89.2143	50.0000	0.6488	6.2984	29.0595	42.6433	1.2050	1.3063	3.1074	10.4073	0.9522

PL21004-BLK2@PBW01@MF6R32@45671@LEM 12/30/2015 19:03:01 QC Status: PASS (Initial: PASS)

User Pre-dilution: 1.00

Run	Time	6Li	9Be	25Mg	27Al	39K	44Ca	45Sc	47Ti	51V	52Cr	53Cl O	54Fe	55Mn	59Co	60Ni
1	19:03:01	30544.8970	3.3333	70.0003	1986.8838	50841.7720	966.7181	27237.4090	350.0067	590.0192	310.0053	235.3364	3440.6510	63.3336	30.0000	156.6680
2	19:03:18	30962.6380	0.0000	90.0004	1900.1986	51770.3240	990.0539	27474.7880	280.0043	545.3497	298.6716	262.6705	3540.6894	53.3335	46.6668	246.6700
3	19:03:34	29598.1040	0.0000	90.0004	1930.2049	51019.4300	1050.0606	27548.3440	293.3381	597.3530	267.3373	271.3374	3787.4555	53.3335	60.0002	206.6690
x		30401.8800	1.1111	83.3337	1939.0957	51210.5090	1002.2775	27420.1800	307.7830	577.5739	292.0047	256.4481	3589.5986	56.6668	45.5557	203.3357
σ		713.9896	1.9245	11.5471	44.0212	492.8847	42.9949	162.5012	37.1696	28.1469	22.1015	18.7898	178.5005	5.7735	15.0309	45.0935
%RSD		2.3485	173.2051	13.8565	2.2702	0.9625	4.2897	0.5926	12.0766	4.8733	7.5689	7.3269	4.9727	10.1886	32.9946	22.1769

Run	Time	65Cu	66Zn	75As	77Se	78Se	82Se	83Kr	89Y	94Mo	95Mo	96Mo	97Mo	98Mo	103Rh	106Cd
1	19:03:01	140.0011	156.6680	8.8889	0.0000	3.3333	3.3333	46.6668	23486.9680	6.6667	10.0000	26.6667	26.6667	16.6667	10629.5440	53.3335
2	19:03:18	136.6577	196.6688	12.2222	3.3333	3.3333	20.0000	43.3334	24466.2120	13.3333	10.0000	26.6667	33.3334	30.0000	10706.3010	26.6667
3	19:03:34	200.0022	173.3350	8.8889	3.3333	3.3333	6.6667	46.6668	24533.0580	30.0000	40.0001	13.3333	26.6667	23.3334	10169.0180	36.6667
x		158.8903	175.5573	10.0000	2.2222	3.3333	10.0000	45.5557	24162.0790	16.6667	20.0000	22.2223	28.8889	23.3334	10501.6210	38.8890
σ		35.6429	20.0928	1.9245	1.9245	0.0000	8.8192	1.9245	585.6184	12.0185	17.3206	7.6980	3.8490	6.6667	290.5882	13.4716
%RSD		22.4324	11.4451	19.2450	86.6025	0.0000	88.1918	4.2245	2.4237	72.1111	86.6026	34.6410	13.3235	28.5715	2.7671	34.6411

Run	Time	107Ag	108Cd	111Cd	115In	118Sn	121Sb	137Ba	159Tb	165Ho	205Tl	208Pb	209Bi
1	19:03:01	10.0000	10.0000	0.0000	52812.9620	80.0004	226.6695	76.6670	59930.2240	61332.8660	300.0050	323.3391	50499.8750
2	19:03:18	20.0000	10.0000	13.3333	52407.2910	83.3337	246.6700	46.6668	61393.2710	63380.1700	350.0067	413.3427	51760.2670
3	19:03:34	16.6667	13.3333	3.3333	53983.1390	50.0001	210.0024	83.3337	60849.6350	62530.9860	296.6715	446.6776	51720.0390
x		15.5556	11.1111	5.5556	53067.7970	71.1114	227.7806	68.8892	60724.3770	62414.6740	315.5611	394.4532	51326.7270
σ		5.0918	1.9245	6.9389	818.2478	18.3587	18.3590	19.5317	739.5228	1028.5962	29.8774	63.8021	716.3575
%RSD		32.7327	17.3205	124.9000	1.5419	25.8168	8.0600	28.3523	1.2178	1.6480	9.4680	16.1748	1.3957

PL21004-BS2@LCS01 12/30/2015 19:07:07 QC Status: FAIL (Initial: FAIL)

User Pre-dilution: 1.00

Run	Time	6Li	9Be	25Mg	27Al	39K	44Ca	45Sc	47Ti	51V	52Cr	53Cl O	54Fe	55Mn	59Co	60Ni
1	19:07:07	30601.4180	380.0079	99542.0060	54804.6990	r949709.3100	35358.6290	28604.9330	423.3432	4062.2407	2061.5671	436.6772	48130.4060	1106.7340	3437.3164	916.7129
2	19:07:23	31407.4930	353.3402	103138.4300	56521.8320	975059.2000	36309.0310	28501.2740	410.0093	4116.2650	2039.5621	408.0092	49859.6890	1043.3932	3714.0919	910.0456
3	19:07:40	30915.8120	293.3381	104716.3200	57615.3310	r949964.5900	36007.8370	28186.9630	280.0043	4145.6117	1968.2130	400.6755	50432.8370	1150.0727	3667.4063	873.3753
x		30974.9080	342.2287	102465.5800	56313.9510	r958244.3600	35891.8320	28431.0570	371.1189	4108.0391	2023.1141	415.1206	49474.3110	1100.0667	3606.2715	900.0446
σ		406.2741	44.3905	2651.9638	1416.8000	r14562.6310	485.7043	217.6521	79.1887	42.2898	48.8021	19.0252	1198.6176	53.6514	148.1697	23.3356
%RSD		1.3116	12.9710	2.5882	2.5159	r1.5197	1.3532	0.7655	21.3378	1.0294	2.4122	4.5831	2.4227	4.8771	4.1087	2.5927

Run	Time	65Cu	66Zn	75As	77Se	78Se	82Se	83Kr	89Y	94Mo	95Mo	96Mo	97Mo	98Mo	103Rh	106Cd
1	19:07:07	1923.5368	1443.4479	127.7787	70.0003	172.2239	76.6670	36.6667	24426.1040	16.6667	40.0001	23.3334	20.0000	10.0000	10956.5990	90.0004
2	19:07:23	1883.5284	1420.1109	157.7792	43.3334	156.6680	76.6670	60.0002	25024.3950	13.3333	23.3334	13.3333	3.3333	13.3333	10939.9120	93.3338
3	19:07:40	1900.1986	1400.1078	116.6674	56.6668	163.3348	86.6671	56.6668	25208.2350	10.0000	13.3333	26.6667	16.6667	30.0000	10796.4070	90.0004
x		1902.4213	1421.2222	134.0751	56.6668	164.0756	80.0004	51.1113	24886.2450	13.3333	25.5556	21.1111	13.3333	17.7778	10897.6390	91.1116
σ		20.0966	21.6914	21.2668	13.3334	7.8043	5.7736	12.6199	408.9575	3.3333	13.4715	6.9389	8.8192	10.7152	88.0657	1.9245
%RSD		1.0564	1.5263	15.8619	23.5295	4.7565	7.2169	24.6910	1.6433	25.0000	52.7147	32.8684	66.1438	60.2729	0.8081	2.1123

Run	Time	107Ag	108Cd	111Cd	115In	118Sn	121Sb	137Ba	159Tb	165Ho	205Tl	208Pb	209Bi
1	19:07:07	2493.6753	56.6668	873.3753	55207.1230	56.6668	4544.4689	9171.2905	62329.6110	63665.4870	11163.5170	8423.9011	51810.5520
2	19:07:23	2557.0262	43.3334	760.0318	55227.2450	80.0004	4591.1590	9555.0188	61970.5010	63799.7560	11717.5470	9007.7938	52618.5060
3	19:07:40	2600.3719	53.3335	743.3637	56012.0240	93.3338	4557.8089	9818.6328	62863.2660	65202.9930	11867.7410	9184.6373	53775.2450
x		2550.3578	51.1113	792.2569	55482.1310	76.6670	4564.4790	9514.9807	62387.7930	64222.7450	11582.9350	8872.1108	52734.7680
σ		53.6599	6.9389	70.7432	459.0115	18.5594	24.0491	325.5231	449.2173	851.5699	370.9087	398.1047	987.4930
%RSD		2.1040	13.5761	8.9293	0.8273	24.2078	0.5269	3.4212	0.7200	1.3260	3.2022	4.4871	1.8726

PL21004-BS3@LCS02 12/30/2015 19:11:13

User Pre-dilution: 1.00

Run	Time	6Li	9Be	25Mg	27Al	39K	44Ca	45Sc	47Ti	51V	52Cr	53Cl O	54Fe	55Mn	59Co	60Ni
1	19:11:13	32625.1040	0.0000	51237.3170	2220.2711	29293.7880	1036.7258	29377.3900	393.3418	818.7035	1453.4495	442.6774	4861.2994	133.3343	1830.1842	490.0132
2	19:11:30	32822.4790	0.0000	51911.1230	2250.2785	29437.5840	906.7119	29571.3510	320.0056	768.6992	1443.4479	426.0100	4881.3101	70.0003	1753.5024	463.3451
3	19:11:46	32822.4790	0.0000	51800.4950	2206.9345	28798.8770	1056.7281	29424.2080	400.0088	807.3692	1393.4401	486.6797	4834.6185	106.6673	2020.2244	483.3462
x		32756.6870	0.0000	51649.6450	2225.8280	29176.7500	1000.0552	29457.6500	371.1188	798.2573	1430.1125	451.7890	4859.0760	103.3340	1867.9704	478.9015
σ		113.9546	0.0000	361.3455	22.1999	335.0526	81.4540	101.2124	44.3906	26.2179	32.1505	31.3444	23.4251	31.7983	137.3172	13.8785
%RSD		0.3479	0.0000	0.6996	0.9974	1.1484	8.1450	0.3436	11.9613	3.2844	2.2481	6.9378	0.4821	30.7724	7.3511	2.8980

Run	Time	65Cu	66Zn	75As	77Se	78Se	82Se	83Kr	89Y	94Mo	95Mo	96Mo	97Mo	98Mo	103Rh	106Cd
1	19:11:13	216.6693	246.6700	74.4447	23.3334	98.8894	33.3334	43.3334	25382.0510	50.0001	73.3336	80.0004	50.0001	133.3343	11176.8670	63.3336
2	19:11:30	250.0034	210.0024	94.4449	20.0000	71.1114	43.3334	50.0001	25883.4620	73.3336	70.0003	113.3340	53.3335	156.6680	11503.9410	76.6670
3	19:11:46	253.3369	223.3361	77.7781	36.6667	88.8893	30.0000	60.0002	25288.4570	43.3334	90.0004	100.0006	46.6668	100.0006	11330.3900	40.0001
x		240.0032	226.6695	82.2226	26.6667	86.2967	35.5556	51.1113	25517.9900	55.5557	77.7781	97.7783	50.0001	130.0010	11337.0660	60.0002
σ		20.2764	18.5597	10.7153	8.8192	14.0693	6.9389	8.3888	319.9486	15.7528	10.7153	16.7776	3.3334	28.4804	163.6393	18.5593
%RSD		8.4484	8.1880	13.0320	33.0719	16.3034	19.5157	16.4127	1.2538	28.3550	13.7767	17.1588	6.6667	21.9078	1.4434	30.9321

Run	Time	107Ag	108Cd	111Cd	115In	118Sn	121Sb	137Ba	159Tb	165Ho	205Tl	208Pb	209Bi
1	19:11:13	3.3333	50.0001	403.3423	54965.6670	46.6668	2460.3329	70.0003	62430.2980	62393.3790	5865.2248	320.0056	51827.3140
2	19:11:30	6.6667	53.3335	396.6753	56609.0380	53.3335	2436.9933	53.3335	62571.2620	64558.4170	6415.5963	263.3372	53433.2380
3	19:11:46	10.0000	23.3334	370.0075	56132.7650	73.3336	2436.9933	56.6668	64833.6990	65558.8720	6045.3427	330.0060	52534.6900
x		6.6667	42.2223	390.0084	55902.4900	57.7780	2444.7731	60.0002	63278.4200	64170.2230	6108.7213	304.4496	52598.4140
σ		3.3333	16.4430	17.6391	845.5399	13.8779	13.4751	8.8192	1348.7545	1618.0568	280.6062	35.9538	804.8560
%RSD		50.0000	38.9439	4.5227	1.5125	24.0193	0.5512	14.6987	2.1315	2.5215	4.5935	11.8094	1.5302

PL21004-B04 LCS03

SE[redacted] 12/30/2015 19:15:19

User Pre-dilution: 1.00

Run	Time	6Li	9Be	25Mg	27Al	39K	44Ca	45Sc	47Ti	51V	52Cr	53Cl O	54Fe	55Mn	59Co	60Ni
1	19:15:19	33692.3190	0.0000	86.6671	40560.2810	26291.2960	1130.0702	29862.3000	426.6767	801.3687	295.3381	306.0052	4040.8979	50.0001	36.6667	493.3467
2	19:15:35	33120.2230	3.3333	150.0012	43912.4680	26729.2370	1140.0715	29467.6820	420.0097	880.0426	298.6716	327.3392	4124.2686	80.0004	66.6669	423.3432
3	19:15:52	32681.9740	0.0000	60.0002	43748.3460	25485.6740	1170.0753	29307.1640	373.3410	825.3708	300.6716	331.3394	4100.9248	66.6669	20.0000	536.6825
x		33164.8390	1.1111	98.8895	42740.3650	26168.7360	1146.7390	29545.7150	406.6758	835.5940	298.2271	321.5613	4088.6971	65.5558	41.1112	484.4575
σ		506.6480	1.9245	46.2286	1899.7906	630.7761	20.8193	285.6760	29.0606	40.3210	2.6944	13.6196	43.0094	15.0309	23.6488	57.1902
%RSD		1.5277	173.2051	46.7478	4.4216	2.4104	1.8155	0.9669	7.1459	4.8254	0.9035	4.2355	1.0519	22.9285	57.5239	11.8050

Run	Time	65Cu	66Zn	75As	77Se	78Se	82Se	83Kr	89Y	94Mo	95Mo	96Mo	97Mo	98Mo	103Rh	106Cd
1	19:15:19	220.0027	130.0009	17.7778	0.0000	4.4444	3.3333	80.0004	25422.1630	13.3333	16.6667	10.0000	6.6667	20.0000	10746.3480	26.6667
2	19:15:35	263.3372	160.0014	11.1111	0.0000	1.1111	0.0000	30.0000	25666.1800	3.3333	10.0000	10.0000	6.6667	20.0000	11160.1790	23.3334
3	19:15:52	246.6700	226.6695	8.8889	10.0000	6.6667	6.6667	33.3334	26321.3830	6.6667	10.0000	13.3333	13.3333	3.3333	11467.2280	26.6667
x		243.3366	172.2239	12.5926	3.3333	4.0741	3.3333	47.7779	25803.2420	7.7778	12.2222	11.1111	8.8889	14.4445	11124.5850	25.5556
σ		21.8587	49.4797	4.6259	5.7735	2.7962	3.3333	27.9552	465.0148	5.0918	3.8490	1.9245	3.8490	9.6225	361.7557	1.9245
%RSD		8.9829	28.7299	36.7353	173.2051	68.6349	100.0000	58.5106	1.8022	65.4654	31.4919	17.3205	43.3013	66.6174	3.2519	7.5307

Run	Time	107Ag	108Cd	111Cd	115In	118Sn	121Sb	137Ba	159Tb	165Ho	205Tl	208Pb	209Bi
1	19:15:19	13.3333	6.6667	3.3333	56293.7560	23.3334	210.0024	66.6669	63853.4650	64175.7220	163.3348	230.0029	53986.4920
2	19:15:35	10.0000	6.6667	3.3333	56585.5600	43.3334	230.0029	50.0001	63934.0280	64988.1290	116.6674	290.0046	53932.8420
3	19:15:52	10.0000	16.6667	0.0000	56498.3530	43.3334	196.6688	63.3336	66082.6440	66394.9070	150.0012	283.3378	54677.2690
x		11.1111	10.0000	2.2222	56459.2230	36.6667	212.2247	60.0002	64623.3790	65186.2530	143.3345	267.7818	54198.8670
σ		1.9245	5.7735	1.9245	149.7854	11.5470	16.7778	8.8192	1264.4024	1122.7800	24.0374	32.8858	415.1751
%RSD		17.3205	57.7351	86.6025	0.2653	31.4919	7.9057	14.6987	1.9566	1.7224	16.7701	12.2812	0.7660

5120223-01RE1@MF6R32 12/30/2015 19:19:23

User Pre-dilution: 1.00

Run	Time	6Li	9Be	25Mg	27Al	39K	44Ca	45Sc	47Ti	51V	52Cr	53Cl O	54Fe	55Mn	59Co	60Ni
1	19:19:23	22578.0020	780.0335	↑3073434.2000	459699.5200	639277.0100	1144718.8000	27902.7550	17420.0070	»579417.2400	99804.8650	12481.2290	1074481.6000	243282.2600	81053.0580	210168.2900
2	19:19:40	22524.5370	836.7052	↑3202571.3000	487253.7500	683905.7600	1204239.3000	29139.9610	18415.3000	»582516.1800	100741.7800	12695.5250	1141683.7000	242881.7600	83888.6070	221519.7500
3	19:19:56	22023.3110	893.3772	↑3283090.6000	505278.8600	704582.0300	1246535.1000	28528.0250	19350.5730	»582999.0400	101457.0000	12509.9350	1166682.3000	249202.7600	87532.7230	227603.9700
X		22375.2830	836.7053	↑3186365.4000	484077.3800	675921.6000	1198497.7000	28523.5800	18395.2930	»581644.1500	100667.8800	12562.2300	1127615.9000	245122.2600	84158.1290	219764.0100
σ		305.9871	56.6719	↑105763.5200	22955.0900	33376.5880	51150.3960	618.6149	965.4380	»1943.6156	828.5441	116.3263	47683.0140	3539.4851	3248.2299	8849.4451
%RSD		1.3675	6.7732	↑3.3193	4.7420	4.9379	4.2679	2.1688	5.2483	»0.3342	0.8230	0.9260	4.2287	1.4440	3.8597	4.0268

Run	Time	65Cu	66Zn	75As	77Se	78Se	82Se	83Kr	89Y	94Mo	95Mo	96Mo	97Mo	98Mo	103Rh	106Cd
1	19:19:23	12541.9790	9808.6220	16119.8350	93.3338	336.6729	263.3372	403.3423	199226.0100	45168.6000	40252.2500	46917.4240	24426.1040	64497.9910	7716.6070	680.0254
2	19:19:40	13379.8390	9795.2743	16320.1920	143.3345	304.4495	310.0053	403.3423	204170.5800	47664.6290	41035.7410	49852.9860	25833.3190	66965.7370	7573.1531	663.3575
3	19:19:56	14040.8350	10649.5670	16134.3050	160.0014	332.2283	273.3374	380.0079	209264.4700	48800.6320	42967.9710	50171.3970	26976.6330	68869.8840	7576.4892	733.3629
X		13320.8840	10084.4880	16191.4440	132.2232	324.4503	282.2266	395.5642	204220.3500	47211.2870	41418.6540	48980.6020	25745.3520	66777.8710	7622.0831	692.2486
σ		751.1650	489.4187	111.7335	34.6949	17.4631	24.5712	13.4721	5019.4128	1857.9703	1397.7667	1793.8437	1277.5378	2191.9929	81.8771	36.5683
%RSD		5.6390	4.8532	0.6901	26.2396	5.3824	8.7062	3.4058	2.4578	3.9354	3.3747	3.6624	4.9622	3.2825	1.0742	5.2825

Run	Time	107Ag	108Cd	111Cd	115In	118Sn	121Sb	137Ba	159Tb	165Ho	205Tl	208Pb	209Bi
1	19:19:23	306.6718	250.0034	203.3356	39967.6650	3587.3743	5635.0793	150729.2900	66478.8500	68419.8380	560.0172	1097421.2000	93191.8910
2	19:19:40	316.6722	223.3361	190.0020	40011.1890	3697.4184	5908.5862	154454.3700	67597.0510	69350.1810	510.0143	1133125.7000	97671.8850
3	19:19:56	276.6709	233.3363	203.3356	40463.1830	3717.4266	6115.3895	159117.0900	68527.3100	70525.8400	530.0154	1141732.6000	97722.4240
x		300.0050	235.5586	198.8911	40147.3460	3667.4064	5886.3517	154766.9200	67534.4040	69431.9530	533.3490	1124093.2000	96195.4000
σ		20.8173	13.4719	7.6982	274.3875	70.0281	240.9259	4202.6260	1025.6657	1055.3798	25.1676	23496.0640	2601.2380
%RSD		6.9390	5.7191	3.8705	0.6835	1.9095	4.0930	2.7155	1.5187	1.5200	4.7188	2.0902	2.7041

5120223-02RE1@MF6R42 12/30/2015 19:23:28

User Pre-dilution: 1.00

Run	Time	6Li	9Be	25Mg	27Al	39K	44Ca	45Sc	47Ti	51V	52Cr	53Cl O	54Fe	55Mn	59Co	60Ni
1	19:23:28	32621.7580	3.3333	725894.8300	30447.5690	↑2846622.9000	622215.4400	29374.0460	486.6797	800.0352	391.3418	256.6703	157699.3700	446687.6600	6295.5124	1423.4448
2	19:23:45	32648.5210	0.0000	724878.3300	30236.8680	↑2848362.1000	626591.1900	29026.2650	510.0143	741.3636	404.0090	250.0034	164545.7900	445312.6100	6472.3032	1563.4678
3	19:24:01	32812.4430	0.0000	735712.2200	30979.3620	↑2808808.8000	623103.2700	29350.6370	486.6797	726.6957	370.0075	250.6701	161033.7300	438838.9200	6215.4574	1350.1002
X		32694.2410	1.1111	728828.4600	30554.6000	↑2834597.9000	623969.9700	29250.3160	494.4579	756.0315	388.4528	252.4480	161092.9600	443613.0600	6327.7577	1445.6709
σ		103.2369	1.9245	5983.1330	382.6432	↑22350.9700	2313.0406	194.3867	13.4722	38.8076	17.1838	3.6718	3423.5916	4191.3026	131.4240	108.4063
%RSD		0.3158	173.2051	0.8209	1.2523	↑0.7885	0.3707	0.6646	2.7246	5.1331	4.4237	1.4545	2.1252	0.9448	2.0769	7.4987

Run	Time	65Cu	66Zn	75As	77Se	78Se	82Se	83Kr	89Y	94Mo	95Mo	96Mo	97Mo	98Mo	103Rh	106Cd
1	19:23:28	1283.4239	4547.8039	66.6669	6.6667	6.6667	6.6667	170.0016	25468.9600	250.0034	190.0020	173.3350	146.6679	263.3372	10339.2090	40.0001
2	19:23:45	1280.0901	4978.0292	73.3336	3.3333	6.6667	3.3333	70.0003	25549.1850	253.3369	206.6690	223.3361	110.0007	250.0034	10686.2770	26.6667
3	19:24:01	1256.7535	5024.7216	81.1115	0.0000	4.4444	6.6667	130.0009	25639.4380	200.0022	156.6680	206.6690	96.6672	303.3384	10636.2180	23.3334
X		1273.4225	4850.1849	73.7040	3.3333	5.9259	5.5556	123.3343	25552.5280	234.4475	184.4463	201.1134	117.7786	272.2263	10553.9020	30.0001
σ		14.5317	262.9082	7.2294	3.3333	1.2830	1.9245	50.3329	85.2883	29.8770	25.4593	25.4593	25.8919	27.7564	187.6061	8.8192
%RSD		1.1412	5.4206	9.8087	100.0000	21.6506	34.6410	40.8101	0.3338	12.7436	13.8031	12.6592	21.9835	10.1961	1.7776	29.3973

Run	Time	107Ag	108Cd	111Cd	115In	118Sn	121Sb	137Ba	159Tb	165Ho	205Tl	208Pb	209Bi
1	19:23:28	33.3334	30.0000	46.6668	54761.1040	86.6671	716.6949	18148.0960	63893.7460	64007.8780	136.6677	448626.3800	51803.8470
2	19:23:45	26.6667	10.0000	43.3334	56196.4910	103.3339	800.0352	18201.5360	64578.5600	64756.4850	130.0009	466938.1300	53198.5340
3	19:24:01	26.6667	6.6667	46.6668	55820.8540	86.6671	843.3725	18508.8230	64058.2310	65333.9280	116.6674	468137.5100	53396.3550
X		28.8889	15.5556	45.5557	55592.8160	92.2227	786.7009	18286.1520	64176.8460	64699.4310	127.7787	461234.0100	52799.5790
σ		3.8490	12.6198	1.9245	744.3684	9.6226	64.3829	194.6809	357.4834	664.8635	10.1836	10934.9790	867.9828
%RSD		13.3235	81.1273	4.2245	1.3390	10.4341	8.1839	1.0646	0.5570	1.0276	7.9698	2.3708	1.6439

PL21004-MS1@MF6R42S 12/30/2015 19:27:34 QC Status: PASS (Initial: PASS)

User Pre-dilution: 1.00

Run	Time	6Li	9Be	25Mg	27Al	39K	44Ca	45Sc	47Ti	51V	52Cr	53Cl O	54Fe	55Mn	59Co	60Ni
1	19:27:34	31032.8770	8153.6549	682674.8800	r1751531.6000	r2671832.3000	587094.4000	29350.6370	553.3502	171110.6600	79542.4690	9747.8900	161050.6900	680256.6400	835401.4200	163741.4600
2	19:27:50	30484.3590	8183.6818	692727.6000	r1762841.0000	r2665462.1000	598272.3400	28243.8060	570.0179	171285.9100	80014.5860	9978.8070	165452.0100	696550.4500	847603.7500	163561.6000
3	19:28:07	31685.1210	8177.0092	695210.1200	r1813250.2000	r2677624.0000	595961.0200	28146.8390	603.3534	173391.9400	80159.1840	9884.0369	165866.1200	692041.5200	840858.4200	165805.0200
x		31067.4520	8171.4486	690204.2000	r1775874.3000	r2668306.1000	593775.9200	28580.4280	575.5738	171929.5000	79905.4130	9870.2447	164122.9400	689616.2000	841287.8700	164369.3600
σ		601.1272	15.7669	6637.6763	r32858.7660	r11494.0540	5900.6402	668.7808	25.4604	1269.5367	322.5264	116.0747	2668.6906	8413.3023	6112.4931	1246.5703
%RSD		1.9349	0.1930	0.9617	r1.8503	r0.4308	0.9937	2.3400	4.4235	0.7384	0.4036	1.1760	1.6260	1.2200	0.7266	0.7584

Run	Time	65Cu	66Zn	75As	77Se	78Se	82Se	83Kr	89Y	94Mo	95Mo	96Mo	97Mo	98Mo	103Rh	106Cd
1	19:27:34	99376.8810	147266.5600	2564.8062	456.6781	1596.8069	706.6941	103.3339	24686.8070	283.3378	170.0016	226.6695	110.0007	253.3369	10088.9280	1606.8087
2	19:27:50	100822.6700	152108.6500	2609.2633	450.0111	1571.2469	906.7119	96.6672	24065.1430	256.6703	180.0018	170.0016	116.6674	256.6703	10215.7370	1646.8158
3	19:28:07	99855.4150	155681.7100	2653.7206	456.6781	1555.6887	716.6949	110.0007	24329.1780	226.6695	116.6674	183.3352	130.0009	333.3394	10078.9170	1556.8000
x		100018.3200	151685.6400	2609.2634	454.4558	1574.5808	776.7003	103.3339	24360.3760	255.5592	155.5569	193.3354	118.8897	281.1155	10127.8610	1603.4748
σ		736.5327	4223.4915	44.4572	3.8492	20.7609	112.7043	6.6667	312.0038	28.3505	34.0484	29.6280	10.1836	45.2579	76.2671	45.1004
%RSD		0.7364	2.7844	1.7038	0.8470	1.3185	14.5107	6.4516	1.2808	11.0935	21.8881	15.3246	8.5656	16.0994	0.7530	2.8127

Run	Time	107Ag	108Cd	111Cd	115In	118Sn	121Sb	137Ba	159Tb	165Ho	205Tl	208Pb	209Bi
1	19:27:34	68493.7250	1123.4027	17086.0410	52477.6960	73.3336	105097.3400	914611.4000	60356.3630	61889.9550	273025.8800	521850.1100	51247.3730
2	19:27:50	71342.1730	1180.0766	17780.7050	53768.5390	80.0004	109795.7200	976065.7700	62346.3920	63937.3850	287178.7400	534211.3200	50469.7080
3	19:28:07	71369.0490	1150.0727	17897.6010	53745.0680	70.0003	110052.1200	967309.9100	62195.3630	62799.4940	290347.0300	542112.4000	51669.7540
x		70401.6490	1151.1840	17588.1160	53330.4340	74.4447	108315.0600	952662.3600	61632.7060	62875.6120	283517.2200	532724.6100	51128.9450
σ		1652.3656	28.3533	438.7198	738.5864	5.0918	2769.5739	33242.6360	1107.9219	1025.8348	9222.8305	10212.6290	608.7256
%RSD		2.3471	2.4630	2.4944	1.3849	6.8397	2.5754	3.4894	1.7976	1.6315	3.2530	1.9171	1.1906

PL21004-DUP2@MF6R42D 12/30/2015 19:31:40

User Pre-dilution: 1.00

Run	Time	6Li	9Be	25Mg	27Al	39K	44Ca	45Sc	47Ti	51V	52Cr	53Cl O	54Fe	55Mn	59Co	60Ni
1	19:31:40	30992.7400	0.0000	667314.9200	26976.6330	r2606878.1000	577285.1400	27819.1660	513.3478	600.0198	331.3394	204.0023	146965.0700	421001.0200	5918.5927	1406.7755
2	19:31:56	30410.7800	0.0000	676347.1600	27227.3790	r2605123.0000	585794.4300	27023.4380	523.3484	606.0202	361.3405	211.3358	150420.9100	424232.8500	5811.8572	1320.0958
3	19:32:13	29537.9090	3.3333	656795.3900	27748.9520	r2590843.0000	571974.7400	27234.0660	516.6814	606.6869	356.0070	195.3354	147869.5600	423370.6900	6235.4711	1196.7454
x		30313.8100	1.1111	666819.1500	27317.6550	r2600948.0000	578351.4400	27358.8900	517.7925	604.2423	349.5623	203.5578	148418.5100	422868.1900	5988.6403	1307.8723
σ		732.2472	1.9245	9785.3075	393.9944	r8795.1137	6971.2754	412.2884	5.0920	3.6720	16.0052	8.0094	1792.1263	1673.4862	220.3229	105.5472
%RSD		2.4156	173.2051	1.4675	1.4423	r0.3382	1.2054	1.5070	0.9834	0.6077	4.5787	3.9347	1.2075	0.3957	3.6790	8.0701

Run	Time	65Cu	66Zn	75As	77Se	78Se	82Se	83Kr	89Y	94Mo	95Mo	96Mo	97Mo	98Mo	103Rh	106Cd
1	19:31:40	953.3844	4464.4293	76.6670	10.0000	4.4444	10.0000	116.6674	23349.9490	193.3354	160.0014	220.0027	50.0001	233.3363	9975.4700	20.0000
2	19:31:56	1130.0702	4434.4146	62.2224	3.3333	3.3333	13.3333	70.0003	23577.2010	176.6684	153.3346	173.3350	100.0006	243.3366	10098.9400	26.6667
3	19:32:13	1020.0572	4594.4941	67.7780	6.6667	6.6667	16.6667	86.6671	24195.4890	213.3358	106.6673	210.0024	90.0004	276.6709	10322.5240	26.6667
x		1037.8373	4497.7793	68.8892	6.6667	4.8148	13.3333	91.1116	23707.5460	194.4465	140.0011	201.1134	80.0004	251.1146	10132.3110	24.4445
σ		84.7534	85.0913	7.2861	3.3333	1.6973	3.3333	23.6489	437.5808	18.3590	29.0597	24.5709	26.4577	22.6902	175.9171	3.8490
%RSD		8.1663	1.8919	10.5766	50.0000	35.2506	25.0000	25.9560	1.8457	9.4417	20.7568	12.2174	33.0720	9.0358	1.7362	15.7459

Run	Time	107Ag	108Cd	111Cd	115In	118Sn	121Sb	137Ba	159Tb	165Ho	205Tl	208Pb	209Bi
1	19:31:40	13.3333	10.0000	50.0001	51663.0500	73.3336	706.6941	17072.6830	59762.4580	60970.4400	333.3394	425514.0200	50181.4520
2	19:31:56	53.3335	10.0000	43.3334	52189.3760	66.6669	746.6973	17583.6550	60769.0990	61873.1750	336.6729	440940.3700	51431.7440
3	19:32:13	23.3334	3.3333	36.6667	51954.7050	76.6670	690.0262	17323.1560	61118.0930	62537.6990	280.0043	454444.9700	51066.3590
x		30.0001	7.7778	43.3334	51935.7100	72.2225	714.4726	17326.4980	60549.8830	61793.7710	316.6722	440299.7900	50893.1850
σ		20.8167	3.8490	6.6667	263.6770	5.0918	29.1253	255.5027	703.9019	786.6409	31.7990	14476.1050	642.8836
%RSD		69.3890	49.4872	15.3847	0.5077	7.0501	4.0765	1.4746	1.1625	1.2730	10.0416	3.2878	1.2632

SEQ-SRD1@MF6R42L@5X 12/30/2015 19:35:45

User Pre-dilution: 1.00

Run	Time	6Li	9Be	25Mg	27Al	39K	44Ca	45Sc	47Ti	51V	52Cr	53Cl O	54Fe	55Mn	59Co	60Ni
1	19:35:45	34421.7110	3.3333	131135.7100	6105.3828	567805.1600	113055.3100	27561.7170	410.0093	185.3352	71.3336	69.3336	32789.0250	84426.8890	1246.7522	266.6706
2	19:36:02	32089.8700	0.0000	134934.0200	6398.9179	562634.7500	117524.7900	27745.6090	336.6729	222.0027	82.6670	78.6670	32949.6040	86418.8080	1166.7415	293.3381
3	19:36:18	32046.3840	0.0000	136980.9600	6695.7983	564296.4800	117845.5600	27688.7690	376.6745	180.0018	65.3336	71.3336	33675.5910	84887.8180	1230.0832	316.6722
x		32852.6550	1.1111	134350.2300	6400.0330	564912.1300	116141.8900	27665.3650	374.4522	195.7799	73.1114	73.1114	33138.0730	85244.5050	1214.5256	292.2269
σ		1359.0159	1.9245	2966.0332	295.2093	2639.6105	2677.8642	94.1532	36.7186	22.8657	8.8024	4.9141	472.3770	1042.7631	42.2132	25.0193
%RSD		4.1367	173.2051	2.2077	4.6126	0.4673	2.3057	0.3403	9.8060	11.6793	12.0397	6.7214	1.4255	1.2233	3.4757	8.5616

Run	Time	65Cu	66Zn	75As	77Se	78Se	82Se	83Kr	89Y	94Mo	95Mo	96Mo	97Mo	98Mo	103Rh	106Cd
1	19:35:45	336.6729	1003.3887	16.6667	0.0000	8.8889	6.6667	83.3337	23623.9890	23.3334	16.6667	30.0000	46.6668	56.6668	10192.3770	33.3334
2	19:36:02	323.3391	1043.3932	22.2222	3.3333	5.5556	3.3333	73.3336	24339.2050	50.0001	53.3335	46.6668	40.0001	50.0001	9885.3717	26.6667
3	19:36:18	340.0064	1140.0715	13.3333	3.3333	3.3333	6.6667	43.3334	24162.0670	33.3334	43.3334	40.0001	13.3333	63.3336	10646.2300	33.3334
x		333.3395	1062.2845	17.4074	2.2222	5.9259	5.5556	66.6669	24041.7530	35.5556	37.7779	38.8890	33.3334	56.6668	10241.3260	31.1112
σ		8.8195	70.2724	4.4905	1.9245	2.7962	1.9245	20.8168	372.4783	13.4716	18.9542	8.3867	17.6384	6.6667	382.7838	3.8490
%RSD		2.6458	6.6152	25.7965	86.6025	47.1865	34.6410	31.2251	1.5493	37.8887	50.1728	21.5710	52.9151	11.7647	3.7376	12.3718

Run	Time	107Ag	108Cd	111Cd	115In	118Sn	121Sb	137Ba	159Tb	165Ho	205Tl	208Pb	209Bi
1	19:35:45	10.0000	23.3334	13.3333	53456.7080	50.0001	56.6668	3190.5598	60097.9930	60208.7220	83.3337	84551.3710	51089.8240
2	19:36:02	10.0000	10.0000	6.6667	53882.5450	33.3334	76.6670	3387.2976	59859.7620	61430.1860	90.0004	86792.3420	51756.9150
3	19:36:18	6.6667	10.0000	6.6667	54241.3350	33.3334	46.6668	3237.2429	60604.6730	61218.7670	86.6671	87744.7520	51941.2950
x		8.8889	14.4445	8.8889	53860.1960	38.8890	60.0002	3271.7001	60187.4760	60952.5580	86.6671	86362.8220	51596.0110
σ		1.9245	7.6980	3.8490	392.7907	9.6225	15.2754	102.7955	380.4321	652.7971	3.3334	1639.4469	447.9601
%RSD		21.6506	53.2939	43.3013	0.7293	24.7436	25.4588	3.1420	0.6321	1.0710	3.8462	1.8983	0.8682

5120223-03RE2@MF6R44 12/30/2015 19:39:51

User Pre-dilution: 1.00

Run	Time	6Li	9Be	25Mg	27Al	39K	44Ca	45Sc	47Ti	51V	52Cr	53Cl O	54Fe	55Mn	59Co	60Ni
1	19:39:51	29093.1450	66.6669	785536.4700	τ4027986.1000	τ1717224.7000	616362.9100	32795.7160	4971.3589	4507.1170	3288.5947	652.0234	805789.1200	630633.5100	11851.0530	3484.0008
2	19:40:07	28701.9040	33.3334	785344.2100	τ4145897.6000	τ1770371.9000	637566.2400	32755.5720	4998.0402	4654.5246	3275.2566	658.0238	828358.6300	640391.4900	11897.7810	3787.4555
3	19:40:24	28528.0250	56.6668	814656.2100	τ4073836.1000	τ1751544.6000	633303.1900	32400.9710	5264.8574	4733.8989	3269.2544	633.3554	841022.6200	635238.1000	12181.4890	3790.7902
x		28774.3580	52.2224	795178.9600	τ4082573.3000	τ1746380.4000	629077.4500	32650.7530	5078.0855	4631.8468	3277.7019	647.8009	825056.7900	635421.0400	11976.7740	3687.4155
σ		269.4431	17.1054	16868.0620	τ59439.3460	τ26947.3270	11215.5260	217.2467	162.2984	115.0792	9.8993	12.8649	17847.3120	4881.5596	178.8213	176.1702
%RSD		1.0059	32.7550	2.1213	τ1.4559	τ1.5430	1.7829	0.6654	3.1961	2.4845	0.3020	1.9859	2.1632	0.7682	1.4931	4.7776

Run	Time	65Cu	66Zn	75As	77Se	78Se	82Se	83Kr	89Y	94Mo	95Mo	96Mo	97Mo	98Mo	103Rh	106Cd
1	19:39:51	2860.4499	5148.1239	427.7878	3.3333	12.2222	26.6667	120.0008	29584.7280	7246.2201	9691.8302	10963.2730	5965.2898	16491.6120	9211.3310	80.0004
2	19:40:07	2897.1282	5118.1070	495.5691	6.6667	10.0000	20.0000	120.0008	29715.1520	6922.6348	10409.2890	11260.3030	6468.9675	16608.4910	9221.3411	60.0002
3	19:40:24	2893.7938	5328.2277	461.1228	6.6667	8.8889	23.3334	113.3340	29955.9400	7332.9563	10362.5690	11393.8020	6605.7324	16244.5010	9234.6880	56.6668
x		2883.7907	5198.1529	461.4932	5.5556	10.3704	23.3334	117.7785	29751.9400	7167.2704	10154.5630	11205.7930	6346.6632	16448.2010	9222.4534	65.5558
σ		20.2823	113.6435	33.8921	1.9245	1.6973	3.3333	3.8491	188.3208	216.2539	401.4186	220.3799	337.2839	185.8375	11.7182	12.6199
%RSD		0.7033	2.1862	7.3440	34.6410	16.3664	14.2857	3.2680	0.6330	3.0172	3.9531	1.9667	5.3143	1.1298	0.1271	19.2506

Run	Time	107Ag	108Cd	111Cd	115In	118Sn	121Sb	137Ba	159Tb	165Ho	205Tl	208Pb	209Bi
1	19:39:51	126.6676	13.3333	26.6667	47828.8210	516.6814	1353.4341	48428.6510	58339.9300	59765.8140	423.3432	τM13483912.0000	47845.5750
2	19:40:07	170.0016	6.6667	40.0001	48033.2280	506.6808	1406.7755	50436.1890	58823.0280	59947.0010	413.3427	τM14157958.0000	47118.4590
3	19:40:24	126.6676	53.3335	50.0001	48864.3060	553.3502	1376.7709	52105.5640	59688.6430	61081.1800	413.3427	τM14432540.0000	50144.5830
x		141.1122	24.4445	38.8890	48242.1180	525.5708	1378.9935	50323.4680	58950.5330	60264.6650	416.6762	τM14024803.0000	48369.5390
σ		25.0189	25.2397	11.7063	548.4375	24.5718	26.7401	1841.0467	683.3373	712.9023	5.7738	τM488130.7100	1579.6389
%RSD		17.7298	103.2530	30.1019	1.1368	4.6753	1.9391	3.6584	1.1592	1.1830	1.3857	τM3.4805	3.2658

5120223-04RE1@MF6R45 12/30/2015 19:43:57

User Pre-dilution: 1.00

Run	Time	6Li	9Be	25Mg	27Al	39K	44Ca	45Sc	47Ti	51V	52Cr	53Cl O	54Fe	55Mn	59Co	60Ni
1	19:43:57	29681.7100	0.0000	587129.9200	3350.6174	863694.3100	1203189.6000	26150.8920	416.6762	306.0052	282.0044	116.0007	τ3765539.1000	781463.5700	2196.9321	333.3394
2	19:44:13	29210.1860	0.0000	574869.0200	3333.9446	862483.7400	1231569.8000	26959.9170	376.6745	328.6726	278.6709	130.6676	τ3833841.9000	783708.3400	2266.9493	290.0046
3	19:44:30	28023.1250	3.3333	566238.4900	3207.2323	862984.7700	1243338.6000	26572.1110	270.0040	294.6714	242.0032	116.6674	τ3800897.1000	786327.3200	2403.6511	350.0067
x		28971.6730	1.1111	576079.1400	3297.2647	863054.2800	1226032.7000	26560.9730	354.4516	309.7831	267.5595	121.1119	τ3800092.7000	783833.0800	2289.1775	324.4503
σ		854.6298	1.9245	10498.1540	78.4148	608.2702	20639.2590	404.6274	75.8194	17.3125	22.1951	8.2822	τ34158.5030	2434.2731	105.1368	30.9730
%RSD		2.9499	173.2051	1.8223	2.3782	0.0705	1.6834	1.5234	21.3906	5.5886	8.2954	6.8384	τ0.8989	0.3106	4.5928	9.5463

Run	Time	65Cu	66Zn	75As	77Se	78Se	82Se	83Kr	89Y	94Mo	95Mo	96Mo	97Mo	98Mo	103Rh	106Cd
1	19:43:57	210.0024	400.0088	607.7981	13.3333	6.6667	10.0000	80.0004	24740.2850	400.0088	600.0198	730.0293	390.0084	966.7181	10118.9620	40.0001
2	19:44:13	200.0022	386.6749	595.5751	3.3333	8.8889	6.6667	93.3338	24536.4010	373.3410	626.6883	603.3534	443.3441	1016.7235	10092.2660	43.3334
3	19:44:30	200.0022	430.0102	598.9086	3.3333	6.6667	3.3333	76.6670	23791.0900	363.3406	670.0247	750.0309	450.0111	1073.3967	9895.3826	30.0000
x		203.3356	405.5646	600.7606	6.6667	7.4074	6.6667	83.3337	24355.9250	378.8968	632.2443	694.4712	427.7879	1018.9461	10035.5370	37.7779
σ		5.7736	22.1954	6.3185	5.7735	1.2830	3.3333	8.8193	499.6713	18.9549	35.3316	79.5416	32.8874	53.3740	122.1087	6.9389
%RSD		2.8395	5.4727	1.0517	86.6026	17.3205	50.0000	10.5831	2.0515	5.0027	5.5883	11.4535	7.6878	5.2382	1.2168	18.3677

Run	Time	107Ag	108Cd	111Cd	115In	118Sn	121Sb	137Ba	159Tb	165Ho	205Tl	208Pb	209Bi
1	19:43:57	6.6667	13.3333	3.3333	51217.2040	56.6668	646.6897	47899.1900	61490.5920	61285.8840	40.0001	840.0388	49068.7360
2	19:44:13	0.0000	20.0000	10.0000	52883.3700	70.0003	636.6890	49212.8450	60443.6060	62490.7110	56.6668	883.3763	51381.4600
3	19:44:30	20.0000	30.0000	6.6667	52662.0910	73.3336	606.6869	50630.5990	61141.5840	61769.1380	60.0002	896.7109	50975.8530
x		8.8889	21.1111	6.6667	52254.2220	66.6669	630.0219	49247.5450	61025.2610	61848.5780	52.2224	873.3753	50475.3500
σ		10.1835	8.3887	3.3333	904.8729	8.8192	20.8181	1366.0349	533.0979	606.3292	10.7152	29.6301	1234.9297
%RSD		114.5644	39.7360	50.0000	1.7317	13.2288	3.3043	2.7738	0.8736	0.9803	20.5185	3.3926	2.4466

5120223-05RE1@MF6R46 12/30/2015 19:48:03

User Pre-dilution: 1.00

Run	Time	6Li	9Be	25Mg	27Al	39K	44Ca	45Sc	47Ti	51V	52Cr	53Cl O	54Fe	55Mn	59Co	60Ni
1	19:48:03	29598.1040	0.0000	656337.3500	179062.9600	τ3457935.6000	832145.4900	27384.5160	630.0218	853.3734	447.3443	321.3390	33682.2820	16882.3280	716.6949	946.7160
2	19:48:19	28986.1370	0.0000	656272.9400	183666.7900	τ3494712.6000	865589.1100	26622.2570	613.3540	820.0370	436.0105	265.3372	34411.6730	16985.8540	463.3451	903.3782
3	19:48:36	27939.5350	0.0000	669529.1700	186041.0000	τ3400703.8000	868830.8900	26638.9730	616.6876	793.3680	435.3438	270.0040	35040.7350	16645.2250	600.0198	896.7109
x		28841.2590	0.0000	660713.1500	182923.5900	τ3451117.3000	855521.8300	26881.9160	620.0212	822.2594	439.5662	285.5601	34378.2300	16837.8020	593.3533	915.6017
σ		838.7226	0.0000	7634.9588	3547.8906	τ47373.8440	20309.2900	435.3454	8.8198	30.0644	6.7443	31.0732	679.8439	174.6252	126.8064	27.1512
%RSD		2.9081	0.0000	1.1556	1.9395	τ1.3727	2.3739	1.6195	1.4225	3.6563	1.5343	10.8815	1.9775	1.0371	21.3711	2.9654

Run	Time	65Cu	66Zn	75As	77Se	78Se	82Se	83Kr	89Y	94Mo	95Mo	96Mo	97Mo	98Mo	103Rh	106Cd
1	19:48:03	1593.4730	2780.4251	48.8890	3.3333	4.4444	13.3333	40.0001	22965.6380	160.0014	80.0004	136.6677	56.6668	146.6679	9852.0022	33.3334
2	19:48:19	1563.4678	2797.0969	54.4446	3.3333	11.1111	3.3333	83.3337	23430.1550	153.3346	90.0004	163.3348	80.0004	180.0018	9962.1221	30.0000
3	19:48:36	1476.7866	2923.8034	44.4446	10.0000	2.2222	6.6667	60.0002	23680.8030	180.0018	96.6672	96.6672	73.3336	140.0011	9968.7961	33.3334
x		1544.5758	2833.7752	49.2594	5.5556	5.9259	7.7778	61.1113	23358.8650	164.4459	88.8893	132.2232	70.0003	155.5569	9927.6401	32.2223
σ		60.5938	78.4111	5.0103	3.8490	4.6259	5.0918	21.6882	362.8729	13.8780	8.3888	33.5553	12.0186	21.4307	65.5893	1.9245
%RSD		3.9230	2.7670	10.1713	69.2821	78.0625	65.4654	35.4896	1.5535	8.4393	9.4373	25.3778	17.1694	13.7768	0.6607	5.9726

