

PREP BATCH REPORT

Prep Code: **PRP-3010**
 Prep Batch **163063** Prep Temp: **93.9 °C**

Technician: **Amanda E. McDaniels**
 Batch Units: **ML**

Prep Start Date: **1/19/2022 1:08:39 PM**
 Prep End Date: **1/20/2022 10:32:00 AM**

Sample ID	Matrix	pH	Initial Samp Amt	Sol Added	Sol Recovered	Final Vol (mL)	Factor	Balance	Prep Start Date	Prep End Date
MB-163063			50	0	0	50	1		1/19/2022	1/20/2022
	Temp cell E7									
LCS4-163063			50	0	0	50	1		1/19/2022	1/20/2022
B22011124-001B	Ground Water		50	0	0	50	1		1/19/2022	1/20/2022
B22011124-001BMS4			50	0	0	50	1		1/19/2022	1/20/2022
B22011124-001BMSD4			50	0	0	50	1		1/19/2022	1/20/2022
B22011125-001B	Ground Water		50	0	0	50	1		1/19/2022	1/20/2022
B22011126-001B	Ground Water		50	0	0	50	1		1/19/2022	1/20/2022
B22011127-001B	Ground Water		50	0	0	50	1		1/19/2022	1/20/2022
B22011128-001B	Ground Water		50	0	0	50	1		1/19/2022	1/20/2022
B22011129-001B	Ground Water		50	0	0	50	1		1/19/2022	1/20/2022
B22011130-001B	Ground Water		50	0	0	50	1		1/19/2022	1/20/2022
B22011131-001B	Ground Water		50	0	0	50	1		1/19/2022	1/20/2022
B22011133-001B	Ground Water		50	0	0	50	1		1/19/2022	1/20/2022
B22011134-001B	Ground Water		50	0	0	50	1		1/19/2022	1/20/2022
B22011134-001BMS4			50	0	0	50	1		1/19/2022	1/20/2022
B22011134-001BMSD4			50	0	0	50	1		1/19/2022	1/20/2022
B22011135-001B	Ground Water		50	0	0	50	1		1/19/2022	1/20/2022
B22011136-001B	Ground Water		50	0	0	50	1		1/19/2022	1/20/2022
B22011137-001B	Ground Water		50	0	0	50	1		1/19/2022	1/20/2022
B22011132-001B	Ground Water		50	0	0	50	1		1/20/2022	1/20/2022

Number	Reagent Name	Exp Date	
14614	50mL DigiTubes J526127-2104	12/10/2022	
14626	Nitric Acid 69.0- 70.0% D0521	12/14/2026	6 mL
14758	Hydrochloric Acid, 36.5-38.0% 0000275677	12/15/2025	1 mL

Spk ID	Spike Name	SampType	AmtAdd	Exp Date
ME211124 EL-M	EL-MSICV-2	LCS4/MS4	0.05 ml	11/24/2022
ME211202 EL200	EL-200.2MS	LCS4/MS4	0.05 mL	12/2/2022
ME220117 AUDI	AUDIGSPK	LCS4/MS4	0.05 ml	10/25/2022

Energy Laboratories Inc

ANALYTICAL RUN Summary

25-Jan-22

Run ID ICPMS207-B_220121A

Run Start Date: 1/21/2022 2:08:28 P
 Analyst: Cindy Rohrer
 Ical: 0
 Column ID:
 Comments:

Instrument ID	Description
04F07114	Metals 5-50 uL Adjustable Pipette
340760037	Metals 100-1000 uL Adjustable Pipette
340760040	Metals 100-1000 uL Adjustable Pipette
440780018	Metals 1-5 mL Adjustable Pipette
440780025	Metals 1-5 mL Adjustable Pipette
841980007	1000-5000uL Pipette
841980009	1000-5000uL Pipette