Run	Time	107Ag	108Cd	111Cd	115In	118Sn	121Sb	137Ba	159Tb	165Ho	205Tl	208Pb	209Bi
1	19:48:03	13.3333	10.0000	13.3333	50335.6340	100.0006	836.7052	23730.9330	59567.8540	61252.3250	83.3337	44203.8750	49346.9020
2	19:48:19	3.3333	16.6667	10.0000	52162.5560	73.3336	963.3844	24262.3330	60597.9620	61302.6630	76.6670	46153.5280	50493.1710
3	19:48:36	13.3333	13.3333	40.0001	50134.5270	73.3336	866.7080	25382.0510	60363.0740	63410.3800	90.0004	47222.3290	50181.4520
x		10.0000	13.3333	21.1111	50877.5730	82.2226	888.9325	24458.4390	60176.2970	61988.4560	83.3337	45859.9110	50007.1750
σ		5.7735	3.3333	16.4430	1117.3623	15.3962	66.1993	842.8467	539.8563	1231.6791	6.6667	1530.4983	592.6738
%RSD		57.7350	25.0000	77.8877	2.1962	18.7250	7.4471	3.4460	0.8971	1.9869	8.0000	3.3373	1.1852

5120223-06REI@MF6R47 12/30/2015 19:52:09

User Pre-dilution: 1.00

Run	Time	6Li	9Be	25Mg	27Al	39K	44Ca	45Sc	47Ti	51V	52Cr	53Cl O	54Fe	55Mn	59Co	60Ni
1	19:52:09	29681.7100	0.0000	643013.9100	312745.2200	r3413244.7000	816781.4600	27601.8390	766.6990	1035.3923	476.0125	321.3390	50519.9860	17092.7200	1020.0572	890.0436
2	19:52:25	29885.7100	3.3333	653053.0100	309955.4100	r3325298.9000	830913.4100	27036.8110	703.3605	984.7200	506.6808	304.6718	51797.1430	17206.2680	1006.7224	893.3772
3	19:52:42	29267.0350	6.6667	678258.6600	322738.9100	r3466375.9000	863105.4600	27096.9900	756.6982	944.7158	517.3481	327.3392	51549.0720	17379.9310	1080.0642	830.0379
x		29611.4850	3.3333	658108.5300	315146.5100	r3401639.8000	836933.4500	27245.2130	742.2526	988.2760	500.0138	317.7833	51288.7340	17226.3060	1035.6146	871.1529
σ		315.2589	3.3333	18158.1040	6721.5382	r71250.8830	23741.5020	310.3089	34.0506	45.4427	21.4591	11.7446	677.2109	144.6500	39.0676	35.6456
%RSD		1.0647	100.0000	2.7591	2.1328	r2.0946	2.8367	1.1389	4.5875	4.5982	4.2917	3.6958	1.3204	0.8397	3.7724	4.0918

Run	Time	65Cu	66Zn	75As	77Se	78Se	82Se	83Kr	89Y	94Mo	95Mo	96Mo	97Mo	98Mo	103Rh	106Cd
1	19:52:09	1406.7755	2977.1541	41.1112	10.0000	4.4444	3.3333	46.6668	23831.1950	150.0012	116.6674	140.0011	63.3336	163.3348	9628.4295	50.0001
2	19:52:25	1523.4610	3093.8597	43.3334	3.3333	3.3333	0.0000	73.3336	23567.1750	233.3363	96.6672	123.3342	66.6669	166.6682	9661.7982	56.6668
3	19:52:42	1593.4730	3230.5739	43.3334	3.3333	3.3333	3.3333	66.6669	24820.5040	223.3361	76.6670	116.6674	90.0004	113.3340	10035.5360	20.0000
x		1507.9032	3100.5292	42.5927	5.5556	3.7037	2.2222	62.2224	24072.9580	202.2246	96.6672	126.6676	73.3336	147.7790	9775.2546	42.2223
σ		94.3161	126.8415	1.2830	3.8490	0.6415	1.9245	13.8779	660.7157	45.5023	20.0002	12.0187	14.5298	29.8767	226.0270	19.5316
%RSD		6.2548	4.0910	3.0123	69.2821	17.3205	86.6025	22.3036	2.7446	22.5009	20.6898	9.4884	19.8133	20.2172	2.3122	46.2590

Run	Time	107Ag	108Cd	111Cd	115In	118Sn	121Sb	137Ba	159Tb	165Ho	205Tl	208Pb	209Bi
1	19:52:09	10.0000	16.6667	20.0000	50771.3810	96.6672	816.7034	23099.3100	58755.9290	60933.5270	96.6672	58202.3860	48730.2560
2	19:52:25	13.3333	10.0000	26.6667	50922.2210	93.3338	846.7061	24375.9700	62014.1310	62007.4190	86.6671	62014.1310	49852.9860
3	19:52:42	10.0000	13.3333	13.3333	51408.2780	126.6676	790.0343	25101.2730	60591.2510	63000.8810	80.0004	62759.2180	50359.0970
x		11.1111	13.3333	20.0000	51033.9600	105.5562	817.8146	24192.1840	60453.7700	61980.6090	87.7782	60991.9110	49647.4460
σ		1.9245	3.3333	6.6667	332.8271	18.3588	28.3522	1013.5567	1633.4457	1033.9375	8.3888	2444.3566	833.6459
%RSD		17.3205	25.0000	33.3334	0.6522	17.3924	3.4668	4.1896	2.7020	1.6682	9.5568	4.0077	1.6791

SEQ-IBL2@ZZZZZZ 12/30/2015 19:56:15

User Pre-dilution: 1.00

Run	Time	6Li	9Be	25Mg	27Al	39K	44Ca	45Sc	47Ti	51V	52Cr	53Cl O	54Fe	55Mn	59Co	60Ni
1	19:56:15	31872.4410	0.0000	23.3334	670.0247	12014.6010	433.3437	39455.4350	233.3363	59.3335	6.6667	14.0000	13673.6090	23.3334	16.6667	33.3334
2	19:56:32	32384.2450	0.0000	33.3334	590.0192	12204.8540	383.3414	38307.2060	186.6686	50.0001	10.6667	20.0000	12511.9380	16.6667	16.6667	6.6667
3	19:56:48	29885.7100	3.3333	23.3334	723.3621	11236.9400	423.3432	37979.1680	153.3346	46.0001	15.3333	14.6667	13469.9720	33.3334	16.6667	26.6667
x		31380.7980	1.1111	26.6667	661.1353	11818.7980	413.3428	38580.6030	191.1132	51.7779	10.8889	16.2222	13218.5060	24.4445	16.6667	22.2223
σ		1319.8309	1.9245	5.7735	67.1145	512.8041	26.4587	775.1777	40.1856	6.8422	4.3376	3.2886	620.3195	8.3887	0.0000	13.8778
%RSD		4.2059	173.2051	21.6507	10.1514	4.3389	6.4012	2.0092	21.0271	13.2145	39.8352	20.2721	4.6928	34.3175	0.0000	62.4500

Run	Time	65Cu	66Zn	75As	77Se	78Se	82Se	83Kr	89Y	94Mo	95Mo	96Mo	97Mo	98Mo	103Rh	106Cd
1	19:56:15	60.0002	53.3335	2.2222	0.0000	3.3333	26.6667	163.3348	41283.5260	3.3333	6.6667	0.0000	0.0000	0.0000	16267.8760	20.0000
2	19:56:32	56.6668	40.0001	0.0000	3.3333	4.4444	20.0000	146.6679	40433.0500	10.0000	3.3333	3.3333	0.0000	6.6667	16411.4670	26.6667
3	19:56:48	66.6669	50.0001	1.1111	0.0000	3.3333	13.3333	156.6680	40908.5030	10.0000	0.0000	3.3333	6.6667	0.0000	16775.4640	23.3334
x		61.1113	47.7779	1.1111	1.1111	3.7037	20.0000	155.5569	40875.0260	7.7778	3.3333	2.2222	2.2222	2.2222	16484.9350	23.3334
σ		5.0918	6.9389	1.1111	1.9245	0.6415	6.6667	8.3888	426.2253	3.8490	3.3333	1.9245	3.8490	3.8490	261.6478	3.3333
%RSD		8.3320	14.5233	100.0000	173.2051	17.3205	33.3334	5.3928	1.0428	49.4872	100.0000	86.6025	173.2051	173.2051	1.5872	14.2857

Run	Time	107Ag	108Cd	111Cd	115In	118Sn	121Sb	137Ba	159Tb	165Ho	205Tl	208Pb	209Bi
1	19:56:15	0.0000	0.0000	0.0000	94508.7140	6.6667	3.3333	10.0000	118179.8600	121591.0700	20.0000	130.0009	94101.1860
2	19:56:32	6.6667	0.0000	6.6667	94340.3120	3.3333	16.6667	3.3333	119642.1400	122087.6600	36.6667	96.6672	97294.5380
3	19:56:48	0.0000	10.0000	0.0000	95623.6150	10.0000	13.3333	3.3333	121935.6400	123952.6500	36.6667	96.6672	97405.7190
x		2.2222	3.3333	2.2222	94824.2140	6.6667	11.1111	5.5556	119919.2100	122543.7900	31.1112	107.7784	96267.1480
σ		3.8490	5.7735	3.8490	697.4038	3.3333	6.9389	3.8490	1893.1585	1245.1097	9.6225	19.2452	1876.6015
%RSD		173.2051	173.2051	173.2051	0.7355	50.0000	62.4500	69.2821	1.5787	1.0161	30.9295	17.8563	1.9494

SEQ-CCV@CCV03 12/30/2015 20:00:22 QC Status: PASS (Initial: PASS)

User Pre-dilution: 1.00

Run	Time	6Li	9Be	25Mg	27Al	39K	44Ca	45Sc	47Ti	51V	52Cr	53Cl O	54Fe	55Mn	59Co	60Ni
1	20:02:06	27451.3840	69917.8380	r5127425.8000	r47826215.0000	r46267499.0000	r1879708.9000	24573.1660	250.0034	161745.5300	184041.5900	22773.8230	r5842850.9000	1149047.3000	748683.0200	145322.3100
2	20:02:22	27468.1010	71103.6490	r5115555.4000	r47947671.0000	r45248655.0000	r1854767.0000	24499.6350	200.0022	161665.4600	185525.2900	22846.0040	r5880503.9000	1187424.7000	745597.6000	143899.9500
3	20:02:38	26959.9170	70196.6410	r5181473.6000	r47808332.0000	r45645863.0000	r1866335.9000	24523.0310	206.6690	161702.7800	186877.9100	22930.2160	r5906455.1000	1191185.6000	759048.6100	141895.4800
x		27293.1340	70406.0420	r5141484.9000	r47860739.0000	r45720672.0000	r1866937.3000	24531.9440	218.8916	161704.5900	185481.6000	22850.0140	r5876636.7000	1175885.8000	751109.7400	143705.9100
σ		288.6957	620.0191	r35136.1100	r75813.8610	r513525.0400	r12481.7960	37.5672	27.1491	40.0668	1418.6660	78.2733	r31987.1720	23318.8430	7046.2156	1721.6367
%RSD		1.0578	0.8806	r0.6834	r0.1584	r1.1232	r0.6686	0.1531	12.4030	0.0248	0.7649	0.3426	r0.5443	1.9831	0.9381	1.1980

Run	Time	65Cu	66Zn	75As	77Se	78Se	82Se	83Kr	89Y	94Mo	95Mo	96Mo	97Mo	98Mo	103Rh	106Cd
1	20:02:06	172005.3000	655571.6200	28120.0900	2000.2200	6556.8081	3077.1874	150.0012	22287.2860	123293.7800	224559.6500	241943.9100	139830.5200	366893.8300	9408.1991	14124.2970
2	20:02:22	173272.3600	654058.2300	29115.4380	1950.2092	6873.7088	2917.1346	133.3343	22821.9440	123361.3500	227641.5600	243391.8000	140961.1100	371922.0900	8994.4473	14281.2090
3	20:02:38	171366.7500	657707.9500	28536.9420	2116.9131	6768.0740	3013.8328	123.3342	22534.5610	126125.5600	229825.4900	247904.6500	140818.9300	373911.2500	9404.8623	13800.4670
x		172214.8000	655779.2700	28590.8230	2022.4474	6732.8636	3002.7183	135.5566	22547.9300	124260.2300	227342.2300	244413.4600	140536.8500	370909.0600	9269.1696	14068.6580
σ		969.9273	1833.7014	499.8569	85.5459	161.3578	80.6032	13.4717	267.5793	1615.7775	2645.6502	3108.9275	615.8221	3616.7256	237.9223	245.1529
%RSD		0.5632	0.2796	1.7483	4.2298	2.3966	2.6843	9.9381	1.1867	1.3003	1.1637	1.2720	0.4382	0.9751	2.5668	1.7425

Run	Time	107Ag	108Cd	111Cd	115In	118Sn	121Sb	137Ba	159Tb	165Ho	205Tl	208Pb	209Bi
1	20:02:06	84151.0160	10412.6270	158021.5600	55371.4510	457145.4300	523441.1200	1105876.4000	58819.6730	59366.5440	r2590479.3000	2084581.2000	46770.0000
2	20:02:22	84487.4480	10385.9290	161220.3300	55646.4560	458942.6800	528526.3800	1114402.7000	60269.1200	60839.5680	r2605573.5000	2109348.6000	46649.3830
3	20:02:38	86438.9990	10669.5910	161403.5400	55026.0300	456595.4700	520650.8700	1126563.6000	58846.5120	60463.7390	r2620800.2000	2099837.6000	47195.5240
x		85025.8210	10489.3820	160215.1400	55347.9790	457561.1900	524206.1200	1115614.2000	59311.7680	60223.2840	r2605617.7000	2097922.5000	46871.6360
σ		1235.3547	156.6351	1901.9040	310.8783	1227.5944	3993.1021	10396.7080	829.1995	765.3849	r15160.5350	12494.2620	286.9058
%RSD		1.4529	1.4933	1.1871	0.5617	0.2683	0.7617	0.9319	1.3980	1.2709	r0.5818	0.5956	0.6121

SEQ-CCB@CCB03 12/30/2015 20:06:12 QC Status: PASS (Initial: PASS)

User Pre-dilution: 1.00

Run	Time	6Li	9Be	25Mg	27Al	39K	44Ca	45Sc	47Ti	51V	52Cr	53Cl O	54Fe	55Mn	59Co	60Ni
1	20:06:12	32404.3160	0.0000	386.6749	5054.7382	35535.9860	800.0352	26321.3830	336.6729	266.6706	102.0006	120.0008	3530.6855	130.0009	90.0004	70.0003
2	20:06:29	31718.5710	10.0000	436.6772	5314.8865	34050.3160	876.7089	26882.4330	210.0024	276.6709	119.3341	108.6673	3684.0797	160.0014	73.3336	56.6668
3	20:06:45	30477.6700	3.3333	690.0262	5908.5862	34030.2410	780.0335	26963.2600	266.6706	256.0036	107.3340	100.6672	3557.3625	143.3345	120.0008	43.3334
x		31533.5190	4.4444	504.4594	5426.0703	34538.8470	818.9259	26655.6920	271.1153	266.4484	109.5562	109.7784	3590.7092	144.4456	94.4450	56.6668
σ		976.5625	5.0918	162.6386	437.6476	863.6053	51.0312	321.7730	63.4521	10.3354	8.8779	9.7146	81.9539	15.0311	23.6489	13.3334
%RSD		3.0969	114.5644	32.2402	8.0656	2.5004	6.2315	1.2071	23.4041	3.8790	8.1035	8.8492	2.2824	10.4060	25.0399	23.5295

Run	Time	65Cu	66Zn	75As	77Se	78Se	82Se	83Kr	89Y	94Mo	95Mo	96Mo	97Mo	98Mo	103Rh	106Cd
1	20:06:12	93.3338	116.6674	6.6667	0.0000	0.0000	6.6667	56.6668	23998.3000	33.3334	76.6670	36.6667	63.3336	66.6669	10486.0440	30.0000
2	20:06:29	130.0009	156.6680	7.7778	6.6667	5.5556	6.6667	36.6667	24004.9850	53.3335	93.3338	66.6669	56.6668	90.0004	10529.4280	26.6667
3	20:06:45	136.6677	113.3340	6.6667	0.0000	5.5556	3.3333	36.6667	23714.2230	66.6669	90.0004	76.6670	66.6669	110.0007	10546.1140	23.3334
x		120.0008	128.8898	7.0370	2.2222	3.7037	5.5556	43.3334	23905.8360	51.1113	86.6671	60.0002	62.2224	88.8893	10520.5280	26.6667
σ		23.3336	24.1143	0.6415	3.8490	3.2075	1.9245	11.5471	165.9754	16.7775	8.8193	20.8168	5.0918	21.6882	31.0077	3.3333
%RSD		19.4446	18.7092	9.1161	173.2051	86.6025	34.6410	26.6470	0.6943	32.8254	10.1760	34.6945	8.1832	24.3991	0.2947	12.5000

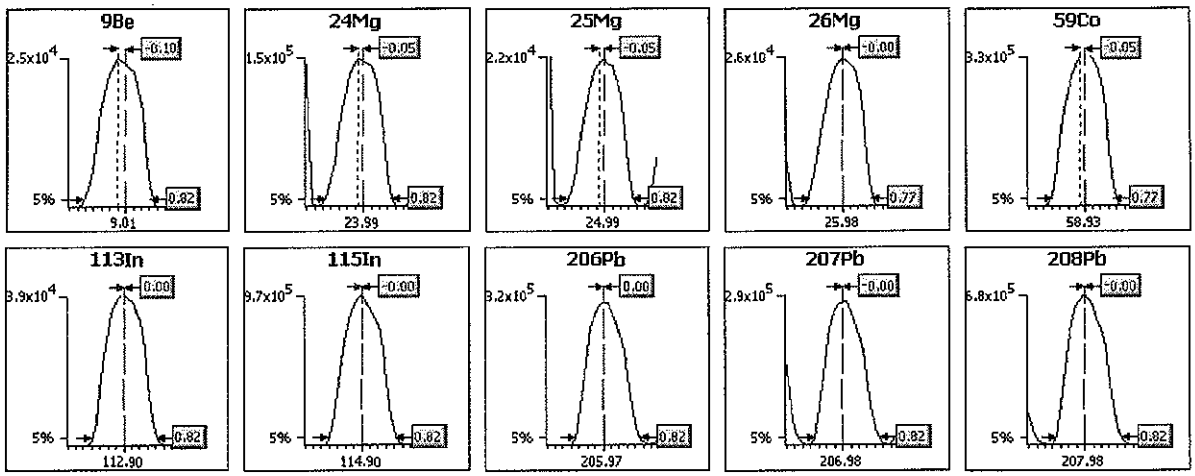
Run	Time	107Ag	108Cd	111Cd	115In	118Sn	121Sb	137Ba	159Tb	165Ho	205Tl	208Pb	209Bi
1	20:06:12	16.6667	13.3333	20.0000	52809.6090	173.3350	110.0007	90.0004	60423.4730	62091.3220	1173.4091	256.6703	50597.0790
2	20:06:29	30.0000	13.3333	6.6667	53540.5330	153.3346	186.6686	93.3338	60356.3630	61114.7370	1140.0715	306.6718	51780.3810
3	20:06:45	16.6667	13.3333	23.3334	52876.6640	143.3345	200.0022	110.0007	61745.6460	61957.0770	990.0539	346.6733	51505.4930
x		21.1111	13.3333	16.6667	53075.6020	156.6680	165.5572	97.7783	60841.8270	61721.0450	1101.1781	303.3385	51294.3180
σ		7.6980	0.0000	8.8192	404.0352	15.2755	48.5730	10.7153	783.4488	529.3509	97.6693	45.0940	619.2712
%RSD		36.4643	0.0000	52.9151	0.7612	9.7502	29.3391	10.9588	1.2877	0.8577	8.8695	14.8659	1.2073

Performance Report

Sample details
Sample name : SEQ-TUN1@TUNE01
Acquired at : 1/4/2016 12:29:22
Report name : 200_8 + IS TEST_NO SCREEN [7/9/2015 09:58:10]

Mass Calibration verification

Acquisition parameters
Sweeps : 10
Dwell : 10.0 mSecs
Point spacing : 0.05 amu
Peak width measured at 5% of the peak maximum



Analyte	Limits			Results	
	Max. width	Min. width	Max. error	Peak width	Peak error
9Be	0.85	0.65	0.11	0.82	-0.10
24Mg	0.85	0.65	0.11	0.82	-0.05
25Mg	0.85	0.65	0.11	0.82	-0.05
26Mg	0.85	0.65	0.11	0.77	-0.00
59Co	0.85	0.65	0.11	0.77	-0.05
113In	0.85	0.65	0.11	0.82	0.00
115In	0.85	0.65	0.11	0.82	-0.00
206Pb	0.85	0.65	0.11	0.82	0.00
207Pb	0.85	0.65	0.11	0.82	-0.00
208Pb	0.85	0.65	0.11	0.82	-0.00

Sample details
Sample name : SEQ-TUN1@TUNE01
Acquired at : 1/4/2016 12:29:22
Report name : 200_8 + IS TEST_NO SCREEN [7/9/2015 09:58:10]

Tune conditions

Major	
Extraction	-106
Lens 1	0.3
Focus	16.3
D1	-47.8
Pole Bias	-0.9
Hexapole Bias	1.5
Nebuliser	0.84
Sampling Depth	130

Minor	
Lens 2	-26.7
Lens 3	-189.0
Forward power	1404
Horizontal	100
Vertical	375
D2	-160
DA	-36.9
Cool	13.0
Auxiliary	0.90

Global	
Standard resolution	n/a
High resolution	n/a
Analogue Detector	n/a
PC Detector	n/a

Add. Gases	
CCT 7% h2/He	0.00
Dont touch this thing	0.00

Sensitivity and stability results

Acquisition parameters
Sweeps : 30

Run	Time	6Li	9Be	24Mg	25Mg	26Mg	45Sc	59Co	89Y	113In	115In	159Tb	206Pb	207Pb	208Pb	209Bi
Dwell (mSecs)		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Limits	%RSD	3.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%
	Countrate	>4000	>4000	>4000	>4000	>4000	>5000	>4000	>5000	>10000	>20000	>20000	>20000	>20000	>20000	>20000
1	12:30:01	46367.948	22908.828	147195.42	21010.919	27080.274	473592.79	357091.54	56303.818	41551.409	964507.65	122817.39	326185.36	296903.79	691323.17	90212.059
2	12:30:08	46227.235	23132.728	147073.47	20887.301	26435.046	478854.64	354596.67	56531.894	40694.211	967550.24	123020.11	322258.99	297403.05	698307.90	92585.745
3	12:30:16	44508.690	22905.487	150969.90	21338.347	26986.663	470038.60	355698.49	55462.001	40493.317	970345.99	126118.80	326371.88	297678.51	693054.50	92898.915
4	12:30:23	45785.005	22614.760	148845.29	21258.159	26702.492	472371.65	352137.12	56964.582	41253.389	964725.74	123949.27	325473.86	297034.62	691459.65	91289.400
5	12:30:31	45838.607	23149.437	148652.17	21014.260	26074.005	475631.89	357798.53	55572.673	40610.505	970046.41	123895.20	323522.71	296838.37	695846.12	91461.113
x		45745.497	22942.248	148547.25	21101.797	26655.696	474097.91	355464.47	56166.994	40920.566	967435.21	123960.15	324762.56	297171.67	693998.27	91689.446
σ		734.75	217.33	1578.65	188.64	412.02	3342.63	2234.63	639.97	457.89	2793.57	1308.98	1797.59	357.79	3019.89	1079.47
%RSD		1.6062	0.9473	1.0627	0.8939	1.5457	0.7050	0.6287	1.1394	1.1190	0.2888	1.0560	0.5535	0.1204	0.4351	1.1773

Result : The performance report passed.

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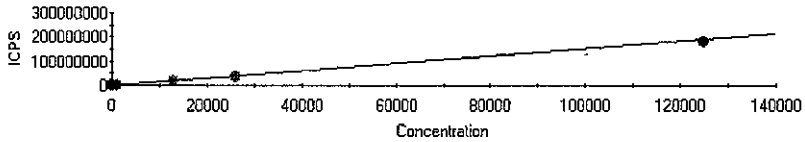
Fully Quant Calibration

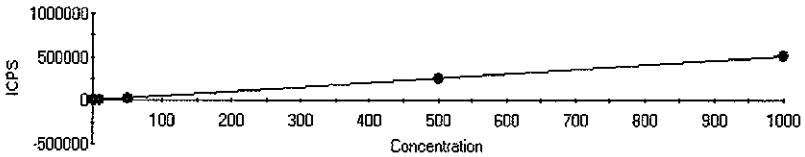
27Al FQ Block 1



Intercept CPS=2000.276929 Intercept Conc=1.300988
Sensitivity=1537.506095 Correlation Coeff=1.000000

Label	Defined	Measured	Error	Mean CPS	% Error
SEQ-CAL1@S01	0.000	-0.031	0.031	1952.43	0.00
SEQ-CAL2@S02	4.000	4.286	0.286	8590.63	7.16
SEQ-CAL3@S03	10.000	10.526	0.526	18184.73	5.26
SEQ-CAL5@S05	260.000	269.532	9.532	416407.03	3.67
SEQ-CAL6@S06	1300.000	1246.230	53.770	1918086.37	4.14
SEQ-CAL7@S07	13000.000	11915.028	1084.972	18321428.30	8.35
SEQ-CAL8@S08	26000.000	24032.962	1967.038	36952825.51	7.57
SEQ-CALA@S10	125000.000	115575.997	9424.003	177700800.15	7.54

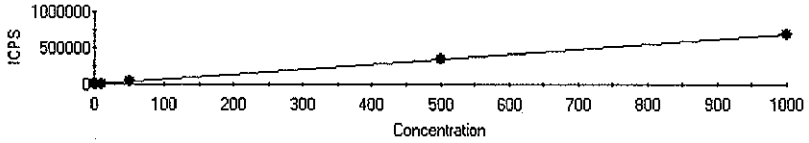
51V FQ Block 1



Intercept CPS=-49.674127 Intercept Conc=-0.098059
Sensitivity=506.575010 Correlation Coeff=0.999918

Label	Defined	Measured	Error	Mean CPS	% Error
SEQ-CAL1@S01	0.000	0.006	0.006	-46.59	0.00
SEQ-CAL4@S04	5.000	5.049	0.049	2507.90	0.98
SEQ-CAL5@S05	10.000	9.777	0.223	4903.01	2.23
SEQ-CAL6@S06	50.000	49.833	0.167	25194.62	0.33
SEQ-CAL7@S07	500.000	497.858	2.142	252152.66	0.43
SEQ-CAL8@S08	1000.000	1023.617	23.617	518489.00	2.36

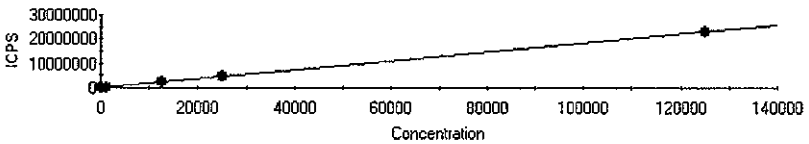
52Cr FQ Block 1



Intercept CPS=115.408962 Intercept Conc=0.168229
Sensitivity=686.023287 Correlation Coeff=0.999936

Label	Defined	Measured	Error	Mean CPS	% Error
SEQ-CAL1@S01	0.000	0.001	0.001	116.23	0.00
SEQ-CAL3@S03	1.000	0.998	0.002	800.19	0.18
SEQ-CAL4@S04	2.000	1.953	0.047	1455.04	2.36
SEQ-CAL5@S05	10.000	9.960	0.040	6948.08	0.40
SEQ-CAL6@S06	50.000	50.021	0.021	34430.70	0.04
SEQ-CAL7@S07	500.000	492.617	7.383	338061.90	1.48
SEQ-CAL8@S08	1000.000	1009.522	9.522	692670.86	0.95

54Fe FQ Block 1



Intercept CPS=8715.991559 Intercept Conc=46.893528
Sensitivity=185.867472 Correlation Coeff=0.999992

Label	Defined	Measured	Error	Mean CPS	% Error
SEQ-CAL1@S01	0.000	-1.230	1.230	8487.27	0.00
SEQ-CAL4@S04	200.000	202.497	2.497	46353.57	1.25
SEQ-CAL5@S05	250.000	260.352	10.352	57107.03	4.14
SEQ-CAL6@S06	1250.000	1285.765	35.765	247697.84	2.86
SEQ-CAL7@S07	12500.000	12523.821	23.821	2335486.85	0.19
SEQ-CAL8@S08	25000.000	25035.649	35.649	4662028.73	0.14
SEQ-CALA@S10	125000.000	122781.700	2218.300	22829840.13	1.77

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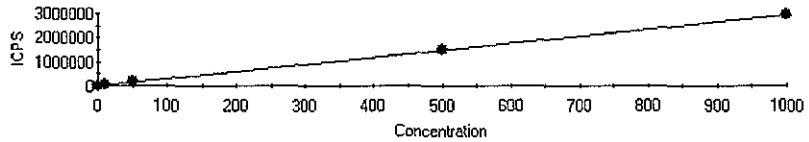
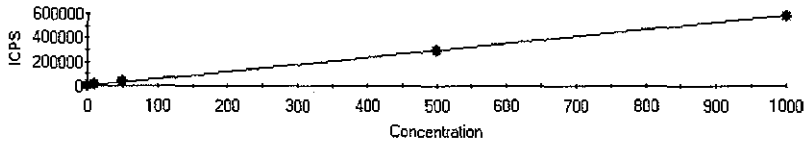
59Co FQ Block 1



Intercept CPS=82.218953 Intercept Conc=0.027826
Sensitivity=2954.793947 Correlation Coeff=0.999968

Label	Defined	Measured	Error	Mean CPS	% Error
SEQ-CAL1@S01	0.000	-0.001	0.001	80.06	0.00
SEQ-CAL3@S03	0.500	0.504	0.004	1572.67	0.88
SEQ-CAL4@S04	1.000	1.019	0.019	3094.22	1.94
SEQ-CAL5@S05	10.000	10.258	0.258	30393.81	2.58
SEQ-CAL6@S06	50.000	50.884	0.884	150434.80	1.77
SEQ-CAL7@S07	500.000	508.502	8.502	1502600.20	1.70
SEQ-CAL8@S08	1000.000	999.589	0.411	2953663.02	0.04

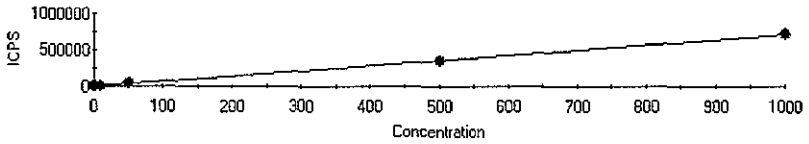
60Ni FQ Block 1



Intercept CPS=191.650382 Intercept Conc=0.325279
Sensitivity=589.187327 Correlation Coeff=0.999991

Label	Defined	Measured	Error	Mean CPS	% Error
SEQ-CAL1@S01	0.000	-0.005	0.005	188.94	0.00
SEQ-CAL4@S04	1.000	0.986	0.014	772.85	1.36
SEQ-CAL5@S05	10.000	10.522	0.522	6390.89	5.22
SEQ-CAL6@S06	50.000	51.865	1.865	30749.81	3.73
SEQ-CAL7@S07	500.000	490.872	9.128	289406.93	1.83
SEQ-CAL8@S08	1000.000	988.369	11.631	582526.18	1.16

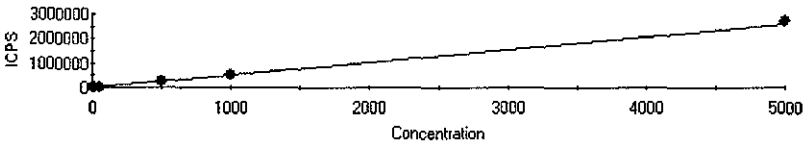
65Cu FQ Block 1



Intercept CPS=361.617939 Intercept Conc=0.504519
Sensitivity=716.757629 Correlation Coeff=0.999981

Label	Defined	Measured	Error	Mean CPS	% Error
SEQ-CAL1@S01	0.000	-0.056	0.056	321.18	0.00
SEQ-CAL4@S04	2.000	2.073	0.073	1847.54	3.66
SEQ-CAL5@S05	10.000	10.394	0.394	7811.93	3.94
SEQ-CAL6@S06	50.000	52.086	2.086	37694.43	4.17
SEQ-CAL7@S07	500.000	488.444	11.556	350457.78	2.31
SEQ-CAL8@S08	1000.000	987.607	12.393	708236.14	1.24

66Zn FQ Block 1



Intercept CPS=246.526924 Intercept Conc=0.474558
Sensitivity=519.487496 Correlation Coeff=0.999928

Label	Defined	Measured	Error	Mean CPS	% Error
SEQ-CAL1@S01	0.000	-0.023	0.023	234.32	0.00
SEQ-CAL4@S04	2.000	2.015	0.015	1293.20	0.74
SEQ-CAL5@S05	10.000	10.311	0.311	5602.91	3.11
SEQ-CAL6@S06	50.000	51.801	1.801	27156.30	3.60
SEQ-CAL7@S07	500.000	491.688	8.312	255672.39	1.66
SEQ-CAL8@S08	1000.000	979.511	20.489	509090.16	2.05
SEQ-CAL9@S09	5000.000	5190.181	190.181	2696480.57	3.80

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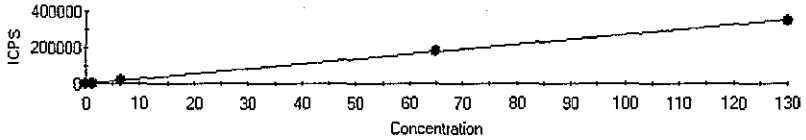
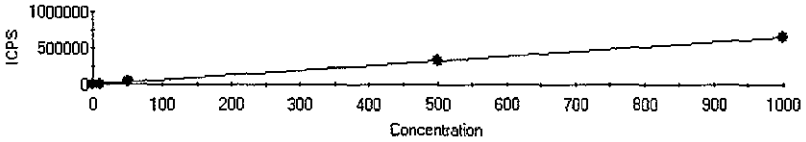
107Ag FQ Block 1



Intercept CPS=19.439274 Intercept Conc=0.007072
Sensitivity=2748.599867 Correlation Coeff=0.999978

Label	Defined	Measured	Error	Mean CPS	% Error
SEQ-CAL1@S01	0.000	-0.001	0.001	17.82	0.00
SEQ-CAL4@S04	1.000	1.001	0.001	2771.73	0.13
SEQ-CAL5@S05	1.300	1.304	0.004	3602.80	0.29
SEQ-CAL6@S06	6.500	6.581	0.081	18108.16	1.25
SEQ-CAL7@S07	65.000	63.766	1.234	175285.61	1.90
SEQ-CAL8@S08	130.000	125.762	4.238	345689.75	3.26

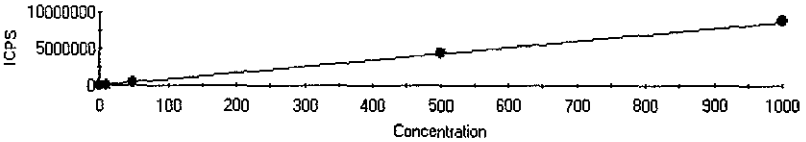
111Cd FQ Block 1



Intercept CPS=14.016478 Intercept Conc=0.021550
Sensitivity=650.427695 Correlation Coeff=0.999956

Label	Defined	Measured	Error	Mean CPS	% Error
SEQ-CAL1@S01	0.000	0.002	0.002	15.58	0.00
SEQ-CAL3@S03	0.500	0.456	0.044	310.85	8.73
SEQ-CAL4@S04	1.000	1.075	0.075	713.50	7.54
SEQ-CAL5@S05	10.000	9.760	0.240	6362.17	2.40
SEQ-CAL6@S06	50.000	49.085	0.915	31940.14	1.83
SEQ-CAL7@S07	500.000	490.756	9.244	319215.46	1.85
SEQ-CAL8@S08	1000.000	1001.880	1.880	651664.37	0.19

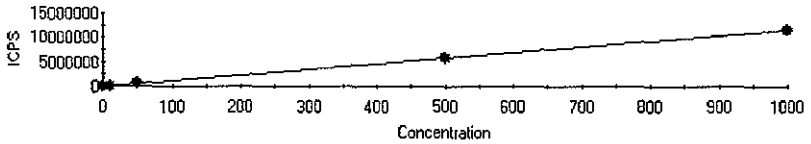
205Tl FQ Block 1



Intercept CPS=92.745737 Intercept Conc=0.010663
Sensitivity=8698.098406 Correlation Coeff=0.999949

Label	Defined	Measured	Error	Mean CPS	% Error
SEQ-CAL1@S01	0.000	0.003	0.003	118.83	0.00
SEQ-CAL3@S03	0.500	0.497	0.003	4417.08	0.57
SEQ-CAL4@S04	1.000	1.009	0.009	8869.33	0.90
SEQ-CAL5@S05	10.000	10.007	0.007	87130.69	0.07
SEQ-CAL6@S06	50.000	50.554	0.554	439812.37	1.11
SEQ-CAL7@S07	500.000	498.199	1.801	4333474.96	0.36
SEQ-CAL8@S08	1000.000	1018.640	18.640	8860319.48	1.86

208Pb FQ Block 1



Intercept CPS=238.124700 Intercept Conc=0.020818
Sensitivity=11438.194676 Correlation Coeff=0.999953

Label	Defined	Measured	Error	Mean CPS	% Error
SEQ-CAL1@S01	0.000	0.000	0.000	238.27	0.00
SEQ-CAL4@S04	1.000	1.016	0.016	11856.58	1.58
SEQ-CAL5@S05	10.000	9.930	0.070	113823.50	0.70
SEQ-CAL6@S06	50.000	49.814	0.186	570025.27	0.37
SEQ-CAL7@S07	500.000	515.337	15.337	5894766.01	3.07
SEQ-CAL8@S08	1000.000	1010.296	10.296	11556205.53	1.03

Semi Quant Calibration

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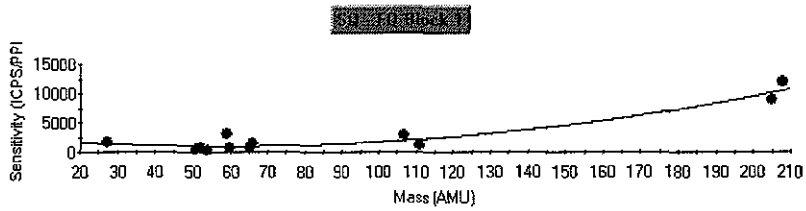

Coeff 0=2515.939964 Coeff 1=-49.992976 Coeff 2=0.423730

Symbol	Mass	RSF	Available	Excluded	Sensitivity Measured	Corrected	Calculated	%Error
27Al	26.98	0.9800	1	1	1537.51	1568.88	1475.53	-6.0
51V	50.94	0.9900	1	1	506.58	512.92	1068.80	108.4
52Cr	51.94	0.9800	1	1	686.02	835.75	1062.42	27.1
54Fe	53.94	0.9600	1	1	185.87	3281.56	1052.17	-67.9
59Co	58.93	0.9300	1	1	2954.79	3177.20	1041.36	-67.2
60Ni	59.93	0.9100	1	1	589.19	2474.99	1041.73	-57.9
65Cu	64.93	0.9000	1	1	716.76	2576.50	1056.29	-59.0
66Zn	65.93	0.3750	1	1	519.49	4981.30	1061.73	-78.7
107Ag	106.91	0.9300	1	1	2748.60	5755.57	2014.11	-65.0
111Cd	110.90	0.5660	1	1	650.43	8935.97	2183.27	-75.6
205Tl	204.97	1.0000	1	1	8698.10	12337.73	10071.15	-18.4
208Pb	207.98	0.9700	1	1	11438.19	22512.32	10446.69	-53.6

Dilution Corrected Concentrations

SEQ-CAL1@S01 1/4/2016 12:40:26

User Pre-dilution: 1.000

Run	Time	6Li	27Al	45Sc	47Ti	51V	52Cr	53Cl O	54Fe	59Co	60Ni	65Cu	66Zn	83Kr	89Y	94Mo
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:40:26	100.9%	-0.0610	99.7%	0.1701	-0.0416	-0.0026	5.0130	-0.1034	0.0050	0.0328	-0.0838	-0.0553	3.0030	99.3%	0.0017
2	12:40:40	99.5%	-0.0033	99.6%	-0.1204	0.0547	-0.0081	-7.7940	-0.9638	-0.0018	-0.0245	0.0037	-0.0564	-0.5042	99.9%	-0.0008
3	12:40:54	99.6%	-0.0290	100.7%	-0.0497	0.0052	0.0142	2.7810	-2.6240	-0.0054	-0.0221	-0.0891	0.0412	-2.4980	100.8%	-0.0009
x		100.0%	-0.0311	100.0%	0.0000	0.0061	0.0012	0.0000	-1.2300	-0.0007	-0.0046	-0.0564	-0.0235	0.0000	100.0%	0.0000
σ		0.8%	0.0289	0.6%	0.1515	0.0481	0.0116	6.8410	1.2810	0.0053	0.0324	0.0521	0.0561	2.7850	0.8%	0.0014
%RSD		0.8	92.7700	0.6	0.0000	791.1000	974.1000	0.0000	104.1000	727.2000	704.8000	92.4100	238.6000	0.0000	0.8	0.0000

Run	Time	95Mo	96Mo	97Mo	98Mo	103Rh	106Cd	107Ag	108Cd	111Cd	115In	118Sn	159Tb	165Ho	205Tl	208Pb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:40:26	0.0030	0.0022	0.0210	-0.0048	99.1%	-0.0038	0.0003	-0.0127	0.0097	97.8%	0.0009	98.4%	97.8%	0.0031	0.0031
2	12:40:40	-0.0015	-0.0021	-0.0126	0.0007	100.7%	0.0032	-0.0035	0.0061	-0.0064	101.8%	0.0015	100.2%	101.0%	0.0020	-0.0010
3	12:40:54	-0.0015	-0.0001	-0.0085	0.0041	100.1%	0.0007	0.0014	0.0066	0.0039	100.3%	-0.0024	101.4%	101.2%	0.0039	-0.0021
x		-0.0000	-0.0000	-0.0000	0.0000	100.0%	-0.0000	-0.0006	0.0000	0.0024	100.0%	-0.0000	100.0%	100.0%	0.0030	0.0000
σ		0.0026	0.0022	0.0183	0.0045	0.8%	0.0035	0.0026	0.0110	0.0082	2.0%	0.0021	1.5%	1.9%	0.0010	0.0027
%RSD		0.0000	0.0000	0.0000	0.0000	0.8	0.0000	432.8000	0.0000	340.5000	2.0	0.0000	1.5	1.9	32.5600	21090.0000

Run	Time	209Bi
		ppb
1	12:40:26	97.5%
2	12:40:40	99.9%
3	12:40:54	102.6%
x		100.0%
σ		2.5%
%RSD		2.5

SEQ-CAL3@S03 1/4/2016 12:48:27

User Pre-dilution: 1.000

Run	Time	6Li	27Al	45Sc	47Ti	51V	52Cr	53Cl O	54Fe	59Co	60Ni	65Cu	66Zn	83Kr	89Y	94Mo
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:48:27	100.4%	10.6100	99.8%	0.2016	2.6720	1.0440	14.3700	100.8000	0.4821	0.4364	1.0480	1.0230	-2.5090	99.0%	-0.0072
2	12:48:42	99.7%	10.7000	102.7%	0.0532	2.5590	0.8996	33.6200	95.7300	0.5346	0.5748	0.9870	1.2350	-7.1490	98.5%	0.0104
3	12:48:56	100.5%	10.2700	103.3%	-0.0689	2.4790	1.0510	28.7400	101.6000	0.4965	0.3696	0.9357	1.2310	-0.5364	101.3%	0.0183
x		100.2%	10.5300	101.9%	0.0620	2.5700	0.9982	25.5700	99.3600	0.5044	0.4602	0.9903	1.1630	-3.3980	99.6%	0.0072
σ		0.4%	0.2267	1.8%	0.1354	0.0968	0.0854	10.0100	3.1690	0.0271	0.1047	0.0563	0.1213	3.3950	1.5%	0.0131
%RSD		0.4	2.1540	1.8	218.5000	3.7660	8.5570	39.1200	3.1890	5.3790	22.7400	5.6890	10.4300	99.9000	1.5	182.3000

Run	Time	95Mo	96Mo	97Mo	98Mo	103Rh	106Cd	107Ag	108Cd	111Cd	115In	118Sn	159Tb	165Ho	205Tl	208Pb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:48:27	-0.0035	0.0085	0.0103	0.0025	98.5%	0.0065	0.4889	0.0064	0.4902	101.6%	0.0002	99.4%	98.4%	0.4968	0.4999
2	12:48:42	0.0073	-0.0042	-0.0042	0.0015	99.7%	0.0060	0.5032	0.0116	0.4247	102.9%	0.0026	102.0%	101.2%	0.4964	0.4810
3	12:48:56	0.0046	0.0019	-0.0086	0.0065	97.7%	-0.0034	0.5202	0.0113	0.4542	102.5%	0.0054	101.9%	101.8%	0.4982	0.5352
x		0.0028	0.0021	-0.0009	0.0035	98.6%	0.0030	0.5041	0.0098	0.4564	102.3%	0.0027	101.1%	100.5%	0.4972	0.5054
σ		0.0056	0.0063	0.0099	0.0027	1.0%	0.0056	0.0156	0.0029	0.0328	0.7%	0.0026	1.5%	1.8%	0.0009	0.0275
%RSD		201.6000	308.3000	1156.0000	75.3300	1.0	182.6000	3.1000	30.1100	7.1820	0.7	95.3300	1.4	1.8	0.1894	5.4470

Run	Time	209Bi
		ppb
1	12:48:27	97.6%
2	12:48:42	100.2%
3	12:48:56	99.9%
x		99.2%
σ		1.4%
%RSD		1.4

SEQ-CAL4@S04 1/4/2016 12:52:18

User Pre-dilution: 1.000

Run	Time	6Li	27Al	45Sc	47Ti	51V	52Cr	53Cl O	54Fe	59Co	60Ni	65Cu	66Zn	83Kr	89Y	94Mo
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:52:18	100.3%	178.5000	100.3%	0.1707	4.9500	1.9900	47.8600	199.8000	1.0180	0.9199	2.2000	1.9320	-1.6520	98.0%	-0.0005
2	12:52:32	99.0%	183.7000	101.4%	0.0055	5.0560	1.8600	43.3400	201.3000	0.9737	1.0140	2.0730	2.0310	-5.4710	101.4%	0.0054
3	12:52:46	100.1%	182.8000	102.0%	-0.0623	5.1400	2.0090	19.0600	206.4000	1.0660	1.0260	1.9470	2.0810	-2.9090	101.4%	-0.0053
x		99.8%	181.7000	101.2%	0.0380	5.0490	1.9530	36.7500	202.5000	1.0190	0.9864	2.0730	2.0150	-3.3440	100.3%	-0.0002
σ		0.7%	2.7560	0.8%	0.1198	0.0954	0.0809	15.4900	3.4690	0.0463	0.0579	0.1265	0.0758	1.9460	2.0%	0.0054
%RSD		0.7	1.5170	0.8	315.7000	1.8890	4.1420	42.1400	1.7130	4.5400	5.8740	6.1040	3.7640	58.2100	2.0	3498.0000

Run	Time	95Mo	96Mo	97Mo	98Mo	103Rh	106Cd	107Ag	108Cd	111Cd	115In	118Sn	159Tb	165Ho	205Tl	208Pb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:52:18	0.0052	0.0001	-0.0062	0.0019	98.6%	0.0564	1.0040	0.0202	0.9429	102.8%	-0.0001	101.5%	100.1%	1.0090	1.0200
2	12:52:32	-0.0017	0.0019	-0.0026	0.0015	99.9%	0.0229	0.9968	0.0253	1.1350	102.6%	-0.0014	101.6%	101.5%	1.0240	0.9795
3	12:52:46	0.0131	-0.0022	-0.0005	-0.0037	98.4%	0.0495	1.0030	0.0114	1.1490	102.2%	0.0041	101.6%	102.9%	0.9941	1.0480
x		0.0055	-0.0001	-0.0031	-0.0001	98.9%	0.0429	1.0010	0.0190	1.0750	102.5%	0.0009	101.6%	101.5%	1.0090	1.0160
σ		0.0074	0.0021	0.0029	0.0031	0.8%	0.0177	0.0039	0.0070	0.1150	0.3%	0.0029	0.1%	1.4%	0.0148	0.0346
%RSD		133.9000	2050.0000	92.8000	2637.0000	0.8	41.2300	0.3920	36.9200	10.6900	0.3	317.8000	0.1	1.4	1.4650	3.4020

Run	Time	209Bi
		ppb
1	12:52:18	97.8%
2	12:52:32	100.6%
3	12:52:46	101.3%
x		99.9%
σ		1.9%
%RSD		1.9

123

SEQ-CAL5@S05 1/4/2016 12:56:08

User Pre-dilution: 1.000

Run	Time	6Li	27Al	45Sc	47Ti	51V	52Cr	53Cl O	54Fe	59Co	60Ni	65Cu	66Zn	83Kr	89Y	94Mo
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:56:08	101.2%	266.3000	97.8%	0.2778	9.5720	9.8180	124.7000	255.0000	10.1800	10.1600	10.2600	10.3300	-6.6510	97.3%	3.1690
2	12:56:22	100.6%	271.6000	99.3%	0.1011	9.7390	9.9030	131.3000	262.6000	10.4500	10.8900	10.5800	10.5800	-4.2920	99.7%	3.2310
3	12:56:36	97.7%	270.7000	101.1%	-0.0365	10.0200	10.1600	113.5000	263.4000	10.1400	10.5200	10.3500	10.0200	-5.7520	101.5%	3.1620
x		99.8%	269.5000	99.4%	0.1141	9.7770	9.9600	123.2000	260.4000	10.2600	10.5200	10.3900	10.3100	-5.5650	99.5%	3.1880
σ		1.9%	2.8220	1.7%	0.1576	0.2257	0.1767	8.9550	4.6330	0.1652	0.3629	0.1667	0.2807	1.1910	2.1%	0.0381
%RSD		1.9	1.0470	1.7	138.1000	2.3080	1.7740	7.2700	1.7800	1.6110	3.4490	1.6030	2.7220	21.4000	2.1	1.1960

Run	Time	95Mo	96Mo	97Mo	98Mo	103Rh	106Cd	107Ag	108Cd	111Cd	115In	118Sn	159Tb	165Ho	205Tl	208Pb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:56:08	5.6150	5.8400	3.3150	8.6970	99.4%	0.5261	1.2560	0.3409	9.0350	101.5%	7.5920	99.8%	101.3%	10.0300	9.8660
2	12:56:22	5.7950	5.9120	3.5090	8.8470	98.6%	0.4752	1.3190	0.3409	10.1500	103.7%	7.4170	102.9%	101.7%	10.0000	10.0000
3	12:56:36	5.8780	6.2830	3.4900	8.6260	97.3%	0.5836	1.3360	0.3584	10.0900	104.6%	7.5450	103.3%	103.2%	9.9860	9.9210
x		5.7630	6.0120	3.4380	8.7240	98.4%	0.5283	1.3040	0.3467	9.7600	103.3%	7.5180	102.0%	102.1%	10.0100	9.9300
σ		0.1347	0.2378	0.1070	0.1129	1.0%	0.0543	0.0422	0.0101	0.6283	1.6%	0.0906	1.9%	1.0%	0.0217	0.0695
%RSD		2.3380	3.9550	3.1120	1.2940	1.0	10.2700	3.2390	2.9240	6.4380	1.6	1.2050	1.9	1.0	0.2165	0.6998

Run	Time	209Bi
		ppb
1	12:56:08	98.4%
2	12:56:22	101.8%
3	12:56:36	104.2%
x		101.5%
σ		2.9%
%RSD		2.8

SEQ-CAL6@S06 1/4/2016 12:59:58

User Pre-dilution: 1.000

Run	Time	6Li	27Al	45Sc	47Ti	51V	52Cr	53Cl O	54Fe	59Co	60Ni	65Cu	66Zn	83Kr	89Y	94Mo
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:59:58	96.1%	r 1231.0000	97.0%	0.2051	49.6000	49.0800	295.5000	1263.0000	50.0500	52.1400	51.9000	50.7900	-3.4540	98.0%	15.5000
2	13:00:12	98.4%	r 1231.0000	99.6%	0.0824	49.8800	50.8300	314.8000	1283.0000	50.9900	51.1500	51.2600	51.3900	-7.2900	99.1%	15.8400
3	13:00:26	97.9%	r 1277.0000	97.6%	-0.0905	50.0200	50.1500	289.2000	1311.0000	51.6100	52.3000	53.1000	53.2200	-4.1420	100.3%	15.9400
x		97.5%	r 1246.0000	98.1%	0.0657	49.8300	50.0200	299.8000	1286.0000	50.8800	51.8600	52.0900	51.8000	-4.9620	99.1%	15.7600
σ		1.2%	r 26.9500	1.4%	0.1485	0.2103	0.8825	13.3300	24.3300	0.7877	0.6230	0.9333	1.2690	2.0460	1.1%	0.2295
%RSD		1.2	r 2.1630	1.4	226.1000	0.4220	1.7640	4.4440	1.8920	1.5480	1.2010	1.7920	2.4500	41.2300	1.1	1.4560

Run	Time	95Mo	96Mo	97Mo	98Mo	103Rh	106Cd	107Ag	108Cd	111Cd	115In	118Sn	159Tb	165Ho	205Tl	208Pb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:59:58	27.5600	29.3000	16.1800	41.5000	97.0%	2.5160	6.4580	1.7300	47.1400	99.3%	36.0400	100.4%	99.7%	51.0400	49.9600
2	13:00:12	28.5900	29.9300	16.8400	43.5700	94.2%	2.6410	6.4910	1.7700	49.2100	100.5%	37.7900	101.0%	101.8%	50.2500	49.2600
3	13:00:26	29.0100	30.5600	17.1000	43.1300	96.2%	2.6210	6.7950	1.7400	50.9000	101.7%	37.7700	102.8%	104.4%	50.3600	50.2300
x		28.3800	29.9300	16.7100	42.7400	95.8%	2.5930	6.5810	1.7470	49.0800	100.5%	37.2000	101.4%	102.0%	50.5500	49.8100
σ		0.7436	0.6288	0.4781	1.0920	1.5%	0.0674	0.1857	0.0206	1.8830	1.2%	1.0050	1.2%	2.4%	0.4282	0.4982
%RSD		2.6200	2.1010	2.8610	2.5540	1.5	2.5980	2.8220	1.1780	3.8360	1.2	2.7020	1.2	2.3	0.8470	1.0000

Run	Time	209Bi
		ppb
1	12:59:58	95.8%
2	13:00:12	101.8%
3	13:00:26	101.7%
x		99.8%
σ		3.4%
%RSD		3.4

SEQ-CAL7@S07 1/4/2016 13:03:46

User Pre-dilution: 1.000

Run	Time	6Li	27Al	45Sc	47Ti	51V	52Cr	53Cl O	54Fe	59Co	60Ni	65Cu	66Zn	83Kr	89Y	94Mo
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:03:46	96.0%	r 11810.0000	95.7%	0.1863	496.8000	492.0000	2953.0000	r 12260.0000	501.2000	482.0000	481.2000	481.3000	-4.3100	95.3%	155.3000
2	13:04:00	92.7%	r 12080.0000	95.0%	-0.1219	503.5000	498.1000	2986.0000	r 12750.0000	511.9000	496.7000	494.1000	498.3000	-3.7400	95.7%	161.9000
3	13:04:14	93.5%	r 11850.0000	96.5%	-0.1632	493.3000	487.7000	2509.0000	r 12570.0000	512.4000	493.9000	490.1000	495.4000	-3.9350	96.6%	161.1000
x		94.1%	r 11920.0000	95.7%	-0.0329	497.9000	492.6000	2816.0000	r 12520.0000	508.5000	490.9000	488.4000	491.7000	-3.9950	95.9%	159.4000
σ		1.7%	r 148.9000	0.8%	0.1910	5.1880	5.2290	266.2000	r 248.4000	6.3470	7.7730	6.5760	9.1260	0.2896	0.6%	3.5870
%RSD		1.8	r 1.2500	0.8	580.4000	1.0420	1.0610	9.4520	r 1.9830	1.2480	1.5840	1.3460	1.8560	7.2480	0.7	2.2500

Run	Time	95Mo	96Mo	97Mo	98Mo	103Rh	106Cd	107Ag	108Cd	111Cd	115In	118Sn	159Tb	165Ho	205Tl	208Pb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:03:46	279.7000	295.0000	164.9000	424.6000	89.7%	24.4900	62.3600	17.6400	481.3000	94.3%	373.3000	98.3%	99.0%	r 503.4000	503.0000
2	13:04:00	287.8000	303.8000	170.7000	438.3000	89.4%	24.9000	64.6300	17.8500	494.7000	97.2%	381.9000	100.7%	100.6%	r 498.8000	526.2000
3	13:04:14	292.5000	307.7000	171.6000	440.6000	91.9%	25.3800	64.3100	17.8400	496.2000	97.7%	383.5000	100.8%	100.5%	r 492.4000	516.9000
x		286.7000	302.2000	169.1000	434.5000	90.3%	24.9200	63.7700	17.7700	490.8000	96.4%	379.6000	99.9%	100.0%	r 498.2000	515.3000
σ		6.4880	6.4930	3.6250	8.6310	1.3%	0.4476	1.2300	0.1193	8.2060	1.8%	5.4780	1.4%	0.9%	r 5.5350	11.6600
%RSD		2.2630	2.1490	2.1440	1.9860	1.5	1.7960	1.9290	0.6713	1.6720	1.9	1.4430	1.4	0.9	r 1.1110	2.2630

Run	Time	209Bi
		ppb
1	13:03:46	97.2%
2	13:04:00	98.2%
3	13:04:14	100.5%
x		98.6%
σ		1.7%
%RSD		1.7

129

SEQ-CAL8@S08 1/4/2016 13:07:33

User Pre-dilution: 1.000

Run	Time	6Li	27Al	45Sc	47Ti	51V	52Cr	53Cl O	54Fe	59Co	60Ni	65Cu	66Zn	83Kr	89Y	94Mo
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:07:33	89.8%	τ 24170.0000	90.5%	0.3312	μ 1035.0000	μ 1018.0000	5741.0000	τ 24810.0000	τ 999.5000	979.6000	976.6000	960.6000	13.1000	91.5%	319.3000
2	13:07:47	91.3%	τ 23900.0000	93.4%	0.0344	μ 1016.0000	μ 1005.0000	4744.0000	τ 25130.0000	τ 998.4000	993.0000	993.0000	984.6000	1.6830	92.7%	329.9000
3	13:08:01	91.1%	τ 24030.0000	95.8%	-0.0058	μ 1021.0000	μ 1005.0000	4891.0000	τ 25170.0000	TM 1001.0000	992.5000	993.1000	993.4000	1.2310	92.8%	336.4000
x		90.8%	τ 24030.0000	93.3%	0.1199	μ 1024.0000	μ 1010.0000	5125.0000	τ 25040.0000	TM 999.6000	988.4000	987.6000	979.5000	5.3380	92.3%	328.5000
σ		0.8%	τ 136.0000	2.7%	0.1840	μ 9.8110	μ 7.6850	538.0000	τ 199.8000	TN 1.2030	7.6210	9.5020	16.9800	6.7270	0.7%	8.6370
%RSD		0.9	τ 0.5660	2.9	153.5000	μ 0.9585	μ 0.7612	10.5000	τ 0.7981	TN 0.1204	0.7711	0.9622	1.7340	126.0000	0.7	2.6290

Run	Time	95Mo	96Mo	97Mo	98Mo	103Rh	106Cd	107Ag	108Cd	111Cd	115In	118Sn	159Tb	165Ho	205Tl	208Pb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:07:33	581.3000	611.8000	338.2000	881.5000	86.5%	49.5000	122.0000	35.8000	997.1000	90.2%	780.4000	96.6%	97.6%	TN 1023.0000	TN 1000.0000
2	13:07:47	591.2000	624.6000	347.5000	909.3000	89.1%	49.6900	127.6000	35.9000	μ 1003.0000	94.4%	790.8000	98.7%	98.6%	TN 1016.0000	TN 1011.0000
3	13:08:01	599.8000	637.8000	352.8000	927.6000	89.0%	51.9400	127.7000	36.3700	μ 1005.0000	94.4%	804.5000	100.1%	98.8%	TN 1017.0000	TN 1020.0000
x		590.8000	624.7000	346.2000	906.2000	88.2%	50.3800	125.8000	36.0200	μ 1002.0000	93.0%	791.9000	98.4%	98.3%	TN 1019.0000	TN 1010.0000
σ		9.2660	13.0100	7.4190	23.2200	1.5%	1.3570	3.2490	0.3034	μ 4.2880	2.4%	12.0600	1.8%	0.6%	TN 3.7860	TN 9.5880
%RSD		1.5680	2.0830	2.1430	2.5630	1.7	2.6930	2.5830	0.8423	μ 0.4280	2.6	1.5230	1.8	0.6	TN 0.3717	TN 0.9491

Run	Time	209Bi
		ppb
1	13:07:33	92.1%
2	13:07:47	95.4%
3	13:08:01	96.4%
x		94.6%
σ		2.2%
%RSD		2.4

SEQ-CAL9@S09 1/4/2016 13:11:20

User Pre-dilution: 1.000

Run	Time	6Li	27Al	45Sc	47Ti	51V	52Cr	53Cl O	54Fe	59Co	60Ni	65Cu	66Zn	83Kr	89Y	94Mo
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:11:20	96.0%	3.5120	95.8%	0.3806	0.2159	0.0474	-91.3400	5.3900	0.0480	-0.0817	1.6880	μ 5226.0000	22.0700	94.2%	0.0647
2	13:11:34	97.7%	3.3910	95.9%	0.0233	0.1599	0.0301	-89.1800	0.6925	0.0650	0.0047	1.7370	μ 5386.0000	12.9200	96.3%	0.0675
3	13:11:49	95.3%	3.5930	98.2%	0.0290	0.1876	0.0282	-92.5100	2.1580	0.0693	0.0285	1.9040	τ 4959.0000	8.4640	96.3%	0.0942
x		96.4%	3.4990	96.6%	0.1443	0.1878	0.0352	-91.0100	2.7470	0.0608	-0.0162	1.7760	TN 5190.0000	14.4800	95.6%	0.0754
σ		1.2%	0.1017	1.4%	0.2046	0.0280	0.0106	1.6850	2.4030	0.0113	0.0580	0.1134	TN 215.8000	6.9390	1.2%	0.0163
%RSD		1.3	2.9050	1.4	141.8000	14.9000	29.9900	1.8520	87.5000	18.5600	358.9000	6.3840	TM 4.1580	47.9000	1.3	21.5500

Run	Time	95Mo	96Mo	97Mo	98Mo	103Rh	106Cd	107Ag	108Cd	111Cd	115In	118Sn	159Tb	165Ho	205Tl	208Pb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:11:20	0.0872	0.1064	0.0335	0.1397	95.1%	0.0127	0.0117	0.0025	0.0570	98.1%	0.1234	98.0%	97.1%	0.1489	0.0877
2	13:11:34	0.1072	0.0868	0.0493	0.1349	92.1%	0.0264	0.0175	-0.0129	0.0505	99.7%	0.1086	101.1%	100.9%	0.1342	0.0897
3	13:11:49	0.0825	0.1359	0.0384	0.1637	95.0%	-0.0047	0.0221	-0.0104	0.1004	101.5%	0.1173	101.6%	102.0%	0.1258	0.0840
x		0.0923	0.1097	0.0404	0.1461	94.1%	0.0115	0.0171	-0.0069	0.0693	99.8%	0.1164	100.2%	100.0%	0.1363	0.0871
σ		0.0131	0.0247	0.0081	0.0154	1.7%	0.0156	0.0052	0.0082	0.0272	1.7%	0.0075	2.0%	2.5%	0.0117	0.0029
%RSD		14.1800	22.5200	20.0100	10.5500	1.8	135.6000	30.4400	118.8000	39.1800	1.7	6.3990	2.0	2.5	8.6000	3.2870

Run	Time	209Bi
		ppb
1	13:11:20	99.1%
2	13:11:34	100.2%
3	13:11:49	102.6%
x		100.7%
σ		1.8%
%RSD		1.8

SEQ-CALA@S10 1/4/2016 13:15:07

User Pre-dilution: 1.000

Run	Time	6Li	27Al	45Sc	47Ti	51V	52Cr	53Cl O	54Fe	59Co	60Ni	65Cu	66Zn	83Kr	89Y	94Mo
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:15:07	86.1%	τ 114200.0000	86.6%	0.4588	0.1782	0.4419	-108.0000	τ 121800.0000	0.6842	3.6010	1.4360	1.4430	34.9700	85.3%	0.0971
2	13:15:21	84.8%	τ 115100.0000	89.7%	0.2195	0.1973	0.3857	-109.9000	τ 122800.0000	0.6430	3.5220	1.3940	1.1310	30.6300	88.5%	0.1202
3	13:15:36	86.0%	τ 117400.0000	90.1%	-0.0138	0.0788	0.3897	-95.1200	τ 123800.0000	0.6747	3.4100	1.5300	1.2050	46.4200	91.1%	0.0972
x		85.7%	τ 115600.0000	88.8%	0.2215	0.1514	0.4058	-104.3000	τ 122800.0000	0.6673	3.5110	1.4540	1.2600	37.3400	88.3%	0.1048
σ		0.7%	τ 1672.0000	1.9%	0.2363	0.0636	0.0314	8.0520	τ 1023.0000	0.0216	0.0962	0.0692	0.1632	8.1590	2.9%	0.0133
%RSD		0.8	τ 1.4470	2.1	106.7000	42.0000	7.7320	7.7170	τ 0.8336	3.2300	2.7390	4.7620	12.9500	21.8500	3.3	12.7000

Run	Time	95Mo	96Mo	97Mo	98Mo	103Rh	106Cd	107Ag	108Cd	111Cd	115In	118Sn	159Tb	165Ho	205Tl	208Pb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:15:07	0.1614	0.1983	0.1148	0.1721	81.2%	-0.0115	0.0099	0.0286	0.0316	86.1%	0.0420	89.1%	88.7%	0.0574	0.1155
2	13:15:21	0.1772	0.1794	0.1032	0.1914	82.8%	0.0036	0.0108	0.0330	0.0822	88.4%	0.0404	91.6%	92.4%	0.0593	0.1057
3	13:15:36	0.1672	0.1743	0.1179	0.1590	81.5%	0.0017	0.0089	-0.0196	0.0795	90.8%	0.0525	93.6%	93.9%	0.0608	0.1030
x		0.1686	0.1840	0.1120	0.1742	81.9%	-0.0021	0.0099	0.0140	0.0644	88.4%	0.0450	91.4%	91.7%	0.0591	0.1080
σ		0.0080	0.0127	0.0077	0.0163	0.8%	0.0082	0.0009	0.0291	0.0285	2.3%	0.0066	2.2%	2.7%	0.0017	0.0066
%RSD		4.7230	6.8750	6.9090	9.3850	1.0	396.2000	9.1680	208.1000	44.2200	2.6	14.7100	2.4	2.9	2.9340	6.0890

Run	Time	209Bi
		ppb
1	13:15:07	80.4%
2	13:15:21	82.5%
3	13:15:36	85.0%
x		82.7%
σ		2.3%
%RSD		2.8

SEQ-ICV1@ICV01 1/4/2016 13:18:59 QC Status: PASS (Initial: FAIL)

User Pre-dilution: 1.000

Run	Time	6Li	27Al	45Sc	47Ti	51V	52Cr	53Cl O	54Fe	59Co	60Ni	65Cu	66Zn	83Kr	89Y	94Mo
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:19:13	98.9%	533.7000	100.5%	0.1749	104.8000	101.6000	544.7000	1049.0000	102.6000	105.3000	105.6000	208.2000	-9.6520	96.8%	0.0111
2	13:19:28	98.5%	534.8000	101.4%	0.0675	106.4000	102.5000	577.5000	1068.0000	104.8000	106.5000	105.1000	211.4000	-13.0100	97.7%	0.0195
3	13:19:42	98.6%	553.3000	100.0%	-0.1706	104.2000	101.5000	543.8000	1086.0000	105.4000	105.8000	106.3000	208.9000	-10.2800	99.9%	0.0101
x		98.7%	107.265%	100.6%	0.0239	105.144%	103.954%	555.3000	1068.0000	105.324%	108.067%	107.856%	104.763%	-10.9800	98.1%	0.0136
σ		0.2%	n/a	0.7%	0.1768	n/a	n/a	19.2300	18.5400	n/a	n/a	n/a	n/a	1.7840	1.6%	0.0052
%RSD		0.2	2.0420	0.7	738.9000	1.0720	0.5394	3.4620	1.7360	1.4020	0.5609	0.5749	0.8059	16.2500	1.6	38.1300

Run	Time	95Mo	96Mo	97Mo	98Mo	103Rh	106Cd	107Ag	108Cd	111Cd	115In	118Sn	159Tb	165Ho	205Tl	208Pb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:19:13	0.0144	0.0327	0.0048	0.0254	99.1%	5.2840	105.4000	3.4240	100.2000	98.8%	0.0175	97.1%	97.1%	217.6000	207.6000
2	13:19:28	0.0291	0.0256	0.0022	0.0240	98.2%	5.1800	104.2000	3.5610	99.8200	102.2%	0.0217	99.9%	100.1%	213.5000	207.2000
3	13:19:42	0.0156	0.0460	0.0100	0.0141	100.1%	5.0620	103.2000	3.2810	99.6200	102.0%	0.0164	101.3%	101.5%	214.8000	207.7000
x		0.0197	0.0347	0.0057	0.0212	99.2%	5.1750	105.338%	3.4220	100.883%	101.0%	0.0185	99.4%	99.5%	105.022%	103.754%
σ		0.0082	0.0103	0.0040	0.0062	1.0%	0.1107	n/a	0.1401	n/a	1.9%	0.0028	2.2%	2.3%	n/a	n/a
%RSD		41.5500	29.7300	70.2900	29.0900	1.0	2.1390	1.0560	4.0960	0.2911	1.9	15.3000	2.2	2.3	0.9672	0.1410

Run	Time	209Bi
		ppb
1	13:19:13	96.0%
2	13:19:28	98.4%
3	13:19:42	100.1%
x		98.2%
σ		2.1%
%RSD		2.1

SEQ-ICB@ICB01 1/4/2016 13:23:04 QC Status: PASS (Initial: PASS)

User Pre-dilution: 1.000

Run	Time	6Li	27Al	45Sc	47Ti	51V	52Cr	53Cl O	54Fe	59Co	60Ni	65Cu	66Zn	83Kr	89Y	94Mo
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:23:04	94.8%	0.3005	95.5%	0.2300	0.0413	-0.0115	-38.7000	-2.5910	-0.0067	-0.0601	-0.0646	-0.0478	-11.3200	97.1%	0.0087
2	13:23:19	96.1%	0.3439	97.2%	-0.0495	-0.0084	-0.0179	-19.0200	-1.0440	-0.0002	-0.1577	-0.0639	-0.0499	-6.2680	99.4%	0.0037
3	13:23:33	96.7%	0.3835	98.0%	-0.0065	0.0094	-0.0306	-26.0400	-3.7760	0.0009	-0.0546	-0.0884	-0.0375	-15.4500	98.8%	0.0104
x		95.9%	0.3426	96.9%	0.0580	0.0141	-0.0200	-27.9200	-2.4700	-0.0020	-0.0908	-0.0723	-0.0451	-11.0100	98.4%	0.0076
σ		1.0%	0.0416	1.3%	0.1505	0.0252	0.0097	9.9740	1.3700	0.0041	0.0580	0.0139	0.0066	4.5990	1.2%	0.0035
%RSD		1.0	12.1300	1.3	259.4000	178.1000	48.6100	35.7200	55.4600	206.8000	63.8600	19.2700	14.7500	41.7600	1.2	45.9500

Run	Time	95Mo	96Mo	97Mo	98Mo	103Rh	106Cd	107Ag	108Cd	111Cd	115In	118Sn	159Tb	165Ho	205Tl	208Pb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:23:04	0.0055	0.0110	0.0026	0.0176	93.6%	-0.0039	0.0151	0.0017	0.0199	99.2%	-0.0036	98.4%	99.4%	0.0121	0.0070
2	13:23:19	0.0029	0.0063	0.0102	0.0099	95.7%	0.0124	0.0086	-0.0022	-0.0115	101.4%	0.0057	99.0%	100.7%	0.0172	0.0079
3	13:23:33	0.0137	0.0148	0.0165	0.0046	96.7%	0.0154	0.0170	0.0177	-0.0064	101.7%	0.0097	101.4%	100.8%	0.0165	0.0075
x		0.0074	0.0107	0.0097	0.0107	95.3%	0.0079	0.0136	0.0057	0.0006	100.8%	0.0039	99.6%	100.3%	0.0153	0.0075
σ		0.0057	0.0043	0.0070	0.0066	1.6%	0.0104	0.0044	0.0106	0.0168	1.3%	0.0068	1.6%	0.8%	0.0028	0.0005
%RSD		76.8200	39.8200	71.6600	61.4600	1.7	130.7000	32.6100	183.4000	2595.0000	1.3	172.7000	1.6	0.8	18.0300	6.0550

Run	Time	209Bi
		ppb
1	13:23:04	97.3%
2	13:23:19	100.4%
3	13:23:33	103.0%
x		100.3%
σ		2.9%
%RSD		2.8

SEQ-IFA@ICSA01 1/4/2016 13:26:55 QC Status: PASS (Initial: PASS)

User Pre-dilution: 1.000

Run	Time	6Li	27Al	45Sc	47Ti	51V	52Cr	53Cl O	54Fe	59Co	60Ni	65Cu	66Zn	83Kr	89Y	94Mo
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:26:55	83.4%	r88340.0000	90.1%	329.0000	-0.4841	20.5200	37.7600	r97310.0000	1.5010	7.8570	8.6330	12.1500	35.7200	88.6%	643.2000
2	13:27:10	84.6%	r91720.0000	91.7%	337.6000	-0.1302	21.7600	-4.8630	r99780.0000	1.4620	7.8050	9.0520	12.5800	31.7700	91.0%	663.6000
3	13:27:26	87.1%	r92650.0000	92.9%	344.9000	-0.3610	20.5400	16.5300	r100100.0000	1.4710	7.8780	8.3860	12.2600	35.9500	94.6%	668.3000
x		85.0%	r90900.0000	91.6%	337.1000	-65.020%	99.714%	16.4700	r99060.0000	147.810%	130.779%	108.631%	112.097%	34.4800	91.4%	658.4000
σ		1.9%	r2267.0000	1.4%	7.9750	n/a	n/a	21.3100	r1526.0000	n/a	n/a	n/a	n/a	2.3470	3.0%	13.3500
%RSD		2.2	r2.4940	1.6	2.3650	55.2700	3.3780	129.4000	r1.5400	1.3780	0.4777	3.8790	1.8070	6.8080	3.3	2.0280

Run	Time	95Mo	96Mo	97Mo	98Mo	103Rh	106Cd	107Ag	108Cd	111Cd	115In	118Sn	159Tb	165Ho	205Tl	208Pb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:26:55	1167.0000	1237.0000	678.4000	1807.0000	85.7%	-0.0074	0.0240	1.7410	1.0700	90.4%	0.1569	91.3%	92.1%	0.0815	4.2880
2	13:27:10	1210.0000	1271.0000	706.3000	r1867.0000	81.2%	0.0261	0.0191	1.8600	0.9170	93.5%	0.1419	95.9%	96.0%	0.0963	4.3580
3	13:27:26	1220.0000	1288.0000	696.3000	r1879.0000	86.7%	0.0020	0.0224	1.7490	0.9797	94.6%	0.1577	97.4%	96.5%	0.0864	4.3170
x		1199.0000	1266.0000	693.7000	r1851.0000	84.5%	0.0069	1.#IO%	1.7830	141.281%	92.8%	0.1522	94.9%	94.9%	1.#IO%	108.027%
σ		27.7700	25.9800	14.1300	r38.9400	2.9%	0.0173	n/a	0.0668	n/a	2.2%	0.0089	3.2%	2.4%	n/a	n/a
%RSD		2.3160	2.0530	2.0360	r2.1040	3.4	251.4000	11.4500	3.7440	7.7840	2.3	5.8260	3.3	2.5	8.5370	0.8188

Run	Time	209Bi
		ppb
1	13:26:55	86.9%
2	13:27:10	90.2%
3	13:27:26	92.5%
x		89.8%
σ		2.8%
%RSD		3.1

SEQ-IFB@ICSAB01 1/4/2016 13:30:47 QC Status: PASS (Initial: PASS)

User Pre-dilution: 1.000

Run	Time	6Li	27Al	45Sc	47Ti	51V	52Cr	53Cl O	54Fe	59Co	60Ni	65Cu	66Zn	83Kr	89Y	94Mo
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:30:47	84.3%	r87890.0000	94.2%	323.0000	19.4200	40.6500	222.3000	r95020.0000	19.5900	25.8200	25.9900	29.2500	28.1100	93.9%	634.5000
2	13:31:01	85.7%	r90400.0000	94.4%	334.9000	20.1700	40.6500	183.6000	r97520.0000	20.6100	26.6200	27.3700	29.8300	44.7500	94.6%	658.7000
3	13:31:15	86.7%	r90380.0000	96.6%	334.4000	20.5000	41.4900	144.3000	r97410.0000	20.4100	25.4800	26.1900	29.5100	25.4300	97.6%	660.9000
x		85.5%	r89560.0000	95.1%	330.8000	105.417%	102.336%	183.4000	r96650.0000	101.017%	108.223%	106.066%	101.827%	32.7600	95.3%	651.3000
σ		1.2%	r1444.0000	1.3%	6.6950	n/a	n/a	38.9900	r1413.0000	n/a	n/a	n/a	n/a	10.4700	2.0%	14.6400
%RSD		1.4	r1.6130	1.4	2.0240	2.7550	1.1710	21.2600	r1.4620	2.6650	2.2640	2.8230	0.9840	31.9500	2.1	2.2480

Run	Time	95Mo	96Mo	97Mo	98Mo	103Rh	106Cd	107Ag	108Cd	111Cd	115In	118Sn	159Tb	165Ho	205Tl	208Pb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:30:47	1149.0000	1221.0000	672.7000	r1813.0000	87.3%	0.9040	17.0100	2.4030	18.0800	94.1%	0.1589	94.7%	96.5%	19.7900	24.0700
2	13:31:01	1194.0000	1275.0000	696.7000	r1864.0000	86.9%	1.0280	17.8000	2.3300	19.9400	97.0%	0.1605	98.7%	99.7%	20.6800	24.4900
3	13:31:15	1193.0000	1268.0000	695.5000	r1844.0000	86.0%	1.0040	17.8600	2.4170	19.2200	97.8%	0.1321	99.7%	100.7%	21.1600	24.9700
x		1179.0000	1255.0000	688.3000	r1840.0000	86.7%	0.9786	97.543%	2.3840	95.390%	96.3%	0.1505	97.7%	99.0%	97.816%	98.039%
σ		26.0800	29.2800	13.5200	r25.9500	0.7%	0.0658	n/a	0.0470	n/a	2.0%	0.0159	2.6%	2.2%	n/a	n/a
%RSD		2.2130	2.3330	1.9640	r1.4100	0.8	6.7210	2.6920	1.9730	4.9190	2.1	10.6000	2.7	2.2	3.3920	1.8300

Run	Time	209Bi
		ppb
1	13:30:47	90.2%
2	13:31:01	92.9%
3	13:31:15	93.8%
x		92.3%
σ		1.8%
%RSD		2.0

SEQ-CCV@CCV01 1/4/2016 13:34:38 QC Status: FAIL (Initial: FAIL)

User Pre-dilution: 1.000

Run	Time	6Li	27Al	45Sc	47Ti	51V	52Cr	53Cl O	54Fe	59Co	60Ni	65Cu	66Zn	83Kr	89Y	94Mo
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:34:53	87.0%	r53980.0000	95.4%	0.0181	517.1000	505.8000	2892.0000	r58070.0000	489.3000	465.2000	460.4000	2315.0000	23.9800	95.0%	162.3000
2	13:35:07	88.7%	r54150.0000	97.2%	-0.0167	510.7000	501.8000	2367.0000	r58160.0000	493.4000	471.2000	464.4000	2344.0000	21.0700	96.4%	162.5000
3	13:35:21	88.2%	r54710.0000	96.9%	-0.0822	520.8000	511.8000	2728.0000	r58650.0000	497.4000	473.6000	468.1000	2341.0000	19.1700	96.7%	164.9000
x		88.0%	r88.987%	96.5%	-0.0269	103.242%	101.293%	2662.0000	r97.154%	98.671%	93.997%	92.861%	93.332%	21.4000	96.0%	163.2000
σ		0.9%	rn/a	1.0%	0.0509	n/a	n/a	268.4000	rn/a	n/a	n/a	n/a	n/a	2.4220	0.9%	1.4630
%RSD		1.0	r0.7023	1.0	189.3000	0.9888	0.9934	10.0800	r0.5316	0.8289	0.9221	0.8308	0.6708	11.3200	1.0	0.8962

Run	Time	95Mo	96Mo	97Mo	98Mo	103Rh	106Cd	107Ag	108Cd	111Cd	115In	118Sn	159Tb	165Ho	205Tl	208Pb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:34:53	290.4000	303.5000	172.0000	438.6000	86.7%	23.7200	61.6700	17.5300	467.8000	96.4%	376.5000	99.5%	100.7%	r510.1000	528.8000
2	13:35:07	294.7000	309.7000	173.0000	442.7000	88.3%	24.1900	62.0800	17.3500	472.5000	97.6%	383.0000	102.2%	102.4%	r507.5000	524.8000
3	13:35:21	296.7000	315.2000	174.1000	452.6000	86.4%	24.8600	62.4600	17.8500	481.9000	96.7%	391.5000	102.5%	104.8%	r505.1000	530.8000
x		293.9000	309.5000	173.0000	444.6000	87.1%	24.2600	95.490%	17.5800	94.817%	96.9%	383.7000	101.4%	102.6%	r101.509%	105.629%
σ		3.2190	5.8500	1.0810	7.1670	1.0%	0.5721	n/a	0.2537	n/a	0.6%	7.5500	1.7%	2.1%	rn/a	n/a
%RSD		1.0950	1.8900	0.6248	1.6120	1.2	2.3580	0.6365	1.4430	1.5140	0.6	1.9680	1.7	2.0	r0.4952	0.5777

Run	Time	209Bi
		ppb
1	13:34:53	93.6%
2	13:35:07	95.2%
3	13:35:21	96.7%
x		95.2%
σ		1.5%
%RSD		1.6

SEQ-CCB@CCB01 1/4/2016 13:38:44 QC Status: PASS (Initial: PASS)

User Pre-dilution: 1.000

Run	Time	6Li	27Al	45Sc	47Ti	51V	52Cr	53Cl O	54Fe	59Co	60Ni	65Cu	66Zn	83Kr	89Y	94Mo
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:38:44	94.8%	1.3940	99.8%	0.1568	-0.0003	-0.0270	-40.7000	-3.4850	0.0176	-0.0801	-0.0950	-0.0209	-9.8760	98.2%	0.0281
2	13:38:58	93.7%	1.5920	99.8%	0.1199	0.0564	-0.0459	-43.0400	0.0577	0.0243	-0.0125	-0.0179	-0.0807	-10.7200	99.0%	0.0453
3	13:39:13	94.9%	1.6820	98.7%	-0.0233	0.0466	-0.0208	-43.0900	-0.3598	0.0052	-0.0229	-0.0035	-0.0290	-5.7940	100.1%	0.0403
x		94.5%	1.5560	99.4%	0.0845	0.0342	-0.0313	-42.2800	-1.2620	0.0157	-0.0385	-0.0392	-0.0435	-8.7960	99.1%	0.0379
σ		0.6%	0.1477	0.6%	0.0952	0.0303	0.0131	1.3650	1.9360	0.0097	0.0364	0.0498	0.0325	2.6330	1.0%	0.0088
%RSD		0.7	9.4920	0.6	112.7000	88.4400	41.8500	3.2280	153.4000	61.8700	94.4900	127.1000	74.5700	29.9300	1.0	23.2800

Run	Time	95Mo	96Mo	97Mo	98Mo	103Rh	106Cd	107Ag	108Cd	111Cd	115In	118Sn	159Tb	165Ho	205Tl	208Pb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:38:44	0.0959	0.0720	0.0414	0.0839	95.6%	0.0210	0.0061	0.0033	0.0033	102.6%	0.0256	100.5%	99.1%	0.1381	0.0220
2	13:38:58	0.1144	0.0525	0.0513	0.0809	97.7%	-0.0324	0.0013	-0.0167	0.0081	103.1%	0.0508	103.2%	102.0%	0.1066	0.0156
3	13:39:13	0.0961	0.0644	0.0506	0.0717	95.6%	-0.0035	0.0012	-0.0141	0.0130	103.5%	0.0531	105.0%	103.7%	0.0996	0.0125
x		0.1021	0.0630	0.0478	0.0789	96.3%	-0.0050	0.0029	-0.0091	0.0081	103.1%	0.0432	102.9%	101.6%	0.1148	0.0167
σ		0.0106	0.0098	0.0055	0.0064	1.2%	0.0267	0.0028	0.0108	0.0048	0.5%	0.0153	2.3%	2.3%	0.0206	0.0048
%RSD		10.3900	15.6000	11.4800	8.0540	1.3	537.2000	98.0900	118.5000	59.6300	0.4	35.3400	2.2	2.3	17.9100	28.9600

Run	Time	209Bi
		ppb
1	13:38:44	101.4%
2	13:38:58	104.2%
3	13:39:13	104.0%
x		103.2%
σ		1.5%
%RSD		1.5

132

PL21004-BLK3@PBW01@MF6R32@45671@LEM 1/4/2016 13:42:36 QC Status: PASS (Initial: PASS)

User Pre-dilution: 1.000

Run	Time	6Li	27Al	45Sc	47Ti	51V	52Cr	53Cl O	54Fe	59Co	60Ni	65Cu	66Zn	83Kr	89Y	94Mo
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:42:36	90.9%	1.4210	96.7%	0.3465	-0.1079	0.2404	167.8000	4.6040	0.0084	0.6066	0.2330	0.3104	-2.9000	96.2%	0.0359
2	13:42:50	91.2%	1.3910	96.3%	0.2030	-0.1456	0.2224	168.7000	3.9320	0.0048	0.6565	0.0997	0.2927	0.2483	97.8%	0.0217
3	13:43:04	90.9%	1.4740	98.0%	-0.1007	-0.1169	0.2612	176.7000	4.2760	0.0169	0.6283	0.1272	0.2797	0.8052	99.5%	0.0253
x		91.0%	1.4290	97.0%	0.1496	-0.1234	0.2413	171.0000	4.2710	0.0100	0.6304	0.1533	0.2942	-0.6155	97.8%	0.0276
σ		0.2%	0.0421	0.9%	0.2283	0.0197	0.0194	4.8870	0.3358	0.0062	0.0250	0.0704	0.0154	1.9980	1.6%	0.0074
%RSD		0.2	2.9450	0.9	152.6000	15.9500	8.0460	2.8570	7.8630	61.7400	3.9680	45.9200	5.2380	324.6000	1.7	26.7500

Run	Time	95Mo	96Mo	97Mo	98Mo	103Rh	106Cd	107Ag	108Cd	111Cd	115In	118Sn	159Tb	165Ho	205Tl	208Pb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:42:36	0.0475	0.0305	0.0873	0.0240	93.2%	-0.0162	0.0015	-0.0130	0.0246	100.2%	0.0789	102.2%	102.8%	0.0358	0.0346
2	13:42:50	0.0248	0.0150	0.1271	0.0270	92.1%	-0.0022	0.0014	-0.0163	0.0189	101.9%	0.0652	103.6%	103.7%	0.0297	0.0399
3	13:43:04	0.0496	0.0082	0.1302	0.0177	90.3%	-0.0038	0.0012	-0.0198	0.0128	104.6%	0.0960	105.2%	104.8%	0.0244	0.0463
x		0.0406	0.0179	0.1149	0.0229	91.9%	-0.0074	0.0013	-0.0164	0.0188	102.2%	0.0800	103.7%	103.7%	0.0300	0.0403
σ		0.0138	0.0114	0.0239	0.0047	1.5%	0.0077	0.0002	0.0034	0.0059	2.2%	0.0155	1.5%	1.0%	0.0057	0.0058
%RSD		33.8300	63.7900	20.8400	20.7200	1.6	103.3000	12.4700	20.8000	31.3300	2.2	19.3200	1.4	0.9	18.9400	14.4800

Run	Time	209Bi
		ppb
1	13:42:36	104.1%
2	13:42:50	104.6%
3	13:43:04	106.0%
x		104.9%
σ		1.0%
%RSD		0.9

PL21004-BS5@LCS02 1/4/2016 13:46:25

User Pre-dilution: 1.000

Run	Time	6Li	27Al	45Sc	47Ti	51V	52Cr	53Cl O	54Fe	59Co	60Ni	65Cu	66Zn	83Kr	89Y	94Mo
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:46:25	96.4%	1.6330	96.5%	0.2686	-0.2031	2.4230	286.2000	3.5780	1.1090	1.5070	0.4806	0.4050	2.8400	96.1%	0.0293
2	13:46:40	96.1%	1.6950	98.0%	0.0753	-0.3736	2.3690	277.3000	4.6390	1.0950	1.4610	0.4454	0.4939	-0.0684	96.7%	0.0334
3	13:46:54	94.5%	1.7920	99.0%	0.0418	-0.5574	2.5440	333.7000	2.7090	1.1380	1.2380	0.4328	0.4029	9.9820	98.4%	0.0150
x		95.7%	1.7070	97.8%	0.1285	-0.3780	2.4450	299.1000	3.6420	1.1140	1.4020	0.4529	0.4339	4.2520	97.1%	0.0259
σ		1.0%	0.0803	1.3%	0.1224	0.1772	0.0895	30.3200	0.9665	0.0220	0.1438	0.0248	0.0519	5.1720	1.2%	0.0097
%RSD		1.0	4.7040	1.3	95.2500	46.8800	3.6610	10.1400	26.5400	1.9760	10.2600	5.4770	11.9700	121.6000	1.2	37.3600

Run	Time	95Mo	96Mo	97Mo	98Mo	103Rh	106Cd	107Ag	108Cd	111Cd	115In	118Sn	159Tb	165Ho	205Tl	208Pb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:46:25	0.0256	0.0155	0.0410	0.0111	91.3%	0.0421	-0.0021	0.0252	1.1270	99.0%	0.0913	100.2%	100.8%	1.0810	0.0160
2	13:46:40	0.0450	0.0131	0.0446	0.0058	94.6%	0.0555	0.0039	0.0328	1.2160	100.9%	0.0974	103.1%	104.0%	1.0830	0.0197
3	13:46:54	0.0442	0.0107	0.0563	0.0053	92.4%	0.0460	0.0087	0.0297	1.2160	100.6%	0.1182	104.3%	105.4%	1.1470	0.0197
x		0.0383	0.0131	0.0473	0.0074	92.8%	0.0479	0.0035	0.0293	1.1860	100.2%	0.1023	102.5%	103.4%	1.1030	0.0185
σ		0.0110	0.0024	0.0080	0.0032	1.7%	0.0069	0.0054	0.0038	0.0512	1.0%	0.0141	2.1%	2.4%	0.0379	0.0022
%RSD		28.6400	18.3100	16.8800	42.9700	1.8	14.4400	155.5000	13.0400	4.3130	1.0	13.8100	2.0	2.3	3.4320	11.6600

Run	Time	209Bi
		ppb
1	13:46:25	101.4%
2	13:46:40	103.7%
3	13:46:54	105.6%
x		103.6%
σ		2.1%
%RSD		2.0

SEQ-IBL1@ZZZZZZZ 1/4/2016 13:50:15

User Pre-dilution: 1.000

Run	Time	6Li	27Al	45Sc	47Ti	51V	52Cr	53Cl O	54Fe	59Co	60Ni	65Cu	66Zn	83Kr	89Y	94Mo
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:50:15	96.9%	46.2000	99.3%	0.1133	-0.1453	0.2491	287.7000	5.2480	0.0136	1.2410	0.2113	0.2438	5.9890	95.3%	0.0070
2	13:50:29	97.2%	47.2800	100.1%	0.1600	-0.0848	0.3002	312.7000	6.5950	-0.0027	1.4140	0.2781	0.3705	14.1500	95.7%	0.0250
3	13:50:43	99.6%	48.5000	99.1%	0.0310	-0.2294	0.2544	302.5000	6.9930	-0.0072	1.4590	0.2657	0.2559	4.3250	97.6%	0.0241
x		97.9%	47.3300	99.5%	0.1014	-0.1531	0.2679	300.9000	6.2790	0.0012	1.3710	0.2517	0.2901	8.1530	96.2%	0.0187
σ		1.5%	1.1510	0.5%	0.0653	0.0726	0.0281	12.5600	0.9146	0.0110	0.1155	0.0355	0.0699	5.2560	1.2%	0.0102
%RSD		1.5	2.4320	0.5	64.3600	47.4200	10.4900	4.1740	14.5700	889.0000	8.4190	14.1200	24.1000	64.4600	1.3	54.4100

Run	Time	95Mo	96Mo	97Mo	98Mo	103Rh	106Cd	107Ag	108Cd	111Cd	115In	118Sn	159Tb	165Ho	205Tl	208Pb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:50:15	0.0081	0.0201	0.0223	0.0093	94.3%	-0.0152	0.0042	0.0231	-0.0006	97.9%	0.0602	98.9%	99.8%	0.0033	0.0095
2	13:50:29	0.0214	0.0069	0.0264	0.0051	91.5%	-0.0062	0.0004	-0.0154	0.0046	98.2%	0.0836	102.3%	101.4%	0.0075	0.0138
3	13:50:43	0.0141	0.0023	0.0359	0.0150	93.8%	-0.0015	0.0027	-0.0102	0.0451	100.3%	0.0775	101.4%	102.6%	0.0046	0.0137
x		0.0146	0.0098	0.0282	0.0098	93.2%	-0.0076	0.0024	-0.0009	0.0164	98.8%	0.0738	100.9%	101.3%	0.0051	0.0123
σ		0.0066	0.0092	0.0070	0.0050	1.5%	0.0070	0.0019	0.0209	0.0250	1.3%	0.0122	1.8%	1.4%	0.0022	0.0025
%RSD		45.6500	94.4700	24.6300	50.9600	1.6	91.2600	78.6000	2433.0000	153.0000	1.4	16.5000	1.8	1.4	42.5900	19.9400

Run	Time	209Bi
		ppb
1	13:50:15	99.0%
2	13:50:29	103.5%
3	13:50:43	103.2%
x		101.9%
σ		2.5%
%RSD		2.4

133

5120223-01RE2@MF6R32 1/4/2016 13:54:03

User Pre-dilution: 1.000

Run	Time	6Li	27Al	45Sc	47Ti	51V	52Cr	53Cl O	54Fe	59Co	60Ni	65Cu	66Zn	83Kr	89Y	94Mo
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:54:03	67.1%	569.8000	96.9%	30.3000	κ2630.0000	376.1000	2328.0000	τ8416.0000	37.1600	477.6000	19.8600	19.4400	328.4000	673.6%	21.8000
2	13:54:18	69.4%	599.1000	98.2%	30.4500	κ2628.0000	376.2000	2579.0000	τ8786.0000	38.2700	495.0000	19.9600	20.2800	452.6000	709.3%	22.1300
3	13:54:32	67.4%	603.2000	100.5%	31.8400	κ2646.0000	375.0000	2785.0000	τ8868.0000	38.5000	498.8000	20.7900	19.8200	553.5000	732.2%	22.6700
x		68.0%	590.7000	98.5%	30.8600	κ2635.0000	375.8000	2564.0000	τ8690.0000	37.9800	490.5000	20.2000	19.8500	444.8000	705.0%	22.2000
σ		1.2%	18.2200	1.8%	0.8471	κ9.6550	0.6516	228.9000	τ241.0000	0.7191	11.3000	0.5074	0.4198	112.7000	29.5%	0.4378
%RSD		1.8	3.0850	1.8	2.7450	κ0.3664	0.1734	8.9270	τ2.7740	1.8930	2.3030	2.5120	2.1150	25.3400	4.2	1.9720

Run	Time	95Mo	96Mo	97Mo	98Mo	103Rh	106Cd	107Ag	108Cd	111Cd	115In	118Sn	159Tb	165Ho	205Tl	208Pb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:54:03	21.2900	27.0800	15.3200	42.8800	65.3%	1.3780	0.2330	0.5847	0.6651	67.7%	4.0950	96.6%	99.5%	0.0156	88.4600
2	13:54:18	21.7100	27.9200	15.9500	43.0600	65.6%	1.4270	0.2193	0.6014	0.6943	70.6%	4.0470	101.3%	103.1%	0.0213	88.2000
3	13:54:32	21.9800	28.0800	16.5200	43.8400	65.9%	1.2160	0.2382	0.6113	0.5545	71.1%	4.1420	102.7%	105.6%	0.0189	89.2300
x		21.6600	27.7000	15.9300	43.2600	65.6%	1.3400	0.2302	0.5991	0.6379	69.8%	4.0950	100.2%	102.7%	0.0186	88.6300
σ		0.3512	0.5361	0.6029	0.5097	0.3%	0.1103	0.0098	0.0135	0.0738	1.8%	0.0475	3.2%	3.1%	0.0029	0.5332
%RSD		1.6210	1.9360	3.7850	1.1780	0.5	8.2270	4.2550	2.2480	11.5600	2.6	1.1600	3.2	3.0	15.5700	0.6017

Run	Time	209Bi
		ppb
1	13:54:03	303.6%
2	13:54:18	323.5%
3	13:54:32	327.0%
x		318.0%
σ		12.6%
%RSD		4.0

5120223-02RE2@MF6R42 1/4/2016 13:57:53

User Pre-dilution: 1.000

Run	Time	6Li	27Al	45Sc	47Ti	51V	52Cr	53Cl O	54Fe	59Co	60Ni	65Cu	66Zn	83Kr	89Y	94Mo
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:57:53	96.4%	29.6500	104.8%	0.7547	0.4296	0.5142	75.4700	1415.0000	3.6740	4.4990	3.0080	15.1800	69.3400	99.2%	0.2511
2	13:58:07	95.7%	31.0900	104.6%	0.5270	0.5427	0.4960	79.1200	1459.0000	3.7840	4.1210	2.9330	15.6300	73.2900	99.9%	0.2406
3	13:58:21	93.1%	31.6100	102.6%	0.3549	0.5167	0.4721	59.9100	1506.0000	3.8860	4.6510	2.8700	16.2200	76.3400	99.2%	0.2670
x		95.1%	30.7800	104.0%	0.5455	0.4963	0.4941	71.5000	1460.0000	3.7820	4.4240	2.9370	15.6800	72.9900	99.4%	0.2529
σ		1.7%	1.0170	1.2%	0.2006	0.0592	0.0211	10.2000	45.4600	0.1057	0.2732	0.0693	0.5250	3.5090	0.4%	0.0133
%RSD		1.8	3.3030	1.2	36.7700	11.9300	4.2660	14.2700	3.1130	2.7950	6.1770	2.3600	3.3490	4.8070	0.4	5.2530

Run	Time	95Mo	96Mo	97Mo	98Mo	103Rh	106Cd	107Ag	108Cd	111Cd	115In	118Sn	159Tb	165Ho	205Tl	208Pb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:57:53	0.2263	0.2511	0.2215	0.2955	94.3%	0.0145	0.0139	0.0049	0.1768	97.6%	0.0901	98.8%	100.5%	0.0113	109.3000
2	13:58:07	0.2441	0.2409	0.2489	0.2823	92.3%	-0.0193	0.0113	0.0016	0.1389	98.3%	0.0975	102.2%	102.7%	0.0063	111.0000
3	13:58:21	0.1814	0.3163	0.2521	0.2875	95.0%	0.0068	0.0159	0.0152	0.1002	100.9%	0.0961	103.4%	103.3%	0.0051	112.8000
x		0.2172	0.2695	0.2408	0.2884	93.9%	0.0007	0.0137	0.0072	0.1386	98.9%	0.0945	101.5%	102.2%	0.0075	111.0000
σ		0.0323	0.0409	0.0168	0.0066	1.4%	0.0177	0.0023	0.0070	0.0383	1.7%	0.0039	2.4%	1.5%	0.0033	1.7590
%RSD		14.8500	15.1800	6.9850	2.3000	1.5	2626.0000	16.6400	97.4300	27.6300	1.7	4.1590	2.4	1.4	43.4900	1.5840

Run	Time	209Bi
		ppb
1	13:57:53	99.6%
2	13:58:07	101.5%
3	13:58:21	102.3%
x		101.1%
σ		1.4%
%RSD		1.4

PL21004-MS2@MF6R42S 1/4/2016 14:01:42 QC Status: PASS (Initial: PASS)

User Pre-dilution: 1.000

Run	Time	6Li	27Al	45Sc	47Ti	51V	52Cr	53Cl O	54Fe	59Co	60Ni	65Cu	66Zn	83Kr	89Y	94Mo
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:01:42	94.2%	τ1949.0000	97.8%	0.7045	542.9000	210.0000	1354.0000	1522.0000	534.8000	519.1000	256.8000	506.2000	51.8000	94.0%	0.3273
2	14:01:56	92.9%	τ1965.0000	100.1%	0.4320	545.6000	211.3000	1435.0000	1569.0000	541.8000	521.8000	261.7000	525.0000	59.3700	95.0%	0.3378
3	14:02:10	94.3%	τ2013.0000	99.1%	0.3221	557.4000	215.5000	1276.0000	1609.0000	551.7000	531.6000	265.4000	528.8000	72.7700	96.0%	0.3215
x		93.6%	τ1976.0000	99.0%	0.4862	109.628%	105.888%	1355.0000	1567.0000	107.797%	103.947%	103.337%	100.860%	61.3100	95.0%	0.3289
σ		0.8%	τ33.0200	1.2%	0.1969	n/a	n/a	79.6000	43.4800	n/a	n/a	n/a	n/a	10.6200	1.0%	0.0083
%RSD		0.8	τ1.6720	1.2	40.4900	1.4090	1.3390	5.8750	2.7760	1.5630	1.2570	1.6560	2.3240	17.3200	1.0	2.5230

Run	Time	95Mo	96Mo	97Mo	98Mo	103Rh	106Cd	107Ag	108Cd	111Cd	115In	118Sn	159Tb	165Ho	205Tl	208Pb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:01:42	0.1995	0.2413	0.1215	0.2928	91.7%	2.5110	49.7300	1.8100	49.3000	95.0%	0.1001	98.4%	97.9%	51.7900	132.2000
2	14:01:56	0.2111	0.2457	0.1333	0.3100	92.7%	2.5990	51.3800	1.6860	51.3500	95.6%	0.1096	98.6%	99.4%	53.2700	135.0000
3	14:02:10	0.2166	0.2766	0.1776	0.3325	91.1%	2.5480	50.4600	1.9170	51.9300	98.4%	0.1200	101.4%	102.6%	53.8100	135.9000
x		0.2090	0.2545	0.1441	0.3118	91.8%	2.5530	101.023%	1.8040	101.443%	96.3%	0.1099	99.4%	100.0%	105.890%	116.685%
σ		0.0087	0.0192	0.0296	0.0199	0.8%	0.0440	n/a	0.1160	n/a	1.8%	0.0099	1.7%	2.4%	n/a	n/a
%RSD		4.1660	7.5400	20.5100	6.3760	0.9	1.7240	1.6410	6.4290	2.7140	1.9	9.0170	1.7	2.4	1.9760	1.4330

Run	Time	209Bi
		ppb
1	14:01:42	95.9%
2	14:01:56	98.2%
3	14:02:10	99.5%
x		97.9%
σ		1.8%
%RSD		1.9

PL21004-DUP3@MF6R42D 1/4/2016 14:05:31

User Pre-dilution: 1.000

Run	Time	6Li	27Al	45Sc	47Ti	51V	52Cr	53Cl O	54Fe	59Co	60Ni	65Cu	66Zn	83Kr	89Y	94Mo
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:05:31	94.0%	31.5300	96.2%	0.4814	0.3772	0.4279	94.6300	1445.0000	3.8690	4.2860	2.6490	14.7200	40.3700	92.6%	0.2415
2	14:05:45	93.7%	31.0300	95.6%	0.4006	0.4484	0.5367	86.9900	1514.0000	3.9950	4.9730	2.9480	16.6900	41.7700	92.8%	0.2298
3	14:06:00	95.7%	31.5100	99.9%	0.2140	0.4114	0.5146	83.1000	1487.0000	3.7700	4.5700	2.7010	15.9600	42.1100	93.0%	0.2853
x		94.5%	31.3600	97.2%	0.3653	0.4124	0.4931	88.2400	1482.0000	3.8780	4.6100	2.7660	15.7900	41.4200	92.8%	0.2522
σ		1.0%	0.2864	2.3%	0.1372	0.0356	0.0575	5.8620	34.9300	0.1130	0.3449	0.1597	0.9957	0.9208	0.2%	0.0292
%RSD		1.1	0.9134	2.4	37.5500	8.6340	11.6700	6.6430	2.3580	2.9150	7.4820	5.7740	6.3060	2.2230	0.2	11.5800

Run	Time	95Mo	96Mo	97Mo	98Mo	103Rh	106Cd	107Ag	108Cd	111Cd	115In	118Sn	159Tb	165Ho	205Tl	208Pb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:05:31	0.1966	0.2302	0.1088	0.2891	88.7%	0.0004	0.0205	-0.0076	0.1331	92.4%	0.0811	96.1%	96.1%	0.0627	109.3000
2	14:05:45	0.1806	0.2365	0.1291	0.2774	88.8%	-0.0044	0.0377	-0.0146	0.1070	95.7%	0.0849	97.4%	98.5%	0.0487	111.9000
3	14:06:00	0.2282	0.2358	0.1331	0.2687	89.0%	0.0173	0.0261	0.0033	0.1224	96.2%	0.0960	96.8%	99.6%	0.0357	111.6000
x		0.2018	0.2342	0.1237	0.2784	88.8%	0.0044	0.0281	-0.0063	0.1208	94.8%	0.0874	96.8%	98.0%	0.0490	110.9000
σ		0.0242	0.0034	0.0130	0.0103	0.1%	0.0114	0.0088	0.0090	0.0131	2.1%	0.0077	0.7%	1.8%	0.0135	1.4270
%RSD		11.9900	1.4660	10.5300	3.6860	0.2	257.0000	31.2800	143.6000	10.8700	2.2	8.8300	0.7	1.8	27.4700	1.2860

Run	Time	209Bi
		ppb
1	14:05:31	94.5%
2	14:05:45	97.3%
3	14:06:00	100.0%
x		97.3%
σ		2.8%
%RSD		2.8

SEQ-SRD3@MF6R42L@5X 1/4/2016 14:09:21

User Pre-dilution: 1.000

Run	Time	6Li	27Al	45Sc	47Ti	51V	52Cr	53Cl O	54Fe	59Co	60Ni	65Cu	66Zn	83Kr	89Y	94Mo
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:09:21	98.2%	6.5040	95.3%	0.6007	0.1582	-0.0206	-64.0400	289.3000	0.7400	0.9510	0.5431	3.3530	-0.9575	92.7%	0.0455
2	14:09:36	98.1%	6.7950	96.4%	0.2548	0.2281	-0.0200	-74.4900	292.7000	0.7236	0.7501	0.4205	3.5180	2.7390	94.5%	0.0373
3	14:09:50	97.1%	6.6020	98.2%	0.1040	0.0634	-0.0124	-59.9100	298.7000	0.8413	0.9150	0.7014	3.4060	0.0470	95.1%	0.0347
x		97.8%	6.6340	96.7%	0.3198	0.1499	-0.0177	-66.1500	293.6000	0.7683	0.8721	0.5550	3.4260	0.6094	94.1%	0.0392
σ		0.6%	0.1483	1.5%	0.2547	0.0827	0.0046	7.5140	4.7640	0.0638	0.1071	0.1408	0.0840	1.9110	1.3%	0.0057
%RSD		0.6	2.2360	1.5	79.6300	55.1500	26.0000	11.3600	1.6230	8.2970	12.2800	25.3800	2.4510	313.6000	1.3	14.4700

Run	Time	95Mo	96Mo	97Mo	98Mo	103Rh	106Cd	107Ag	108Cd	111Cd	115In	118Sn	159Tb	165Ho	205Tl	208Pb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:09:21	0.0459	0.0303	0.0285	0.0495	96.1%	0.0065	0.0047	-0.0078	0.0444	93.0%	0.0733	93.0%	93.8%	0.0040	21.2900
2	14:09:36	0.0379	0.0472	0.0296	0.0521	94.4%	-0.0013	-0.0020	0.0066	0.0215	95.0%	0.0640	96.2%	95.6%	0.0061	21.7100
3	14:09:50	0.0443	0.0557	0.0314	0.0418	97.3%	0.0107	0.0094	-0.0088	0.0266	95.6%	0.0519	95.6%	96.3%	0.0055	21.9100
x		0.0427	0.0444	0.0298	0.0478	95.9%	0.0053	0.0041	-0.0033	0.0308	94.5%	0.0631	94.9%	95.2%	0.0052	21.6300
σ		0.0042	0.0129	0.0015	0.0053	1.4%	0.0061	0.0057	0.0086	0.0121	1.4%	0.0107	1.7%	1.3%	0.0011	0.3158
%RSD		9.9130	29.1600	4.9640	11.1900	1.5	115.6000	141.2000	258.7000	39.1000	1.4	16.9600	1.8	1.3	21.4300	1.4600

Run	Time	209Bi
		ppb
1	14:09:21	94.3%
2	14:09:36	95.8%
3	14:09:50	97.3%
x		95.8%
σ		1.5%
%RSD		1.5

5120223-03RE3@MF6R44 1/4/2016 14:13:12

User Pre-dilution: 1.000

Run	Time	6Li	27Al	45Sc	47Ti	51V	52Cr	53Cl O	54Fe	59Co	60Ni	65Cu	66Zn	83Kr	89Y	94Mo
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:13:12	92.3%	↑3818.0000	115.8%	7.0580	13.5300	8.9560	244.7000	6787.0000	6.4710	9.8000	5.8100	14.1900	48.4300	110.4%	8.1960
2	14:13:26	92.7%	↑3908.0000	119.5%	6.8470	13.8700	9.0970	267.5000	7026.0000	6.3340	10.0700	5.9500	14.3800	53.5100	113.3%	8.2350
3	14:13:41	92.8%	↑4024.0000	120.0%	6.8150	13.2300	9.1120	322.0000	↑6909.0000	6.4950	9.9810	6.1400	14.8100	69.8800	116.7%	8.5050
x		92.6%	↑3917.0000	118.4%	6.9070	13.5400	9.0550	278.1000	↑6907.0000	6.4340	9.9490	5.9570	14.4600	57.2700	113.5%	8.3120
σ		0.3%	↑103.0000	2.3%	0.1323	0.3233	0.0864	39.7000	↑119.3000	0.0869	0.1354	0.1655	0.3144	11.2100	3.1%	0.1680
%RSD		0.3	↑2.6300	1.9	1.9160	2.3870	0.9547	14.2800	↑1.7280	1.3510	1.3610	2.7740	2.1740	19.5700	2.8	2.0210

Run	Time	95Mo	96Mo	97Mo	98Mo	103Rh	106Cd	107Ag	108Cd	111Cd	115In	118Sn	159Tb	165Ho	205Tl	208Pb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:13:12	11.0600	12.2300	6.6980	17.2400	85.6%	0.0917	0.1039	0.1139	0.1643	86.7%	0.4466	91.8%	92.3%	0.0630	TM 3662.0000
2	14:13:26	11.6700	12.6700	6.9130	18.0800	84.0%	0.0724	0.0873	0.0403	0.1404	88.7%	0.4720	93.7%	95.4%	0.0687	TM 3756.0000
3	14:13:41	11.5900	12.8000	7.2390	18.0500	84.5%	0.1376	0.1048	0.0571	0.1433	89.5%	0.4253	96.6%	97.0%	0.0648	TM 3746.0000
x		11.4400	12.5700	6.9500	17.7900	84.7%	0.1006	0.0986	0.0705	0.1494	88.3%	0.4480	94.0%	94.9%	0.0655	TM 3721.0000
σ		0.3333	0.3022	0.2725	0.4768	0.8%	0.0335	0.0098	0.0336	0.0130	1.4%	0.0234	2.4%	2.4%	0.0029	TM 51.4800
%RSD		2.9130	2.4050	3.9200	2.6800	1.0	33.2800	9.9760	54.7100	8.7270	1.6	5.2250	2.6	2.5	4.4680	TM 1.3830

Run	Time	209Bi
		ppb
1	14:13:12	89.8%
2	14:13:26	92.4%
3	14:13:41	94.7%
x		92.3%
σ		2.5%
%RSD		2.7

5120223-04RE2@MF6R45 1/4/2016 14:17:02

User Pre-dilution: 1.000

Run	Time	6Li	27Al	45Sc	47Ti	51V	52Cr	53Cl O	54Fe	59Co	60Ni	65Cu	66Zn	83Kr	89Y	94Mo
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:17:02	92.5%	3.3560	95.4%	0.6321	0.1705	0.3282	-7.7420	r37330.0000	1.4640	1.3210	0.3177	1.0420	45.1000	95.8%	0.4932
2	14:17:17	92.6%	3.0660	97.3%	0.4437	0.0111	0.3115	-2.4220	r38070.0000	1.4410	1.2280	0.2930	1.2100	36.5900	96.2%	0.5009
3	14:17:31	91.1%	3.2370	96.2%	0.1832	0.1575	0.3385	-9.4350	r39120.0000	1.5040	1.5570	0.2228	1.2800	58.5500	97.0%	0.5454
x		92.1%	3.2200	96.3%	0.4197	0.1130	0.3261	-6.5330	r38170.0000	1.4700	1.3690	0.2779	1.1770	46.7400	96.3%	0.5132
σ		0.9%	0.1454	1.0%	0.2254	0.0885	0.0136	3.6600	r897.1000	0.0317	0.1700	0.0492	0.1219	11.0700	0.6%	0.0282
%RSD		0.9	4.5160	1.0	53.7100	78.3300	4.1730	56.0200	r2.3500	2.1530	12.4200	17.7200	10.3500	23.6800	0.6	5.4900

Run	Time	95Mo	96Mo	97Mo	98Mo	103Rh	106Cd	107Ag	108Cd	111Cd	115In	118Sn	159Tb	165Ho	205Tl	208Pb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:17:02	0.7475	0.8909	0.4842	1.2670	87.7%	-0.0048	0.0018	-0.0056	0.0463	94.9%	0.0961	95.8%	97.5%	-0.0026	0.1787
2	14:17:17	0.8463	0.8363	0.5694	1.2280	88.5%	0.0266	0.0044	0.0095	0.0192	94.6%	0.0744	98.1%	99.4%	-0.0023	0.2329
3	14:17:31	0.8264	0.9401	0.4755	1.3320	87.1%	-0.0212	0.0017	-0.0003	0.0238	96.4%	0.0756	98.7%	99.7%	-0.0016	0.2290
x		0.8067	0.8891	0.5097	1.2750	87.8%	0.0002	0.0027	0.0012	0.0298	95.3%	0.0820	97.6%	98.8%	-0.0022	0.2135
σ		0.0522	0.0520	0.0519	0.0527	0.7%	0.0243	0.0015	0.0077	0.0145	1.0%	0.0122	1.5%	1.2%	0.0005	0.0302
%RSD		6.4720	5.8430	10.1800	4.1290	0.8	11470.0000	57.0800	645.6000	48.8200	1.0	14.8800	1.6	1.2	22.2900	14.1600

Run	Time	209Bi
		ppb
1	14:17:02	94.3%
2	14:17:17	96.4%
3	14:17:31	97.4%
x		96.0%
σ		1.6%
%RSD		1.6

5120223-05RE2@MF6R46 1/4/2016 14:20:52

User Pre-dilution: 1.000

Run	Time	6Li	27Al	45Sc	47Ti	51V	52Cr	53Cl O	54Fe	59Co	60Ni	65Cu	66Zn	83Kr	89Y	94Mo
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:20:52	91.1%	215.7000	96.5%	0.5079	0.5453	0.7709	184.3000	311.4000	0.4347	2.8710	4.0480	10.0100	26.0900	89.4%	0.2434
2	14:21:07	93.6%	221.9000	97.1%	0.8034	0.6813	0.7461	160.9000	320.2000	0.4203	2.9720	3.9230	10.0900	39.8500	92.8%	0.2569
3	14:21:21	90.5%	221.6000	99.8%	0.5341	0.2576	0.7895	218.8000	318.8000	0.4066	3.0890	3.7870	10.0600	41.1600	96.3%	0.2296
x		91.7%	219.7000	97.8%	0.6151	0.4948	0.7688	188.0000	316.8000	0.4205	2.9770	3.9190	10.0500	35.7000	92.8%	0.2433
σ		1.6%	3.4750	1.8%	0.1636	0.2163	0.0218	29.1400	4.7100	0.0140	0.1092	0.1303	0.0373	8.3470	3.4%	0.0137
%RSD		1.8	1.5820	1.8	26.5900	43.7200	2.8350	15.5000	1.4870	3.3340	3.6660	3.3250	0.3715	23.3800	3.7	5.6160

Run	Time	95Mo	96Mo	97Mo	98Mo	103Rh	106Cd	107Ag	108Cd	111Cd	115In	118Sn	159Tb	165Ho	205Tl	208Pb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:20:52	0.0997	0.1751	0.0887	0.1742	86.5%	0.0006	0.0021	0.0234	0.0442	93.7%	0.0724	96.8%	96.7%	-0.0011	11.4800
2	14:21:07	0.1241	0.1703	0.0727	0.1575	84.9%	0.0094	-0.0006	0.0166	0.1042	93.5%	0.0651	98.1%	98.6%	0.0038	11.8500
3	14:21:21	0.1419	0.1471	0.1040	0.1938	87.1%	0.0074	0.0081	0.0092	0.0746	95.4%	0.0938	100.0%	100.6%	0.0064	11.9600
x		0.1219	0.1642	0.0885	0.1752	86.2%	0.0058	0.0032	0.0164	0.0744	94.2%	0.0771	98.3%	98.6%	0.0030	11.7700
σ		0.0212	0.0150	0.0157	0.0181	1.1%	0.0046	0.0045	0.0071	0.0300	1.0%	0.0149	1.6%	2.0%	0.0038	0.2529
%RSD		17.3900	9.1410	17.7100	10.3500	1.3	79.2700	138.2000	43.3000	40.3500	1.1	19.3800	1.7	2.0	126.1000	2.1490

Run	Time	209Bi
		ppb
1	14:20:52	96.4%
2	14:21:07	97.9%
3	14:21:21	98.9%
x		97.7%
σ		1.3%
%RSD		1.3

5120223-06RE2@MF6R47 1/4/2016 14:24:43

User Pre-dilution: 1.000

Run	Time	6Li	27Al	45Sc	47Ti	51V	52Cr	53Cl O	54Fe	59Co	60Ni	65Cu	66Zn	83Kr	89Y	94Mo
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:24:43	93.4%	375.6000	96.2%	1.0460	0.5594	0.8206	274.9000	474.2000	0.6849	3.2360	4.0780	9.9410	29.2300	90.2%	0.2652
2	14:24:57	91.6%	382.7000	97.3%	0.9894	0.6683	0.9109	247.9000	480.2000	0.6546	3.2480	3.9870	10.4000	29.3200	92.9%	0.2710
3	14:25:11	91.5%	389.0000	97.7%	0.6792	0.7715	1.0080	239.3000	494.5000	0.6879	3.0030	3.7970	10.3300	41.9900	93.4%	0.2179
x		92.2%	382.5000	97.1%	0.9048	0.6664	0.9132	254.0000	482.9000	0.6758	3.1630	3.9540	10.2300	33.5100	92.2%	0.2514
σ		1.1%	6.7040	0.8%	0.1974	0.1061	0.0937	18.5500	10.4400	0.0185	0.1379	0.1437	0.2491	7.3450	1.7%	0.0291
%RSD		1.2	1.7530	0.9	21.8200	15.9200	10.2600	7.3030	2.1620	2.7300	4.3620	3.6350	2.4360	21.9200	1.8	11.5900

Run	Time	95Mo	96Mo	97Mo	98Mo	103Rh	106Cd	107Ag	108Cd	111Cd	115In	118Sn	159Tb	165Ho	205Tl	208Pb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:24:43	0.1379	0.1665	0.0939	0.1856	84.8%	-0.0011	0.0077	0.0029	0.0689	90.2%	0.1187	93.9%	94.6%	0.0075	15.4400
2	14:24:57	0.1058	0.2043	0.0971	0.2044	86.2%	-0.0256	0.0151	0.0169	0.0333	92.9%	0.1279	98.0%	97.5%	0.0051	15.8500
3	14:25:11	0.1462	0.1670	0.1052	0.1836	83.0%	-0.0165	0.0007	0.0194	0.0545	93.9%	0.1176	98.3%	99.6%	0.0066	16.1900
x		0.1300	0.1793	0.0988	0.1912	84.7%	-0.0144	0.0078	0.0131	0.0522	92.3%	0.1214	96.7%	97.2%	0.0064	15.8300
σ		0.0214	0.0217	0.0058	0.0115	1.6%	0.0124	0.0072	0.0089	0.0179	1.9%	0.0057	2.5%	2.5%	0.0012	0.3758
%RSD		16.4500	12.1000	5.8480	6.0110	1.9	86.0200	92.0000	68.2100	34.3600	2.1	4.6540	2.5	2.6	18.6300	2.3750

Run	Time	209Bi
		ppb
1	14:24:43	95.0%
2	14:24:57	97.0%
3	14:25:11	97.4%
x		96.4%
σ		1.3%
%RSD		1.3

136

5120223-01RE3@MF6R32@2X@Y,Bi 1/4/2016 14:28:33

User Pre-dilution: 1.000

Run	Time	6Li	27Al	45Sc	47Ti	51V	52Cr	53Cl O	54Fe	59Co	60Ni	65Cu	66Zn	83Kr	89Y	94Mo
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:28:33	79.5%	272.6000	94.1%	15.4100	x 1086.0000	159.6000	1006.0000	4477.0000	19.8300	261.6000	10.9200	7.5850	93.4600	367.9%	12.8300
2	14:28:48	79.2%	285.2000	94.8%	16.4500	x 1086.0000	159.5000	969.0000	4648.0000	20.3500	269.5000	11.1500	7.7600	110.0000	384.9%	12.6500
3	14:29:02	81.8%	286.6000	96.4%	16.2100	x 1105.0000	161.8000	905.7000	4731.0000	20.9000	272.2000	11.4700	7.7540	125.5000	398.8%	13.1700
x		80.1%	281.4000	95.1%	16.0200	x 1092.0000	160.3000	960.4000	4619.0000	20.3600	267.8000	11.1800	7.7000	109.7000	383.9%	12.8800
σ		1.4%	7.7090	1.2%	0.5424	x 11.2900	1.3010	50.8800	129.8000	0.5349	5.4910	0.2757	0.0993	16.0100	15.5%	0.2681
%RSD		1.8	2.7390	1.2	3.3850	x 1.0330	0.8113	5.2980	2.8100	2.6280	2.0510	2.4660	1.2900	14.6000	4.0	2.0810

Run	Time	95Mo	96Mo	97Mo	98Mo	103Rh	106Cd	107Ag	108Cd	111Cd	115In	118Sn	159Tb	165Ho	205Tl	208Pb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:28:33	12.0400	14.7600	8.0830	22.2300	73.1%	0.5980	0.1171	0.2041	0.2553	75.8%	1.4280	93.5%	96.4%	0.0373	182.0000
2	14:28:48	12.0700	15.3100	8.5230	22.8000	74.1%	0.6176	0.1140	0.2646	0.2058	77.5%	1.5280	97.3%	98.9%	0.0344	190.5000
3	14:29:02	12.5600	15.4100	8.5080	23.1800	74.0%	0.5524	0.1203	0.2401	0.2603	78.6%	1.5960	98.6%	100.1%	0.0434	191.3000
x		12.2300	15.1600	8.3710	22.7400	73.7%	0.5894	0.1171	0.2362	0.2405	77.3%	1.5180	96.5%	98.5%	0.0384	188.0000
σ		0.2925	0.3516	0.2497	0.4808	0.5%	0.0335	0.0031	0.0304	0.0301	1.4%	0.0845	2.6%	1.9%	0.0046	5.1470
%RSD		2.3920	2.3190	2.9830	2.1140	0.7	5.6800	2.6810	12.8900	12.5300	1.8	5.5700	2.7	1.9	11.9700	2.7380

Run	Time	209Bi
		ppb
1	14:28:33	71.0%
2	14:28:48	72.2%
3	14:29:02	74.0%
x		72.4%
σ		1.6%
%RSD		2.2

5120223-01RE4@MF6R44@5X@Pb 1/4/2016 14:32:23

User Pre-dilution: 1.000

Run	Time	6Li	27Al	45Sc	47Ti	51V	52Cr	53Cl O	54Fe	59Co	60Ni	65Cu	66Zn	83Kr	89Y	94Mo
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:32:23	95.5%	r 939.0000	102.6%	1.8190	2.7580	1.7390	-40.3700	1644.0000	1.6050	2.5240	1.8020	4.0310	14.1900	100.4%	1.9030
2	14:32:37	96.4%	r 951.8000	104.9%	1.7340	2.7340	1.6430	-31.9200	1670.0000	1.5670	2.3640	1.8260	3.9190	10.4600	106.4%	1.8530
3	14:32:52	94.2%	r 950.7000	106.6%	1.4990	2.6980	1.6200	-23.3400	1681.0000	1.5630	2.5240	1.8840	4.1100	12.4400	105.6%	1.9490
x		95.4%	r 947.1000	104.7%	1.6840	2.7300	1.6670	-31.8800	1665.0000	1.5780	2.4710	1.8380	4.0200	12.3700	104.1%	1.9020
σ		1.1%	r 7.0950	2.0%	0.1659	0.0301	0.0629	8.5130	19.1400	0.0234	0.0922	0.0420	0.0958	1.8670	3.2%	0.0483
%RSD		1.1	r 0.7491	1.9	9.8510	1.1020	3.7700	26.7100	1.1490	1.4790	3.7300	2.2840	2.3820	15.1000	3.1	2.5410

Run	Time	95Mo	96Mo	97Mo	98Mo	103Rh	106Cd	107Ag	108Cd	111Cd	115In	118Sn	159Tb	165Ho	205Tl	208Pb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:32:23	2.5290	2.6820	1.4500	3.7980	93.4%	-0.0075	0.0283	0.0043	0.0383	98.9%	0.0886	101.1%	101.4%	0.0018	r 768.6000
2	14:32:37	2.5090	2.7300	1.5250	3.8150	95.7%	0.0047	0.0248	0.0194	0.0312	101.4%	0.0834	101.0%	102.8%	0.0075	r 785.2000
3	14:32:52	2.5620	2.7450	1.5090	3.9620	96.3%	0.0049	0.0272	0.0055	0.0261	101.4%	0.0750	104.0%	105.7%	0.0075	r 764.2000
x		2.5340	2.7190	1.4950	3.8590	95.2%	0.0007	0.0268	0.0097	0.0319	100.5%	0.0824	102.0%	103.3%	0.0056	r 777.7000
σ		0.0268	0.0329	0.0397	0.0901	1.5%	0.0071	0.0018	0.0084	0.0061	1.5%	0.0069	1.7%	2.2%	0.0033	r 11.1200
%RSD		1.0590	1.2080	2.6540	2.3360	1.6	1063.0000	6.8190	86.1400	19.2100	1.4	8.3290	1.6	2.1	58.8600	r 1.4390

Run	Time	209Bi
		ppb
1	14:32:23	94.7%
2	14:32:37	98.6%
3	14:32:52	103.0%
x		98.8%
σ		4.1%
%RSD		4.2

5120223-03RE4@MF6R32@3X@V 1/4/2016 14:36:14

User Pre-dilution: 1.000

Run	Time	6Li	27Al	45Sc	47Ti	51V	52Cr	53Cl O	54Fe	59Co	60Ni	65Cu	66Zn	83Kr	89Y	94Mo
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:36:14	85.2%	394.3000	100.1%	11.8100	688.6000	101.1000	485.5000	3205.0000	14.6000	200.6000	24.8700	346.1000	60.3200	306.9%	10.2700
2	14:36:28	85.2%	419.9000	100.1%	11.6800	693.6000	101.7000	539.6000	3268.0000	14.8200	202.9000	26.4900	367.1000	84.8400	316.8%	10.3000
3	14:36:42	86.3%	423.3000	103.6%	11.2800	701.6000	103.2000	544.2000	3254.0000	14.7300	203.0000	25.8600	368.1000	85.3300	320.1%	10.3500
x		85.6%	412.5000	101.2%	11.5900	694.6000	102.0000	523.1000	3242.0000	14.7200	202.2000	25.7400	360.5000	76.8300	314.6%	10.3100
σ		0.6%	15.8700	2.0%	0.2785	6.5360	1.0560	32.6500	32.8600	0.1106	1.3680	0.8172	12.4000	14.3000	6.9%	0.0426
%RSD		0.7	3.8470	2.0	2.4030	0.9410	1.0360	6.2430	1.0130	0.7513	0.6767	3.1750	3.4410	18.6100	2.2	0.4132

Run	Time	95Mo	96Mo	97Mo	98Mo	103Rh	106Cd	107Ag	108Cd	111Cd	115In	118Sn	159Tb	165Ho	205Tl	208Pb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:36:14	8.9800	11.1600	6.0540	16.1600	83.9%	0.4998	0.0650	0.1824	0.3014	86.1%	1.0730	99.1%	101.9%	0.0283	154.3000
2	14:36:28	9.1460	11.3800	6.1030	16.3800	83.7%	0.4252	0.0612	0.1717	0.3326	88.2%	1.1040	102.6%	104.4%	0.0197	157.5000
3	14:36:42	9.5630	11.4900	5.9890	16.4100	82.9%	0.4101	0.0785	0.1851	0.3318	90.2%	1.0440	104.6%	107.1%	0.0211	160.1000
x		9.2300	11.3500	6.0490	16.3200	83.5%	0.4450	0.0682	0.1798	0.3219	88.2%	1.0740	102.1%	104.5%	0.0230	157.3000
σ		0.3007	0.1656	0.0571	0.1337	0.5%	0.0481	0.0091	0.0071	0.0178	2.0%	0.0298	2.8%	2.6%	0.0046	2.8790
%RSD		3.2580	1.4600	0.9432	0.8194	0.6	10.8000	13.3700	3.9340	5.5210	2.3	2.7710	2.7	2.5	20.0200	1.8300

Run	Time	209Bi
		ppb
1	14:36:14	82.2%
2	14:36:28	84.5%
3	14:36:42	85.2%
x		84.0%
σ		1.6%
%RSD		1.9

SEQ-CCV@CCV02 1/4/2016 14:40:08 QC Status: PASS (Initial: FAIL)

User Pre-dilution: 1.000

Run	Time	6Li	27Al	45Sc	47Ti	51V	52Cr	53Cl O	54Fe	59Co	60Ni	65Cu	66Zn	83Kr	89Y	94Mo
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:40:22	87.6%	r 54840.0000	94.7%	0.1460	516.5000	503.7000	2944.0000	r 58300.0000	493.5000	467.1000	458.3000	2323.0000	40.5000	96.8%	160.6000
2	14:40:36	87.1%	r 55220.0000	96.3%	0.0080	515.9000	502.9000	2610.0000	r 57880.0000	491.7000	472.2000	461.1000	2326.0000	40.3000	97.1%	162.5000
3	14:40:50	87.0%	r 55230.0000	96.3%	0.0617	518.7000	500.1000	3197.0000	r 58660.0000	494.7000	471.1000	464.8000	2317.0000	52.3300	97.3%	162.5000
x		87.2%	r 90.321%	95.7%	0.0719	103.407%	100.454%	2917.0000	r 97.128%	98.664%	94.027%	92.279%	92.882%	44.3800	97.1%	161.9000
σ		0.3%	r n/a	0.9%	0.0696	n/a	n/a	294.7000	r n/a	n/a	n/a	n/a	n/a	6.8870	0.2%	1.0820
%RSD		0.3	r 0.3973	1.0	96.7700	0.2829	0.3757	10.1000	r 0.6700	0.3113	0.5667	0.7149	0.2095	15.5200	0.2	0.6681

Run	Time	95Mo	96Mo	97Mo	98Mo	103Rh	106Cd	107Ag	108Cd	111Cd	115In	118Sn	159Tb	165Ho	205Tl	208Pb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:40:22	286.2000	304.4000	168.7000	434.3000	87.9%	23.4300	60.4900	16.4600	467.0000	95.7%	379.7000	100.5%	100.0%	r 507.9000	525.3000
2	14:40:36	289.9000	306.7000	170.8000	436.4000	88.8%	23.5900	60.6000	16.6700	466.9000	97.6%	385.6000	99.4%	100.8%	r 512.9000	537.9000
3	14:40:50	295.4000	311.9000	176.2000	446.0000	89.0%	24.6100	61.6700	17.2100	475.1000	97.3%	383.2000	101.6%	102.5%	r 508.9000	532.0000
x		290.5000	307.7000	171.9000	438.9000	88.5%	23.8800	93.721%	16.7800	93.932%	96.8%	382.8000	100.5%	101.1%	r 101.986%	106.352%
σ		4.6580	3.8520	3.8300	6.2360	0.6%	0.6418	n/a	0.3891	n/a	1.0%	2.9760	1.1%	1.3%	r n/a	n/a
%RSD		1.6040	1.2520	2.2280	1.4210	0.6	2.6880	1.0740	2.3190	1.0120	1.0	0.7775	1.1	1.2	r 0.5171	1.1850

Run	Time	209Bi
		ppb
1	14:40:22	92.7%
2	14:40:36	92.6%
3	14:40:50	94.5%
x		93.2%
σ		1.1%
%RSD		1.2

SEQ-CCB@CCB02 1/4/2016 14:44:16 QC Status: PASS (Initial: FAIL)

User Pre-dilution: 1.000

Run	Time	6Li	27Al	45Sc	47Ti	51V	52Cr	53Cl O	54Fe	59Co	60Ni	65Cu	66Zn	83Kr	89Y	94Mo
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:44:16	90.7%	1.6480	94.9%	0.1630	0.1012	-0.0196	-58.2200	0.0854	0.0208	0.0194	0.0567	0.0236	2.4660	95.8%	0.0565
2	14:44:31	90.4%	1.9590	96.5%	0.1396	0.0757	-0.0028	-57.7700	0.2569	0.0140	0.0303	0.0072	-0.0656	9.0890	98.1%	0.0217
3	14:44:45	90.8%	2.0570	95.6%	0.0039	-0.0387	0.0113	-39.8100	1.1240	0.0049	-0.0147	0.0092	0.0153	3.4570	98.5%	0.0436
x		90.6%	1.8880	95.7%	0.1022	0.0461	-0.0037	-51.9300	0.4888	0.0132	0.0117	0.0243	-0.0089	5.0040	97.5%	0.0406
σ		0.2%	0.2139	0.8%	0.0859	0.0745	0.0154	10.5000	0.5569	0.0080	0.0234	0.0280	0.0493	3.5720	1.4%	0.0176
%RSD		0.2	11.3300	0.9	84.1000	161.6000	419.0000	20.2200	113.9000	60.1000	200.9000	115.0000	552.4000	71.3800	1.5	43.4100

Run	Time	95Mo	96Mo	97Mo	98Mo	103Rh	106Cd	107Ag	108Cd	111Cd	115In	118Sn	159Tb	165Ho	205Tl	208Pb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:44:16	0.0655	0.0546	0.0389	0.0685	98.1%	-0.0160	0.0003	-0.0099	0.0351	99.8%	0.0656	98.9%	100.1%	0.1133	0.0176
2	14:44:31	0.0790	0.0468	0.0730	0.0696	95.7%	0.0159	-0.0022	0.0095	0.0138	101.1%	0.0714	100.7%	101.8%	0.1172	0.0217
3	14:44:45	0.0398	0.0742	0.0582	0.0758	96.4%	0.0009	0.0002	-0.0020	0.0495	101.2%	0.0507	102.9%	101.3%	0.0903	0.0229
x		0.0614	0.0585	0.0567	0.0713	96.7%	0.0003	-0.0006	-0.0008	0.0328	100.7%	0.0626	100.8%	101.0%	0.1069	0.0207
σ		0.0199	0.0141	0.0171	0.0039	1.2%	0.0160	0.0014	0.0098	0.0180	0.7%	0.0107	2.0%	0.9%	0.0146	0.0028
%RSD		32.4200	24.1200	30.1700	5.5300	1.2	6143.0000	247.0000	1216.0000	54.7100	0.7	17.0400	2.0	0.9	13.6200	13.4500

Run	Time	209Bi
		ppb
1	14:44:16	97.1%
2	14:44:31	100.0%
3	14:44:45	101.4%
x		99.5%
σ		2.2%
%RSD		2.2

BB

Mass Uncorrected ICPS

SEQ-CAL1@S01 1/4/2016 12:40:26

User Pre-dilution: 1.00

Run	Time	6Li	27Al	45Sc	47Ti	51V	52Cr	53Cl O	54Fe	59Co	60Ni	65Cu	66Zn	83Kr	89Y	94Mo
1	12:40:26	46793.4540	1900.1986	61742.2900	1670.1534	399.3421	112.6674	169.3349	8664.1267	96.6672	210.0024	300.0050	216.6693	240.0032	54221.2160	33.3334
2	12:40:40	46183.6810	1986.8838	61691.9500	1353.4341	414.0094	110.6673	158.0014	8510.6485	76.6670	176.6684	363.3406	216.6693	216.6693	54580.0200	30.0000
3	12:40:54	46203.7820	1970.2135	62410.1600	1446.7818	420.0097	125.3342	170.0016	8293.7815	66.6669	180.0018	300.0050	270.0040	200.0022	55046.1510	30.0000
x		46393.6390	1952.4319	61948.1330	1490.1231	411.1204	116.2230	165.7793	8489.5189	80.0004	188.8909	321.1168	234.4475	218.8915	54615.7960	31.1112
σ		346.3956	45.9969	400.9180	162.7472	10.6324	7.9537	6.7441	186.0745	15.2754	18.3590	36.5669	30.7928	20.0929	413.6297	1.9245
%RSD		0.7466	2.3559	0.6472	10.9217	2.5862	6.8435	4.0681	2.1918	19.0942	9.7193	11.3874	13.1342	9.1794	0.7573	6.1859

Run	Time	95Mo	96Mo	97Mo	98Mo	103Rh	106Cd	107Ag	108Cd	111Cd	115In	118Sn	159Tb	165Ho	205Tl	208Pb
1	12:40:26	30.0000	20.0000	73.3336	16.6667	26074.0050	73.3336	20.0000	36.6667	20.0000	113440.0500	46.6668	116275.5400	121178.9600	116.6674	143.3345
2	12:40:40	23.3334	13.3333	20.0000	26.6667	26495.2200	83.3337	10.0000	60.0002	10.0000	118041.4100	50.0001	118456.7600	125216.4600	110.0007	103.3339
3	12:40:54	23.3334	16.6667	26.6667	33.3334	26338.0980	80.0004	23.3334	60.0002	16.6667	116336.3100	40.0001	119898.8200	125365.1500	130.0009	110.0007
x		25.5556	16.6667	40.0001	25.5556	26302.4410	78.8892	17.7778	52.2224	15.5556	115939.2600	45.5557	118210.3700	123920.1900	118.8897	118.8897
σ		3.8490	3.3333	29.0595	8.3887	212.8594	5.0918	6.9389	13.4716	5.0918	2326.2347	5.0918	1824.1614	2375.1386	10.1836	21.4306
%RSD		15.0613	20.0000	72.6485	32.8254	0.8093	6.4544	39.0313	25.7966	32.7327	2.0064	11.1770	1.5431	1.9167	8.5656	18.0256

Run	Time	209Bi
1	12:40:26	84800.3410
2	12:40:40	86916.8560
3	12:40:54	89218.9970
x		86978.7310
σ		2209.9778
%RSD		2.5408

SEQ-CAL3@S03 1/4/2016 12:48:27

User Pre-dilution: 1.00

Run	Time	6Li	27Al	45Sc	47Ti	51V	52Cr	53Cl O	54Fe	59Co	60Ni	65Cu	66Zn	83Kr	89Y	94Mo
1	12:48:27	46579.0230	18278.3570	61842.9710	1706.8269	1780.1743	819.3703	258.6704	27371.1430	1500.1238	446.6776	1106.7340	773.3662	196.6688	54056.9080	20.0000
2	12:48:42	46257.3870	18946.3890	63601.7090	1586.8051	1804.8458	730.0293	270.6707	27003.3790	1683.4892	536.6825	1076.7304	893.3772	163.3348	53771.8920	46.6668
3	12:48:56	46632.6300	18371.8790	63970.9530	1460.1172	1715.4952	817.3701	272.0041	28410.9930	1590.1391	420.0097	1056.7281	906.7119	210.0024	55327.8540	60.0002
x		46489.6800	18532.2080	63138.5440	1584.5831	1766.8384	788.9232	267.1150	27595.1710	1591.2507	467.7900	1080.0642	857.8185	190.0020	54385.5510	42.2223
σ		202.9494	361.7264	1137.0877	123.3698	46.1440	51.0134	7.3436	730.0587	91.6878	61.1345	25.1691	73.4410	24.0375	828.4073	20.3671
%RSD		0.4365	1.9519	1.8009	7.7856	2.6117	6.4662	2.7492	2.6456	5.7620	13.0688	2.3303	8.5614	12.6512	1.5232	48.2377

Run	Time	95Mo	96Mo	97Mo	98Mo	103Rh	106Cd	107Ag	108Cd	111Cd	115In	118Sn	159Tb	165Ho	205Tl	208Pb
1	12:48:27	20.0000	30.0000	56.6668	30.0000	25910.2040	86.6671	1373.4371	60.0002	336.6729	117747.6400	46.6668	117538.2900	121925.5100	4311.0219	3097.1942
2	12:48:42	36.6667	10.0000	33.3334	26.6667	26211.0650	86.6671	1423.4448	66.6669	296.6715	119324.6700	53.3335	120611.4000	125419.2200	4424.4097	2940.4755
3	12:48:56	33.3334	20.0000	26.6667	36.6667	25709.6360	76.6670	1480.1205	66.6669	316.6722	118862.0000	60.0002	120432.4700	126149.2200	4427.7447	3363.9556
x		30.0001	20.0000	38.8890	31.1112	25943.6350	83.3337	1425.6674	64.4447	316.6722	118644.7700	53.3335	119527.4200	124497.9800	4387.7254	3133.8751
σ		8.8192	10.0000	15.7528	5.0918	252.3805	5.7736	53.3764	3.8490	20.0007	810.6467	6.6667	1724.9560	2257.5307	66.4481	214.1097
%RSD		29.3973	50.0000	40.5071	16.3664	0.9728	6.9282	3.7440	5.9726	6.3159	0.6833	12.5000	1.4431	1.8133	1.5144	6.8321

Run	Time	209Bi
1	12:48:27	84881.0890
2	12:48:42	87172.6210
3	12:48:56	86856.2810
x		86303.3310
σ		1241.8113
%RSD		1.4389

SEQ-CAL4@S04 1/4/2016 12:52:18

User Pre-dilution: 1.00

Run	Time	6Li	27Al	45Sc	47Ti	51V	52Cr	53Cl O	54Fe	59Co	60Ni	65Cu	66Zn	83Kr	89Y	94Mo
1	12:52:18	46528.7670	277381.4700	62141.6640	1680.1552	3023.8361	1459.4505	366.6741	45811.8060	3077.1874	730.0293	1923.5368	1240.0846	203.3356	53513.7090	30.0000
2	12:52:32	45915.6620	288320.7200	62796.1380	1516.7932	3103.8631	1390.1063	356.6737	46810.2060	3000.4951	800.0352	1873.5264	1320.0958	176.6684	55404.9880	40.0001
3	12:52:46	46461.7590	288716.3100	63175.4190	1450.1156	3021.8355	1468.7853	337.3396	47996.3670	3290.5954	810.0361	1786.8423	1350.1002	193.3354	55371.4510	23.3334
x		46302.0620	284806.1700	62704.4070	1549.0214	3049.8449	1439.4474	353.5624	46872.7930	3122.7593	780.0335	1861.3018	1303.4269	191.1131	54763.3830	31.1112
σ		336.3061	6433.0160	522.9468	118.3577	46.7918	42.9848	14.9127	1093.6245	150.3235	43.5927	69.1623	56.8705	13.4718	1082.3791	8.3887
%RSD		0.7263	2.2587	0.8340	7.6408	1.5342	2.9862	4.2178	2.3332	4.8138	5.5886	3.7158	4.3632	7.0491	1.9765	26.9637

Run	Time	95Mo	96Mo	97Mo	98Mo	103Rh	106Cd	107Ag	108Cd	111Cd	115In	118Sn	159Tb	165Ho	205Tl	208Pb
1	12:52:18	33.3334	16.6667	30.0000	30.0000	25930.2610	143.3345	2813.7687	76.6670	640.0225	119206.4700	46.6668	119929.2200	124043.8800	8694.1554	6242.1423
2	12:52:32	23.3334	20.0000	36.6667	30.0000	26277.9240	106.6673	2820.4374	83.3337	770.0326	118916.0400	43.3334	120131.8600	125736.9000	9057.8435	6078.6983
3	12:52:46	46.6668	13.3333	40.0001	20.0000	25870.0900	136.6677	2830.4406	66.6669	776.6998	118443.2600	56.6668	120091.3300	127497.8400	8864.3195	6265.4917
x		34.4445	16.6667	35.5556	26.6667	26026.0920	128.8898	2821.5489	75.5559	728.9183	118855.2500	48.8890	120050.8100	125759.5400	8872.1062	6195.4441
σ		11.7063	3.3333	5.0918	5.7735	220.1585	19.5318	8.3913	8.3888	77.0582	385.2194	6.9389	107.2319	1727.0914	181.9691	101.7767
%RSD		33.9860	20.0000	14.3206	21.6507	0.8459	15.1539	0.2974	11.1027	10.5716	0.3241	14.1932	0.0893	1.3733	2.0510	1.6428

Run	Time	209Bi
1	12:52:18	85052.6820
2	12:52:32	87505.7990
3	12:52:46	88098.1460
x		86885.5420
σ		1614.6985
%RSD		1.8584

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SEQ-CAL5@S05 1/4/2016 12:56:08

User Pre-dilution: 1.00

Run	Time	6Li	27Al	45Sc	47Ti	51V	52Cr	53Cl O	54Fe	59Co	60Ni	65Cu	66Zn	83Kr	89Y	94Mo
1	12:56:08	46940.8770	402337.0500	60574.4730	1753.5024	5616.4010	6807.2143	1058.7283	55012.6160	29460.9930	6032.0005	7526.4477	5474.9815	166.6682	53165.0050	4777.9219
2	12:56:22	46656.0840	416744.8200	61530.8640	1590.1391	5677.7725	6813.2188	1064.0623	57370.4560	30778.6820	6569.0392	7903.4340	5715.1292	183.3352	54435.8260	4984.6996
3	12:56:36	45319.3470	422826.2000	62635.0320	1466.7850	5687.1117	6894.6135	1051.3941	58561.3460	30430.8470	6468.9675	7880.0804	5525.0117	170.0016	55462.0010	4961.3535
x		46305.4360	413969.3600	61580.1230	1603.4755	5660.4284	6838.3489	1058.0616	56981.4730	30223.5070	6356.6691	7769.9874	5571.7075	173.3350	54354.2770	4907.9916
σ		865.7687	10522.7730	1031.1625	143.8232	38.4137	48.8190	6.3603	1806.0601	682.8747	285.5886	211.2346	126.7008	8.8193	1150.6671	113.2469
%RSD		1.8697	2.5419	1.6745	8.9695	0.6786	0.7139	0.6011	3.1696	2.2594	4.4927	2.7186	2.2740	5.0880	2.1170	2.3074

Run	Time	95Mo	96Mo	97Mo	98Mo	103Rh	106Cd	107Ag	108Cd	111Cd	115In	118Sn	159Tb	165Ho	205Tl	208Pb
1	12:56:08	8610.7427	9134.5869	5324.8924	14187.7290	26134.1770	666.6911	3477.3316	450.0111	5948.6123	117899.5900	18605.6870	117970.5000	125503.7100	86189.9850	58487.5400
2	12:56:22	9094.5468	9461.5878	5765.1608	14765.3140	25936.9470	623.3547	3730.7654	460.0116	6825.8950	120422.3400	18578.9650	121658.6300	126020.7900	88690.5300	61883.2430
3	12:56:36	9378.1681	10219.0740	5825.1990	14621.7490	25599.3260	756.6982	3827.4722	486.6797	6862.5893	121543.7800	19066.6400	122141.7100	127947.4200	90491.4820	61628.1860
x		9027.8192	9605.0828	5638.4174	14524.9310	25890.1500	682.2480	3678.5231	465.5675	6545.6988	119955.2400	18750.4310	120590.2800	126490.6400	88457.3320	60666.3230
σ		388.0398	556.3012	273.1751	300.7184	270.4794	68.0193	180.8219	18.9551	517.4175	1866.4578	274.1712	2281.6181	1287.8284	2160.2095	1891.1861
%RSD		4.2983	5.7917	4.8449	2.0704	1.0447	9.9699	4.9156	4.0714	7.9047	1.5560	1.4622	1.8920	1.0181	2.4421	3.1174

Run	Time	209Bi
1	12:56:08	85628.0450
2	12:56:22	88562.6260
3	12:56:36	90592.4800
x		88261.0500
σ		2495.9196
%RSD		2.8279

SEQ-CAL6@S06 1/4/2016 12:59:58

User Pre-dilution: 1.00

Run	Time	6Li	27Al	45Sc	47Ti	51V	52Cr	53Cl O	54Fe	59Co	60Ni	65Cu	66Zn	83Kr	89Y	94Mo
1	12:59:58	44609.1810	r1837349.0000	60087.9270	1663.4855	25688.2430	32783.0040	4188.9649	237560.5600	144011.7000	30093.0590	36613.5820	25963.6900	186.6686	53550.5920	23289.7950
2	13:00:12	45651.0000	r1886358.7000	61695.3060	1573.4695	25118.6540	32947.5970	4213.6430	246853.2800	149875.3400	30149.9130	36857.9000	26762.6690	153.3346	54097.1470	24051.7750
3	13:00:26	45419.8470	r1919365.2000	60480.5170	1360.1017	25655.4840	33217.2420	4228.3164	248706.1000	150217.5900	30544.5610	37959.0840	27578.4350	180.0018	54754.3970	24492.9500
x		45226.6760	r1881024.3000	60754.5830	1532.3522	25487.4600	32982.6140	4210.3081	244373.3200	148034.8800	30262.5110	37143.5220	26768.2640	173.3350	54134.0450	23944.8400
σ		547.1135	r41267.5250	838.0042	155.8153	319.8150	219.2270	19.8866	5972.3074	3488.3729	245.9109	716.7836	807.3869	17.6387	602.7504	608.6643
%RSD		1.2097	r2.1939	1.3793	10.1684	1.2548	0.6647	0.4723	2.4439	2.3565	0.8126	1.9298	3.0162	10.1761	1.1134	2.5419

Run	Time	95Mo	96Mo	97Mo	98Mo	103Rh	106Cd	107Ag	108Cd	111Cd	115In	118Sn	159Tb	165Ho	205Tl	208Pb
1	12:59:58	42201.0580	45744.8030	25793.2060	67439.2180	25522.4430	2857.1156	17576.9760	2043.5630	30457.6030	116255.2800	86412.0780	118696.5300	123513.3900	427099.1500	288207.2000
2	13:00:12	44240.7200	47225.6800	27150.4830	71573.9840	24770.3670	3030.5050	17874.2210	2113.5790	32170.1530	117747.6400	91693.4360	119419.2300	126139.0800	444959.2500	299207.5000
3	13:00:26	45429.8970	48803.9830	27896.0680	71708.3710	25308.5130	3043.8428	18933.0280	2103.5767	33675.5910	119142.3000	92760.8490	121489.7300	129387.5900	446827.6300	305980.7800
x		43957.2250	47258.1560	26946.5860	70240.5240	25200.4410	2977.1545	18128.0750	2086.9062	32101.1160	117715.0800	90288.7880	119868.5000	126346.6900	439628.6800	297798.4900
σ		1632.9813	1529.8484	1066.1558	2426.9327	387.5103	104.1704	712.7768	37.8680	1610.1042	1443.7845	3399.4853	1449.7843	2942.5959	10891.0260	8970.1717
%RSD		3.7149	3.2372	3.9566	3.4552	1.5377	3.4990	3.9319	1.8146	5.0157	1.2265	3.7651	1.2095	2.3290	2.4773	3.0122

Run	Time	209Bi
1	12:59:58	83360.4490
2	13:00:12	88518.8690
3	13:00:26	88495.3080
x		86791.5420
σ		2971.4375
%RSD		3.4236

SEQ-CAL7@S07 1/4/2016 13:03:46

User Pre-dilution: 1.00

Run	Time	6Li	27Al	45Sc	47Ti	51V	52Cr	53Cl O	54Fe	59Co	60Ni	65Cu	66Zn	83Kr	89Y	94Mo
1	13:03:46	44532.1380	r17367598.0000	59265.8900	1620.1444	234545.0900	302930.4600	37476.4210	r2194395.2000	1415152.1000	271552.7300	329760.9500	239004.3400	166.6682	52055.2780	225601.6400
2	13:04:00	43018.2080	r17657855.0000	58866.6420	1290.0915	236843.5500	305590.6400	37801.0940	r2271241.5000	1440731.8000	278941.4600	337946.8200	247082.7200	170.0016	52273.1890	237273.2000
3	13:04:14	43359.8250	r17597182.0000	59802.7220	1266.7549	237266.3600	307500.1000	37637.7520	r2272749.0000	1461848.3000	281134.1400	339492.8500	248736.9300	173.3350	52742.5550	238138.7300
x		43636.7230	r17540878.0000	59311.7510	1392.3303	236218.3300	305340.4000	37638.4220	r2246128.6000	1439244.0000	277209.4500	335733.5400	244941.3300	170.0016	52357.0070	233671.1900
σ		794.0409	r153101.0200	469.7221	197.6375	1464.4073	2295.0752	162.3377	r44808.7170	23383.6060	5020.0371	5229.8594	5207.6868	3.3334	351.2218	7001.8195
%RSD		1.8197	r0.8728	0.7920	14.1947	0.6199	0.7516	0.4313	r1.9949	1.6247	1.8109	1.5577	2.1261	1.9608	0.6708	2.9964

Run	Time	95Mo	96Mo	97Mo	98Mo	103Rh	106Cd	107Ag	108Cd	111Cd	115In	118Sn	159Tb	165Ho	205Tl	208Pb
1	13:03:46	413871.2400	444836.8100	253502.5600	665140.5900	23597.2530	25973.7190	162204.2700	19454.1270	296277.1600	120250.0800	851332.5300	116177.6400	122631.5800	r4262757.5000	2980789.2000
2	13:04:00	430228.3100	463165.6400	265593.8500	695555.0700	23513.7030	26969.9470	171862.6400	20142.2890	312545.1900	124179.0400	897304.1600	119003.8400	124638.6000	r4268761.4000	3166191.2000
3	13:04:14	440821.4700	472908.5100	269080.8400	704693.5200	24165.4090	27675.3950	172117.4000	20265.8970	315370.2800	124898.8000	905551.5900	119196.3400	124530.4600	r4303346.3000	3208280.2000
x		428307.0100	460303.6500	262725.7500	688463.0600	23758.7880	26873.0200	168728.1000	19954.1040	308064.2100	123109.3000	884729.4300	118125.9400	123933.5400	r4278288.4000	3118420.2000
σ		13577.4530	14253.0140	8175.5850	20708.2390	354.6130	854.9690	5651.2427	437.3821	10305.1500	2502.1772	29215.0560	1690.0225	1128.8332	r21907.4270	121035.4700
%RSD		3.1700	3.0964	3.1118	3.0079	1.4926	3.1815	3.3493	2.1919	3.3451	2.0325	3.3021	1.4307	0.9108	r0.5121	3.8813

Run	Time	209Bi
1	13:03:46	84531.1850
2	13:04:00	85399.2410
3	13:04:14	87388.0070
x		85772.8110
σ		1464.5902
%RSD		1.7075

SEQ-CAL8@S08 1/4/2016 13:07:33

User Pre-dilution: 1.00

Run	Time	6Li	27Al	45Sc	47Ti	51V	52Cr	53Cl O	54Fe	59Co	60Ni	65Cu	66Zn	83Kr	89Y	94Mo
1	13:07:33	41675.3070	τ 33631884.0000	56065.6870	1676.8213	κ 469375.6300	κ 604337.8000	74285.6080	τ 4207290.9000	τ 2682745.5000	524552.5100	637162.7000	454308.3900	276.6709	50000.4590	444997.7400
2	13:07:47	42371.8490	τ 34323668.0000	57870.2760	1426.7786	κ 472234.1100	κ 614325.7100	74648.5630	τ 4382360.9000	τ 2749281.6000	545315.7200	662938.1100	476305.8300	206.6690	50630.5990	468568.9100
3	13:08:01	42288.1270	τ 35415546.0000	59366.5440	1420.1109	κ 474306.6000	κ 613963.7800	74740.6480	τ 4478586.7000	TH 2804575.7000	554344.6600	672407.0300	487071.0100	203.3356	50657.4140	477962.8300
x		42111.7610	τ 34457033.0000	57767.5020	1507.9036	κ 471972.1100	κ 610875.7600	74558.2730	τ 4356079.5000	TH 2745534.3000	541404.3000	657502.6200	472561.7400	228.8918	50429.4900	463843.1600
σ		380.2913	τ 899278.3900	1652.8267	146.3250	κ 2475.9023	κ 5664.9332	240.5818	τ 137544.1000	TH 61001.4830	15276.3710	18240.0420	16699.1310	41.4114	371.7942	16983.0450
%RSD		0.9031	τ 2.6099	2.8612	9.7039	κ 0.5246	κ 0.9273	0.3227	τ 3.1575	TH 2.2218	2.8216	2.7741	3.5337	18.0921	0.7373	3.6614

Run	Time	95Mo	96Mo	97Mo	98Mo	103Rh	106Cd	107Ag	108Cd	111Cd	115In	118Sn	159Tb	165Ho	205Tl	208Pb
1	13:07:33	825403.8200	884997.7000	498555.8300	1324398.3000	22748.4260	50221.6730	303971.7000	37764.9450	587517.1100	126436.5000	1705341.1000	114135.3400	120986.4200	TH 8239384.7000	TH 5540087.1000
2	13:07:47	856363.7600	923013.6500	523991.5100	1398936.2000	23436.8380	52145.7940	329066.4500	39271.3070	κ 615058.8800	132532.4100	1805127.3000	116687.4400	122185.6300	TH 8455820.1000	TH 5796831.5000
3	13:08:01	869372.5100	942974.6900	532275.9300	1427951.0000	23410.1030	54533.0730	329702.2100	39803.6140	κ 616933.0300	133039.7400	1838988.1000	118298.0500	122439.0100	TH 8546471.4000	TH 5900326.6000
x		850380.0300	916995.3500	518274.4200	1383761.9000	23198.4560	52300.1800	320913.4600	38946.6220	κ 606503.0100	130669.5500	1783152.2000	116373.6100	121870.3500	TH 8413892.1000	TH 5745748.4000
σ		22586.8360	29453.3150	17571.9970	53418.0550	389.9662	2159.8422	14675.4320	1057.4066	κ 16468.9520	3674.6927	69480.6360	2099.0242	775.9210	TH 157778.4400	TH 185472.9800
%RSD		2.6561	3.2119	3.3905	3.8604	1.6810	4.1297	4.5730	2.7150	κ 2.7154	2.8122	3.8965	1.8037	0.6367	TH 1.8752	TH 3.2280

Run	Time	209Bi
1	13:07:33	80124.8840
2	13:07:47	82963.5090
3	13:08:01	83868.4220
x		82318.9380
σ		1953.2340
%RSD		2.3728

SEQ-CAL9@S09 1/4/2016 13:11:20

User Pre-dilution: 1.00

Run	Time	6Li	27Al	45Sc	47Ti	51V	52Cr	53Cl O	54Fe	59Co	60Ni	65Cu	66Zn	83Kr	89Y	94Mo
1	13:11:20	44548.8860	7086.0940	59316.2170	1823.5162	216.6693	140.6678	69.3336	9278.0655	213.3358	136.6677	1493.4560	κ 2579471.2000	370.0075	51451.8570	123.3342
2	13:11:34	45339.4470	6915.9630	59390.0300	1453.4495	190.0020	125.3342	68.0003	8490.6298	263.3372	186.6686	1543.4643	κ 2688369.2000	293.3381	52595.0380	130.0009
3	13:11:49	44230.6720	7389.6688	60839.5680	1493.4560	199.3355	128.0009	66.6669	8921.0417	280.0043	203.3356	1680.1552	τ 2506129.7000	270.0040	52578.2740	170.0016
x		44706.3350	7130.5753	59848.6050	1590.1406	202.0023	131.3343	68.0003	8896.5790	252.2258	175.5573	1572.3585	TH 2591323.4000	311.1165	52208.3900	141.1122
σ		570.9101	239.9651	858.9923	203.0967	13.5322	8.1923	1.3333	394.2874	34.6954	34.6951	96.6453	TH 91696.0270	52.3186	655.2301	25.2400
%RSD		1.2770	3.3653	1.4353	12.7722	6.6990	6.2377	1.9608	4.4319	13.7557	19.7628	6.1465	TH 3.5386	16.8164	1.2550	17.8865

Run	Time	95Mo	96Mo	97Mo	98Mo	103Rh	106Cd	107Ag	108Cd	111Cd	115In	118Sn	159Tb	165Ho	205Tl	208Pb
1	13:11:20	153.3346	176.6684	90.0004	246.6700	25017.7100	90.0004	50.0001	53.3335	50.0001	113777.5700	336.6729	115836.6600	120375.0500	1373.4371	683.3590
2	13:11:34	186.6686	150.0012	116.6674	243.3366	24225.5690	106.6673	66.6669	36.6667	46.6668	115573.3400	306.6718	119473.2700	124990.0400	1263.4211	700.0270
3	13:11:49	150.0012	226.6695	100.0006	290.0046	24990.9700	73.3336	80.0004	40.0001	80.0004	117636.2100	333.3394	120138.6200	126379.0400	1216.7481	646.6897
x		163.3348	184.4464	102.2228	260.0037	24744.7490	90.0005	65.5558	43.3334	58.8891	115662.3700	325.5614	118482.8500	123914.7100	1284.5354	676.6919
σ		20.2763	38.9214	13.4717	26.0349	449.8224	16.6668	15.0309	8.8192	18.3587	1930.8636	16.4435	2315.6896	3143.1248	80.4501	27.2865
%RSD		12.4139	21.1018	13.1787	10.0133	1.8178	18.5186	22.9285	20.3520	31.1750	1.6694	5.0508	1.9545	2.5365	6.2630	4.0323

Run	Time	209Bi
1	13:11:20	86227.0000
2	13:11:34	87182.7170
3	13:11:49	89235.8280
x		87548.5150
σ		1537.4060
%RSD		1.7561

SEQ-CAL4@S10 1/4/2016 13:15:07

User Pre-dilution: 1.00

Run	Time	6Li	27Al	45Sc	47Ti	51V	52Cr	53Cl O	54Fe	59Co	60Ni	65Cu	66Zn	83Kr	89Y	94Mo
1	13:15:07	39974.3610	τ 152095640.0000	53654.5350	1723.4967	126.6676	340.0064	70.0003	τ 19550167.0000	1813.5142	1993.5519	1196.7454	856.7070	396.6753	46599.1260	153.3346
2	13:15:21	39375.0880	τ 158622560.0000	55539.1360	1550.1321	132.0010	314.6721	66.0002	τ 20413384.0000	1770.1723	2023.5585	1213.4143	743.3637	376.6745	48361.6290	190.0020
3	13:15:36	39910.7490	τ 162729180.0000	55827.5610	1330.0973	119.3341	312.0054	78.0003	τ 20790241.0000	1876.8604	1990.2178	1320.0958	790.0343	470.0122	49728.9760	163.3348
x		39753.3990	τ 157815790.0000	55007.0780	1534.5754	126.0009	322.2279	71.3336	τ 20251264.0000	1820.1823	2002.4427	1243.4185	796.7017	414.4540	48229.9100	168.8905
σ		329.1678	τ 5362480.6000	1180.1802	197.1606	6.3597	15.4542	6.1101	τ 635734.3700	53.6557	18.3626	66.9255	56.9650	49.1431	1569.0769	18.9545
%RSD		0.8280	τ 3.3979	2.1455	12.8479	5.0473	4.7960	8.5656	τ 3.1392	2.9478	0.9170	5.3824	7.1501	11.8573	3.2533	11.2230

Run	Time	95Mo	96Mo	97Mo	98Mo	103Rh	106Cd	107Ag	108Cd	111Cd	115In	118Sn	159Tb	165Ho	205Tl	208Pb
1	13:15:07	236.6698	283.3378	193.3354	276.6709	21365.0760	56.6668	40.0001	73.3336	30.0000	99882.3760	126.6676	105309.7800	109940.7900	480.0127	663.3575
2	13:15:21	266.6706	266.6706	183.3352	316.6722	21779.3910	73.3336	43.3334	80.0004	60.0002	102501.2900	126.6676	108254.0600	114520.1400	506.6808	573.3514
3	13:15:36	260.0037	266.6706	210.0024	273.3374	21441.9230	73.3336	40.0001	26.6667	60.0002	105242.3400	156.6680	110591.9500	116366.7000	533.3490	610.0205
x		254.4480	272.2263	195.5577	288.8935	21528.7970	67.7780	41.1112	60.0002	50.0001	102542.0000	136.6677	108051.9300	113609.2100	506.6808	615.5765
σ		15.7532	9.6228	13.4718	24.1147	220.3960	9.6226	1.9245	29.0595	17.3206	2680.2131	17.3208	2646.8795	3308.3862	26.6682	45.2596
%RSD		6.1911	3.5349	6.8889	8.3473	1.0237	14.1972	4.6812	48.4323	34.6411	2.6138	12.6736	2.4496	2.9121	5.2633	7.3524

Run	Time	209Bi
1	13:15:07	69968.2230
2	13:15:21	71768.8450
3	13:15:36	73966.3540
x		71901.1410
σ		2002.3457
%RSD		2.7849

SEQ-ICV1@ICV01 1/4/2016 13:18:59 QC Status: PASS (Initial: FAIL)

User Pre-dilution: 1.00

Run	Time	6Li	27Al	45Sc	47Ti	51V	52Cr	53Cl O	54Fe	59Co	60Ni	65Cu	66Zn	83Kr	89Y	94Mo
1	13:19:13	45895.5600	826737.2000	62259.1300	1686.8231	54742.9960	69178.2120	8609.4081	205005.7300	301156.9800	61765.7820	75149.3300	106989.2200	143.3345	52849.8420	46.6668
2	13:19:28	45714.6520	835813.5000	62819.6330	1583.4712	55135.3560	69182.2420	8637.4347	210535.6700	310345.0400	63041.1580	75488.7910	109670.8900	116.6674	53379.5910	60.0002
3	13:19:42	45741.4530	852388.2500	61920.1600	1303.4268	54997.1900	69864.7650	8694.1554	212368.5500	311382.9700	62514.2050	76530.7830	108719.5700	140.0011	54573.3130	46.6668
x		45783.8890	838312.9800	62332.9740	1524.5737	54958.5140	69408.4060	8646.9994	209303.6500	307628.3300	62440.3820	75722.9680	108459.8900	133.3343	53600.9150	51.1113
σ		97.6345	13006.9060	454.2604	198.3681	199.0190	395.2236	43.1757	3833.1487	5628.3328	640.8851	719.8833	1359.5641	14.5299	882.7948	7.6980
%RSD		0.2133	1.5516	0.7288	13.0114	0.3621	0.5694	0.4993	1.8314	1.8296	1.0264	0.9507	1.2535	10.8973	1.6470	15.0614

Run	Time	95Mo	96Mo	97Mo	98Mo	103Rh	106Cd	107Ag	108Cd	111Cd	115In	118Sn	159Tb	165Ho	205Tl	208Pb
1	13:19:13	46.6668	66.6669	46.6668	66.6669	26067.3190	5868.5603	284554.8000	3964.1975	64202.5770	114587.6500	86.6671	114732.7900	120266.9700	1818779.7000	1206164.5000
2	13:19:28	70.0003	56.6668	43.3334	63.3336	25833.3190	5901.9152	288578.7100	4234.3192	65901.3350	118510.8000	100.0006	118071.8100	124006.7100	1829983.2000	1232500.9000
3	13:19:42	50.0001	90.0004	56.6668	50.0001	26338.0980	5808.5217	287667.1600	3924.1801	65901.3350	118291.3000	86.6671	119767.1000	125750.4200	1873142.3000	1259720.7000
x		55.5557	71.1114	48.8890	60.0002	26079.5790	5859.6657	286933.5600	4040.8989	65335.0820	117129.9100	91.1116	117523.9000	123341.3600	1840635.1000	1232795.4000
σ		12.6199	17.1055	6.9389	8.8192	252.6125	47.3278	2109.8774	168.6977	980.7781	2204.4020	7.6981	2561.4865	2801.6189	28704.0270	26779.2800
%RSD		22.7157	24.0545	14.1932	14.6987	0.9686	0.8077	0.7353	4.1748	1.5012	1.8820	8.4491	2.1795	2.2714	1.5595	2.1722

Run	Time	209Bi
1	13:19:13	83498.3730
2	13:19:28	85564.1140
3	13:19:42	87105.3140
x		85389.2670
σ		1809.8163
%RSD		2.1195

SEQ-ICB@ICB01 1/4/2016 13:23:04 QC Status: PASS (Initial: PASS)

User Pre-dilution: 1.00

Run	Time	6Li	27Al	45Sc	47Ti	51V	52Cr	53Cl O	54Fe	59Co	60Ni	65Cu	66Zn	83Kr	89Y	94Mo
1	13:23:04	44006.2530	2350.3038	59131.6870	1663.4855	286.6712	100.6672	116.0007	7890.0891	50.0002	150.0012	303.3384	213.3358	123.3342	53037.5980	43.3334
2	13:23:19	44585.7330	2456.9986	60185.2340	1396.7740	328.6726	98.6672	138.0011	8320.4726	80.0004	96.6672	310.0053	216.6693	163.3348	54294.9880	36.6667
3	13:23:33	44880.5120	2537.0206	60681.8520	1453.4495	319.3389	91.3338	131.3343	7866.7356	83.3337	156.6680	293.3381	223.3361	96.6672	53969.7260	46.6668
x		44490.8330	2448.1077	59999.5910	1504.5697	311.5609	96.8894	128.4454	8025.7658	74.4448	134.4455	302.2273	217.7804	127.7787	53767.4370	42.2223
σ		444.7882	93.6754	791.5809	140.5123	22.0545	4.9141	11.2811	255.4906	12.6199	32.8863	8.3890	5.0919	33.5553	652.6469	5.0918
%RSD		0.9997	3.8264	1.3193	9.3390	7.0787	5.0719	8.7828	3.1834	16.9520	24.4607	2.7757	2.3381	26.2605	1.2138	12.0594

Run	Time	95Mo	96Mo	97Mo	98Mo	103Rh	106Cd	107Ag	108Cd	111Cd	115In	118Sn	159Tb	165Ho	205Tl	208Pb
1	13:23:04	33.3334	33.3334	43.3334	56.6668	24619.9590	73.3336	60.0002	53.3335	26.6667	115029.8400	36.6667	116363.3200	123212.6900	193.3354	170.0016
2	13:23:19	30.0000	26.6667	56.6668	43.3334	25168.1240	93.3338	43.3334	50.0001	6.6667	117595.6900	60.0002	116981.1700	124827.8300	243.3366	180.0018
3	13:23:33	46.6668	40.0001	66.6669	33.3334	25435.5330	96.6672	66.6669	73.3336	10.0000	117855.6900	70.0003	119905.5700	124861.6200	243.3366	193.3354
x		36.6667	33.3334	55.5557	44.4446	25074.5390	87.7782	56.6668	58.8891	14.4445	116827.0800	55.5557	117750.0200	124300.7200	226.6695	181.1129
σ		8.8192	6.6667	11.7064	11.7063	415.7630	12.6199	12.0186	12.6199	10.7152	1561.8694	17.1054	1892.1507	942.4105	28.8682	11.7065
%RSD		24.0523	20.0000	21.0714	26.3392	1.6581	14.3770	21.2092	21.4299	74.1820	1.3369	30.7897	1.6069	0.7582	12.7358	6.4637

Run	Time	209Bi
1	13:23:04	84669.1260
2	13:23:19	87330.7950
3	13:23:33	89626.3080
x		87208.7430
σ		2480.8434
%RSD		2.8447

SEQ-IFA@ICSA01 1/4/2016 13:26:55 QC Status: PASS (Initial: PASS)

User Pre-dilution: 1.00

Run	Time	6Li	27Al	45Sc	47Ti	51V	52Cr	53Cl O	54Fe	59Co	60Ni	65Cu	66Zn	83Kr	89Y	94Mo
1	13:26:55	38718.9450	↓122319560.0000	55787.3150	324548.3100	242.0032	12160.7950	1551.4657	↓16242019.0000	4047.5675	4317.6918	5855.2183	5861.8893	423.3432	48398.4910	873479.6100
2	13:27:10	39278.0020	↓129339690.0000	56813.6420	339243.8100	265.3372	12217.5380	1512.7925	↓16989013.0000	4027.5586	4381.0554	6258.8204	6195.4437	376.6745	49678.7020	926407.5500
3	13:27:26	40423.0050	↓132322040.0000	57544.8860	351444.4100	240.6699	12319.6750	1552.1325	↓17353593.0000	4137.6080	4517.7890	5968.6254	6198.7793	430.0102	51679.8110	965368.9400
x		39473.3170	↓127993770.0000	56715.2810	338412.1700	249.3368	12232.6690	1538.7969	↓16861542.0000	4070.9114	4405.5120	6027.5547	6085.3708	410.0093	49919.0010	921752.0300
σ		868.6576	↓5135272.4000	882.9044	13467.3200	13.8728	80.5138	22.5729	↓566644.1600	58.6210	102.2659	208.1542	193.5478	29.0606	1653.8058	46121.2310
%RSD		2.2006	↓4.0121	1.5567	3.9796	5.5639	0.6582	1.4637	↓3.3606	1.4400	2.3213	3.4534	3.1805	7.0878	3.3130	5.0036

Run	Time	95Mo	96Mo	97Mo	98Mo	103Rh	106Cd	107Ag	108Cd	111Cd	115In	118Sn	159Tb	165Ho	205Tl	208Pb
1	13:26:55	1617141.8000	1748728.8000	978301.3300	2658704.3000	22534.5610	63.3336	76.6670	1866.8583	2580.3662	104800.6100	383.3414	107933.6200	114148.8400	700.0270	22076.7740
2	13:27:10	1723794.5000	1848276.3000	1048031.3000	↓2828534.9000	21365.0760	100.0006	66.6669	2056.8993	2637.0491	108456.4500	363.3406	113335.4300	118916.0400	843.3725	23370.0000
3	13:27:26	1795456.6000	1933699.3000	1065467.5000	↓2932368.8000	22808.5770	76.6670	76.6670	1973.5475	2770.4221	109630.4100	403.3423	115124.3600	119577.9700	783.3671	23550.4650
x		1712131.0000	1843568.1000	1030600.0000	↓2806536.0000	22236.0720	80.0004	73.3336	1965.7684	2662.6124	107629.1600	383.3414	112131.1400	117547.6200	775.5888	22999.0800
σ		89727.7670	92575.1140	46123.4380	↓138157.1900	766.6458	18.5594	5.7735	95.2590	97.5727	2518.9364	20.0008	3743.5870	2961.9719	71.9886	803.8209
%RSD		5.2407	5.0215	4.4754	↓4.9225	3.4478	23.1991	7.8730	4.8459	3.6645	2.3404	5.2175	3.3386	2.5198	9.2818	3.4950

Run	Time	209Bi
1	13:26:55	75549.2910
2	13:27:10	78440.2880
3	13:27:26	80417.4500
x		78135.6760
σ		2448.3331
%RSD		3.1334

SEQ-IFB@ICSAB01 1/4/2016 13:30:47 QC Status: PASS (Initial: PASS)

User Pre-dilution: 1.00

Run	Time	6Li	27Al	45Sc	47Ti	51V	52Cr	53Cl O	54Fe	59Co	60Ni	65Cu	66Zn	83Kr	89Y	94Mo
1	13:30:47	39137.3980	r127355250.0000	58383.5420	333738.9000	9555.0188	24438.1360	3124.5369	r16639800.0000	54566.6070	14498.2180	17864.2020	14524.9280	380.0079	51260.7820	909545.6700
2	13:31:01	39766.7870	r131240100.0000	58490.8950	346662.6300	9741.8836	24345.8890	3077.1874	r17328484.0000	57601.9130	14999.0300	18879.5840	14875.4940	490.0132	51646.2880	955507.5400
3	13:31:15	40238.8570	r134196700.0000	59826.2090	354135.8900	9672.4762	24570.4930	3063.8495	r17532713.0000	58517.7340	14735.2660	18565.6050	15119.2290	356.6737	53319.2380	985448.2700
x		39714.3470	r130930690.0000	58900.2150	344845.8100	9656.4595	24451.5060	3088.5246	r17100332.0000	56895.4180	14744.1710	18436.4630	14839.8830	408.8983	52075.4360	950167.1600
σ		552.5991	r3431203.8000	803.7285	10319.1510	94.4564	112.8968	31.8926	r447121.7100	2068.1399	250.5245	519.8638	298.7466	71.2099	1094.2742	38232.0670
%RSD		1.3914	r2.6206	1.3646	2.9924	0.9782	0.4617	1.0326	r2.6147	3.6350	1.6991	2.8198	2.0131	17.4151	2.1013	4.0237

Run	Time	95Mo	96Mo	97Mo	98Mo	103Rh	106Cd	107Ag	108Cd	111Cd	115In	118Sn	159Tb	165Ho	205Tl	208Pb
1	13:30:47	1678598.1000	1819647.0000	1021977.0000	r2807927.4000	22948.9290	1023.3909	43972.7580	2677.0608	13082.7400	109056.9000	403.3423	111972.0200	119618.5000	156302.2200	128751.9900
2	13:31:01	1767908.9000	1925827.9000	1073909.6000	r2932613.9000	22865.3860	1180.0766	47101.7060	2660.3892	14661.8140	112457.9600	420.0097	116619.9100	123533.6700	168191.6000	135776.4200
3	13:31:15	1813779.3000	1965619.3000	1099055.4000	r2971030.8000	22614.7600	1173.4091	48013.1220	2800.4313	14418.0910	113446.8000	356.6737	117859.0700	124733.2100	173761.5700	139800.0500
x		1753428.8000	1903698.0000	1064980.7000	r2903857.4000	22809.6920	1125.6255	46362.5290	2712.6271	14054.2150	111653.8900	393.3419	115483.6700	122628.4600	166085.1300	134776.1600
σ		68744.0750	75460.4260	39307.3110	r85269.4740	173.9070	88.6005	2119.1796	76.4962	850.1015	2302.7605	32.8309	3103.6471	2674.8154	8918.2468	5591.5384
%RSD		3.9206	3.9639	3.6909	r2.9364	0.7624	7.8712	4.5709	2.8200	6.0487	2.0624	8.3467	2.6875	2.1812	5.3697	4.1488

Run	Time	209Bi
1	13:30:47	78483.9960
2	13:31:01	80780.6490
3	13:31:15	81570.9930
x		80278.5460
σ		1603.5796
%RSD		1.9975

SEQ-CCV@CCV01 1/4/2016 13:34:38 QC Status: FAIL (Initial: FAIL)

User Pre-dilution: 1.00

Run	Time	6Li	27Al	45Sc	47Ti	51V	52Cr	53Cl O	54Fe	59Co	60Ni	65Cu	66Zn	83Kr	89Y	94Mo
1	13:34:53	40386.1750	r79170745.0000	59088.0720	1440.1141	235423.3600	300964.0800	37098.2080	r10303372.0000	1377086.8000	261212.9500	314483.6800	1145099.2000	350.0067	51867.5420	235966.5100
2	13:35:07	41176.3750	r80910860.0000	60202.0110	1430.1125	235449.3600	304080.5900	37015.2040	r10505214.0000	1413363.2000	269300.5400	322704.3800	1179196.5000	336.6729	52672.1490	239900.8300
3	13:35:21	40945.3350	r81494945.0000	60014.1080	1356.7679	235702.4600	303355.6300	37209.9970	r10573215.0000	1423182.9000	270323.5700	325128.5000	1177242.6000	316.6722	52812.9620	243497.9200
x		40835.9620	r80525516.0000	59768.0640	1408.9981	235525.0600	302800.1000	37107.8030	r10460600.0000	1404544.3000	266945.6900	320772.1900	1167179.4000	334.4506	52450.8840	239788.4200
σ		406.2951	r1209066.8000	596.3377	45.5083	154.1799	1630.8342	97.7502	r140344.4100	24280.5210	4990.9736	5579.2523	19146.9380	16.7780	510.0716	3766.9649
%RSD		0.9949	r1.5015	0.9978	3.2298	0.0655	0.5386	0.2634	r1.3416	1.7287	1.8697	1.7393	1.6404	5.0166	0.9725	1.5710

Run	Time	95Mo	96Mo	97Mo	98Mo	103Rh	106Cd	107Ag	108Cd	111Cd	115In	118Sn	159Tb	165Ho	205Tl	208Pb
1	13:34:53	430664.9400	459110.8600	265394.8300	690683.8800	22805.2350	25495.7020	162682.7000	19627.8330	293234.1800	123023.4800	877145.2800	117578.8100	124783.9000	r4181237.5000	3037334.2000
2	13:35:07	443598.4400	475333.5400	270910.6600	707103.6400	23226.2990	26351.4700	165961.1700	19684.6220	299985.8600	124753.4900	904251.2100	120804.0200	126909.6900	r4229154.2000	3067108.7000
3	13:35:21	446435.7300	483508.1700	272352.8100	721789.8500	22718.3510	26933.1710	166008.6900	20125.5860	303630.5800	123827.6300	916280.9600	121202.6000	129908.2700	r4279650.5000	3148545.9000
x		440233.0400	472650.8600	269552.7700	706525.7900	22916.6290	26260.1140	164884.1900	19812.6800	298950.2100	123868.2000	899225.8100	119861.8100	127200.6200	r4230014.1000	3084329.6000
σ		8406.7777	12417.9220	3672.3678	15561.0350	271.6783	723.0761	1906.6898	272.4679	5275.0078	865.7154	20045.9820	1987.1549	2574.5423	r49212.1070	57571.0670
%RSD		1.9096	2.6273	1.3624	2.2025	1.1855	2.7535	1.1564	1.3752	1.7645	0.6989	2.2292	1.6579	2.0240	r1.1634	1.8666

Run	Time	209Bi
1	13:34:53	81443.1880
2	13:35:07	82798.6830
3	13:35:21	84134.1940
x		82792.0220
σ		1345.5157
%RSD		1.6252

SEQ-CCB@CCB01 1/4/2016 13:38:44 QC Status: PASS (Initial: PASS)

User Pre-dilution: 1.00

Run	Time	6Li	27Al	45Sc	47Ti	51V	52Cr	53Cl O	54Fe	59Co	60Ni	65Cu	66Zn	83Kr	89Y	94Mo
1	13:38:44	44006.2530	4134.2732	61816.1220	1656.8176	266.6706	92.6671	115.3341	8026.8755	133.3343	143.3345	290.0046	233.3363	136.6677	53614.2990	73.3336
2	13:38:58	43490.4460	4437.7496	61802.6980	1616.8104	293.3381	82.0004	114.0007	8694.1554	153.3346	183.3352	346.6733	203.3356	133.3343	54046.8490	100.0006
3	13:39:13	44016.3020	4527.7939	61148.2950	1446.7818	282.0044	96.6672	113.3340	8564.0319	96.6672	176.6684	356.6737	230.0029	166.6682	54663.8550	93.3338
x		43837.6670	4366.6056	61589.0390	1573.4699	280.6710	90.4449	114.2229	8428.3543	127.7787	167.7793	331.1172	222.2250	145.5567	54108.3340	88.8893
σ		300.7438	206.1813	381.7539	111.5238	13.3837	7.5817	1.0184	353.7258	28.7393	21.4307	35.9539	16.4433	18.3589	527.4725	13.8779
%RSD		0.6860	4.7218	0.6198	7.0878	4.7684	8.3827	0.8916	4.1969	22.4915	12.7732	10.8584	7.3994	12.6129	0.9748	15.6126

Run	Time	95Mo	96Mo	97Mo	98Mo	103Rh	106Cd	107Ag	108Cd	111Cd	115In	118Sn	159Tb	165Ho	205Tl	208Pb
1	13:38:44	173.3350	130.0009	106.6673	166.6682	25154.7540	103.3339	36.6667	56.6668	16.6667	118976.8200	110.0007	118791.0800	122763.3400	1310.0944	250.0034
2	13:38:58	203.3356	100.0006	123.3342	163.3348	25706.2930	43.3334	23.3334	33.3334	20.0000	119507.0400	173.3350	122016.7200	126446.6400	1060.0618	220.0027
3	13:39:13	176.6684	120.0008	123.3342	150.0012	25144.7260	76.6670	23.3334	36.6667	23.3334	120027.1600	180.0018	124162.1400	128498.4500	996.7213	206.6690
x		184.4463	116.6674	117.7785	160.0014	25335.2580	74.4448	27.7778	42.2223	20.0000	119503.6800	154.4458	121656.6500	125902.8100	1122.2925	225.5584
σ		16.4433	15.2754	9.6226	8.8193	321.3654	30.0619	7.6980	12.6199	3.3333	525.1774	38.6347	2703.5721	2905.9737	165.6960	22.1950
%RSD		8.9149	13.0932	8.1701	5.5120	1.2685	40.3815	27.7129	29.8891	16.6667	0.4395	25.0150	2.2223	2.3081	14.7641	9.8400

Run	Time	209Bi
1	13:38:44	88232.7750
2	13:38:58	90592.4800
3	13:39:13	90440.9830
x		89755.4130
σ		1320.8168
%RSD		1.4716

PL21004-BLK3@PBW01@MF6R32@45671@LEM 1/4/2016 13:42:36 QC Status: PASS (Initial: PASS)

User Pre-dilution: 1.00

Run	Time	6Li	27Al	45Sc	47Ti	51V	52Cr	53Cl O	54Fe	59Co	60Ni	65Cu	66Zn	83Kr	89Y	94Mo
1	13:42:36	42167.5690	4047.5675	59916.8030	1806.8462	825.3708	261.3371	337.3396	9254.7083	103.3339	530.0154	510.0143	393.3418	183.3352	52531.3380	83.3337
2	13:42:50	42294.8250	3987.5410	59675.2220	1650.1498	800.0352	246.6700	332.6728	9134.5869	93.3338	560.0172	420.0097	386.6749	203.3356	53403.0610	63.3336
3	13:43:04	42194.3600	4180.9612	60698.6300	1353.4341	820.7037	266.0039	336.6729	9354.8107	130.0009	553.3502	446.6776	386.6749	203.3356	54331.8740	70.0003
x		42218.9180	4072.0232	60096.8850	1603.4767	815.3699	258.0037	335.5618	9248.0353	108.8896	547.7943	458.9006	388.8972	196.6688	53422.0910	72.2225
σ		67.0883	99.0020	534.9425	230.2812	13.4837	10.0888	2.5241	110.2634	18.9544	15.7537	46.2305	3.8492	11.5473	900.4189	10.1836
%RSD		0.1589	2.4313	0.8901	14.3614	1.6537	3.9103	0.7522	1.1923	17.4070	2.8758	10.0742	0.9898	5.8714	1.6855	14.1003

Run	Time	95Mo	96Mo	97Mo	98Mo	103Rh	106Cd	107Ag	108Cd	111Cd	115In	118Sn	159Tb	165Ho	205Tl	208Pb
1	13:42:36	96.6672	63.3336	176.6684	76.6670	24523.0310	60.0002	23.3334	36.6667	30.0000	116228.2800	236.6698	120841.1700	127409.9500	420.0097	320.0056
2	13:42:50	63.3336	40.0001	243.3366	73.3336	24212.2000	76.6670	23.3334	33.3334	26.6667	118088.6900	206.6690	122472.7900	128461.2600	366.6741	393.3418
3	13:43:04	103.3339	30.0000	253.3369	66.6669	23750.9860	76.6670	23.3334	30.0000	23.3334	121300.5600	290.0046	124361.5100	129813.6000	323.3391	416.6762
x		87.7782	44.4446	224.4473	72.2225	24162.0720	71.1114	23.3334	33.3334	26.6667	118539.1800	244.4478	122558.4900	128561.6000	370.0076	376.6746
σ		21.4305	17.1054	41.6788	5.0918	388.4562	9.6226	0.0000	3.3333	3.3333	2565.9754	42.2088	1761.7306	1204.9615	48.4214	50.4445
%RSD		24.4144	38.4871	18.5695	7.0501	1.6077	13.5317	0.0000	10.0000	12.5000	2.1647	17.2670	1.4375	0.9373	13.0866	13.3921

Run	Time	209Bi
1	13:42:36	90555.4470
2	13:42:50	91020.0530
3	13:43:04	92228.8110
x		91268.1040
σ		863.8189
%RSD		0.9465

PL21004-BS5@LCS02 1/4/2016 13:46:25

User Pre-dilution: 1.00

Run	Time	6Li	27Al	45Sc	47Ti	51V	52Cr	53Cl O	54Fe	59Co	60Ni	65Cu	66Zn	83Kr	89Y	94Mo
1	13:46:25	44716.3720	4351.0410	59755.7480	1720.1627	1107.4008	1623.4783	600.6865	9087.8735	3237.2429	1040.0595	680.0254	440.0107	220.0027	52494.4590	73.3336
2	13:46:40	44575.6840	4514.4540	60708.6970	1540.1304	1038.7260	1646.8158	609.3538	9408.1991	3237.2429	1026.7246	663.3575	490.0132	206.6690	52839.7840	80.0004
3	13:46:54	43842.1300	4707.8854	61326.1540	1520.1271	1093.3991	1718.8291	662.6908	9164.6171	3403.9705	910.0456	663.3575	450.0111	273.3374	53761.8330	53.3335
x		44378.0620	4524.4601	60596.8660	1593.4734	1079.8420	1663.0411	624.2437	9220.2299	3292.8188	992.2766	668.9135	460.0117	233.3364	53032.0250	68.8892
σ		469.4315	178.6325	791.1532	110.1711	36.2892	49.7030	33.5770	167.2475	96.2602	71.5256	9.6232	26.4589	35.2776	655.1923	13.8779
%RSD		1.0578	3.9482	1.3056	6.9139	3.3606	2.9887	5.3788	1.8139	2.9233	7.2082	1.4386	5.7518	15.1188	1.2355	20.1452

Run	Time	95Mo	96Mo	97Mo	98Mo	103Rh	106Cd	107Ag	108Cd	111Cd	115In	118Sn	159Tb	165Ho	205Tl	208Pb
1	13:46:25	63.3336	40.0001	103.3339	53.3335	24025.0380	123.3342	13.3333	80.0004	736.6965	114837.4300	263.3372	118504.0400	124898.8000	9621.7558	216.6693
2	13:46:40	93.3338	36.6667	110.0007	36.6667	24884.0100	140.0011	30.0000	90.0004	806.7025	116944.0300	283.3378	121820.7800	128846.6600	9862.0130	226.6695
3	13:46:54	93.3338	33.3334	130.0009	36.6667	24299.0980	130.0009	43.3334	86.6671	806.7025	116596.2800	333.3394	123263.3700	130618.3400	10636.2180	263.3372
x		83.3337	36.6667	114.4452	42.2223	24402.7150	131.1121	28.8889	85.5560	783.3671	116125.9200	293.3381	121196.0600	128121.2600	10039.9960	235.5586
σ		17.3207	3.3333	13.8780	9.6226	438.7607	8.3888	15.0309	5.0918	40.4179	1129.3234	36.0567	2440.3901	2927.9565	530.1340	24.5710
%RSD		20.7847	9.0909	12.1263	22.7902	1.7980	6.3982	52.0299	5.9514	5.1595	0.9725	12.2919	2.0136	2.2853	5.2802	10.4310

Run	Time	209Bi
1	13:46:25	88209.2150
2	13:46:40	90185.1270
3	13:46:54	91875.2580
x		90089.8660
σ		1834.8770
%RSD		2.0367

SEQ-IBL1@ZZZZZZ 1/4/2016 13:50:15

User Pre-dilution: 1.00

Run	Time	6Li	27Al	45Sc	47Ti	51V	52Cr	53Cl O	54Fe	59Co	60Ni	65Cu	66Zn	83Kr	89Y	94Mo
1	13:50:15	44944.1580	72531.5290	61527.5080	1600.1408	1175.4093	270.0040	461.3450	9551.6819	120.0008	903.3782	500.0138	363.3406	250.0034	52051.9250	40.0001
2	13:50:29	45084.8520	74779.6330	62017.4870	1663.4855	1240.7513	294.0048	475.3458	9868.6869	73.3336	1010.0561	550.0166	430.0102	300.0050	52259.7790	66.6669
3	13:50:43	46193.7320	75912.2960	61420.1180	1510.1254	1173.4091	272.0041	474.0124	9905.3935	60.0002	1036.7258	543.3496	373.3410	236.6698	53282.3550	66.6669
x		45407.5810	74407.8190	61655.0380	1591.2506	1196.5232	278.6709	470.2344	9775.2541	84.4449	983.3867	531.1267	388.8973	262.2260	52531.3530	57.7780
σ		684.4514	1720.7791	318.4496	77.0656	38.3157	13.3171	7.7272	194.4871	31.5058	70.5609	27.1500	35.9542	33.3898	658.6383	15.3961
%RSD		1.5074	2.3126	0.5165	4.8431	3.2023	4.7788	1.6433	1.9896	37.3093	7.1753	5.1118	9.2452	12.7332	1.2538	26.6470

Run	Time	95Mo	96Mo	97Mo	98Mo	103Rh	106Cd	107Ag	108Cd	111Cd	115In	118Sn	159Tb	165Ho	205Tl	208Pb
1	13:50:15	36.6667	46.6668	73.3336	43.3334	24803.7910	60.0002	30.0000	76.6670	13.3333	113460.3000	186.6686	116906.8900	123699.2300	120.0008	193.3354
2	13:50:29	56.6668	26.6667	80.0004	36.6667	24061.8010	70.0003	20.0000	33.3334	16.6667	113831.5700	243.3366	120932.3700	125662.5500	163.3348	226.6695
3	13:50:43	46.6668	20.0000	96.6672	50.0001	24673.4370	76.6670	26.6667	40.0001	43.3334	116312.6800	233.3363	119915.7100	127129.4000	136.6677	233.3363
x		46.6668	31.1112	83.3337	43.3334	24513.0100	68.8892	25.5556	50.0002	24.4445	114534.8500	221.1138	119251.6600	125497.0600	140.0011	217.7804
σ		10.0001	13.8778	12.0186	6.6667	396.1566	8.3888	5.0918	23.3335	16.4430	1550.7948	30.2466	2093.2845	1721.0623	21.8585	21.4308
%RSD		21.4286	44.6072	14.4223	15.3847	1.6161	12.1772	19.9243	46.6668	67.2667	1.3540	13.6792	1.7554	1.3714	15.6131	9.8406

Run	Time	209Bi
1	13:50:15	86146.2400
2	13:50:29	90040.3690
3	13:50:43	89740.7620
x		88642.4570
σ		2165.9716
%RSD		2.4446

5120223-01RE2@MF6R32 1/4/2016 13:54:03

User Pre-dilution: 1.00

Run	Time	6Li	27Al	45Sc	47Ti	51V	52Cr	53Cl O	54Fe	59Co	60Ni	65Cu	66Zn	83Kr	89Y	94Mo
1	13:54:03	31190.0800	850777.3200	60027.5300	34786.4280	u874465.2800	168455.7600	20912.0250	r1848687.0000	146033.5700	384555.0800	23116.0190	16915.7230	1793.5102	367893.0200	82717.9530
2	13:54:18	32243.7470	906550.8700	60839.5680	35435.5950	u878957.7600	169354.9000	21197.3510	r1957990.0000	152813.6600	404980.6300	23630.6730	17944.3590	2430.3248	387377.8800	87801.9670
3	13:54:32	31343.9410	933681.6100	62235.6370	37828.5420	u889341.1100	169624.5300	21380.4460	r2022049.7000	157326.3200	417697.0600	25174.8090	17974.4190	2953.8131	399875.2600	91265.8320
x		31592.5890	897003.2700	61034.2450	36016.8550	u880921.3800	169145.0600	21163.2740	r1942908.9000	152057.8500	402410.9300	23973.8330	17611.5000	2392.5494	385048.7200	87261.9180
σ		569.1420	42268.7590	1116.8521	1602.1894	u7629.8405	611.9871	236.0625	r87659.7480	5684.1874	16719.7600	1071.4356	602.7481	581.0731	16117.8340	4299.4531
%RSD		1.8015	4.7122	1.8299	4.4484	u0.8661	0.3618	1.1154	r4.5118	3.7382	4.1549	4.4692	3.4225	24.2868	4.1859	4.9271

Run	Time	95Mo	96Mo	97Mo	98Mo	103Rh	106Cd	107Ag	108Cd	111Cd	115In	118Sn	159Tb	165Ho	205Tl	208Pb
1	13:54:03	73069.1420	85193.9960	44679.5250	116724.5700	17162.8520	1596.8069	620.0211	656.6904	440.0107	78534.4290	6845.9100	114239.9800	123276.8800	583.3521	1542309.4000
2	13:54:18	77919.1690	91794.4470	48589.5060	122466.0300	17253.0230	1723.4967	610.0205	703.3605	476.6792	81910.6930	7059.4065	119709.6800	127741.2200	753.3646	1641215.0000
3	13:54:32	79953.3840	93478.1410	50945.6850	126068.1000	17333.1750	1493.4560	666.6911	720.0285	406.6758	82512.7680	7279.5801	121435.6800	130919.2900	706.6941	1679775.4000
x		76980.5650	90155.5280	48071.5720	121752.9000	17249.6830	1604.5865	632.2442	693.3598	441.1219	80985.9630	7061.6322	118461.7800	127312.4600	681.1369	1621099.9000
σ		3536.7966	4378.5051	3165.0247	4712.4098	85.2104	115.2175	30.2480	32.8320	35.0149	2144.3273	216.8436	3756.6596	3839.1998	87.8404	70906.1780
%RSD		4.5944	4.8566	6.5840	3.8705	0.4940	7.1805	4.7842	4.7352	7.9377	2.6478	3.0707	3.1712	3.0156	12.8961	4.3740

Run	Time	209Bi
1	13:54:03	264053.2600
2	13:54:18	281395.3800
3	13:54:32	284417.2700
x		276621.9700
σ		10989.1660
%RSD		3.9726

5120223-02RE2@MF6R42 1/4/2016 13:57:53

User Pre-dilution: 1.00

Run	Time	6Li	27Al	45Sc	47Ti	51V	52Cr	53Cl O	54Fe	59Co	60Ni	65Cu	66Zn	83Kr	89Y	94Mo
1	13:57:53	44773.3180	49886.5020	64944.4860	2420.3221	815.3699	441.3441	269.3373	281690.9900	11266.9780	2923.8034	2573.6976	8300.4543	710.0277	54194.3900	410.0093
2	13:58:07	44455.0960	52115.6220	64820.2710	2156.9225	862.0409	420.6764	266.0039	290119.9500	11610.7430	2697.0667	2523.6836	8557.3590	723.3621	54536.4260	396.6753
3	13:58:21	43242.6020	51911.1230	63551.3590	1923.5368	816.7034	417.3429	252.6702	294118.7500	11737.5720	2973.8197	2443.6617	8757.5495	766.6990	54194.3900	436.6772
x		44157.0050	51304.4160	64438.7050	2166.9272	831.3714	426.4545	262.6705	288643.2300	11538.4310	2864.8966	2513.6810	8538.4543	733.3629	54308.4020	414.4539
σ		807.7232	1232.1991	770.9701	248.5437	26.5689	13.0020	8.8194	6344.1175	243.4885	147.4807	65.5925	229.1333	29.6297	197.4748	20.3679
%RSD		1.8292	2.4017	1.1964	11.4699	3.1958	3.0489	3.3576	2.1979	2.1102	5.1479	2.6094	2.6835	4.0403	0.3636	4.9144

Run	Time	95Mo	96Mo	97Mo	98Mo	103Rh	106Cd	107Ag	108Cd	111Cd	115In	118Sn	159Tb	165Ho	205Tl	208Pb
1	13:57:53	373.3410	410.0093	393.3418	513.3478	24797.1070	93.3338	56.6668	56.6668	126.6676	113163.3000	256.6703	116771.8400	124601.4200	190.0020	649136.9200
2	13:58:07	403.3423	396.6753	440.0107	506.6808	24282.3870	56.6668	50.0001	53.3335	103.3339	114017.2100	276.6709	120868.2000	127322.0700	150.0012	671349.6800
3	13:58:21	306.6718	516.6814	446.6776	510.0143	24987.6270	86.6671	63.3336	70.0003	80.0004	116930.5300	280.0043	122216.0400	128062.3600	140.0011	688173.8300
x		361.1184	441.1220	426.6767	510.0143	24689.0400	78.8892	56.6668	60.0002	103.3339	114703.6800	271.1152	119952.0200	126661.9500	160.0014	669553.4800
σ		49.4807	65.7751	29.0607	3.3335	364.8285	19.5317	6.6667	8.8192	23.3336	1975.2043	12.6202	2835.3728	1822.4511	26.4580	19580.3430
%RSD		13.7021	14.9109	6.8109	0.6536	1.4777	24.7584	11.7647	14.6987	22.5808	1.7220	4.6549	2.3638	1.4388	16.5361	2.9244

Run	Time	209Bi
1	13:57:53	86607.2560
2	13:58:07	88263.0670
3	13:58:21	89006.9340
x		87959.0850
σ		1228.3798
%RSD		1.3965

PL21004-MS2@MF6R425 1/4/2016 14:01:42 QC Status: PASS (Initial: PASS)

User Pre-dilution: 1.00

Run	Time	6Li	27Al	45Sc	47Ti	51V	52Cr	53Cl O	54Fe	59Co	60Ni	65Cu	66Zn	83Kr	89Y	94Mo
1	14:01:42	43718.2020	r2934366.5000	60614.7400	2206.9345	256489.9600	132228.0200	16528.3450	286662.8400	1526614.9000	295354.5300	177159.5500	252635.5900	566.6843	51344.5860	500.0138
2	14:01:56	43142.1260	r3027338.8000	62040.9800	1960.2113	260700.5500	134436.7300	16874.9810	301287.8700	1576111.5000	302486.7200	183653.1800	266441.4500	626.6883	51867.5420	520.0149
3	14:02:10	43778.4910	r3069608.7000	61413.4070	1823.5162	261267.8300	134745.9300	16730.7150	306825.2000	1599591.7000	307287.0800	186180.4800	268384.0200	710.0277	52427.4070	503.3473
x		43546.2730	r3010438.0000	61356.3750	1996.8873	259486.1100	133803.5600	16711.3470	298258.6400	1567439.4000	301709.4400	182331.0700	262487.0200	634.4668	51879.8450	507.7920
σ		351.2971	r69186.9990	714.8282	194.3225	2610.2045	1373.1850	174.1277	10416.9300	37253.3020	6004.1303	4653.5274	8586.7015	71.9876	541.5151	10.7158
%RSD		0.8067	r2.2982	1.1650	9.7313	1.0059	1.0263	1.0420	3.4926	2.3767	1.9900	2.5522	3.2713	11.3462	1.0438	2.1103

Run	Time	95Mo	96Mo	97Mo	98Mo	103Rh	106Cd	107Ag	108Cd	111Cd	115In	118Sn	159Tb	165Ho	205Tl	208Pb
1	14:01:42	316.6722	376.6745	223.3361	486.6797	24118.6180	2730.4100	129458.5900	2043.5630	30430.8470	110160.0900	273.3374	116312.6800	121330.9700	432855.3800	764816.6000
2	14:01:56	336.6729	386.6749	243.3366	516.6814	24372.6280	2843.7781	134720.8900	1920.2028	31895.8560	110794.3900	296.6715	116522.0000	123141.7400	455460.6100	794519.0000
3	14:02:10	350.0067	440.0107	316.6722	560.0172	23958.1950	2853.7812	135417.8000	2230.2735	33113.5320	114057.7100	330.0060	119817.7600	127112.5000	466966.1800	805083.8900
x		334.4506	401.1200	261.1150	521.1261	24149.8140	2809.3231	133199.0900	2064.6798	31813.4110	111670.7300	300.0050	117550.8100	123861.7300	451760.7300	788139.8300
σ		16.7780	34.0494	49.1422	36.8703	208.9701	68.5235	3258.0584	156.1103	1343.2412	2091.3740	28.4810	1966.0216	2957.2495	17353.7770	20877.8360
%RSD		5.0166	8.4886	18.8202	7.0751	0.8653	2.4391	2.4460	7.5610	4.2222	1.8728	9.4935	1.6725	2.3875	3.8414	2.6490

Run	Time	209Bi
1	14:01:42	83410.9080
2	14:01:56	85392.5120
3	14:02:10	86529.8570
x		85111.0930
σ		1578.4037
%RSD		1.8545

PL21004-DUP3@MF6R42D 1/4/2016 14:05:31

User Pre-dilution: 1.00

Run	Time	6Li	27Al	45Sc	47Ti	51V	52Cr	53Cl O	54Fe	59Co	60Ni	65Cu	66Zn	83Kr	89Y	94Mo
1	14:05:31	43647.8650	48586.1540	59621.5380	1936.8730	797.3683	362.6739	265.3372	264687.9900	10943.2490	2580.3662	2136.9178	7456.3900	470.0122	50560.2090	370.0075
2	14:05:45	43523.9400	47510.4920	59212.2090	1840.1862	808.7026	429.3435	266.0039	275632.8100	11256.9650	2953.8131	2333.6328	8403.8826	480.0127	50694.2850	356.6737
3	14:06:00	44411.5500	50409.3740	61893.3120	1716.8288	782.7004	416.6762	261.3371	280604.8300	10953.2610	2810.4344	2220.2711	8237.0634	483.3462	50778.0840	436.6772
x		43861.1180	48835.3400	60242.3530	1831.2960	796.2571	402.8979	264.2261	273641.8800	11051.1590	2781.5379	2230.2739	8032.4453	477.7903	50677.5260	387.7861
σ		480.6984	1465.4181	1444.3464	110.2912	13.0367	35.4061	2.5240	8143.0492	178.3041	188.3930	98.7383	505.8033	6.9393	109.9006	42.8625
%RSD		1.0960	3.0007	2.3976	6.0226	1.6372	8.7879	0.9553	2.9758	1.6134	6.7730	4.4272	6.2970	1.4524	0.2169	11.0531

Run	Time	95Mo	96Mo	97Mo	98Mo	103Rh	106Cd	107Ag	108Cd	111Cd	115In	118Sn	159Tb	165Ho	205Tl	208Pb
1	14:05:31	306.6718	353.3402	200.0022	470.0122	23326.5550	73.3336	70.0003	40.0001	93.3338	107087.0300	223.3361	113554.8100	119030.8600	603.3534	617920.1400
2	14:05:45	286.6712	366.6741	233.3363	456.6781	23349.9490	70.0003	116.6674	33.3334	80.0004	111010.3300	240.0032	115195.2500	122023.4800	503.3473	654777.3300
3	14:06:00	356.6737	366.6741	240.0032	446.6776	23396.7350	93.3338	86.6671	53.3335	90.0004	111570.4600	266.6706	114469.5000	123388.3800	403.3423	669353.5800
x		316.6722	362.2294	224.4472	457.7893	23357.7460	78.8892	91.1116	42.2223	87.7782	109889.2700	243.3366	114406.5200	121480.9000	503.3476	647350.3500
σ		36.0568	7.6983	21.4309	11.7069	35.7339	12.6199	23.6489	10.1836	6.9390	2442.9247	21.8587	822.0345	2228.8539	100.0055	26508.8620
%RSD		11.3862	2.1253	9.5483	2.5573	0.1530	15.9970	25.9560	24.1189	7.9051	2.2231	8.9829	0.7185	1.8347	19.8681	4.0950

Run	Time	209Bi
1	14:05:31	82166.3180
2	14:05:45	84655.6690
3	14:06:00	86984.1620
x		84602.0500
σ		2409.3696
%RSD		2.8479

SEQ-SRD3@MF6R42L@5X 1/4/2016 14:09:21

User Pre-dilution: 1.00

Run	Time	6Li	27Al	45Sc	47Ti	51V	52Cr	53Cl O	54Fe	59Co	60Ni	65Cu	66Zn	83Kr	89Y	94Mo
1	14:09:21	45550.4980	11440.5280	59061.2310	2043.5630	274.0041	97.3339	92.6671	59239.0490	2143.5860	710.0277	706.6941	1870.1923	203.3356	50620.5430	93.3338
2	14:09:36	45503.5970	12001.2500	59725.5500	1703.4929	271.3374	96.0005	80.6670	60608.0290	2126.9154	606.6869	633.3554	1980.2156	226.6695	51602.7080	83.3337
3	14:09:50	45081.5020	11937.8330	60863.0570	1573.4695	243.3366	104.0006	98.6672	62698.8030	2497.0095	710.0277	836.7052	1950.2092	213.3358	51944.6470	80.0004
x		45378.5330	11793.2030	59883.2800	1773.5085	262.8927	99.1117	90.6671	60848.6270	2255.8370	675.5808	725.5849	1933.5391	214.4470	51389.3000	85.5560
σ		258.3025	307.0678	911.2097	242.7419	16.9885	4.2861	9.1652	1742.3804	209.0278	59.6638	102.9827	56.8744	11.7066	687.3651	6.9390
%RSD		0.5692	2.6038	1.5216	13.6871	6.4621	4.3245	10.1087	2.8635	9.2661	8.8315	14.1931	2.9415	5.4590	1.3376	8.1104

Run	Time	95Mo	96Mo	97Mo	98Mo	103Rh	106Cd	107Ag	108Cd	111Cd	115In	118Sn	159Tb	165Ho	205Tl	208Pb
1	14:09:21	90.0004	60.0002	80.0004	100.0006	25275.0870	80.0004	30.0000	40.0001	40.0001	107815.5600	206.6690	109961.0300	116265.4100	120.0008	120652.0200
2	14:09:36	80.0004	86.6671	83.3337	106.6673	24833.8730	73.3336	13.3333	56.6668	26.6667	110112.8500	190.0020	113693.1900	118406.1100	140.0011	123603.9700
3	14:09:50	90.0004	100.0006	86.6671	90.0004	25582.6120	86.6671	43.3334	40.0001	30.0000	110865.2500	163.3348	113062.0500	119378.7100	136.6677	127470.8000
x		86.6671	82.2226	83.3337	98.8894	25230.5240	80.0004	28.8889	45.5557	32.2223	109597.8900	186.6686	112238.7600	118016.7400	132.2232	123975.6000
σ		5.7736	20.3672	3.3334	8.3888	376.3532	6.6667	15.0309	9.6226	6.9389	1588.7216	21.8586	1997.6513	1592.7508	10.7153	3412.6265
%RSD		6.6618	24.7708	4.0000	8.4830	1.4917	8.3334	52.0299	21.1226	21.5345	1.4496	11.7098	1.7798	1.3496	8.1040	2.7527

Run	Time	209Bi
1	14:09:21	82041.8680
2	14:09:36	83333.5370
3	14:09:50	84611.9310
x		83329.1120
σ		1285.0371
%RSD		1.5421

5120223-03RE3@MF6R44 1/4/2016 14:13:12

User Pre-dilution: 1.00

Run	Time	6Li	27Al	45Sc	47Ti	51V	52Cr	53Cl O	54Fe	59Co	60Ni	65Cu	66Zn	83Kr	89Y	94Mo
1	14:13:12	43068.4450	τ6799825.3000	71731.8880	10626.2070	6879.9357	5356.9112	962.7176	1456702.0000	21899.6790	6795.8725	5128.1126	8624.0887	506.6808	60309.3860	13162.8560
2	14:13:26	43282.7920	τ7183301.3000	74036.9250	10689.6140	6955.3264	5337.5665	974.0522	1554065.3000	22083.4560	7182.8365	5394.9337	8987.7740	530.0154	61879.8870	13560.1060
3	14:13:41	43316.2850	τ7423472.0000	74312.4930	10699.6260	6869.9281	5380.9254	1030.0584	τ1542319.2000	22918.8540	7216.1962	5641.7501	9398.1888	640.0225	63735.9780	14354.6570
x		43222.5070	τ7135532.9000	73360.4350	10671.8160	6901.7301	5358.4677	988.9427	τ1517695.5000	22300.6630	7064.9684	5388.2654	9003.3505	558.9063	61975.0840	13692.5400
σ		134.4689	τ314555.5300	1417.0773	39.8145	46.6847	21.7213	36.0554	τ53147.4340	543.1971	233.6401	256.8836	387.2850	71.2111	1715.2785	606.8376
%RSD		0.3111	τ4.4083	1.9317	0.3731	0.6764	0.4054	3.6458	τ3.5019	2.4358	3.3070	4.7675	4.3016	12.7411	2.7677	4.4319

Run	Time	95Mo	96Mo	97Mo	98Mo	103Rh	106Cd	107Ag	108Cd	111Cd	115In	118Sn	159Tb	165Ho	205Tl	208Pb
1	14:13:12	17910.9600	19971.9140	11080.0810	28721.9670	22511.1700	170.0016	283.3378	170.0016	130.0009	100532.8200	976.7191	108476.6900	114368.2400	576.6850	τM19661648.0000
2	14:13:26	19377.2960	21208.0420	11717.5470	30868.9870	22086.7980	153.3346	246.6700	93.3338	120.0008	102818.1700	1053.3944	110716.7900	118257.5300	640.0225	τM20703351.0000
3	14:13:41	19711.3460	21939.7760	12545.3170	31474.3910	22230.4810	226.6695	296.6715	113.3340	123.3342	103792.4800	963.3844	114172.4700	120243.3200	623.3547	τM21271111.0000
x		18999.8680	21039.9110	11780.9820	30355.1150	22276.1500	183.3352	275.5598	125.5565	124.4453	102381.1600	997.8326	111121.9800	117623.0300	613.3541	τM20545370.0000
σ		957.6988	994.6462	734.6746	1446.3772	215.8407	38.4427	25.8923	39.7684	5.0918	1673.1940	48.5776	2869.4276	2988.4927	32.8317	τM816278.8500
%RSD		5.0406	4.7274	6.2361	4.7649	0.9689	20.9685	9.3962	31.6737	4.0916	1.6343	4.8683	2.5822	2.5407	5.3528	τM3.9731

Run	Time	209Bi
1	14:13:12	78087.2680
2	14:13:26	80380.4590
3	14:13:41	82408.4950
x		80292.0740
σ		2161.9688
%RSD		2.6926

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5120223-04RE2@MF6R45 1/4/2016 14:17:02

User Pre-dilution: 1.00

Run	Time	6Li	27Al	45Sc	47Ti	51V	52Cr	53Cl O	54Fe	59Co	60Ni	65Cu	66Zn	83Kr	89Y	94Mo
1	14:17:02	42941.1780	6829.2308	59091.4270	2080.2380	412.0093	298.6716	160.6681	r 6633823.2000	4210.9751	926.7139	563.3508	753.3646	496.6802	52336.8870	750.0309
2	14:17:17	42988.0650	6532.3461	60265.7650	1920.2028	359.3404	291.3380	166.0015	r 6876276.6000	4207.6402	886.7099	553.3502	846.7061	443.3441	52551.4530	763.3654
3	14:17:31	42281.4300	6712.4772	59601.4060	1626.8122	398.6754	302.6717	158.6681	r 7015003.1000	4364.3807	1070.0630	503.3473	880.0426	583.3521	52957.1310	836.7052
x		42736.8910	6691.3514	59652.8660	1875.7510	390.0084	297.5604	161.7792	r 6841701.0000	4260.9986	961.1623	540.0161	826.7044	507.7921	52615.1570	783.3672
σ		395.1372	149.5656	588.8578	229.9581	27.3832	5.7480	3.7909	r 192927.7900	89.5470	96.4085	32.1474	65.6649	70.6623	314.9905	46.6708
%RSD		0.9246	2.2352	0.9871	12.2595	7.0212	1.9317	2.3433	r 2.8199	2.1016	10.0304	5.9530	7.9430	13.9156	0.5987	5.9577

Run	Time	95Mo	96Mo	97Mo	98Mo	103Rh	106Cd	107Ag	108Cd	111Cd	115In	118Sn	159Tb	165Ho	205Tl	208Pb
1	14:17:02	1136.7377	1366.7694	786.7007	2023.5585	23065.8920	70.0003	23.3334	43.3334	43.3334	110048.7500	263.3372	113288.1800	120766.8600	66.6669	1120.0690
2	14:17:17	1286.7577	1286.7577	920.0466	1973.5475	23283.1110	103.3339	30.0000	60.0002	26.6667	109714.7500	213.3358	115991.9500	123124.8400	70.0003	1530.1288
3	14:17:31	1270.0887	1460.1172	783.3671	2156.9225	22902.1450	53.3335	23.3334	50.0001	30.0000	111806.6700	220.0027	116694.1900	123493.1200	76.6670	1440.1141
x		1231.1947	1371.2148	830.0381	2051.3429	23083.7160	75.5559	25.5556	51.1113	33.3334	110523.3900	232.2252	115324.7700	122461.6100	71.1114	1363.4373
σ		82.2256	86.7652	77.9674	94.7923	191.1074	25.4590	3.8490	8.3888	8.8192	1123.8319	27.1491	1798.3533	1479.2000	5.0918	215.5151
%RSD		6.6785	6.3276	9.3932	4.6210	0.8279	33.6956	15.0613	16.4127	26.4576	1.0168	11.6909	1.5594	1.2079	7.1603	15.8067

Run	Time	209Bi
1	14:17:02	82008.2330
2	14:17:17	83851.6010
3	14:17:31	84696.0420
x		83518.6260
σ		1374.4939
%RSD		1.6457

5120223-05RE2@MF6R46 1/4/2016 14:20:52

User Pre-dilution: 1.00

Run	Time	6Li	27Al	45Sc	47Ti	51V	52Cr	53Cl O	54Fe	59Co	60Ni	65Cu	66Zn	83Kr	89Y	94Mo
1	14:20:52	42308.2210	322044.9300	59792.6560	1966.8794	1097.3996	557.3504	364.0073	63279.4720	1286.7577	1770.1723	3040.5084	5068.0790	363.3406	48850.9010	363.3406
2	14:21:07	43463.6520	333102.8700	60138.2580	2293.6226	1072.7300	532.6823	334.6728	65626.0210	1266.7549	1856.8563	3017.1673	5211.4934	446.6776	50667.4700	393.3418
3	14:21:21	42053.7110	342146.2700	61853.0390	2066.9016	1072.7300	572.0180	399.3421	67372.0560	1266.7549	1983.5497	3020.5017	5368.2512	466.6786	52571.5690	356.6741
x		42608.5280	332431.3600	60594.6510	2109.1346	1080.9532	554.0169	366.0074	65425.8500	1273.4225	1870.1928	3026.0591	5215.9412	425.5656	50696.6470	374.4522
σ		751.4134	10067.4770	1103.4108	167.4157	14.2430	19.8786	32.3810	2053.6218	11.5486	107.3120	12.6240	150.1355	54.8085	1860.5057	16.4436
%RSD		1.7635	3.0284	1.8210	7.9376	1.3176	3.5881	8.8471	3.1389	0.9069	5.7380	0.4172	2.8784	12.8790	3.6699	4.3914

Run	Time	95Mo	96Mo	97Mo	98Mo	103Rh	106Cd	107Ag	108Cd	111Cd	115In	118Sn	159Tb	165Ho	205Tl	208Pb
1	14:20:52	163.3348	266.6706	166.6682	286.6712	22755.1100	73.3336	23.3334	73.3336	40.0001	108675.7100	206.6690	114388.4900	119861.6700	80.0004	65438.0060
2	14:21:07	203.3356	266.6706	146.6679	266.6706	22337.4090	83.3337	16.6667	66.6669	76.6670	108432.8400	190.0020	116015.5900	122175.5000	123.3342	69380.4110
3	14:21:21	236.6698	240.0032	200.0022	333.3394	22898.8030	83.3337	40.0001	60.0002	60.0002	110558.2100	260.0037	118264.2800	124699.4200	146.6679	70613.1810
x		201.1134	257.7814	171.1128	295.5604	22663.7740	80.0004	26.6667	66.6669	58.8891	109222.2500	218.8916	116222.7900	122245.5300	116.6675	68477.1990
σ		36.7179	15.3964	26.9435	34.2118	291.6291	5.7736	12.0185	6.6667	18.3587	1163.3266	36.5664	1946.1846	2419.6375	33.8301	2703.2300
%RSD		18.2573	5.9727	15.7461	11.5752	1.2868	7.2169	45.0695	10.0000	31.1750	1.0651	16.7053	1.6745	1.9793	28.9970	3.9476

Run	Time	209Bi
1	14:20:52	83811.2320
2	14:21:07	85156.9850
3	14:21:21	85991.4510
x		84986.5560
σ		1100.0563
%RSD		1.2944

5120223-06RE2@MF6R47 1/4/2016 14:24:43

User Pre-dilution: 1.00

Run	Time	6Li	27Al	45Sc	47Ti	51V	52Cr	53Cl O	54Fe	59Co	60Ni	65Cu	66Zn	83Kr	89Y	94Mo
1	14:24:43	43386.6190	557233.5000	59564.4990	2523.6836	1325.4299	575.3515	441.3441	91912.2960	1983.5497	1973.5475	3067.1840	5044.7327	376.6745	49276.5220	393.3418
2	14:24:57	42545.9930	574748.4000	60302.6750	2497.0095	1320.7626	638.0224	430.0102	94468.2970	1933.5389	2016.8904	3067.1840	5378.2571	383.3414	50744.5650	413.3427
3	14:25:11	42515.8530	586568.7100	60547.6280	2176.9273	1292.0918	669.3580	412.6760	97442.7800	2036.8948	1886.8625	2950.4787	5368.2512	450.0111	50989.2620	340.0064
x		42816.1550	572850.2000	60138.2670	2399.2068	1312.7615	627.5773	428.0101	94607.7910	1984.6612	1959.1001	3028.2622	5263.7470	403.3423	50336.7830	382.2303
σ		494.2661	14759.4380	511.7697	192.9612	18.0519	47.8657	14.4383	2767.8795	51.6869	66.2069	67.3798	189.7379	40.5536	926.3281	37.9098
%RSD		1.1544	2.5765	0.8510	8.0427	1.3751	7.6271	3.3734	2.9256	2.6043	3.3795	2.2250	3.6046	10.0544	1.8403	9.9181

Run	Time	95Mo	96Mo	97Mo	98Mo	103Rh	106Cd	107Ag	108Cd	111Cd	115In	118Sn	159Tb	165Ho	205Tl	208Pb
1	14:24:43	216.6693	253.3369	173.3350	303.3384	22307.3350	70.0003	36.6667	50.0001	53.3335	104551.1000	300.0050	110990.0900	117217.5200	150.0012	87552.9160
2	14:24:57	176.6684	316.6722	183.3352	343.3398	22668.2260	46.6668	56.6668	66.6669	33.3334	107721.1200	330.0060	115877.1700	120814.1500	133.3343	92094.1220
3	14:25:11	236.6698	263.3372	196.6688	310.0053	21819.4870	56.6668	20.0000	70.0003	46.6668	108878.1100	310.0053	116181.0100	123381.6200	146.6679	94603.0210
x		210.0025	277.7821	184.4463	318.8945	22265.0160	57.7780	37.7779	62.2224	44.4446	107050.1100	313.3387	114349.4200	120471.1000	143.3345	91416.6860
σ		30.5512	34.0490	11.7065	21.4311	425.9494	11.7064	18.3586	10.7152	10.1836	2240.1913	15.2758	2913.2323	3096.3358	8.8193	3573.5393
%RSD		14.5480	12.2574	6.3468	6.7204	1.9131	20.2609	48.5963	17.2209	22.9129	2.0927	4.8752	2.5477	2.5702	6.1530	3.9091

Run	Time	209Bi
1	14:24:43	82596.8600
2	14:24:57	84346.1450
3	14:25:11	84696.0420
x		83879.6820
σ		1124.6476
%RSD		1.3408

5120223-01RE3@MF6R32@2X@Y,Bi 1/4/2016 14:28:33

User Pre-dilution: 1.00

Run	Time	6Li	27Al	45Sc	47Ti	51V	52Cr	53Cl O	54Fe	59Co	60Ni	65Cu	66Zn	83Kr	89Y	94Mo
1	14:28:33	36898.0620	396060.2400	58269.4800	17800.7440	u404869.1600	80162.5470	10029.5290	933567.4000	72182.0980	194195.5700	11624.0930	6098.7117	686.6926	200919.3400	41527.9690
2	14:28:48	36777.5760	417390.1000	58705.6060	19049.9390	u410052.5700	81139.8260	10122.9660	978312.4400	74930.8710	202391.4600	12024.6140	6322.1976	790.0343	210243.3300	42324.9650
3	14:29:02	37969.1260	426481.1300	59695.3530	19113.4050	u416524.3900	82176.4080	10190.3750	1013506.1000	78389.8560	208309.5700	12602.0620	6445.6176	876.7089	217832.2300	45135.1010
x		37214.9210	413310.4900	58890.1460	18654.6960	u410482.0400	81159.5940	10114.2900	975128.6400	75167.6080	201632.2000	12083.5900	6288.8423	784.4786	209664.9700	42996.0110
σ		655.9326	15615.3780	730.6298	740.2245	u5839.4691	1007.0762	80.7729	40064.3340	3110.6428	7087.5693	491.6444	175.8419	95.1299	8471.2689	1894.8820
%RSD		1.7626	3.7781	1.2407	3.9680	u1.4226	1.2409	0.7986	4.1086	4.1383	3.5151	4.0687	2.7961	12.1265	4.0404	4.4071

Run	Time	95Mo	96Mo	97Mo	98Mo	103Rh	106Cd	107Ag	108Cd	111Cd	115In	118Sn	159Tb	165Ho	205Tl	208Pb
1	14:28:33	36620.2760	42405.3380	22126.8950	57980.9780	19236.9990	783.3671	343.3398	280.0043	200.0022	87876.0110	2677.0608	110531.2200	119520.5500	303.3384	779701.4800
2	14:28:48	37905.5280	45379.6470	24035.0640	61238.9020	19480.8500	826.7043	343.3398	356.6737	176.6684	89898.9800	2930.4722	115070.3500	122530.2200	290.0046	827728.2400
3	14:29:02	40329.2570	46635.9810	24482.9230	63480.8690	19450.7860	760.0318	366.6741	333.3394	213.3358	91110.9570	3100.5286	116525.3800	124067.5300	356.6737	853389.2800
x		38285.0200	44806.9890	23548.2940	60900.2500	19389.5450	790.0344	351.1179	323.3391	196.6688	89628.6490	2902.6872	114042.3100	122039.4400	316.6722	820273.0000
σ		1883.3867	2172.6798	1251.1698	2765.5407	132.9616	33.8326	13.4720	39.3008	18.5596	1634.3277	213.0968	3126.5211	2312.8781	35.2779	37405.3240
%RSD		4.9194	4.8490	5.3132	4.5411	0.6857	4.2824	3.8369	12.1547	9.4370	1.8234	7.3414	2.7415	1.8952	11.1402	4.5601

Run	Time	209Bi
1	14:28:33	61715.4420
2	14:28:48	62759.2180
3	14:29:02	64403.9950
x		62959.5510
σ		1355.4258
%RSD		2.1529

5120223-01RE4@MF6R44@5X@Pb 1/4/2016 14:32:23

User Pre-dilution: 1.00

Run	Time	6Li	27Al	45Sc	47Ti	51V	52Cr	53Cl O	54Fe	59Co	60Ni	65Cu	66Zn	83Kr	89Y	94Mo
1	14:32:23	44361.3060	r1483555.7000	63571.4990	3564.0318	1566.8017	1222.0821	242.0032	321040.3200	4917.9966	1710.1608	1680.1552	2376.9774	306.6718	54848.2940	2940.4755
2	14:32:37	44766.6190	r1536874.0000	64971.3430	3550.6933	1618.8108	1189.4111	249.3368	335668.0200	4964.6886	1670.1534	1763.5044	2410.3195	286.6712	58105.1000	3013.8328
3	14:32:52	43778.4910	r1559755.4000	66015.4920	3330.6100	1638.8144	1182.0768	258.0037	341589.2300	4994.7050	1783.5083	1816.8482	2527.0178	303.3384	57672.3570	3150.5458
x		44302.1380	r1526728.4000	64852.7780	3481.7784	1608.1423	1197.8567	249.7812	332765.8600	4959.1301	1721.2742	1753.5026	2438.1049	298.8938	56875.2500	3034.9514
σ		496.7140	r39099.8650	1226.3029	131.0854	37.1728	21.2979	8.0095	10577.3960	38.6551	57.4888	68.8932	78.7849	10.7155	1768.6803	106.6156
%RSD		1.1212	r2.5610	1.8909	3.7649	2.3115	1.7780	3.2066	3.1786	0.7795	3.3399	3.9289	3.2314	3.5851	3.1098	3.5129

Run	Time	95Mo	96Mo	97Mo	98Mo	103Rh	106Cd	107Ag	108Cd	111Cd	115In	118Sn	159Tb	165Ho	205Tl	208Pb
1	14:32:23	3964.1975	4271.0030	2383.6458	6282.1699	24569.8240	70.0003	96.6672	56.6668	43.3334	114614.6500	256.6703	119564.4600	125669.3100	103.3339	r4288928.0000
2	14:32:37	4134.2732	4564.4789	2627.0462	6609.0682	25171.4670	86.6671	90.0004	76.6670	40.0001	117514.6600	250.0034	119412.4800	127386.2900	156.6680	r4556388.3000
3	14:32:52	4197.6356	4564.4789	2587.0347	6829.2308	25341.9390	86.6671	96.6672	60.0002	36.6667	117555.1700	230.0029	122905.2300	130926.0500	163.3348	r4603238.8000
x		4098.7021	4466.6536	2532.5756	6573.4896	25027.7430	81.1115	94.4449	64.4447	40.0001	116561.4900	245.5589	120627.3900	127993.8800	141.1123	r4482851.7000
σ		120.7158	169.4384	130.5193	275.2604	405.6264	9.6226	3.8490	10.7152	3.3333	1686.1380	13.8781	1974.1338	2680.5244	32.8864	r169568.6800
%RSD		2.9452	3.7934	5.1536	4.1874	1.6207	11.8634	4.0754	16.6270	8.3334	1.4466	5.6517	1.6366	2.0943	23.3051	r3.7826

Run	Time	209Bi
1	14:32:23	82401.7680
2	14:32:37	85722.2600
3	14:32:52	89562.3490
x		85895.4590
σ		3583.4309
%RSD		4.1719

5120223-03RE4@MF6R32@3X@V 1/4/2016 14:36:14

User Pre-dilution: 1.00

Run	Time	6Li	27Al	45Sc	47Ti	51V	52Cr	53Cl O	54Fe	59Co	60Ni	65Cu	66Zn	83Kr	89Y	94Mo
1	14:36:14	39652.5220	608947.3300	62020.8430	14835.4280	294207.5500	58270.1510	7202.1851	702460.2200	55015.9690	153627.2000	26214.4080	265377.6700	573.3514	167611.0300	32357.4830
2	14:36:28	39572.6090	648010.6700	61980.5700	14681.8460	295732.5200	58453.3210	7269.5721	717218.4400	56045.5630	156044.5100	28063.2480	283289.5300	730.0293	173048.1500	33371.1380
3	14:36:42	40071.4540	676139.1700	64158.9380	14725.2490	296505.0800	58780.7560	7305.6009	738007.5300	57447.6070	160999.8000	28220.4000	292501.1300	726.6957	174835.1900	34083.7740
x		39732.1950	644365.7200	62720.1170	14747.5080	295481.7200	58501.4090	7259.1194	719228.7300	56169.7130	156890.5100	27499.3520	280389.4400	676.6921	171831.4600	33270.7980
σ		293.9784	33743.8930	1246.2181	79.1736	1169.1188	258.6767	52.4943	17858.7180	1220.5637	3758.4059	1115.5650	13792.3290	89.5112	3762.6321	867.5086
%RSD		0.7399	5.2368	1.9870	0.5369	0.3957	0.4422	0.7231	2.4830	2.1730	2.3956	4.0567	4.9190	13.2278	2.1897	2.6074

Run	Time	95Mo	96Mo	97Mo	98Mo	103Rh	106Cd	107Ag	108Cd	111Cd	115In	118Sn	159Tb	165Ho	205Tl	208Pb
1	14:36:14	27050.1840	32263.8180	16909.0440	43500.4940	22060.0660	733.3629	220.0027	283.3378	236.6698	99909.3360	2286.9543	117173.6300	126321.5900	283.3378	763741.6200
2	14:36:28	28320.7120	33796.0360	17510.1800	45275.7980	22006.6040	653.3568	213.3358	276.6709	263.3372	102299.0300	2410.3195	121276.9200	129363.9200	226.6695	798263.3200
3	14:36:42	30103.0920	34706.1220	17490.1420	46170.2800	21812.8040	646.6897	273.3374	300.0050	270.0040	104598.3000	2333.6328	123685.7100	132684.6000	240.0032	821499.4900
x		28491.3290	33588.6590	17303.1220	44982.1910	21959.8250	677.8031	235.5587	286.6712	256.6703	102268.8900	2343.6355	120712.0900	129456.7100	250.0035	794501.4700
σ		1533.5885	1234.2880	341.4287	1358.8937	130.0994	48.2315	32.8868	12.0189	17.6388	2344.6283	62.2879	3292.5804	3182.5231	29.6282	29062.1150
%RSD		5.3826	3.6747	1.9732	3.0210	0.5924	7.1159	13.9612	4.1926	6.8722	2.2926	2.6577	2.7276	2.4584	11.8511	3.6579

Run	Time	209Bi
1	14:36:14	71510.1520
2	14:36:28	73482.4530
3	14:36:42	74097.4140
x		73030.0060
σ		1351.6705
%RSD		1.8508

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SEQ-CCV@CCV02 1/4/2016 14:40:08 QC Status: PASS (Initial: FAIL)

User Pre-dilution: 1.00

Run	Time	6Li	27Al	45Sc	47Ti	51V	52Cr	53Cl O	54Fe	59Co	60Ni	65Cu	66Zn	83Kr	89Y	94Mo
1	14:40:22	40637.2910	r79837262.0000	58651.9280	1563.4678	238560.9200	303851.1000	37513.9080	r10322842.0000	1390573.8000	262753.0600	314521.6300	1155100.5000	466.6785	52893.4280	236975.5900
2	14:40:36	40443.0940	r81718974.0000	59628.2480	1443.4479	239706.4700	306402.6300	37519.9330	r10390553.0000	1402574.8000	268795.9300	319773.4900	1168573.7000	470.0122	53054.3620	241218.3400
3	14:40:50	40366.0860	r81739978.0000	59631.6030	1500.1238	243103.5800	305305.9800	37952.3890	r10534129.0000	1412035.3000	268346.2600	322621.5100	1164663.0000	553.3502	53138.1820	241399.7300
x		40482.1570	r81098738.0000	59303.9260	1502.3465	240456.9900	305186.5700	37662.0770	r10415841.0000	1401728.0000	266631.7500	318972.2100	1162779.1000	496.6803	53028.6570	239864.5500
σ		139.7582	r1092520.6000	564.6500	60.0408	2362.4984	1279.9498	251.4360	r107889.3200	10755.8030	3366.5591	4108.9635	6931.3581	49.1058	124.3854	2503.5624
%RSD		0.3452	r1.3471	0.9521	3.9965	0.9825	0.4194	0.6676	r1.0358	0.7673	1.2626	1.2882	0.5961	9.8868	0.2346	1.0437

Run	Time	95Mo	96Mo	97Mo	98Mo	103Rh	106Cd	107Ag	108Cd	111Cd	115In	118Sn	159Tb	165Ho	205Tl	208Pb
1	14:40:22	430120.0300	466163.1700	263397.9900	690852.6700	23119.3600	25234.9760	159703.9100	18425.3200	291716.5100	122189.0100	878859.5800	118777.5800	123932.3700	r4121541.4000	2967110.4000
2	14:40:36	438622.1600	473210.2900	268809.6600	700209.4700	23349.9490	25746.4070	162289.0900	18943.0490	296580.1400	124733.2100	908292.5100	117541.6700	124898.8000	r4160235.5000	3051645.0000
3	14:40:50	447296.5300	481418.1800	277264.6500	715641.1100	23396.7350	26829.5320	164919.1300	19524.2770	301181.0900	124314.2000	901316.8200	120108.2200	126973.9100	r4211804.7000	3068315.3000
x		438679.5700	473597.2100	269824.1000	702234.4200	23288.6810	25936.9710	162304.0400	18964.2150	296492.5800	123745.4700	896156.3000	118809.1600	125268.3600	r4164527.2000	3029023.6000
σ		8588.3946	7634.8627	6988.7684	12517.6680	148.4906	814.1797	2607.6396	549.7841	4732.8971	1364.1219	15380.1050	1283.5684	1554.0844	r45284.4000	54262.3390
%RSD		1.9578	1.6121	2.5901	1.7825	0.6376	3.1391	1.6066	2.8991	1.5963	1.1024	1.7162	1.0804	1.2406	r1.0874	1.7914

Run	Time	209Bi
1	14:40:22	80595.6850
2	14:40:36	80501.5230
3	14:40:50	82166.3180
x		81087.8420
σ		935.1735
%RSD		1.1533

SEQ-CCB@CCB02 1/4/2016 14:44:16 QC Status: PASS (Initial: FAIL)

User Pre-dilution: 1.00

Run	Time	6Li	27Al	45Sc	47Ti	51V	52Cr	53Cl O	54Fe	59Co	60Ni	65Cu	66Zn	83Kr	89Y	94Mo
1	14:44:16	42097.2450	4301.0172	58772.7040	1583.4712	269.3373	100.0006	100.6672	8303.7907	136.6677	193.3354	383.3414	246.6700	233.3363	52336.8870	113.3340
2	14:44:31	41929.8070	4837.9536	59796.0110	1586.8051	252.0035	108.6673	100.0006	8490.6298	120.0008	203.3356	356.6737	206.6690	276.6709	53600.8870	63.3336
3	14:44:45	42103.9420	4934.6723	59202.1440	1430.1125	252.6702	118.6674	120.0008	8584.0508	93.3338	176.6684	356.6737	246.6700	236.6698	53785.3050	96.6672
x		42043.6650	4691.2144	59256.9530	1533.4629	258.0037	109.1118	106.8895	8459.4904	116.6674	191.1131	365.5629	233.3364	248.8923	53241.0260	91.1116
σ		98.6605	341.3635	513.8507	89.5197	9.8209	9.3414	11.3596	142.7014	21.8584	13.4718	15.3966	23.0946	24.1146	788.4179	25.4590
%RSD		0.2347	7.2767	0.8672	5.8377	3.8065	8.5613	10.6274	1.6869	18.7357	7.0491	4.2118	9.8976	9.6888	1.4808	27.9427

Run	Time	95Mo	96Mo	97Mo	98Mo	103Rh	106Cd	107Ag	108Cd	111Cd	115In	118Sn	159Tb	165Ho	205Tl	208Pb
1	14:44:16	123.3342	100.0006	100.0006	133.3343	25789.8630	60.0002	20.0000	40.0001	36.6667	115762.3900	203.3356	116923.7800	124030.3600	1050.0606	240.0032
2	14:44:31	146.6679	90.0004	156.6680	140.0011	25181.4940	96.6672	13.3333	63.3336	23.3334	117207.3900	220.0027	119095.0200	126098.5200	1113.4015	276.6709
3	14:44:45	86.6671	133.3343	133.3343	150.0012	25345.2820	80.0004	20.0000	50.0001	46.6668	117291.8100	170.0016	121580.9400	125503.7100	890.0436	250.0034
x		118.8897	107.7784	130.0010	141.1122	25438.8800	78.8892	17.7778	51.1113	35.5556	116753.8600	197.7800	119199.9100	125210.8600	1017.8352	255.5592
σ		30.2463	22.6898	28.4804	8.3888	314.7992	18.3587	3.8490	11.7063	11.7063	859.6786	25.4593	2330.3522	1064.7258	115.1132	18.9547
%RSD		25.4406	21.0523	21.9078	5.9448	1.2375	23.2715	21.6507	22.9037	32.9240	0.7363	12.8725	1.9550	0.8503	11.3096	7.4169

Run	Time	209Bi
1	14:44:16	84463.8970
2	14:44:31	86953.8740
3	14:44:45	88202.4830
x		86540.0850
σ		1903.3320
%RSD		2.1994

File Name: M122915B SDG No.: MF6R32 Standards Prep Date: 12-15-15

Instrument: ICPMS01 Case No.: 45671 Standards Log Page No.: 1

Analyst: LEM

Lab ID	EPA Sample #	Date&Time	Elements circled for S0-S# were used throughout this run unless otherwised noted. ~~Al, As, Sb, Ba, Be, Ca, Cd, Cr, Co, Cu, Fe, Pb, Mg, Mn, Ni, K, Se, Ag~~ Na ~~Tl, V, Zn~~
BL52903-TUN1	TUNE01	12/29/15 13:12	
BL52903-CAL1	S01	12/29/15 13:20	
BL52903-CAL4	S04	12/29/15 13:22	
BL52903-CAL5	S05	12/29/15 13:25	
BL52903-CAL6	S06	12/29/15 13:27	
BL52903-CAL7	S07	12/29/15 13:30	
BL52903-CAL8	S08	12/29/15 13:32	
BL52903-CALA	S10	12/29/15 13:35	
BL52903-ICV1	ICV01	12/29/15 13:37	
BL52903-ICB1	ICB01	12/29/15 13:40	
BL52903-IFA1	ICSA01	12/29/15 13:42	
BL52903-IFB1	ICSAB01	12/29/15 13:45	
BL52903-CCV1	CCV01	12/29/15 13:47	
BL52903-CCB1	CCB01	12/29/15 13:50	
PL21004-BLK1	PBW01	12/29/15 13:52	
PL21004-BS1	LCS01	12/29/15 13:55	
5120223-01	MF6R32	12/29/15 13:57	
5120223-02	MF6R42	12/29/15 14:00	
PL21004-DUP1	MF6R42D	12/29/15 14:02	
BL52903-SRD1	MF6R42L	12/29/15 14:05	
5120223-03	MF6R44	12/29/15 14:07	NON-REPORT
5120223-04	MF6R45	12/29/15 14:09	
5120223-05	MF6R46	12/29/15 14:12	
5120223-06	MF6R47	12/29/15 14:14	
5120223-03RE1	MF6R44	12/29/15 14:17	
BL52903-CCV2	CCV02	12/29/15 14:19	
BL52903-CCB2	CCB02	12/29/15 14:22	

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File Name: M122915B SDG No.: MF6R32 Standards Prep Date: 121515

Instrument: ICPMS01 Case No.: 45671 Standards Log Page No.: 1

Analyst: LEM

Lab ID	EPA Sample #	Date&Time	Elements circled for S0-S# were used throughout this run unless otherwised ~~noted~~. Al, As, Sb, Ba, Be, Ca, Cd, Cr, Co, Cu, Fe, Pb, Mg, Mn, Ni, K, Se, Ag, Na, Tl, V, Zn
~~PL21004-BS1~~	~~LCS01~~	~~12/29/15 13:55~~	
~~5120223-02~~	~~MF6R42~~	~~12/29/15 14:00~~	
BL52904-TUN1	TUNE01	12/30/15 17:31	
BL52904-CAL1	S01	12/30/15 17:42	
BL52904-CAL2	S02	12/30/15 17:46	Al,SE,Ag
BL52904-CAL3	S03	12/30/15 17:51	Sb,As,Cd,Co,SE,Tl
BL52904-CAL4	S04	12/30/15 17:55	MINUS Al,SE,Ag,Ba
BL52904-CAL5	S05	12/30/15 17:59	
BL52904-CAL6	S06	12/30/15 18:03	MINUS SE
BL52904-CAL7	S07	12/30/15 18:07	
BL52904-CAL8	S08	12/30/15 18:11	
BL52904-CAL9	S09	12/30/15 18:15	Ba,MN,ZN
BL52904-CALA	S10	12/30/15 18:19	Al, Ca, Fe, Mg, K
BL52904-ICV1	ICV01	12/30/15 18:27	
BL52904-ICB1	ICB01	12/30/15 18:32	
BL52904-IFA1	ICSA01	12/30/15 18:36	
BL52904-IFB1	ICSAB01	12/30/15 18:40	
BL52904-CCV1	CCV01	12/30/15 18:44	
BL52904-CCB1	CCB01	12/30/15 18:50	
BL52904-CCV2	CCV02	12/30/15 18:54	
BL52904-CCB2	CCB02	12/30/15 18:58	
PL21004-BLK2	PBW01	12/30/15 19:03	
PL21004-BS2	LCS01	12/30/15 19:07	MINUS SD,AS,SE,Cd,Co,SE,Tl,Mg,Al
PL21004-BS3	LCS02	12/30/15 19:11	Sb,As,Cd,Co,Mg,SE,Tl
PL21004-BS4	LCS03	12/30/15 19:15	Al ONLY
5120223-01RE1	MF6R32	12/30/15 19:19	MINUS V,Tl,PD
5120223-02RE1	MF6R42	12/30/15 19:23	
PL21004-MS1	MF6R42S	12/30/15 19:27	
PL21004-DUP2	MF6R42D	12/30/15 19:31	
BL52904-SRD2	MF6R42L	12/30/15 19:35	
5120223-03RE2	MF6R44	12/30/15 19:39	MINUS PD
5120223-04RE1	MF6R45	12/30/15 19:43	
5120223-05RE1	MF6R46	12/30/15 19:48	
5120223-06RE1	MF6R47	12/30/15 19:52	
BL52904-IBL2	ZZZZZZ	12/30/15 19:56	
BL52904-CCV3	CCV03	12/30/15 20:00	
BL52904-CCB3	CCB03	12/30/15 20:06	

File Name: M122915B SDG No.: MF6R82 Standards Prep Date: 01042016

Instrument: ICPMS01 Case No.: 45671 Standards Log Page No.: 1

Analyst: LEM

Lab ID	EPA Sample #	Date&Time	Elements circled for S0-S# were used throughout this run unless otherwised noted. Al, As, Sb, Ba, Be, Ca, Cd, Cr, Co, Cu, Fe, Pb, Mg, Mn, Ni, K, Se, Ag, Na, Tl, V, Zn
~~PL21004-BS1~~	~~LCS01~~	~~12/29/15 13:55~~	
5120223-02	MF6R42	~~12/29/15~~ 14:00	
PL21004-BS2	LCS01	12/30/15 19:07	
PL21004-BS3	LCS02	12/30/15 19:11	
PL21004-BS4	LCS03	12/30/15 19:15	
5120223-02RE1	MF6R42	12/30/15 19:23	
~~PL21004-MS1~~	~~MF6R42S~~	~~12/30/15 19:27~~	
BA60402-TUN1	TUNE01	1/4/16 12:29	
BA60402-CAL1	S01	1/4/16 12:40	
BA60402-CAL3	S03	1/4/16 12:48	CR, CO, Tl, ~~Pb, Cd~~ ~~Atmos Cu, Fe, Pb, Ni~~
BA60402-CAL4	S04	1/4/16 12:52	
BA60402-CAL5	S05	1/4/16 12:56	
BA60402-CAL6	S06	1/4/16 12:59	
BA60402-CAL7	S07	1/4/16 13:03	
BA60402-CAL8	S08	1/4/16 13:07	
BA60402-CAL9	S09	1/4/16 13:11	ZN
BA60402-ICV1	ICV01	1/4/16 13:18	
BA60402-ICB1	ICB01	1/4/16 13:23	
BA60402-IFA1	ICSA01	1/4/16 13:26	
BA60402-IFB1	ICSAB01	1/4/16 13:30	
BA60402-CCV1	CCV01	1/4/16 13:34	
BA60402-CCB1	CCB01	1/4/16 13:38	
PL21004-BLK3	PBW01	1/4/16 13:42	CR
PL21004-BS5	LCS03	1/4/16 13:46	
BA60402-IBL1	ZZZZZZ	1/4/16 13:50	
5120223-01RE2	MF6R32	1/4/16 13:54	
5120223-02RE2	MF6R42	1/4/16 13:57	
PL21004-MS2	MF6R42S	1/4/16 14:01	
PL21004-DUP3	MF6R42D	1/4/16 14:05	
BA60402-SRD3	MF6R42L	1/4/16 14:09	
5120223-03RE3	MF6R44	1/4/16 14:13	
5120223-04RE2	MF6R45	1/4/16 14:17	
5120223-05RE2	MF6R46	1/4/16 14:20	
5120223-06RE2	MF6R47	1/4/16 14:24	
5120223-01RE3	MF6R32	1/4/16 14:28	Tl, Pb
5120223-03RE4	MF6R44	1/4/16 14:32	Pb
5120223-01RE4	MF6R32	1/4/16 14:36	V
BA60402-CCV2	CCV02	1/4/16 14:40	
BA60402-CCB2	CCB02	1/4/16 14:44	

DOE 1/4/16

AM 1/4

PREPARATION BENCH SHEET

PL21004

Bonner Analytical Testing Co.

Matrix: Water
Analysis: ISM023 - ICPMS (2542.1)
Prepared: 12/22/2015 09:00 using METALS - 200.8

Case: 45671
SDG: MF6R32
Work Order: 5120223

Lab Number	Sample ID	Initial (mL)	Final (mL)	Spike ID	Spike Amount (uL)	Spike ID	Spike Amount (uL)	pH	Filtered
5120223-01	MF6R32	~~50~~ 25	50					< 2	~~Filtered~~
5120223-01RE1	MF6R32	~~50~~ 25	50					< 2	~~Filtered~~
5120223-01RE2	MF6R32	~~50~~ 25	50		1/5			< 2	~~Filtered~~
5120223-01RE3	MF6R32	~~50~~ 25	50					< 2	~~Filtered~~
5120223-01RE4	MF6R32	~~50~~ 25	50					< 2	~~Filtered~~
5120223-02	MF6R42	50	50					< 2	~~Filtered~~
5120223-02RE1	MF6R42	50	50					< 2	~~Filtered~~
5120223-02RE2	MF6R42	50	50					< 2	~~Filtered~~
5120223-03	MF6R44	50	50					< 2	~~Filtered~~
5120223-03RE1	MF6R44	50	50					< 2	~~Filtered~~
5120223-03RE2	MF6R44	50	50					< 2	~~Filtered~~
5120223-03RE3	MF6R44	50	50					< 2	~~Filtered~~
5120223-03RE4	MF6R44	50	50					< 2	~~Filtered~~
5120223-04	MF6R45	50	50					< 2	~~Filtered~~
5120223-04RE1	MF6R45	50	50					< 2	~~Filtered~~
5120223-04RE2	MF6R45	50	50					< 2	~~Filtered~~
5120223-05	MF6R46	50	50					< 2	~~Filtered~~
5120223-05RE1	MF6R46	50	50					< 2	~~Filtered~~
5120223-05RE2	MF6R46	50	50					< 2	~~Filtered~~
5120223-06	MF6R47	50	50					< 2	~~Filtered~~
5120223-06RE1	MF6R47	50	50					< 2	~~Filtered~~
5120223-06RE2	MF6R47	50	50					< 2	~~Filtered~~
PL21004-MS1	MF6R42S	50	50	B5I0029	500	B4L0224	45	< 2	
PL21004-MS2	MF6R42S	50	50	B5I0029	500	B4L0224	45	< 2	
PL21004-BS1	LCS01	50	50	B5E0061	100			< 2	
PL21004-BS2	LCS01	50	50	B5E0061	100			< 2	
PL21004-BS3	LCS02	50	50	B5L0085	1000			< 2	
PL21004-BS4	LCS03	50	50	B4G0074	20			< 2	
PL21004-BS5	LCS03	50	50	B5L0085	1000			< 2	
PL21004-DUP1	MF6R42D	50	50					< 2	
PL21004-DUP2	MF6R42D	50	50					< 2	
PL21004-DUP3	MF6R42D	50	50					< 2	
PL21004-BLK1	PBW01	50	50					< 2	
PL21004-BLK2	PBW01	50	50					< 2	
PL21004-BLK3	PBW01	50	50					< 2	

PREPARATION BENCH SHEET

PL21004

Bonner Analytical Testing Co.

Matrix: Water
Analysis: QC
Prepared: 12/22/2015 09:00 using METALS - 200.8

Case:
SDG: MF6R32
Work Order: 5120223

Lab Number	Sample ID	Initial (mL)	Final (mL)	Spike ID	Spike Amount (uL)	Spike ID	Spike Amount (uL)	pH	Filtered

Table 1: Quality Controls (QC), Reagents (R) and Standards (Std)

LIMS ID	Description	Vendor	LotNum
B3E0023	R - Distilled Water	In-House	NA
B4G0074	Std - Aluminum - 100ppm	SCP Science	S131219013
B4L0224	QC - Selenium - 100 ppm	SCP Science	S140115015
B5E0061	QC - BAT-11	Inorganic Ventures	G2-MEB466037
B5G0112	R - Hydrochloric Acid - 1:1	In House	NA
B5I0004	R - Nitric Acid - 1:1	In House	NA
B5I0029	QC - CLP-MS-SPK	Inorganic Ventures	J2-MEB568045
B5L0085	QC - MA-CRQL-WATER-2542.	Inorganic Ventures	H2-MEB540085

Table 2: Metals Digestion Apparatus

Balance ID		NA					
Dig. Block ID		1					
Start Temp	Stop Temp	96.5	92.6				
Start Time	Stop Time	0900	1600				

Comments: RM 1/4

LEM 12/22/2015
Perpared By Date

1/4/2016
Preparation Reviewed By Date

ISM02.3 Standard & QC Log
Standards & QC for ICPMS01 MA 2542.1 were prepared on: 12-15-15

Description	EPA ID	Amount Spiked	Volume Made	Manufacturer	Lot#	Date Lot Expires**	LIMs ID
BAT-11				Inorganic Ventures	F2-MEB466037	Jan-16	B5E0061
BAISM-MIX1				Inorganic Ventures	J2-MEB586055	Jul-16	B5H0038
BAT-13				Inorganic Ventures	J2-MEB586056	Jul-16	B5H0037
BAT-15				Inorganic Ventures	J2-MEB582109	Sep-16	B5I0014
BONNER-1				Inorganic Ventures	H2-MEB546053	Oct-15	B4J0063
Initial Calibration High - CALA	S10	NA	50 mL	Inorganic Ventures	NA	2 Weeks	B4J0062
BONNER-1		0.625 mL			H2-MEB546053	Oct-15	B4J0063
Initial Calibration High - CAL9	S09	NA	50 mL	Inorganic Ventures	NA	2 Weeks	B4J0061
BAT-15		2.5 mL			J2-MEB582109	Aug-16	B5I0014
Initial Calibration High - CAL8	S08		100 mL Composite	Inorganic Ventures	NA	2 Weeks	B4J0059
BAT-13		2.0 mL			J2-MEB586056	Jul-16	B5H0037
BAISM-MIX1		2.0 mL			J2-MEB586055	Jun-16	B5H0038
BONNER-1		0.25 mL			H2-MEB546053	Oct-15	B4J0063
Initial Calibration Mid - CAL7	S07	25 mL	50 mL	Inorganic Ventures	From S08	2 Weeks	B4J0058
Initial Calibration Mid - CAL6	S06	2.5 mL	50 mL	Inorganic Ventures	From S08	2 Weeks	B4J0057
Initial Calibration Mid - CAL5	S05	0.5 mL	50 mL	Inorganic Ventures	From S08	2 Weeks	B4J0056
Initial Calibration Low - CAL4	S04		50 mL	Inorganic Ventures	NA	2 Weeks	B4J0055
BAT- 11		0.05 mL			F2-MEB466037		B5E0061
Initial Calibration Low - CAL3	S03		50 mL	Inorganic Ventures	NA	2 Weeks	B4J0054
BAT- 11		0.025 mL			F2-MEB466037		B5E0061
Initial Calibration Low - CAL2	S02		50 mL	Inorganic Ventures	NA	2 Weeks	B4J0053
BAT- 11		0.01 mL			F2-MEB466037		B5E0061
Initial Calibration Low - CAL1	S01	NA	NA	In-house	NA	2 Weeks	B5H0062
ICV-1	ICV	1.0 mL	50 mL	EPA	ICV-1 (0307)	2 Weeks	B4J0065
Interelement Check Standard A	ISCA	5.0 mL	50 mL	In-house	NA		B4J0066
Interelement Check Standard AB	ICSAB		50 mL	EPA	ICS-MS (0803)	2 Weeks	B4J0067
ICS PART A		5.0 mL	Composite	EPA	ICS-MS (0803)	2 Weeks	B4J0066
ICS PART B		5.0 mL					B4J0067
Continuing Calibration Verification	CCV		50 mL	NA	NA	2 Weeks	B4J0067
Initial Calibration High - CAL8		25 mL	Composite	In-house	From S08		B4J0060
BONNER-1		0.2375 mL		Inorganic Ventures	H2-MEB546053	Oct-15	B4J0059
BAT-15		1.0 mL		Inorganic Ventures	J2-MEB582109	Sep-15	B5I0014
BAT - 200.8TS	TUNE	0.5 mL	50 mL	In-house	NA	2 Weeks	B3J0005
BAT - TUNE A	TUNE A	0.05 mL	50 mL	In-house	NA	2 weeks	B4J0064
BAT - TUNE D	TUNE D	0.5 mL	50 mL	In-house	NA	2 weeks	B5I0011
CLP-MS-SPK	Matrix Spike (Water)	0.5 mL	50 mL	Inorganic Ventures	J2-MEB568045	Jul-15	B5I0019
MSSE-100PPM		0.045 mL		SCP Science	From Se-1000ppm LIMS ID B4G0145	Oct-15	B4L0024
CLP-MS-SPK	Matrix Spike (Soil)	1.0 mL	100 mL	Inorganic Ventures	J2-MEB568045	Jul-15	B5I0029
MSSE-100PPM		0.09 mL		SCP Science	From Se-1000ppm LIMS ID B4G0145	Oct-15	B4L0024
BAT-11	LCS01 (Water)	0.1 mL	50 mL	Inorganic Ventures	G2-MEB466037	Jan-16	B5E0061
MA-CRQL-WATER-2542.1	LCS02 (Water)	1.0 mL	50 mL	In-House	NA	Jan-15	B5L0085
BAT-11	LCS01 (Soil)	1.0 mL	100 mL	Inorganic Ventures	G2-MEB466037	Jan-16	B5E0061
Thallium - 10 PPM	LCS02 (Soil)	0.25 mL	100 mL	In-House	NA	Jan-15	B5G0173

* Dilutions of calibration stds. CCV, & 200.8TS are made with the same acid water as the S0. ICB & CCB
* Dilutions of ICV. ICSA. ICSAB. Tune A. & Tune D are made with 1% HNO3
** Date lot expires reflects the date that the standard being described will expire

Prepared By: 12-15-15
Analyst/Date

Reviewed By: 12/28/15
Name/Date

ISM02.3 Standard & QC Log
Standards & QC for ICPMS01 MA 2542.1 were prepared on: 01/04/2016

Description	EPA ID	Amount Spiked	Volume Made	Manufacturer	Lot#	Date Lot Expires**	LIMs ID
BAT-11				Inorganic Ventures	F2-MEB466037	Jan-16	B5E0061
BAISM-MIX1				Inorganic Ventures	J2-MEB586055	Jul-16	B5H0038
BAT-13				Inorganic Ventures	J2-MEB586056	Jul-16	B5H0037
BAT-15				Inorganic Ventures	J2-MEB582109	Sep-16	B5I0014
BONNER-1				Inorganic Ventures	H2-MEB546053	Oct-15	B4J0063
Initial Calibration High - CALA	S10	NA	50 mL	Inorganic Ventures	NA	2 Weeks	B4J0062
BONNER-1		0.625 mL			H2-MEB546053	Oct-15	B4J0063
Initial Calibration High - CAL9	S09	NA	50 mL	Inorganic Ventures	NA	2 Weeks	B4J0061
BAT-15		2.5 mL			J2-MEB582109	Aug-16	B5I0014
Initial Calibration High - CAL8	S08		100 mL	Inorganic Ventures	NA	2 Weeks	B4J0059
BAT-13		2.0 mL	Composite		J2-MEB586056	Jul-16	B5H0037
BAISM-MIX1		2.0 mL			J2-MEB586055	Jun-16	B5H0038
BONNER-1		0.25 mL			H2-MEB546053	Oct-15	B4J0063
Initial Calibration Mid - CAL7	S07	25 mL	50 mL	Inorganic Ventures	From S08	2 Weeks	B4J0058
Initial Calibration Mid - CAL6	S06	2.5 mL	50 mL	Inorganic Ventures	From S08	2 Weeks	B4J0057
Initial Calibration Mid - CAL5	S05	0.5 mL	50 mL	Inorganic Ventures	From S08	2 Weeks	B4J0056
Initial Calibration Low - CAL4	S04		50 mL	Inorganic Ventures	NA	2 Weeks	B4J0055
BAT- 11		0.05 mL			F2-MEB466037		B5E0061
Initial Calibration Low - CAL3	S03		50 mL	Inorganic Ventures	NA	2 Weeks	B4J0054
BAT- 11		0.025 mL			F2-MEB466037		B5E0061
Initial Calibration Low - CAL2	S02		50 mL	Inorganic Ventures	NA	2 Weeks	B4J0053
BAT- 11		0.01 mL			F2-MEB466037		B5E0061
Initial Calibration Low - CAL1	S01	NA	NA	In-house	NA	2 Weeks	B5H0062
ICV-1	ICV	1.0 mL	50 mL	EPA	ICV-1 (0307)	2 Weeks	B4J0065
Interelement Check Standard A	ISCA	5.0 mL	50 mL	In-house	NA		B4J0066
Interelement Check Standard AB	ICSAB		50 mL	EPA	ICS-MS (0803)	2 Weeks	B4J0067
ICS PART A		5.0 mL	Composite	EPA	ICS-MS (0803)	2 Weeks	B4J0066
ICS PART B		5.0 mL					B4J0067
Continuing Calibration Verification	CCV		50 mL	NA	NA	2 Weeks	B4J0067
Initial Calibration High - CAL8		25 mL	Composite	In-house	From S08		B4J0060
BONNER-1		0.2375 mL		Inorganic Ventures	H2-MEB546053	Oct-15	B4J0059
BAT-15		1.0 mL		Inorganic Ventures	J2-MEB582109	Sep-15	B5I0014
BAT - 200.8TS	TUNE	0.5 mL	50 mL	In-house	NA	2 Weeks	B3J0005
BAT - TUNE A	TUNE A	0.05 mL	50 mL	In-house	NA	2 weeks	B4J0064
BAT - TUNE D	TUNE D	0.5 mL	50 mL	In-house	NA	2 weeks	B5I0011
CLP-MS-SPK	Matrix Spike (Water)	0.5 mL	50 mL	Inorganic Ventures	J2-MEB568045	Jul-15	B5I0019
MSSE-100PPM		0.045 mL		SCP Science	From Se-1000ppm LIMS ID B4G0145	Oct-15	B4L0024
CLP-MS-SPK	Matrix Spike (Soil)	1.0 mL	100 mL	Inorganic Ventures	J2-MEB568045	Jul-15	B5I0029
MSSE-100PPM		0.09 mL		SCP Science	From Se-1000ppm LIMS ID B4G0145	Oct-15	B4L0024
BAT-11	LCS01 (Water)	0.1 mL	50 mL	Inorganic Ventures	G2-MEB466037	Jan-16	B5E0061
MA-CRQL-WATER-2542.1	LCS02 (Water)	1.0 mL	50 mL	In-House	NA	Jan-15	B5L0085
BAT-11	LCS01 (Soil)	1.0 mL	100 mL	Inorganic Ventures	G2-MEB466037	Jan-16	B5E0061
Thallium - 10 PPM	LCS02 (Soil)	0.25 mL	100 mL	In-House	NA	Jan-15	B5G0173

* Dilutions of calibration stds. CCV. & 200.8TS are made with the same acid water as the S0. ICB & CCB
* Dilutions of ICV. ICSA. ICSAB. Tune A. & Tune D are made with 1% HNO3
** Date lot expires reflects the date that the standard being described will expire

Prepared By: 1/4/16
Analyst/Date

Reviewed By: 1/4/16
Name/Date

TUNE PREPARATION LOG

TUNE A

Lims ID: B510036

Preparation Date: 09·11·2015

Prepared By: LEM

Reagents	Conc. mg/L	Amount	Supplier	Lot Number	Received Date	Expiration Date
Nitric Acid	1%	46.75 mL	BATCO	N/A	N/A	N/A
Barium	1000	0.5 mL	SCP Science	S131017004	10·2014	10·1·2015
Cobalt	1000	0.5 mL	SCP Science	S131203009	10·2014	10·1·2015
Lithium-6	1000	0.5 mL	Inorganic Ventures	G2·LI03005	12·2·2014	01·01·16
Uranium	1000	0.5 mL	Inorganic Ventures	H2·U01116	06·01·15	06·01·16
Is_Sc_In	667	0.75 mL	BATCO	N/A	12·6·2014	12·4·2015
Cerium	1000	0.5 mL	Inorganic Ventures	G2CE01056	12·2015	01·01·2016

Balance ID: NA

Instrument: ICPMS01

Final Volume: 50 mL

Concentration: 10 mg/L

Used For: Tune A

Expiration Date: 12 months after preparation date

Comments: 0.05 mL to 50 mL for Daily Tune A

Reviewed By: 9/14/15
Supervisor/Date

TUNE PREPARATION LOG

TUNE D

Lims ID: B510011

Preparation Date: 09.02.2015

Prepared By: LEM

Reagents	Conc. mg/L	Amount	Supplier	Lot Number	Received Date	Expiration Date
Nitric Acid	1%	32.55 mL	BATCO	N/A	N/A	N/A
Aluminum	10000	0.1 mL	Inorganic Ventures	J2-AL05009	8.10.15	8.10.16
Arsenic	1000	1 mL	SCP Science	S140326010	10.14	10.1.15
Barium	1000	1 mL	SCP Science	S131017004	10.14	10.1.15
Beryllium	1000	1 mL	SCP Science	S140414006	10.14	10.1.15
Calcium	10000	0.1 mL	SCP Science	S140331015	10.14	10.1.15
Cadmium	1000	1 mL	SCP Science	S131206019	10.14	10.1.15
Cobalt	1000	1 mL	SCP Science	S131203009	10.14	10.1.15
Chromium	1000	1 mL	SCP Science	S140414008	10.14	10.1.15
Copper	1000	1 mL	SCP Science	S140515074	10.14	10.1.15
Iron	10000	0.1 mL	Inorganic Ventures	J2-FE04047	8.10.15	8.18.16
Indium (Is_Sc_In)	667	0.75 mL	BATCO	N/A	12.02.14	12.02.15
Potassium	10000	0.1 mL	SCP Science	S140219012	10.14	10.1.15
Lithium-6	1000	2 mL	Inorganic Ventures	G2-LI03005	12.2.14	01.01.16
Magnesium	10000	0.1 mL	SCP Science	S140219010	10.14	10.1.15
Manganese	1000	1 mL	SCP Science	S140313015	10.14	10.1.15
Molybdenum	1000	1 mL	Inorganic Ventures	H2-MO02062	11.14	11.1.15
Sodium	10000	0.1 mL	SCP Science	S140204032	10.14	10.1.15
Nickel	1000	1 mL	SCP Science	S140113011	10.14	10.1.15
Lead	1000	1 mL	Inorganic Ventures	J2-PB03066	08.18.15	08.18.16
Selenium	1000	1 mL	SCP Science	S140115015	10.14	10.1.15
Thallium	1000	1 mL	SCP Science	S140116017	10.14	10.1.15
Vanadium	1000	1 mL	SCP Science	S131120006	10.14	10.1.15
Uranium	10000	0.1 mL	Inorganic Ventures	H2-U01116	08.01.15	08.01.16
Zinc	1000	1 mL	SCP Science	S140113011	10.14	10.1.15

Instrument	ICPMS01
Final Volume	50 mL
Concentration	Varies
Used For	Tune D
Expiration Date	12 months after preparation date
Comments	0.25 mL to 50 mL for Daily Tune D

Reviewed By: 9/14/15

Supervisor/Date

TUNE PREPARATION LOG

200.8TS

Lims ID: B510045

Preparation Date: 08-01-2015

Prepared By: LEM

Reagents	Conc. mg/L	Amount	Supplier	Lot Number	Received Date	Expiration Date
Nitric Acid / HCl	1%/0.5%	47.7 mL	BATCO	N/A	N/A	N/A
Beryllium	1000	0.5 mL	SCP Science	S1402141006	10 2014	10-1-15
Cobalt	1000	0.5 mL	SCP Science	S1312030009	10 2014	10-1-15
Indium (Is_Sc_In)	667	0.75 mL	BATCO	N/A	12-6-2014	12-4-2015
Lead	1000	0.5 mL	Inorganic Ventures	J2-PB18006	08 2015	08 2016
Magnesium	10000	0.05 mL	SCP Science	S1402190010	10/2014	10-1-15

Balance ID: NA

Instrument: ICPMS01

Final Volume: 50 mL

Concentration: 10 mg/L

Used For: 200.8TS

Expiration Date: 12 months after preparation date

Comments: 0.5 mL to 50 mL for Daily 200.8TS

Reviewed By: 9/14/15

Supervisor/Date

REAGENTS PREPARATION LOG

1% HNO3

Lims ID: B5L0074

Preparation Date: 12/07/15

Prepared By: LEM

Reagents	Conc. mg/L	Amount	Supplier	Lot Number	Received Date	Expiration Date
Distilled H2O	Neat	19800 mL	BATCO	NA	NA	NA
Nitric Acid	Neat	200 mL	FISHER	1115041	04/2015	04/29/2017

Balance ID: NA

Instrument: ICPMS01

Final Volume : 20 Liters

Concentration: 1% HNO3

Used For: ICV, ICSA, ICSAB,TUNE, Soil Samples

Expiration Date 12 months after preparation date

Comments

Reviewed By: 12/10/15

Supervisor/Date

REAGENTS PREPARATION LOG

ICPMS01 Reference Standard

Lims ID: B5L0004

Preparation Date: 12-17-2015 Prepared By: LEM

Reagents	Conc. mg/L	Amount	Supplier	Lot Number	Received Date	Expiration Date
Distilled Water	Neat	19780 mL	BATCO	NA	NA	NA
Nitric Acid	Neat	200 mL	FISHER	1115041	04/2015	4/20/2017
6020ISS	10	20 mL	INORGANIC VENTURES	H2-MEB54W51	12-12-14	1/2016
^{6}Lithium	1000	1.2 mL	INORGANIC VENTURES	G2-LIU5W05	12-12-14	1/2016
IS_Sc_In	1000/667	0.3 mL	BATCO	NA	NA	2/2016

IS_Sc_In

Reagents	Conc. mg/L	Amount	Supplier	Lot Number	Received Date	Expiration Date
5% Nitric Acid	Neat	100 mL	BATCO		NA	
Scandium	Neat	100 mg	ALDRICH	75106371D	NA	NA
Indium	Neat	66.7 mg	ALDRICH	MKBL4854	NA	NA

Balance ID: MIV

Instrument: ICPMS01

Final Volume: 20 Liters

Concentration: Bi, Ho, Rh, Tb, Y 10ppb / ^{6}Li 70ppb / Sc 25ppb / In 20ppb in 1%HNO_3

Used For: Internal Standard for ICP-MS

Expiration Date:

Comments: The 5% HNO3 should be warm when adding the Scandium and Indium to help go in solution.

Reviewed By: 12/18/15

Supervisor/Date

REAGENTS PREPARATION LOG

Acidified Water

Lims ID: B5L0036

Preparation Date: 12/04/15 Prepared By: LEM

Reagents	Conc. mg/L	Amount	Supplier	Lot Number	Received Date	Expiration Date
Distilled H2O	Neat	19700 mL	BATCO	NA	NA	NA
Nitric Acid	Neat	200 mL	FISHER	1115060	07/2015	07/18/17
Hydrochloric Acid	Neat	100 mL	FISHER	4113110	11/2014	12/2016

Balance ID: NA

Instrument: ICPMS01

Final Volume : 20 Liters

Concentration: 1%HNO3 / 0.5%HCl

Used For: Preparation of Standards and Controls

Expiration Date 12 months after preparation date

Comments

Reviewed By: 12/9/15

Supervisor/Date

ISM02.2 CLP STANDARDS CONCENTRATION

Element	S02 1/5CRQL	S03 1/2CRQL	S04 CRQL	S05 S10	S06 S50	S07 S500	S08 S1000	S09 S5000	S10 S125000	ICV	LCS (ug/L)	LCS (mg/kg)	ICSA	ICSAB	CCV	MS (ug/L)	MS (mg/kg)	TUNE
Al	4	10	20	260	1300	13000	26000		125000	504	40		(100000)	(100000)	62500			
Ag	0.2	0.5	1	1.3	6.5	65	130			100	2	1	(0)	18	65	50	5	
As	0.2	0.5	1	10	50	500	1000			200	2	1	(0.1)	19	500	40	4	
Ba	2	5		10	50	500	1000	5000		99	20	10	(1.2)	22	2500	2000	200	
Be	0.2	0.5	1	10	50	500	1000			99	2	1	(0)	19	500	50	5	100
Ca	100	250	500	250	1250	12500	25000		125000	2005	1000		(100000)	(100000)	62500			
Cd	0.2	0.5	1	10	50	500	1000			99	2	1	(0.7)	20	500	50	5	
Co	0.2	0.5	1	10	50	500	1000			100	2	1	1	20	500	500	50	100
Cr	0.4	1	2	10	50	500	1000			98	4	2	21	40	500	200	20	
Cu	0.4	1	2	10	50	500	1000			98	4	2	8	25	500	250	25	
Fe	40	100	200	250	1250	12500	25000		125000	1016	400		(100000)	(100000)	62500			
Mg	100	250	500	250	1250	12500	25000		125000	1215	1000		(100000)	(100000)	62500			100
Mn	0.2	0.5	1	10	50	500	1000	5000		100	2	1	7	27	500	500	50	
Na	100	250	500	250	1250	12500	25000		125000	2019	1000		(100000)	(100000)	62500			
Ni	0.2	0.5	1	10	50	500	1000			101	2	1	6	24	500	500	50	
Pb	0.2	0.5	1	10	50	500	1000			200	2	1	4	25	500	20	2	100
K	100	250	500	250	1250	12500	25000		125000	2004	1000		(100000)	(100000)	62500			
Sb	0.4	1	2	10	50	500	1000			199	4	2	(1.5)	22	500	100	10	
Se	1	2.5	5	10	50	500	1000			206	10	5	(0.3)	19	500	100	10	
Tl	0.2	0.5	1	10	50	500	1000			206	2	1	(0)	21	500	50	5	
V	1	2.5	5	10	50	500	1000			100	10	5	(0.5)	19	500	500	50	
Zn	0.4	1	2	10	50	500	1000	5000		205	4	2	11	29	2500	500	50	

Units are ug/L unless noted otherwise
( ) Indicates analyte values that are less than the CRQL and the value is to be used as a set point for the +/-2 times the CRQL acceptance criteria calculations
In is also in the Tune at 100 ppb

EPA SAMPLE NO.

MF6R32

FORM 1-IN
INORGANIC ANALYSIS DATA SHEET

Lab Name: Bonner Analytical Testing Co. Contract: EPW14029

Lab Code: BON Case No.: 45671 MA No.: SDG No.: MF6R32

Matrix: Water Lab Sample ID: 5120223-01

% Solids: Date Received: 12/16/2015

Analytical method: CVAA

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

CAS NO.	Analyte	Concentration	Q	Date Analyzed	Time Analyzed
7439-97-6	Mercury	0.15	J	12/23/2015	0954

NOTE: Hardness (total) is reported in mg/L

Comments:
Filtered

EPA SAMPLE NO.

MF6R42

FORM 1-IN
INORGANIC ANALYSIS DATA SHEET

Lab Name: Bonner Analytical Testing Co. Contract: EPW14029

Lab Code: BON Case No.: 45671 MA No.: SDG No.: MF6R32

Matrix: Water Lab Sample ID: 5120223-02

% Solids: Date Received: 12/16/2015

Analytical method: CVAA

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

CAS NO.	Analyte	Concentration	Q	Date Analyzed	Time Analyzed
7439-97-6	Mercury	0.20	U	12/23/2015	1002

NOTE: Hardness (total) is reported in mg/L

Comments:
Filtered

EPA SAMPLE NO.

MF6R44

FORM 1-IN
INORGANIC ANALYSIS DATA SHEET

Lab Name: Bonner Analytical Testing Co. Contract: EPW14029

Lab Code: BON Case No.: 45671 MA No.: SDG No.: MF6R32

Matrix: Water Lab Sample ID: 5120223-03

% Solids: Date Received: 12/16/2015

Analytical method: CVAA

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

CAS NO.	Analyte	Concentration	Q	Date Analyzed	Time Analyzed
7439-97-6	Mercury	0.20	U	12/23/2015	1005

NOTE: Hardness (total) is reported in mg/L

Comments:
Filtered

EPA SAMPLE NO.

MF6R45

FORM 1-IN
INORGANIC ANALYSIS DATA SHEET

Lab Name: Bonner Analytical Testing Co. Contract: EPW14029

Lab Code: BON Case No.: 45671 MA No.: SDG No.: MF6R32

Matrix: Water Lab Sample ID: 5120223-04

% Solids: Date Received: 12/16/2015

Analytical method: CVAA

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

CAS NO.	Analyte	Concentration	Q	Date Analyzed	Time Analyzed
7439-97-6	Mercury	0.20	U	12/23/2015	1007

NOTE: Hardness (total) is reported in mg/L

Comments:
Filtered

EPA SAMPLE NO.

MF6R46

FORM 1-IN
INORGANIC ANALYSIS DATA SHEET

Lab Name: Bonner Analytical Testing Co. Contract: EPW14029

Lab Code: BON Case No.: 45671 MA No.: SDG No.: MF6R32

Matrix: Water Lab Sample ID: 5120223-05

% Solids: Date Received: 12/16/2015

Analytical method: CVAA

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

CAS NO.	Analyte	Concentration	Q	Date Analyzed	Time Analyzed
7439-97-6	Mercury	0.20	U	12/23/2015	1010

NOTE: Hardness (total) is reported in mg/L

Comments:
Filtered

EPA SAMPLE NO.

MF6R47

FORM 1-IN
INORGANIC ANALYSIS DATA SHEET

Lab Name: Bonner Analytical Testing Co. Contract: EPW14029

Lab Code: BON Case No.: 45671 MA No.: SDG No.: MF6R32

Matrix: Water Lab Sample ID: 5120223-06

% Solids: Date Received: 12/16/2015

Analytical method: CVAA

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

CAS NO.	Analyte	Concentration	Q	Date Analyzed	Time Analyzed
7439-97-6	Mercury	0.20	U	12/23/2015	1012

NOTE: Hardness (total) is reported in mg/L

Comments:
Filtered

FORM 2-IN
INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: Bonner Analytical Testing Co. Contract: EPW14029

Lab Code: BON Case No.: 45671 MA No.: SDG No.: MF6R32

Initial Calibration Verification Source: USEPA, Lot: EPA (0508)

Continuing Calibration Verification Source: LEEMAN, Lot: B5G0070

Run Batch: BL52306H122315B Analytical method: CVAA

Concentration Units: ug/L

	Initial Calibration Verification				Continuing Calibration Verification						
	ID: ICV01				ID: CCV01				ID: CCV02		
Analyte	True	Found	%R	%RSD	True	Found	%R	%RSD	Found	%R	%RSD
Mercury	4.0000	4.1	103		3.0000	3.0	101		2.8	92	

FORM 3-IN
BLANKS

Lab Name: Bonner Analytical Testing Co. Contract: EPW14029

Lab Code: BON Case No.: 45671 MA No.: SDG No.: MF6R32

Preparation Blank Matrix: Water

Preparation Blank Concentration Units (µg/L, mg/L, mg/kg dry weight, or µg): ug/L

Analytical method: CVAA Preparation Batch: PL22005

Run Batch: BL52306H122315B Preparation Method: 7470A

	Initial Calibration Blank (ug/L)		Continuing Calibration Blank (ug/L)						Preparation Blank/Leachate Extraction Blank	
Analyte	ID: ICB01	Q	ID: CCB01	Q	ID: CCB02	Q	ID:	Q	ID: PBW01	Q
Mercury	0.20	U	-0.044	J	-0.047	J			-0.020	J

NOTE: Hardness (total) is reported in mg/L

EPA SAMPLE NO.

MF6R42S

FORM 5A-IN
MATRIX SPIKE SAMPLE RECOVERY

Lab Name: Bonner Analytical Testing Co. Contract: EPW14029

Lab Code: BON Case No.: 45671 MA No.: SDG No.: MF6R32

Matrix: Water Analytical Method: CVAA

% Solids:

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

Analyte	Control Limit %R	Spiked Sample Result (SSR)	Q	Sample Result (SR)	Q	Spike Added (SA)	%R	Q
Mercury	75-125	0.97		0.20	U	1.00	97	

EPA SAMPLE NO.

FORM 6-IN
DUPLICATES

MF6R42D

Lab Name: Bonner Analytical Testing Co. Contract: EPW14029

Lab Code: BON Case No.:45671 MA No.: SDG No.: MF6R32

Matrix: Water Analytical Method: CVAA

% Solids:

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

Analyte	Control Limit	Sample (S)	Q	Duplicate (D)	Q	RPD	Q
Mercury		0.20	U	0.20	U		

NOTE: Hardness (total) is reported in mg/L

FORM 9-IN
METHOD DETECTION LIMIT

Lab Name: Bonner Analytical Testing Co. Contract: EPW14029

Lab Code: BON Case No.: 45671 MA No.: SDG No.: MF6R32

Analytical Method: CVAA Instrument ID: CETAC01

Preparation Method: 7470A

Concentration Units (µg/L, µg, or mg/kg): ug/L

Analyte	Wavelength/Mass	MDL	Date Analyzed
Mercury	257.00 nm	0.019	01/13/2015

FORM 12-IN
ANALYSIS LOG

Lab Name: Bonner Analytical Testing Co. Contract: EPW14029

Lab Code: BON Case No.: 45671 MA No.: SDG No.: MF6R32

Instrument ID: CETAC01 Analytical Method: CVAA

Start Date: 12/23/2015 End Date: 12/23/2015

Run Batch: BL52306H122315B

EPA Sample NO.	D/F	Time	Analytes																									
			Al	Sb	As	Ba	Be	Cd	Ca	Cr	Co	Cu	Fe	Pb	Mg	Mn	Hg	Ni	K	Se	Ag	Na	Tl	V	Zn	CN		
S01	1.0	0924															X											
S02	1.0	0927															X											
S03	1.0	0929															X											
S04	1.0	0932															X											
S05	1.0	0934															X											
S06	1.0	0937															X											
S07	1.0	0939															X											
ICV01	1.0	0942															X											
ICB01	1.0	0944															X											
CCV01	1.0	0947															X											
CCB01	1.0	0949															X											
MF6R32	1.0	0954															X											
MF6R42	1.0	1002															X											
MF6R44	1.0	1005															X											
MF6R45	1.0	1007															X											
MF6R46	1.0	1010															X											
MF6R47	1.0	1012															X											
MF6R42S	1.0	1015															X											
MF6R42D	1.0	1017															X											
PBW01	1.0	1024															X											
CCV02	1.0	1028															X											
CCB02	1.0	1030															X											

FORM 15-IN
INITIAL CALIBRATION

Lab Name: Bonner Analytical Testing Co. Contract: EPW14029

Lab Code: BON Case No.: 45671 MA No.: SDG No.: MF6R32

Instrument ID: CETAC01 Start Date: 12/23/2015

Analytical method: CVAA Run Batch: BL52306H122315B

Concentration Units: ug/L

Analyte	True	Found	%D	True	Found	%D	True	Found	%D
Mercury	0.0	-0.0076		0.10	0.10	-5	0.20	0.20	1

FORM 15-IN
INITIAL CALIBRATION

Lab Name: Bonner Analytical Testing Co. Contract: EPW14029

Lab Code: BON Case No.: 45671 MA No.: SDG No.: MF6R32

Instrument ID: CETAC01 Start Date: 12/23/2015

Analytical method: CVAA Run Batch: BL52306H122315B

Concentration Units: ug/L

Analyte	True	Found	%D	True	Found	%D	True	Found	%D
Mercury	0.50	0.51	-2	1.0	0.98	2	3.0	3.0	-1

FORM 15-IN
INITIAL CALIBRATION

Lab Name: Bonner Analytical Testing Co. Contract: EPW14029

Lab Code: BON Case No.: 45671 MA No.: SDG No.: MF6R32

Instrument ID: CETAC01 Start Date: 12/23/2015

Analytical method: CVAA Run Batch: BL52306H122315B

Concentration Units: ug/L

Analyte	True	Found	%D	True	Found	%D	True	Found	%D
Mercury	6.0	6.0	0						

FORM 16-IN
INITIAL CALIBRATION SUMMARY

Lab Name: Bonner Analytical Testing Co.
Contract: EPW14029
Lab Code: BON
Case No.: 45671
MA No.:
SDG No.: MF6R32
Instrument ID: CETAC01
Start Date: 12/23/2015
Analytical method: CVAA
Run Batch: BL52306H122315B

Analyte	Corr. Coeff.	Slope	Intercept	Calib. Type	Weighting
Mercury	0.9999397	20649.95	0.0789870	Lin. Reg	None

Bonner Analytical Testing Company

Instrument ID: ~~ICPMS01~~ CETMC01 Calibration ID: B552008 Calibration Date: 12/23/2015 by NDP

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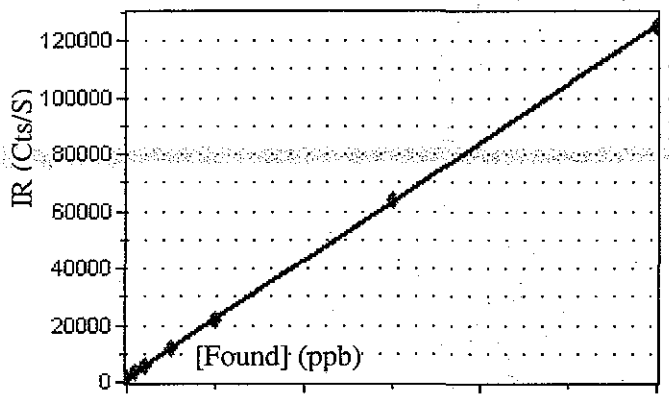
ISM023 - Mercury - Mercury



Calibration Plot: Mercury
Calibration Type: Linear Regression
Corr. Coeff.: 0.9999397
Fit: [Y] = 20649.95 * [X] + 1631.078

Sequence Std. Name	LIMS ID	True Conc. (ppb)	Found Conc. (ppb)	IR (Cts/S)	Difference (%)
BL52306-CAL1	B5I0098	0	-0.01	1474	0
BL52306-CAL2	B5I0097	0.1	0.10	3793	-5
BL52306-CAL3	B5I0096	0.2	0.20	5720	1
BL52306-CAL4	B5I0095	0.5	0.51	12210	-2
BL52306-CAL5	B5I0094	1	0.98	21770	2
BL52306-CAL6	B5I0093	3	3.03	64170	-1
BL52306-CAL7	B5I0092	6	5.99	125300	0

Bonner Analytical Testing Company

Report Generated By Teledyne Leeman QuickTrace

Analyst: nprice

Worksheet file: \\BATCO-SERVER\Share Folders\InstData\Cetac01\2015\Worksheet\H122315B.wszf

Creation Date: 10/9/2015 4:23:52 PM

Comment:

Results

Sample Name		Type	Date/Time	Conc (ppb)	µAbs	%RSD	Residual	Flags	% Recovery
SEQ-CAL1@S01		STD	12/23/15 09:24:30 am	0.0000	1474	0.00	-7.52		N/A
Replicates	1474.0								
SEQ-CAL2@S02		STD	12/23/15 09:27:01 am	0.1000	3793	0.00	4.75		N/A
Replicates	3792.8								
SEQ-CAL3@S03		STD	12/23/15 09:29:33 am	0.2000	5720	0.00	-1.93		N/A
Replicates	5720.2								
SEQ-CAL4@S04		STD	12/23/15 09:32:05 am	0.5000	12212	0.00	12.40		N/A
Replicates	12212.4								
SEQ-CAL5@S05		STD	12/23/15 09:34:37 am	1.0000	21769	0.00	-24.88		N/A
Replicates	21769.1								
SEQ-CAL6@S06		STD	12/23/15 09:37:10 am	3.0000	64172	0.00	28.17		N/A
Replicates	64171.8								
SEQ-CAL7@S07		STD	12/23/15 09:39:43 am	6.0000	125324	0.00	-10.99		N/A
Replicates	125323.8								

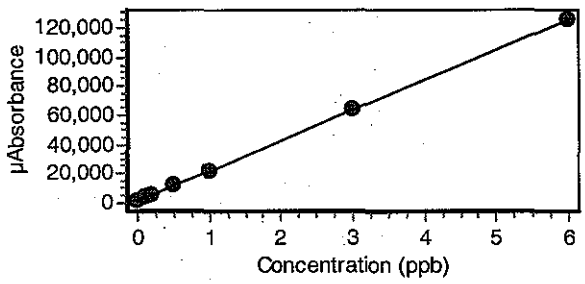
Calibration

Equation: Abs = 20653.556x + 1629.396

R2: 0.99994

SEE: 388.5635

Flags:



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SEQ-ICV@ICV001		ICV	12/23/15 09:42:16 am	4.1280	86891	0.00			103.20
Replicates	86890.5								
SEQ-ICB@ICB001		ICB	12/23/15 09:44:47 am	-0.0148	1324	0.00			N/A
Replicates	1324.0								
SEQ-CCV@CCV001		CCV	12/23/15 09:47:19 am	3.0440	64491	0.00			101.45
Replicates	64491.4								
SEQ-CCB@CCB001		CCB	12/23/15 09:49:51 am	-0.0439	724	0.00			N/A
Replicates	723.6								
5120223-01@MF6R32		UNK	12/23/15 09:54:59 am	0.0740	3159	0.00			N/A
Replicates	3158.7								

Sample Name	Type	Date/Time	Conc (ppb)	µAbs	%RSD	Residual Flags	% Recovery
5120223-02@MF6R42	UNK	12/23/15 10:02:44 am	-0.0184	1249	0.00		N/A
Replicates 1249.0							
5120223-03@MF6R44	UNK	12/23/15 10:05:15 am	0.0021	1672	0.00		N/A
Replicates 1672.4							
5120223-04@MF6R45	UNK	12/23/15 10:07:48 am	-0.0150	1320	0.00		N/A
Replicates 1320.1							
5120223-05@MF6R46	UNK	12/23/15 10:10:20 am	-0.0061	1504	0.00		N/A
Replicates 1503.5							
5120223-06@MF6R47	UNK	12/23/15 10:12:52 am	-0.0263	1086	0.00		N/A
Replicates 1086.1							
PL22005-MS1@MF6R42S	UNK	12/23/15 10:15:24 am	0.9648	21556	0.00		N/A
Replicates 21556.1							
PL22005-DUP1@MF6R42D	UNK	12/23/15 10:17:56 am	-0.0232	1151	0.00		N/A
Replicates 1151.2							
PL22005-BLK1@PBW01	UNK	12/23/15 10:24:46 am	-0.0199	1217	0.00		N/A
Replicates 1217.4							
SEQ-CCV@CCV~~3~~02	CCV	12/23/15 10:28:04 am	2.7570	58571	0.00		91.90
Replicates 58570.9							
SEQ-CCB@CCB~~3~~02	CCB	12/23/15 10:30:35 am	-0.0470	658	0.00		N/A
Replicates 657.9							

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File Name: H122315B SDG No.: MF6R32 Standards Prep Date: 12/23/15

Instrument: CETAC01 Case No.: 45671 Standards Log Page No.: 28

Analyst: NDP

Lab ID	EPA Sample #	Date&Time	Elements circled for S0-S# were used throughout this run unless otherwised noted. Hg
BL52306-CAL1	S01	12/23/15 9:24	
BL52306-CAL2	S02	12/23/15 9:27	
BL52306-CAL3	S03	12/23/15 9:29	
BL52306-CAL4	S04	12/23/15 9:32	
BL52306-CAL5	S05	12/23/15 9:34	
BL52306-CAL6	S06	12/23/15 9:37	
BL52306-CAL7	S07	12/23/15 9:39	
BL52306-ICV1	ICV01	12/23/15 9:42	
BL52306-ICB1	ICB01	12/23/15 9:44	
BL52306-CCV1	CCV01	12/23/15 9:47	
BL52306-CCB1	CCB01	12/23/15 9:49	
5120223-01	MF6R32	12/23/15 9:54	
5120223-02	MF6R42	12/23/15 10:02	
5120223-03	MF6R44	12/23/15 10:05	
5120223-04	MF6R45	12/23/15 10:07	
5120223-05	MF6R46	12/23/15 10:10	
5120223-06	MF6R47	12/23/15 10:12	
PL22005-MS1	MF6R42S	12/23/15 10:15	
PL22005-DUP1	MF6R42D	12/23/15 10:17	
PL22005-BLK1	PBW01	12/23/15 10:24	
BL52306-CCV2	CCV02	12/23/15 10:28	
BL52306-CCB2	CCB02	12/23/15 10:30	

PREPARATION BENCH SHEET

PL22005

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Matrix: Water

Bonner Analytical Testing Co.

Case: 45671

Analysis: ISM023 - Mercury

SDG: MF6R32

Prepared: 12/22/2015 14:40 using METALS - 7470A

Work Order: 5120223

Lab Number	Sample ID	Initial (mL)	Final (mL)	Spike ID	Spike Amount (uL)	Spike ID	Spike Amount (uL)	pH
5120223-01	MF6R32	25	50					< 2
5120223-02	MF6R42	50	50					< 2
5120223-03	MF6R44	50	50					< 2
5120223-04	MF6R45	50	50					< 2
5120223-05	MF6R46	50	50					< 2
5120223-06	MF6R47	50	50					< 2
~~PL22005-PS1~~	~~[SOURCE]A~~	~~50~~	~~50~~					~~< 2~~
PL22005-MS1	MF6R42S	50	50	B5F0118	500			< 2
~~PL22005-BS1~~	~~LCS01~~	~~50~~	~~50~~					~~< 2~~
PL22005-DUP1	MF6R42D	50	50					< 2
PL22005-BLK1	PBW01	50	50					< 2

Table 1: Quality Controls (QC), Reagents (R) and Standards (Std)

LIMS ID	Description	Vendor	LotNum
B5F0118	HG - MATRIX SPIKE 0.1 ppm	In-House	S-WS
B5I0083	R - Sulfuric Acid, Concentrated	Fisher	144219
B5J0020	R - Nitric Acid, Concentrated	Fisher	1115041
B5J0057	Potassium Persulfate	Fisher	1
B5L0022	R - Stannous Chloride, 10%	In-House	NA
B5L0068	R - Sodium Chloride Hydroxylan	In-House	NA
B5L0071	R - Potassium Permanganate, 5%	In-House	NA

Table 3: Hg Calibration Curve Procedure

EPA ID	Std. Discription	WATER		SOIL	
		Spike V. (uL)	F.V. (mL)	Spike V. (uL)	F.V. (mL)
S01/ICB/CCB	Cal Blank/ICB/CCB	0	50	0	100
S02	Cal Std 0.1 ppb	50	50	100	100
S03	Cal Std 0.2 ppb	100	50	200	100
S04	Cal Std 0.5ppb	250	50	500	100
S05	Cal Std 1 ppb	500	50	1000	100
S06/CCV	Cal Std/CCV 3 ppb	1500	50	3000	100
S07	Cal Std 6 ppb	3000	50	6000	100
ICV	ICV 4.0 ppb	500	50	1000	100

These are the spike values used for Water and Soil calibration curves. These standards are associated to this batch only and were digested under the same conditions as the samples. See Matrix type to determine which spike volume (Spike V.) and final volume (F.V.) were used.

Table 2: Hg Digestion Apparatus

Balance ID		NA					
Dig. Block ID		1					
Start Temp	Stop Temp	98	98				
Start Time	Stop Time	1440	1640				

Comments:

NDP 12/22/2015

Perpared By Date

1/4/16

Preparation Reviewed By Date

ISM02.2 Hg Standard & QC Log

Analyst: NDP Date: 12/23/15

Description	EPA ID	Amount Spiked	Volume Made	Manufacturer	Lot#	Date Lot Expires	Final Conc. (ug/L)	LIMS ID
Initial Calibration Working Std.	S-WS		50 mL	Inorganic Ventures	NA	1 month	~~10~~ 100 ppb	B5I0091
Hg @ 10 ppm		0.5 mL	Composite		H2-HG02129	Sep-16		B5I0086
Initial Calibration High	S07		100 mL (soil) 50 mL (water)	Inorganic Ventures	NA	1 Day	6.0 ppb	B5I0092
Initial Calibration Working Std.	S-WS	6.0 mL (soil) 3.0 mL (water)	Composite		From S-WS	1 month		B5I0091
Initial Calibration Mid/Continuing Calibration Verification	S06/CCV		100 mL (soil) 50 mL (water)	Inorganic Ventures	NA	1 Day	3.0 ppb	B5I0093
Initial Calibration Working Std.	S-WS	3.0 mL (soil) 1.5 mL (water)	Composite		From S-WS	1 month		B5I0091
Initial Calibration Mid	S05		100 mL (soil) 50 mL (water)	Inorganic Ventures	NA	1 Day	1.0 ppb	B5I0094
Initial Calibration Working Std.	S-WS	1.0 mL (soil) 0.5 mL (water)	Composite		From S-WS	1 month		B5I0091
Initial Calibration Low	S04		100 mL (soil) 50 mL (water)	Inorganic Ventures	NA	1 Day	0.5 ppb	B5I0095
Initial Calibration Working Std.	S-WS	0.5 mL (soil) 0.25 mL (water)	Composite		From S-WS	1 month		B5I0091
Initial Calibration Low	S03		100 mL (soil) 50 mL (water)	Inorganic Ventures	NA	1 Day	0.2 ppb	B5I0096
Initial Calibration Working Std.	S-WS	0.2mL (soil) 0.1mL (water)	Composite		From S-WS	1 month		B5I0091
Initial Calibration Low	S02		100 mL (soil) 50 mL (water)	Inorganic Ventures	NA	1 Day	0.1 ppb	B5I0097
Initial Calibration Working Std.	S-WS	0.1mL (soil) 0.05mL (water)	Composite		From S-WS	1 month		B5I0092
Initial Calibration Blank	S01		100 mL (soil) 50 mL (water)	In-house	NA	1 Day	NA	B5I0098
Initial Calibration Blank	ICB							
Continuing Calibration Blank	CCB							
Initial Calibration Verrification	ICV		100 mL (soil) 50 mL (water)	EPA Reference Material	NA	1 Day	4.0 ppb	B5I0101
ICV-5		1.0 mL (soil) 0.5 mL (water)	Composite		0508	NA		B5I0100
Matrix Spike	MS		100 mL (soil) 50 mL (water)	Inorganic Ventures	NA	1 Day	1.0 ppb	B5I0091
Initial Calibration Working Std.	S-WS	1.0 mL (soil) 0.5 mL (water)	Composite		From S-WS	1 month		B5I0091

Note[1]: All standards and QC are brought to final volume wit the same water source that is used for S0, CCB & ICB

Reviewed By: Date: 12/28/15

REAGENTS PREPARATION LOG

Potassium Permanganate Solution

Lims ID: B5L0071

Preparation Date: 12/10/15

Prepared By: NDP

Reagents	Conc. mg/L	Amount	Supplier	Lot Number	Received Date	Expiration Date
Distilled H2O	Neat	1000 mL	BATCO	NA	NA	NA
Potassium Permanganate	Neat	50 g	fisher	149371	7/6/15	NA

Balance ID: Mettler IV

Instrument: Cetac M-7600

Final Volume: 1 Liter

Concentration: 5%

Used For: Mercury Digestion

Expiration Date: 6 months after preparation date

Comments: 50 grams to 1000 mL of Distilled Water

Reviewed By: [signature] 12/10/15

Supervisor/Date

REAGENTS PREPARATION LOG

Sodium Chloride Hydroxylamine Sulfate Solution

LIMS ID: B5L0068

Preparation Date: 12/10/15 Prepared By: NDP

Reagents	Conc. mg/L	Amount	Supplier	Lot Number	Received Date	Expiration Date
Distilled H2O	Neat	1000 mL	BATCO	NA	NA	NA
Hydroxylamine Sulfate	Neat	120	Fisher	149337	9/3/15	NA
Sodium Chloride	Neat	120	Fisher	14298	9/22/15	NA

Balance ID Mettler IV

Instrument Cetac M-7600

Final Volume 1 Liter

Concentration 24%

Used For Mercury Digestion

Expiration Date 6 months after preparation date

Comments: 120 g Hydroxylamine Sulfate and 120 g NaCl to 1 L of Distilled Water

Reviewed By: [signature] 12/14/15

Supervisor/Date

REAGENTS PREPARATION LOG

Stannous Chloride

LIMS ID: BSL0022

Preparation Date: 12/02/15 Prepared By: NDP

Reagents	Conc. mg/L	Amount	Supplier	Lot Number	Received Date	Expiration Date
Distilled H2O	Neat	900 mL	BATCO	NA	NA	NA
Stannous Chloride	Neat	100 g	Fisher	151201	8/17/15	NA
Hydrochloric Acid	Neat	1000 mL	Fisher	413070	8/17/15	NA

Balance ID NA

Instrument Cetac M-7600

Final Volume 1 Liter

Concentration 10%

Used For Solution for Cetac M-7600

Expiration Date 6 months after preparation date

Comments

Reviewed By: 12/8/15

Supervisor/Date

REAGENTS PREPARATION LOG

Potassium Persulfate Solution

Lims ID: BSJ0057

Preparation Date: 10-19-15

Prepared By: NDP

Reagents	Conc. mg/L	Amount	Supplier	Lot Number	Received Date	Expiration Date
Distilled H2O	Neat	1000 mL	BATCO	NA	NA	NA
Potassium Persulfate	Neat	50 g	Fisher	128101	6/2013	

Balance ID: Mettler IV

Instrument: Cetac M-7600

Final Volume: 1 Liter

Concentration: 5%

Used For: Mercury Digestion

Expiration Date: 6 months after preparation date

Comments: 50 grams to 1000 mL of Distilled Water

Reviewed By: [signature] 10/19/15

Supervisor/Date

ORIGIN ID:TULA (732) 321-4238
LOCKHEED MARTIN GOVT REAC GOVT
2890 WOODBRIDGE AVE
EDISON, NJ 088373659
UNITED STATES US

SHIP DATE: 15DEC15
ACTWGT: 65.60 LB
CAD: 7POS1621
DIMS: 28x16x15 IN
BILL SENDER

TO CHRIS BONNER
BONNER ANALYTICAL TESTING CO
2703 OAK GROVE RD

HATTIESBURG MS 39402
(601) 264-2854 REF:
INV:
PO: DEPT:

FedEx Express

TRK# 0215 8594 8322 0215

WED - 16 DEC 10:30A
PRIORITY OVERNIGHT

AH HBGA

39402
MS-US MSY

P. Ach
12-16-15
0943
3°C

CUSTODY SEAL
ENVIRONMENTAL SAMPLING SUPPLY
essvial.com 800-233-8425

Date: 12/15/15
Signature:

CUSTODY SEAL
ENVIRONMENTAL SAMPLING SUPPLY
www.essvial.com 800-233-

Date: 12/15/15
Signature:

COPY
ORIGINAL IN CSF: MF6R29
Signature: P. Ach

Bonner Analytical Testing Company

SAMPLE RECEIPT FORM

27

Client: CLP Date: 12-16-15

Sample Type: Grab Composite SDG#: MF6R32 Case#: 45671

Matrix: SW (stormwater) GW (groundwater) WW (wastewater) DW (drinkingwater) SL (sludge)

SO (soil) AS (asbestos) PE (petroleum) other Surface Water

1) Does this project fall under NPDES, RCRA, CLP, litigation or other EPA guidelines?	NA	YES	NO
2) Did Cooler come with airbill/sticker? Circle carrier: UPS, FedEx, other:_____ If YES, enter airbill number here: 8594 8322 0215	NA	YES	NO
3) Are custody seals intact? Custody Seal#: N/A Custody Seal#: N/A	NA	YES	NO
4) Are all bottles sealed in separate plastic bags?	NA	YES	NO
5) Are samples requiring no headspace, headspace free?	NA	YES	NO
6) Packing Material: Bubblewrap, peanuts, vermiculite, ice, other:_____		YES	NO
7) Are chains of custody filled out properly? (ink, signed, dates, QC listed, etc.)		YES	NO
8) Are all bottle labels complete and agree with COC? (ID, time, date, preservation)		YES	NO
9) Were all bottles received intact?		YES	NO
10) Were correct containers used for the tests indicated? Who's: BATCO, Client		YES	NO
11) Was a sufficient aliquot of sample sent for tests indicated?		YES	NO
12) Are samples within holding times for requested analysis?		YES	NO
13) Sample Preservation?			
A) If samples were collected within 6 hours of receipt, has chilling begun?	NA	YES	NO
B) If samples were received beyond 6 hours of collection:			
1) Is there a temperature blank?	NA	YES	NO
2) Temperature 3 °C			
C) Were correct preservatives added to sample/s?	NA	YES	NO

14) Describe "NO" items for the above if # 1) response is NA or YES

N/A

15) Is there a Corrective Action and/or Client Contact form attached? YES NO

Signature: P. Ach

COPY

ORIGINAL IN CSF: MF6R29

Signature: P. Ach

Rev No. 1.4

Date: 07/15/05

WORK ORDER

5120223

Bonner Analytical Testing Co.

Client: Environmental Protection Agency, Region 6
Project: 45671

Project Manager: Chris Bonner
Project Number: 45671

Report To:
Environmental Protection Agency, Region 6
Ray Flores
10625 Fallstone Road
Houston, TC 77099-4303
Phone: (281) 983-2139
Fax: (281) 983-2248

Invoice To:
Environmental Protection Agency, Region 6
Ray Flores
10625 Fallstone Road
Houston, TC 77099-4303
Phone :(281) 983-2139
Fax: (281) 983-2248

Date Due: 01/06/2016 15:00 (15 day TAT)

Cooler ID: Cooler-215 **Temp Received: 3.0°C** **Airbill No.: 859483220215** **TR/COC No.: 6-121515-111029-0018**
Date Received : 12/16/2015 09:43
Custody Seals Yes Containers Intact Yes COC/Labels Agree Yes Preservation Confirmed Yes Received On Ice Yes

LAB ID	EPA ID	Matrix	Sampled Date/Time	Cooler ID	Comments
5120223-01	**MF6R32**	**[Water]**	**12/14/2015 11:45**	Cooler-215	
Analysis: ISM023 - Filtered Water Analysis: ISM023 - ICPMS (2542.1) Analysis: ISM023 - Mercury					
5120223-02	**MF6R42**	**[Water]**	**12/14/2015 10:30**	Cooler-215	QC
Analysis: ISM023 - Filtered Water Analysis: ISM023 - ICPMS (2542.1) Analysis: ISM023 - Mercury					
5120223-03	**MF6R44**	**[Water]**	**12/14/2015 13:00**	Cooler-215	
Analysis: ISM023 - Filtered Water Analysis: ISM023 - Mercury Analysis: ISM023 - ICPMS (2542.1)					
5120223-04	**MF6R45**	**[Water]**	**12/14/2015 12:00**	Cooler-215	
Analysis: ISM023 - ICPMS (2542.1) Analysis: ISM023 - Filtered Water Analysis: ISM023 - Mercury					
5120223-05	**MF6R46**	**[Water]**	**12/14/2015 14:00**	Cooler-215	
Analysis: ISM023 - Filtered Water Analysis: ISM023 - ICPMS (2542.1) Analysis: ISM023 - Mercury					
5120223-06	**MF6R47**	**[Water]**	**12/14/2015 14:00**	Cooler-215	
Analysis: ISM023 - Filtered Water Analysis: ISM023 - ICPMS (2542.1) Analysis: ISM023 - Mercury					

Reviewed By

12-21-15
Date

Bonner Analytical Testing Co.
Inhouse Chain of Custody
for Samples

SDG Number: MF6R32 **Case No.:** 45671

Work Order Number: 5120223

1) MF6R32	7)	13)	19)
2) MF6R42	8)	14)	20)
3) MF6R44	9)	15)	21)
4) MF6R45	10)	16)	22)
5) MF6R46	11)	17)	23)
6) MF6R47	12)	18)	24)

Sample to be used for QC: ~~MF6R32~~ MF6R42

Name: P. Aitken Signature: P. Aitken Date &Time 12-21-15 1158 Purpose: S
Name: L MEADOWS Signature: [illegible] Date &Time 12-22-15 0900 Purpose: PD
Name: [illegible] Signature: [illegible] Date &Time 12-22-15 1400 Purpose: P/S
Name: Signature: Date &Time Purpose:
Name: Signature: Date &Time Purpose:
Name: Signature: Date &Time Purpose:
Name: Signature: Date &Time Purpose:
Name: Signature: Date &Time Purpose:
Name: Signature: Date &Time Purpose:
Name: Signature: Date &Time Purpose:
Name: Signature: Date &Time Purpose:
Name: Signature: Date &Time Purpose:
Name: Signature: Date &Time Purpose:
Name: Signature: Date &Time Purpose:

Purpose: S - Storage; W - Weigh; P - Pour; DP - Disposal; TS - Total Solids

Bonner Analytical Testing Co.
Digestate Chain of Custody
for Samples

SDG Number: MF6R32 **Case No.:** 45671

Work Order Number: 5120223 **Fraction:** MS 2542.1

1) MF6R32	7)	13)	19)
2) MF6R42	8)	14)	20)
3) MF6R44	9)	15)	21)
4) MF6R45	10)	16)	22)
5) MF6R46	11)	17)	23)
6) MF6R47	12)	18)	24)

Sample to be used for QC: MF6R42

Name	Signature	Date &Time	Purpose
L MEADOWS		12-22-15 0900	PID
L MEADOWS		12-22-15 1700	S
L MEADOWS		12-29-15 1400	A
L MEADOWS		12-30-15 1800	A
L MEADOWS		01-07-16 1800	A
L MEADOWS		01-07-16 1530	S

Purpose: S - Storage; A - Analyze; DP - Disposal; D - Digest; W - Weigh; P-Pour; T-TCLP; F-Filter

Document Number: LIM-F-01 Effective Date: 9/20/15
Revision Number: 1.0 CMB

Bonner Analytical Testing Co.
Digestate Chain of Custody
for Samples

SDG Number: MF6R32 **Case No.:** 45671

Work Order Number: 5120223 **Fraction:** _____

1) MF6R32	7)	13)	19)
2) MF6R42	8)	14)	20)
3) MF6R44	9)	15)	21)
4) MF6R45	10)	16)	22)
5) MF6R46	11)	17)	23)
6) MF6R47	12)	18)	24)

Sample to be used for QC: MF6R42

Name	Signature	Date &Time	Purpose
NPeu	Nathan Peu	12/22/15 14:00	P
NPeu	Nathan Peu	12/22/15 1440	Dig
NPeu	Nathan Peu	12/22/15 1700	S
NPeu	Nathan Peu	12/23/15 930	A
NPeu	Nathan Peu	12/23/15 1030	S/DP

Purpose: S - Storage; A - Analyze; DP - Disposal; D - Digest; W - Weigh; P-Pour; T-TCLP; F-Filter

Tricia Aiken

From: Whitlee Dean <wdean9@csgov.com>
Sent: Friday, December 18, 2015 1:30 PM
To: taiken@batco.com
Cc: Flores.Raymond@epa.gov; Gorostiza.Sylvia@epa.gov; Humphrey.marvelyn@Epa.gov; perez.myra@epa.gov; cmbonner@batco.com; maxbonner@batco.com
Subject: Region 06 | Case 45671 | Lab BON | Issue Samples/analyses listed on COC but not received at laboratory | FINAL

Good afternoon Tricia,

Issue: The laboratory is scheduled for CN analysis and it is also listed on the COC. The laboratory did not receive any samples that were properly preserved with sodium hydroxide for CN analysis.
Resolution: Per Region 6, the CN analysis for these water samples is cancelled. Please note the issue in the SDG Narrative.

Please let me know if you have any questions or problems. To waive any defect(s) associated with this issue, please contact your Regional CLP COR.
Thanks,

WHITLEE DEAN
Environmental Coordinator- Regions 6 and 9
CSC Government Solutions LLC, A CSRA Company

6361 Walker Lane Alexandria, VA 22310
t:+1.703.461.2322 | wdean9@csgov.com
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From: "Perez, Myra" <perez.myra@epa.gov>
To: Whitlee Dean <wdean9@csgov.com>
Cc: "Flores, Raymond" <flores.raymond@epa.gov>, "Humphrey, Marvelyn" <humphrey.marvelyn@epa.gov>, "Goehl, Sara" <Goehl.Sara@epa.gov>, "Caroline Kramer" <ckramer5@csgov.com>
Date: 12/18/2015 02:14 PM
Subject: RE: Region 06 | Case 45671 | Lab BON | Issue Samples/analyses listed on COC but not received at laboratory - R6 resolution

Hello Whitlee –

Issue: The laboratory is scheduled for CN analysis and it is also listed on the COC. The laboratory did not receive any samples that were properly preserved with sodium hydroxide for CN analysis.

R6 Response – The lab should cancel the CN analysis for the waters and note the issue in the SDG narrative.

Please do not hesitate to contact me if you have questions.

Thank you.

Myra Perez
R6 CLP RSCC
281-983-2130

*******12/18/2015. 12:58pm. Phone conversation between Tricia Aiken (BON) and Whitlee Dean (SMO).** Case 45671. Tricia advised that they only received one bottle for metals analysis, nothing was received for CN.

*******12/18/2015. 12:58pm. Phone conversation between Myra Perez (Region 7) and Whitlee Dean (SMO).** Case 45671. Myra requested clarification regarding the issue. Wanted to confirm that the laboratory only received one bottle and that no volume was received for CN.

From: Whitlee Dean [mailto:wdean9@csgov.com]
Sent: Friday, December 18, 2015 11:55 AM
To: Perez, Myra
Cc: Flores, Raymond; Humphrey, Marvelyn; Goehl, Sara
Subject: RE: Region 06 | Case 45671 | Lab BON | Issue Samples/analyses listed on COC but not received at laboratory - please reply

Hi Myra,

The laboratory advised that the bottles are labeled as follows: Analyses: Total Metals by ISM02.3?MA# 2542.1 & Hg, Cn by ISM02.3. The laboratory typically receives two bottles for each sample, one preserved with nitric for metals and Hg analysis and one preserved with sodium hydroxide for CN analysis. Although CN analysis is listed on the labels, the laboratory did not receive any samples that are preserved with sodium hydroxide.

Please let me know if you have any questions.
Thanks,

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From: "Tricia Aiken" <taiken@batco.com>
To: "'Whitlee Dean'" <wdean9@csgov.com>
Cc: "'Chris Bonner'" <cmbonner@batco.com>, "'Max Bonner'" <maxbonner@batco.com>
Date: 12/18/2015 12:48 PM
Subject: RE: Region 06 | Case 45671 | Lab BON | Issue Samples/analyses listed on COC but not received at laboratory - please reply

---

Whitlee;

The bottles for TM are labeled as follows:

Analyses: Total Metals by ISM02.3?MA# 2542.1 & Hg, Cn by ISM02.3

Normally when you have this type of analysis you receive 2 bottles of each sample, one preserved with nitric for metals and Hg analysis and one preserved with sodium hydroxide for Cn analysis. The lab did not receive any samples for Cn analysis although it is listed on the labels for TM/Hg and the TR.

Thanks;
Tricia Aiken
Bonner Analytical
(601)264-2854

From: Whitlee Dean [mailto:wdean9@csgov.com]
Sent: Friday, December 18, 2015 11:00 AM
To: Tricia Aiken
Cc: 'Chris Bonner'; 'Max Bonner'
Subject: RE: Region 06 | Case 45671 | Lab BON | Issue Samples/analyses listed on COC but not received at laboratory - please reply

Hi Tricia,

Were there any bottles that were specifically labeled for CN analysis? If so, what was the pH of those bottles?

Thanks!

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From: "Perez, Myra" <perez.myra@epa.gov>
To: Whitlee Dean <wdean9@csgov.com>
Cc: "Flores, Raymond" <flores.raymond@epa.gov>, "Humphrey, Marvelyn" <humphrey.marvelyn@epa.gov>, "Goehl, Sara" <Goehl.Sara@epa.gov>
Date: 12/18/2015 11:56 AM
Subject: RE: Region 06 | Case 45671 | Lab BON | Issue Samples/analyses listed on COC but not received at laboratory - please reply

---

Whitlee – did the lab check pH for the bottles with labels that listed CN as the analysis? Not the bottles for TM. Please let me know.

Thank you.

Myra Perez
R6 CLP RSCC
281-983-2130

From: Whitlee Dean [mailto:wdean9@csgov.com]
Sent: Friday, December 18, 2015 10:50 AM
To: Perez, Myra
Cc: Flores, Raymond; Appleby, Charlie; Humphrey, Marvelyn
Subject: RE: Region 06 | Case 45671 | Lab BON | Issue Samples/analyses listed on COC but not received at laboratory - please reply

Good morning Myra,

The laboratory advised that the pH was checked on all TM samples and the pH was 1, with the exception of sample MF6R33. The pH of this sample was 5 and HNO3 was added to bring the pH to below 2.

Please let me know if you have any questions.
Thanks,

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From: "Tricia Aiken" <taiken@batco.com>
To: "Whitlee Dean" <wdean9@csgov.com>
Cc: "Chris Bonner" <cmbonner@batco.com>, "Max Bonner" <maxbonner@batco.com>
Date: 12/18/2015 11:36 AM
Subject: RE: Region 06 | Case 45671 | Lab BON | Issue Samples/analyses listed on COC but not received at laboratory - please reply

---

Whitlee;

Yes, the pH was checked on all TM samples, and the pH was 1 with the exception of the sample listed below in issue 1 (MF6R33) initial pH was 5 and HNO3 was added to bring the pH to below 2. There are no samples preserved with sodium hydroxide for CN analysis.

Thanks;
Tricia Aiken
Bonner Analytical
(601)264-2854

From: Whitlee Dean [mailto:wdean9@csgov.com]
Sent: Friday, December 18, 2015 10:06 AM
To: taiken@batco.com
Cc: cmbonner@batco.com; maxbonner@batco.com
Subject: Fw: Region 06 | Case 45671 | Lab BON | Issue Samples/analyses listed on COC but not received at laboratory - please reply

Good morning Tricia,

Did the laboratory check the pH of the samples that are listed for CN analysis? If so, please provide the pH for these samples.

Thanks!

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----- Forwarded by Whitlee Dean/AMER/CSGov on 12/18/2015 11:05 AM -----

From: "Perez, Myra" <perez.myra@epa.gov>
To: Whitlee Dean <wdean9@csgov.com>
Cc: Caroline Kramer <ckramer5@csgov.com>, "Appleby, Charlie" <Appleby.Charlie@epa.gov>, "Flores, Raymond" <flores.raymond@epa.gov>, "Humphrey, Marvelyn" <humphrey.marvelyn@epa.gov>
Date: 12/18/2015 10:59 AM
Subject: RE: Region 06 | Case 45671 | Lab BON | Issue Samples/analyses listed on COC but not received at laboratory - please reply

---

Hi Whitlee – can you ask the lab whether or not they checked the pH of the samples listed for CN analysis? Please let me know and if yes, provide pH of the samples.

Thank you.

Myra Perez
R6 CLP RSCC
281-983-2130

From: Perez, Myra
Sent: Friday, December 18, 2015 9:21 AM
To: 'Whitlee Dean'
Cc: Caroline Kramer; Appleby, Charlie; Flores, Raymond; Humphrey, Marvelyn
Subject: RE: Region 06 | Case 45671 | Lab BON | Issue Samples/analyses listed on COC but not received at laboratory

Hello Whitlee – Ray is out today so I'm going to wait until he returns on Monday to the office for the resolution to this issue.

The only option I have is to cancel the analysis but he might have a different approach.

Please copy me on any issues sent to Ray since he will not be in the office nor checking his messages.

Thank you.

Myra Perez
R6 CLP RSCC
281-983-2130

From: Whitlee Dean [mailto:wdean9@csgov.com]
Sent: Thursday, December 17, 2015 4:38 PM
To: Gorostiza, Sylvia; Perez, Myra
Cc: Flores, Raymond
Subject: Region 06 | Case 45671 | Lab BON | Issue Samples/analyses listed on COC but not received at laboratory

Good evening,

BON is reporting the following issue. Please advise.

Issue: The laboratory is scheduled for CN analysis and it is also listed on the COC. The laboratory did not receive any samples that were properly preserved with sodium hydroxide for CN analysis.

Please let me know if you have any questions.
Thanks,

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From: "Tricia Aiken" <taiken@batco.com>
To: "'Whitlee Dean'" <wdean9@csgov.com>
Cc: "'Chris Bonner'" <cmbonner@batco.com>, "'Max Bonner'" <maxbonner@batco.com>
Date: 12/17/2015 04:46 PM
Subject: RE: Region 06 | Case 45671 | Lab BON | Issue Multiple | FINAL

Whitlee;

Yet another problem. As I was logging these samples in I discovered CN is listed as an analyte for the TM samples; however the lab did not receive any samples properly preserved with sodium hydroxide for CN analysis.

Thanks;
Tricia Aiken
Bonner Analytical
(601)264-2854

From: Whitlee Dean [mailto:wdean9@csgov.com]
Sent: Thursday, December 17, 2015 2:30 PM
To: taiken@batco.com
Cc: Flores, Raymond; Gorostiza, Sylvia; Perez, Myra; Humphrey.marvelyn@Epa.gov; cmbonner@batco.com; maxbonner@batco.com
Subject: Region 06 | Case 45671 | Lab BON | Issue Multiple | FINAL

UPDATED RECORD OF COMMUNICATION

This updated ROC is being sent to clarify the sample IDs that were provided in the Resolution for Issue 4.

Tricia,

pH outside allowable limits
Issue 1: Sample MF6R33 (TM) had a pH level of 5. HNO3 was added to the sample to bring the pH to below 2. Please confirm if this is acceptable.
Resolution 1: Per Region 6, the laboratory should note the issue in the SDG Narrative and proceed with the analysis of the samples.

Laboratory problems
Issue 2: Sample MF6R32 is a black liquid with a very strong odor. This sample has a pH level of 9.5. The laboratory did not add HNO3 due to the nature of the sample. The laboratory would like to request any and all background information that is available on this sample in order to protect the instrumentation.
Resolution 2: Per Region 6, this sample is from a temporary well and not a drum. The laboratory should proceed with digesting and analyzing the sample. The laboratory could use a reduced volume as appropriate (10-1 mLs for example), add acid as per normal digestion procedure, and reconstitute to their normal analytical volume of 100 (or 50 mLs). Please note the issue in the SDG Narrative and proceed with the analysis of the samples.

Non-standard matrix
Issue 3: The DM samples MF6R33 and MF6R34 both contain sediment. Please note that while there is more sediment in the TM samples, the laboratory felt the need to report this as an issue. Please advise.
Issue 3: Per Region 6, the laboratory should filter an aliquot of the DM samples with the customary 0.45 micron filter and proceed to digestion. If filtering is not possible, the laboratory should let the sediment precipitate to the bottom of the container and take an aliquot off the top for digestion. Please note the issue in the SDG Narrative and proceed with the

analysis of the samples.

Incorrect/duplicated sample IDs
Issue 4: Several of the TM and DM samples have the same sample ID. Please advise if SMO should provide new sample IDs for the DM samples that have a duplicate sample ID. Please note that the laboratory only received a DM sample for MF6R32.
Resolution 4: Per Region 6, the below sample IDs should be used for the DM samples. The sample ID for MF6R32 remains the same, provided that there are no other samples with this same sample ID. Please note the issue in the SDG Narrative and proceed with the analysis of the samples.

Old Sample ID	New Sample ID
MF6R29	MF6R42
MF6R33	MF6R44
MF6R34	MF6R45
MF6R35	MF6R46
MF6R36	MF6R47

Please let me know if you have any questions or problems. To waive any defect(s) associated with this issue, please contact your Regional CLP COR.

Thanks,

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From: "Perez, Myra" <perez.myra@epa.gov>
To: Whitlee Dean <wdean9@csgov.com>
Cc: "Flores, Raymond" <flores.raymond@epa.gov>, "Gorostiza, Sylvia" <Gorostiza.Sylvia@epa.gov>
Date: 12/17/2015 03:18 PM
Subject: RE: Region 06 | Case 45671 | Lab BON | Issue - Sample ID - R6 resolution

Whitlee – The lab shall use the original sample number (MF6R32) as long as there are no other samples with that sample number. The lab shall note the issue and resolution in the SDG narrative and proceed with analysis.

Thank you.

Myra Perez
R6 CLP RSCC
281-983-2130

From: Whitlee Dean [mailto:wdean9@csgov.com]
Sent: Thursday, December 17, 2015 1:48 PM
To: Gorostiza, Sylvia; Perez, Myra
Cc: Flores, Raymond
Subject: RE: Region 06 | Case 45671 | Lab BON | Issue pH outside allowable limits

Good afternoon,

BON has requested clarification regarding the resolution that was provided for Issue 4. The laboratory was provided with new sample IDs for the DM samples, since duplicate sample IDs were listed on the COC. For sample MF6R32, the laboratory only received a DM sample and no TM sample. Since there is no duplicate sample ID, please advise if this sampler should keep the original sample ID or proceed with the updated sample ID that was provided.

Thanks!

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From: "Tricia Aiken" <taiken@batco.com>
To: "'Whitlee Dean'" <wdean9@csgov.com>
Cc: "'Chris Bonner'" <cmbonner@batco.com>, "'Max Bonner'" <maxbonner@batco.com>
Date: 12/17/2015 02:31 PM
Subject: RE: Region 06 | Case 45671 | Lab BON | Issue pH outside allowable limits | FINAL

Whitlee;

I just realized in issue 4 where the samples are supposed to be re-named, sample MF6R32 is a DM only sample there is no TM sample; therefore should the sample ID remain MF6R32 or still be changed to MF6R43?

Thanks;
Tricia Aiken
Bonner Analytical
(601)264-2854

From: Whitlee Dean [mailto:wdean9@csgov.com]
Sent: Thursday, December 17, 2015 12:47 PM
To: taiken@batco.com
Cc: Flores.Raymond@epa.gov; Gorostiza.Sylvia@epa.gov; Humphrey.marvelyn@Epa.gov; perez.myra@epa.gov; cmbonner@batco.com; maxbonner@batco.com
Subject: Region 06 | Case 45671 | Lab BON | Issue pH outside allowable limits | FINAL

Good afternoon Tricia,

Issue: The laboratory added 10mL of nitric to sample MF6R32 and the pH dropped from 9.5 to 8.8. Please advise if the laboratory should continue to add nitric to this sample.
Resolution: Per Region 6, the laboratory can add more nitric to the sample container to try to obtain an acidic pH. Alternatively, the laboratory can take aliquot of the sample to be used for digestion and add acid directly to the aliquot as per normal digestion procedure. Since a reduced amount of sample is being used, the laboratory can add more acid to the aliquot to try to obtain an acidic pH. The laboratory should stop dding acid when the normal digestion volume is achieved.

Please let me know if you have any questions or problems. To waive any defect(s) associated with this issue, please contact your Regional CLP COR.
Thanks,

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From: "Flores, Raymond" <flores.raymond@epa.gov>
To: Whitlee Dean <wdean9@csgov.com>, "Gorostiza, Sylvia" <Gorostiza.Sylvia@epa.gov>, "Perez, Myra" <perez.myra@epa.gov>
Date: 12/17/2015 01:10 PM
Subject: RE: Region 06 | Case 45671 | Lab BON | Issue pH outside allowable limits

The lab can add more nitric to the sample container to try to obtain an acidic pH. Alternatively, for this non-standard matrix, the lab can take an aliquot of the sample to be used for digestion and add acid directly to the aliquot as per normal digestion procedure. Since a reduced amount of sample is being used the lab can add more acid to the aliquot to try to obtain an acidic pH. Stop adding acid when the normal digestion volume is achieved.

From: Whitlee Dean [mailto:wdean9@csgov.com]
Sent: Thursday, December 17, 2015 12:04 PM
To: Gorostiza, Sylvia; Perez, Myra
Cc: Flores, Raymond
Subject: Region 06 | Case 45671 | Lab BON | Issue pH outside allowable limits

Good afternoon,

BON is reporting the following issue. Please advise how the laboratory should proceed.

Issue: The laboratory added 10mL of nitric to sample MF6R32 and the pH dropped from 9.5 to 8.8. Please advise if the laboratory should continue to add nitric to this sample.

Please let me know if you have any questions.
Thanks,

WHITLEE DEAN
Environmental Coordinator- Regions 6 and 9
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From: "Tricia Aiken" <taiken@batco.com>
To: "'Whitlee Dean'" <wdean9@csgov.com>
Cc: "'Chris Bonner'" <cmbonner@batco.com>, "'Max Bonner'" <maxbonner@batco.com>
Date: 12/17/2015 12:54 PM
Subject: RE: Region 06 | Case 45671 | Lab BON | Issue Multiple | FINAL

Whitlee;

The lab added 10ml of nitric to sample MF6R32 and the pH dropped from 9.5 to 8.8. Shall we continue to add nitric or not?

Thanks;
Tricia Aiken
Bonner Analytical
(601)264-2854

From: Whitlee Dean [mailto:wdean9@csgov.com]
Sent: Thursday, December 17, 2015 9:55 AM
To: taiken@batco.com
Cc: Gorostiza, Sylvia; Humphrey, Marvelyn; Perez, Myra; Flores, Raymond; cmbonner@batco.com; maxbonner@batco.com
Subject: Region 06 | Case 45671 | Lab BON | Issue Multiple | FINAL

Good morning Tricia,

pH outside allowable limits
Issue 1: Sample MF6R33 (TM) had a pH level of 5. HNO3 was added to the sample to bring the pH to below 2. Please confirm if this is acceptable.
Resolution 1: Per Region 6, the laboratory should note the issue in the SDG Narrative and proceed with the analysis of the samples.

Laboratory problems
Issue 2: Sample MF6R32 is a black liquid with a very strong odor. This sample has a pH level of 9.5. The laboratory did not add HNO3 due to the nature of the sample. The laboratory would like to request any and all background information that is available on this sample in order to protect the instrumentation.
Resolution 2: Per Region 6, this sample is from a temporary well and not a drum. The laboratory should proceed with digesting and analyzing the sample. The laboratory could use a reduced volume as appropriate (10-1 mLs for example), add acid as per normal digestion procedure, and reconstitute to their normal analytical volume of 100 (or 50 mLs). Please note the issue in the SDG Narrative and proceed with the analysis of the samples.

Non-standard matrix
Issue 3: The DM samples MF6R33 and MF6R34 both contain sediment. Please note that while there is more sediment in the TM samples, the laboratory felt the need to report this as an issue. Please advise.
Issue 3: Per Region 6, the laboratory should filter an aliquot of the DM samples with the customary 0.45 micron filter and proceed to digestion. If filtering is not possible, the laboratory should let the sediment precipitate to the bottom of the container and take an aliquot off the top for digestion. Please note the issue in the SDG Narrative and proceed with the analysis of the samples.

Incorrect/duplicated sample IDs
Issue 4: Several of the TM and DM samples have the same sample ID. Please advise if SMO should provide new sample

IDs for the DM samples that have a duplicate sample ID.
Resolution 4: Per Region 6, the below sample IDs should be used for the DM samples. Please note the issue in the SDG Narrative and proceed with the analysis of the samples.

Old Sample ID	New Sample ID
MF6R29	MF6R42
MF6R32	MF6R43
MF6R33	MF6R44
MF6R34	MF6R45
MF6R35	MF6R46
MF6R36	MF6R47

Please let me know if you have any questions or problems. To waive any defect(s) associated with this issue, please contact your Regional CLP COR.
Thanks,

WHITLEE DEAN
Environmental Coordinator- Regions 6 and 9
CSC Government Solutions LLC, A CSRA Company

6361 Walker Lane Alexandria, VA 22310
t:+1.703.461.2322 | wdean9@csgov.com
www.csra.com

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From: "Flores, Raymond" <flores.raymond@epa.gov>
To: Whitlee Dean <wdean9@csgov.com>
Cc: "Gorostiza, Sylvia" <Gorostiza.Sylvia@epa.gov>, "Perez, Myra" <perez.myra@epa.gov>, "Humphrey, Marvelyn" <humphrey.marvelyn@epa.gov>
Date: 12/17/2015 10:20 AM
Subject: RE: Region 06 | Case 45671 | Lab BON | Issue Multiple

Hi Whitlee,

Here are some instructions for the laboratory:

2-MF6R32 is a black liquid with a strong odor and pH of 9.5. The field indicated that the sample was from a temporary well, not a drum. Region 6 would like the laboratory to digest and analyze the non-standard matrix sample. The laboratory could use a reduced volume as appropriate (10-1 mls for example). Add acid as per normal digestion procedure and reconstitute to their normal analytical volume of 100 (or 50 mLs).

3-The DM samples MF6R33 and MF6R34 both contain sediment. The field may have inadvertently failed to filter the samples for the DM samples. If possible, the lab should filter an aliquot of the DM samples with the customary 0.45 micron filter and proceed to digestion. If filtering is not possible, the lab should let the sediment precipitate to the bottom of the container and take an aliquot off the top for digestion. The lab should report their actions in the SDG narrative.

4- Several of the TM and DM samples have the same sample ID. The field indicated that they inadvertently assigned the same sample numbers to the DM samples. The following would have been the numbers they should have used:

MF6R42
MF6R43
MF6R44
MF6R45
MF6R46
MF6R47

Please renumber using the sample numbers above for the DMs.

From: Whitlee Dean [mailto:wdean9@csgov.com]
Sent: Thursday, December 17, 2015 8:33 AM
To: Flores, Raymond
Cc: Gorostiza, Sylvia; Perez, Myra
Subject: RE: Region 06 | Case 45671 | Lab BON | Issue Multiple

Good morning,

BON has reported an additional issue for this Case which also requires a resolution. Please advise.

Issue: Sample MF6R32 has a pH level of 9.5. The laboratory did not add HNO3 due to the nature of the sample. (The laboratory previously reported that this sample is black with a strong odor).

Please let me know if you have any questions.
Thanks,

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From: "Tricia Aiken" <taiken@batco.com>
To: <wdean9@csgov.com>
Cc: "'Chris Bonner'" <cmbonner@batco.com>, "'Max Bonner'" <maxbonner@batco.com>
Date: 12/17/2015 09:12 AM
Subject: pH issue

Whitlee;

I failed to mention yesterday, that sample MF6R32 had a pH level of 9.5, the lab did not add HNO3 as usual due to the nature of the sample.

Thanks;
Tricia Aiken
Bonner Analytical
(601)264-2854

From: Whitlee Dean/AMER/CSGov
To: "Flores, Raymond" <flores.raymond@epa.gov>
Cc: "Gorostiza, Sylvia" <Gorostiza.Sylvia@epa.gov>, "Perez, Myra" <perez.myra@epa.gov>
Date: 12/16/2015 04:32 PM
Subject: RE: Region 06 | Case 45671 | Lab BON | Issue Multiple

Hi Ray,

The sample IDs that were duplicated are below.

MF6R29
MF6R33
MF6R34
MF6R35
MF6R36

Please let me know if you have any questions.
Thanks,

WHITLEE DEAN
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From: "Flores, Raymond" <flores.raymond@epa.gov>
To: Whitlee Dean <wdean9@csgov.com>, "Gorostiza, Sylvia" <Gorostiza.Sylvia@epa.gov>, "Perez, Myra" <perez.myra@epa.gov>
Date: 12/16/2015 04:24 PM
Subject: RE: Region 06 | Case 45671 | Lab BON | Issue Multiple

Hi Whitlee,

Issue 1: Adjusting the pH of aqueous sample is desired. Ask lab to proceed with the digestion of MF6R33.

Issue2: We are requesting background info for MFR32.

Issue 3: DM samples MF6R33 & MF6R34 both contain sediment. We are requesting verification from the field that these were both DM samples as there should be no sediment present.

Issue 4: We will confirm with field samplers that new IDs should be assigned to the DM samples. It would be helpful if the lab could provide the sample IDs that have been duplicated for the TM and DM.

From: Whitlee Dean [mailto:wdean9@csgov.com]
Sent: Wednesday, December 16, 2015 2:56 PM
To: Gorostiza, Sylvia; Perez, Myra
Cc: Flores, Raymond
Subject: Region 06 | Case 45671 | Lab BON | Issue Multiple

Good afternoon,

BON is reporting the following issues. Please advise how the laboratory should proceed.

pH outside allowable limits
Issue 1: Sample MF6R33 (TM) had a pH level of 5. HNO3 was added to the sample to bring the pH to below 2. Please confirm if this is acceptable.

Laboratory problems
Issue 2: Sample MF6R32 is a black liquid with a very strong odor. The laboratory would like to request any and all background information that is available on this sample in order to protect the instrumentation.

Non-standard matrix
Issue 3: The DM samples MF6R33 and MF6R34 both contain sediment. Please note that while there is more sediment in the TM samples, the laboratory felt the need to report this as an issue. Please advise.

Incorrect/duplicated sample IDs
Issue 4: Several of the TM and DM samples have the same sample ID. Please advise if SMO should provide new sample IDs for the DM samples that have a duplicate sample ID.

Please let me know if you have any questions.
Thanks,

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From: "Tricia Aiken" <taiken@batco.com>
To: <wdean9@csgov.com>
Cc: "'Chris Bonner'" <cmbonner@batco.com>, "'Max Bonner'" <maxbonner@batco.com>
Date: 12/16/2015 03:22 PM
Subject: Region 6 | Case 45671 | Sample Receipt

Whitlee;

On December 16, 2015 we received 11 waters via FedEx air bill 8594 8322 0215. Custody seals were present and intact. Cooler temp was determined to be 3°C. Samples were in good condition except for the following discrepancies.

1. Sample MF6R33 for TM had a pH level of 5, HNO3 was added to bring the pH to below 2.

2. Sample MF6R32 is a black liquid with a very strong odor, the lab would like to request any and all background information that is available on this sample in order to protect the instrumentation.

3. The DM samples for MF6R33 and -R34 both contain sediment, while there is more sediment in the TM samples the lab felt the need to report this as an issue.

Thanks;
Tricia Aiken
Bonner Analytical
(601)264-2854

Bonner Analytical Testing Company

Corrective Action

Topic: MF6R32 45671 Date: 12-29-15

Nature of Problem: ANALYTICAL RUN 1: SAMPLES SCANNED BY ICP-AES PRIOR TO ICP-MS IN ORDER TO PROTECT INSTRUMENTATION. MF6R32 OVER LR FOR Na; MF6R44 OVER LR FOR Na.
ANALYTICAL RUN 2: TM MINUS CR, Na; MF6R32 OVER LR FOR V; MF6R44 OVER LR FOR PD. MF6R32 OUTSIDE ACCEPTABLE RANGE FOR V, BI

Action Requested:

1 New Sample Requested: YES (NO)

2 Retest or Reanalysis Necessary: (YES) NO

3 Other Action: DILUTIONS

Submitter

Signature: [signature] Date: 1/4/16

Corrective Action Taken: RUN 1: Na ONLY - MF6R32 RANG INITIAL 100x DILUTION; SAMPLE COULD NOT BE RAN FOR Na UNDILUTED. MF6R44 @ 4x FOR Na.
RUN 2: TM MINUS CR, Na
RUN 3: CR + MF6R32 @ 3x FOR V, MF6R44 @ 5x FOR PD, MF6R32 @ 2x FOR V, BI

Was the problem resolved: (YES) NO

Responder

Signature: [signature] Date: 1/4/16

Bonner Analytical Testing Company

Corrective Action

Topic: MF6R32 Date: 1/5/16

Nature of Problem: Due to the nature (black) of the sample, it was run at an initial volume of 25mL for Hg ~~& HP-MS~~

Sample ID: MF6R32

Action Requested:

1 New Sample Requested: YES NO

2 Retest or Reanalysis Necessary: YES NO

3 Other Action: —

Submitter

Signature: [signature] Date: 1/5/16

Corrective Action Taken: Benchsheet reflects initial dilution w/ 25mL & 50mL final volume

Was the problem resolved: YES NO

Responder

Signature: [signature] Date: 1/5/16