Std ID	Std Name	Std Amount	Std Units	Samp Amount	Samp Units	SampType	Expiration Date
ME210901 ICSA	ICSA					ICSA	9/1/2022
ME210901 ICSAB	ICSAB					ICSAB	9/1/2022
ME211206 ICV STANDARD	ICV for ICPMS Standards					ICV	4/30/2022
ME211207 2008TS	200.8 Tune Solution						12/7/2022
ME220112 0.025 PPB STAND	0.025 ppb Standard						11/18/2022
ME220112 0.05 PPB STANDA	0.5 ppb Standard						11/18/2022
ME220112 0.1 PPB STANDAR	0.1 ppb Standard						11/18/2022
ME220112 0.5 PPB STANDAR	0.5 ppb Standard						11/18/2022
ME220112 1 PPB STANDARD	1 ppb Standard						11/18/2022
ME220112 10 PPB STANDAR	10 ppb Standard					CCV	11/18/2022
ME220112 100 PPB STANDAR	100 ppb Standard					CAL8	11/18/2022
ME220112 50 PPB STANDAR	50 ppb Standard/CCV					CRI	11/18/2022
ME220112 7900 INTERNAL ST	Internal Standards 2 mg/L						2/8/2022
ME220112 SS1	SS1 ICPMS Spiking Solution					LFB/MS	12/8/2022
ME220112A 1000 PPB STAND	1000 PPB Standard					URL	11/18/2022

Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist					
14998053	Rinse	ICPMS-6020-W- SAMP			1/21/2022 2:08:2	1	R373694		0	0						
Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q

Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist					
14998054	Rinse	ICPMS-6020-W- SAMP			1/21/2022 2:14:4	1	R373694		0	0						
Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q

Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist						
14998055	Rinse	ICPMS-6020-W- SAMP				1/21/2022 2:20:5	1	R373694			0	0					
Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q	

Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist						
14998056	Cal Blk	ICPMS-6020-W- SAMP				1/21/2022 2:27:1	1	R373694			0	0					
Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q	

Aluminum	A	mg/L	0	0		0	0	0	0.0006966	0.001	1	0%	0	0	0%	
Antimony	A	mg/L	0	0		0	0	0	0.0002882	0.001	0.1	0%	0	0	0%	
Arsenic	A	mg/L	0	0		0	0	0	0.0001626	0.001	1	0%	0	0	0%	
Barium	A	mg/L	0	0		0	0	0	8.917E-05	0.001	1	0%	0	0	0%	
Beryllium	A	mg/L	0	0		0	0	0	0.0001137	0.001	1	0%	0	0	0%	
Boron	A	mg/L	0	0		0	0	0	0.0036397	0.0036397	1	0%	0	0	0%	L
Cadmium	A	mg/L	0	0		0	0	0	2.969E-05	0.001	1	0%	0	0	0%	
Calcium	A	mg/L	0	0		0	0	0	0.0254163	0.0254163	50	0%	0	0	0%	L
Cerium	A	mg/L	0	0		0	0	0	8.97E-06	0.001	0.1	0%	0	0	0%	
Chromium	A	mg/L	0	0		0	0	0	0.0002078	0.001	1	0%	0	0	0%	
Cobalt	A	mg/L	0	0		0	0	0	2.037E-05	0.001	1	0%	0	0	0%	
Copper	A	mg/L	0	0		0	0	0	0.0001010	0.001	1	0%	0	0	0%	
Iron	A	mg/L	0	0		0	0	0	0.0021231	0.0021231	5	0%	0	0	0%	L
Lanthanum	A	mg/L	0	0		0	0	0	1.209E-05	0.001	0.1	0%	0	0	0%	
Lead	A	mg/L	0	0		0	0	0	3.957E-05	0.001	1	0%	0	0	0%	
Magnesium	A	mg/L	0	0		0	0	0	0.0084694	0.0084694	50	0%	0	0	0%	L
Manganese	A	mg/L	0	0		0	0	0	5.319E-05	0.001	1	0%	0	0	0%	
Mercury	A	mg/L	0	0		0	0	0	7.78E-06	0.001	0.002	0%	0	0	0%	
Molybdenum	A	mg/L	0	0		0	0	0	0.0000598	0.001	0.1	0%	0	0	0%	
Nickel	A	mg/L	0	0		0	0	0	0.0001477	0.001	1	0%	0	0	0%	
Potassium	A	mg/L	0	0		0	0	0	0.0951865	0.0951865	50	0%	0	0	0%	L
Selenium	A	mg/L	0	0		0	0	0	6.961E-05	0.001	1	0%	0	0	0%	
Silicon	A	mg/L	0	0		0	0	0	0.0786454	0.1	0.4	0%	0	0	0%	
Silver	A	mg/L	0	0		0	0	0	1.541E-05	0.001	0.04	0%	0	0	0%	
Sodium	A	mg/L	0	0		0	0	0	0.0321039	0.0321039	50	0%	0	0	0%	L
Strontium	A	mg/L	0	0		0	0	0	9.136E-05	0.001	1	0%	0	0	0%	
Thallium	A	mg/L	0	0		0	0	0	0.0001262	0.001	1	0%	0	0	0%	
Thorium	A	mg/L	0	0		0	0	0	7.051E-05	0.001	1	0%	0	0	0%	
Tin	A	mg/L	0	0		0	0	0	0.0021596	0.0021596	0.1	0%	0	0	0%	L
Titanium	A	mg/L	0	0		0	0	0	0.0001844	0.001	1	0%	0	0	0%	

Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist					
14998056	Cal Blk	ICPMS-6020-W-	SAMP		1/21/2022 2:27:1	1	R373694		0	0						
Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
Uranium	A	mg/L	0	0		0	0	0	1.948E-05	0.0003	1	0%	0	0	0%	
Vanadium	A	mg/L	0	0		0	0	0	0.004194	0.004194	1	0%	0	0	0%	L
Zinc	A	mg/L	0	0		0	0	0	0.0006119	0.001	1	0%	0	0	0%	
Lithium	B	mg/L	0	0		0	0	0	0.05	0.05	1	0%	0	0	0%	L
Iron, Ferrous	C	mg/L	0	0		0	0	0	0.0021231	0.0021231	5	0%	0	0	0%	L

Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist					
14998057	0.025 ppb STD	ICPMS-6020B-C	Cal1		1/21/2022 2:34:3	1	R373694		0	0						
Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
Aluminum	A	mg/L	0.0001162	0.0001162		0	0	0		0.01		0%			0%	
Antimony	A	mg/L	0.00002883	0.00002883		0	0	0		0.001		0%			0%	
Arsenic	A	mg/L	0.00004803	0.00004803		0.000025	0	0		0.001		192%	80	120	0%	S
Barium	A	mg/L	0.00003113	0.00003113		0.000025	0	0		0.0003		125%	80	120	0%	S
Beryllium	A	mg/L	0.00002409	0.00002409		0.000025	0	0		0.001		96%	80	120	0%	
Boron	A	mg/L	-0.0003706	-0.0003706		0	0	0		0.1		0%			0%	
Cadmium	A	mg/L	0.00002301	0.00002301		0.000025	0	0		0.001		92%	80	120	0%	
Calcium	A	mg/L	0.006919	0.006919		0	0	0		1		0%			0%	
Cerium	A	mg/L	0.00002416	0.00002416		0.000025	0	0		0.001		97%	80	120	0%	
Chromium	A	mg/L	0.00003595	0.00003595		0.000025	0	0		0.001		144%	80	120	0%	S
Cobalt	A	mg/L	0.00002271	0.00002271		0.000025	0	0		0.001		91%	80	120	0%	
Copper	A	mg/L	0.00002946	0.00002946		0	0	0		0.005		0%			0%	
Iron	A	mg/L	0.000751	0.000751		0	0	0		0.01		0%			0%	
Lanthanum	A	mg/L	0.00002362	0.00002362		0.000025	0	0		0.001		94%	80	120	0%	
Lead	A	mg/L	0.00002086	0.00002086		0.000025	0	0		0.001		83%	80	120	0%	
Lithium	A	mg/L	0.0002615	0.0002615		0.0003125	0	0		1		84%	80	120	0%	
Magnesium	A	mg/L	0.005972	0.005972		0	0	0		1		0%			0%	
Manganese	A	mg/L	0.000027	0.000027		0	0	0		0.001		0%			0%	
Mercury	A	mg/L	-6.456E-07	-6.456E-07		0	0	0		0.001		0%			0%	
Molybdenum	A	mg/L	0.00002591	0.00002591		0	0	0		0.001		0%			0%	
Nickel	A	mg/L	0.00004174	0.00004174		0	0	0		0.005		0%			0%	
Potassium	A	mg/L	0.008966	0.008966		0.00625	0	0		1		143%	80	120	0%	S
Selenium	A	mg/L	0.00001752	0.00001752		0.000025	0	0		0.005		70%	80	120	0%	S
Silicon	A	mg/L	-0.00006814	-0.00006814		0	0	0		0.1		0%			0%	
Silver	A	mg/L	0.00001498	0.00001498		0	0	0		0.001		0%			0%	

Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist					
14998057	0.025 ppb STD	ICPMS-6020B-C	Cal1		1/21/2022 2:34:3	1	R373694		0	0						
Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
Sodium	A	mg/L	0.005683	0.005683		0.00625	0	0		1		91%	80	120	0%	
Strontium	A	mg/L	0.00001748	0.00001748		0	0	0		0.001		0%	80	120	0%	
Thallium	A	mg/L	0.00002227	0.00002227		0	0	0		0.001		0%			0%	
Thorium	A	mg/L	0.00001675	0.00001675		0	0	0		0.05		0%			0%	
Tin	A	mg/L	0.00004093	0.00004093		0	0	0		0.001		0%			0%	
Titanium	A	mg/L	0.00004367	0.00004367		0	0	0		0.001		0%			0%	
Uranium	A	mg/L	0.00002478	0.00002478		0.000025	0	0		0.001		99%	80	120	0%	
Vanadium	A	mg/L	0.00009247	0.00009247		0	0	0		0.005		0%			0%	
Zinc	A	mg/L	0.00005315	0.00005315		0	0	0		0.01		0%			0%	
Iron, Ferrous	C	mg/L	0.000751	0.000751		0.000025	0	0		0.01	5	3004%	80	120	0%	S
Silicon as SiO2	C	mg/L	-0.00014582	-0.00014582		0.0000535	0	0		0.214	0.9	-273%	80	120	0%	S

Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist					
14998058	0.05 ppb STD	ICPMS-6020B-C	Cal2		1/21/2022 2:41:1	1	R373694		0	0						
Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
Aluminum	A	mg/L	0.0001081	0.0001081		0	0	0		0.01		0%			0%	
Antimony	A	mg/L	0.00005595	0.00005595		0.00005	0	0		0.001		112%	80	120	0%	
Arsenic	A	mg/L	0.00006918	0.00006918		0.00005	0	0		0.001		138%	80	120	0%	S
Barium	A	mg/L	0.00004527	0.00004527		0.00005	0	0		0.0003		91%	80	120	0%	
Beryllium	A	mg/L	0.00005034	0.00005034		0.00005	0	0		0.001		101%	80	120	0%	
Boron	A	mg/L	-0.00109	-0.00109		0	0	0		0.1		0%			0%	
Cadmium	A	mg/L	0.00005967	0.00005967		0.00005	0	0		0.001		119%	80	120	0%	
Calcium	A	mg/L	0.01484	0.01484		0.0125	0	0		1		119%	80	120	0%	
Cerium	A	mg/L	0.00005741	0.00005741		0.00005	0	0		0.001		115%	80	120	0%	
Chromium	A	mg/L	0.00006244	0.00006244		0.00005	0	0		0.001		125%	80	120	0%	S
Cobalt	A	mg/L	0.00006116	0.00006116		0	0	0		0.001		0%			0%	
Copper	A	mg/L	0.00005747	0.00005747		0.00005	0	0		0.005		115%	80	120	0%	
Iron	A	mg/L	0.001561	0.001561		0.00125	0	0		0.01		125%	80	120	0%	S
Lanthanum	A	mg/L	0.00005514	0.00005514		0.00005	0	0		0.001		110%	80	120	0%	
Lead	A	mg/L	0.00005023	0.00005023		0.00005	0	0		0.001		100%	80	120	0%	
Lithium	A	mg/L	0.0006174	0.0006174		0.000625	0	0		1		99%	80	120	0%	
Magnesium	A	mg/L	0.01456	0.01456		0.0125	0	0		1		116%	80	120	0%	
Manganese	A	mg/L	0.00005438	0.00005438		0.00005	0	0		0.001		109%	80	120	0%	
Mercury	A	mg/L	-5.411E-07	-5.411E-07		0	0	0		0.001		0%			0%	

Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist					
14998058	0.05 ppb STD	ICPMS-6020B-C	Cal2		1/21/2022 2:41:1	1	R373694		0	0						
Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
Molybdenum	A	mg/L	0.00006304	0.00006304		0.00005	0	0		0.001		126%	80	120	0%	S
Nickel	A	mg/L	0.00007482	0.00007482		0	0	0		0.005		0%			0%	
Potassium	A	mg/L	0.01994	0.01994		0.0125	0	0		1		160%	80	120	0%	S
Selenium	A	mg/L	0.00005245	0.00005245		0.00005	0	0		0.005		105%	80	120	0%	
Silicon	A	mg/L	-0.00002162	-0.00002162		0	0	0		0.1		0%			0%	
Silver	A	mg/L	0.00002194	0.00002194		0.00002	0	0		0.001		110%	80	120	0%	
Sodium	A	mg/L	0.01385	0.01385		0.0125	0	0		1		111%	80	120	0%	
Strontium	A	mg/L	0.00004504	0.00004504		0.00005	0	0		0.001		90%	80	120	0%	
Thallium	A	mg/L	0.00005561	0.00005561		0	0	0		0.001		0%			0%	
Thorium	A	mg/L	0.00004279	0.00004279		0	0	0		0.05		0%			0%	
Tin	A	mg/L	0.0000546	0.0000546		0	0	0		0.001		0%			0%	
Titanium	A	mg/L	0.00006111	0.00006111		0	0	0		0.001		0%			0%	
Uranium	A	mg/L	0.00005752	0.00005752		0.00005	0	0		0.001		115%	80	120	0%	
Vanadium	A	mg/L	0.0001469	0.0001469		0	0	0		0.005		0%			0%	
Zinc	A	mg/L	0.00004369	0.00004369		0	0	0		0.01		0%			0%	
Iron, Ferrous	C	mg/L	0.001561	0.001561		0.00005	0	0		0.01	5	3122%	80	120	0%	S
Silicon as SiO2	C	mg/L	-4.6267E-05	-4.6267E-05		0.00428	0	0		0.214	0.9	-1%	80	120	0%	S

Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist					
14998059	0.10 ppb STD	ICPMS-6020B-C	Cal3		1/21/2022 2:47:5	1	R373694		0	0						
Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
Aluminum	A	mg/L	0.0001464	0.0001464		0.0001	0	0		0.01		146%	80	120	0%	S
Antimony	A	mg/L	0.0001083	0.0001083		0.0001	0	0		0.001		108%	80	120	0%	
Arsenic	A	mg/L	0.0001265	0.0001265		0.0001	0	0		0.001		127%	80	120	0%	S
Barium	A	mg/L	0.0001062	0.0001062		0.0001	0	0		0.0003		106%	80	120	0%	
Beryllium	A	mg/L	0.0001029	0.0001029		0.0001	0	0		0.001		103%	80	120	0%	
Boron	A	mg/L	-0.001098	-0.001098		0	0	0		0.1		0%			0%	
Cadmium	A	mg/L	0.0001046	0.0001046		0.0001	0	0		0.001		105%	80	120	0%	
Calcium	A	mg/L	0.02655	0.02655		0.025	0	0		1		106%	80	120	0%	
Cerium	A	mg/L	0.0001026	0.0001026		0.0001	0	0		0.001		103%	80	120	0%	
Chromium	A	mg/L	0.00008118	0.00008118		0.0001	0	0		0.001		81%	80	120	0%	
Cobalt	A	mg/L	0.0001007	0.0001007		0.0001	0	0		0.001		101%	80	120	0%	
Copper	A	mg/L	0.0001002	0.0001002		0.0001	0	0		0.005		100%	80	120	0%	
Iron	A	mg/L	0.002747	0.002747		0.0025	0	0		0.01		110%	80	120	0%	

Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist					
14998059	0.10 ppb STD	ICPMS-6020B-C	Cal3		1/21/2022 2:47:5	1	R373694		0	0						
Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
Lanthanum	A	mg/L	0.0001032	0.0001032		0.0001	0	0		0.001		103%	80	120	0%	
Lead	A	mg/L	0.00009554	0.00009554		0.0001	0	0		0.001		96%	80	120	0%	
Lithium	A	mg/L	0.001203	0.001203		0.00125	0	0		1		96%	80	120	0%	
Magnesium	A	mg/L	0.02612	0.02612		0.025	0	0		1		104%	80	120	0%	
Manganese	A	mg/L	0.000101	0.000101		0.0001	0	0		0.001		101%	80	120	0%	
Mercury	A	mg/L	6.655E-07	6.655E-07		0.000002	0	0		0.001		33%	80	120	0%	S
Molybdenum	A	mg/L	0.0001129	0.0001129		0.0001	0	0		0.001		113%	80	120	0%	
Nickel	A	mg/L	0.00009595	0.00009595		0.0001	0	0		0.005		96%	80	120	0%	
Potassium	A	mg/L	0.02659	0.02659		0.025	0	0		1		106%	80	120	0%	
Selenium	A	mg/L	0.0001032	0.0001032		0.0001	0	0		0.005		103%	80	120	0%	
Silicon	A	mg/L	0.0003106	0.0003106		0.0004	0	0		0.1		78%	80	120	0%	S
Silver	A	mg/L	0.00004643	0.00004643		0.00004	0	0		0.001		116%	80	120	0%	
Sodium	A	mg/L	0.02439	0.02439		0.025	0	0		1		98%	80	120	0%	
Strontium	A	mg/L	0.00009126	0.00009126		0.0001	0	0		0.001		91%	80	120	0%	
Thallium	A	mg/L	0.0001051	0.0001051		0.0001	0	0		0.001		105%	80	120	0%	
Thorium	A	mg/L	0.00008862	0.00008862		0.0001	0	0		0.05		89%	80	120	0%	
Tin	A	mg/L	0.00009495	0.00009495		0.0001	0	0		0.001		95%	80	120	0%	
Titanium	A	mg/L	0.0001017	0.0001017		0.0001	0	0		0.001		102%	80	120	0%	
Uranium	A	mg/L	0.0001051	0.0001051		0.0001	0	0		0.001		105%	80	120	0%	
Vanadium	A	mg/L	0.0001147	0.0001147		0.0001	0	0		0.005		115%	80	120	0%	
Zinc	A	mg/L	0.00007297	0.00007297		0.0001	0	0		0.01		73%	80	120	0%	S
Iron, Ferrous	C	mg/L	0.002747	0.002747		0.0001	0	0		0.01	5	2747%	80	120	0%	S
Silicon as SiO2	C	mg/L	0.000664684	0.000664684		0.00856	0	0		0.214	0.9	8%	80	120	0%	S

Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist					
14998060	0.5 ppb STD	ICPMS-6020B-C	Cal4		1/21/2022 2:54:3	1	R373694		0	0						
Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
Aluminum	A	mg/L	0.0005488	0.0005488		0.0005	0	0		0.01		110%	80	120	0%	
Antimony	A	mg/L	0.0004977	0.0004977		0.0005	0	0		0.001		100%	80	120	0%	
Arsenic	A	mg/L	0.0004916	0.0004916		0.0005	0	0		0.001		98%	80	120	0%	
Barium	A	mg/L	0.0004845	0.0004845		0.0005	0	0		0.0003		97%	80	120	0%	
Beryllium	A	mg/L	0.0004797	0.0004797		0.0005	0	0		0.001		96%	80	120	0%	
Boron	A	mg/L	-0.0001913	-0.0001913		0.0005	0	0		0.1		-38%	80	120	0%	S
Cadmium	A	mg/L	0.0004921	0.0004921		0.0005	0	0		0.001		98%	80	120	0%	

Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist					
14998060	0.5 ppb STD	ICPMS-6020B-C Cal4			1/21/2022 2:54:3	1	R373694		0	0						
Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
Calcium	A	mg/L	0.1201	0.1201		0.125	0	0		1		96%	80	120	0%	
Cerium	A	mg/L	0.0004776	0.0004776		0.0005	0	0		0.001		96%	80	120	0%	
Chromium	A	mg/L	0.0005009	0.0005009		0.0005	0	0		0.001		100%	80	120	0%	
Cobalt	A	mg/L	0.0004712	0.0004712		0.0005	0	0		0.001		94%	80	120	0%	
Copper	A	mg/L	0.0005381	0.0005381		0.0005	0	0		0.005		108%	80	120	0%	
Iron	A	mg/L	0.01263	0.01263		0.0125	0	0		0.01		101%	80	120	0%	
Lanthanum	A	mg/L	0.0004831	0.0004831		0.0005	0	0		0.001		97%	80	120	0%	
Lead	A	mg/L	0.0004879	0.0004879		0.0005	0	0		0.001		98%	80	120	0%	
Lithium	A	mg/L	0.005937	0.005937		0.00625	0	0		1		95%	80	120	0%	
Magnesium	A	mg/L	0.1205	0.1205		0.125	0	0		1		96%	80	120	0%	
Manganese	A	mg/L	0.0004902	0.0004902		0.0005	0	0		0.001		98%	80	120	0%	
Mercury	A	mg/L	0.0000939	0.0000939		0.00001	0	0		0.001		94%	80	120	0%	
Molybdenum	A	mg/L	0.0004873	0.0004873		0.0005	0	0		0.001		97%	80	120	0%	
Nickel	A	mg/L	0.0006183	0.0006183		0.0005	0	0		0.005		124%	80	120	0%	S
Potassium	A	mg/L	0.1212	0.1212		0.125	0	0		1		97%	80	120	0%	
Selenium	A	mg/L	0.0004859	0.0004859		0.0005	0	0		0.005		97%	80	120	0%	
Silicon	A	mg/L	0.001795	0.001795		0.002	0	0		0.1		90%	80	120	0%	
Silver	A	mg/L	0.000196	0.000196		0.0002	0	0		0.001		98%	80	120	0%	
Sodium	A	mg/L	0.1204	0.1204		0.125	0	0		1		96%	80	120	0%	
Strontium	A	mg/L	0.0004773	0.0004773		0.0005	0	0		0.001		95%	80	120	0%	
Thallium	A	mg/L	0.0004841	0.0004841		0.0005	0	0		0.001		97%	80	120	0%	
Thorium	A	mg/L	0.0004558	0.0004558		0.0005	0	0		0.05		91%	80	120	0%	
Tin	A	mg/L	0.0005259	0.0005259		0.0005	0	0		0.001		105%	80	120	0%	
Titanium	A	mg/L	0.000447	0.000447		0.0005	0	0		0.001		89%	80	120	0%	
Uranium	A	mg/L	0.000491	0.000491		0.0005	0	0		0.001		98%	80	120	0%	
Vanadium	A	mg/L	0.0005332	0.0005332		0.0005	0	0		0.005		107%	80	120	0%	
Zinc	A	mg/L	0.0005052	0.0005052		0.0005	0	0		0.01		101%	80	120	0%	
Iron, Ferrous	C	mg/L	0.01263	0.01263		0.0005	0	0		0.01	5	2526%	80	120	0%	S
Silicon as SiO2	C	mg/L	0.0038413	0.0038413		0.0428	0	0		0.214	0.9	9%	80	120	0%	S

Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist					
14998061	1 ppb STD	ICPMS-6020B-C Cal5			1/21/2022 3:01:1	1	R373694		0	0						
Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q

Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist					
14998061	1 ppb STD	ICPMS-6020B-C	CaI5		1/21/2022 3:01:1	1	R373694		0	0						
Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
Aluminum	A	mg/L	0.0009681	0.0009681		0.001	0	0		0.01		97%	80	120	0%	
Antimony	A	mg/L	0.0009999	0.0009999		0.001	0	0		0.001		100%	80	120	0%	
Arsenic	A	mg/L	0.001	0.001		0.001	0	0		0.001		100%	80	120	0%	
Barium	A	mg/L	0.001007	0.001007		0.001	0	0		0.0003		101%	80	120	0%	
Beryllium	A	mg/L	0.00101	0.00101		0.001	0	0		0.001		101%	80	120	0%	
Boron	A	mg/L	0.001522	0.001522		0.001	0	0		0.1		152%	80	120	0%	S
Cadmium	A	mg/L	0.001003	0.001003		0.001	0	0		0.001		100%	80	120	0%	
Calcium	A	mg/L	0.2522	0.2522		0.25	0	0		1		101%	80	120	0%	
Cerium	A	mg/L	0.001011	0.001011		0.001	0	0		0.001		101%	80	120	0%	
Chromium	A	mg/L	0.001001	0.001001		0.001	0	0		0.001		100%	80	120	0%	
Cobalt	A	mg/L	0.001014	0.001014		0.001	0	0		0.001		101%	80	120	0%	
Copper	A	mg/L	0.0009804	0.0009804		0.001	0	0		0.005		98%	80	120	0%	
Iron	A	mg/L	0.02615	0.02615		0.025	0	0		0.01		105%	80	120	0%	
Lanthanum	A	mg/L	0.001008	0.001008		0.001	0	0		0.001		101%	80	120	0%	
Lead	A	mg/L	0.001007	0.001007		0.001	0	0		0.001		101%	80	120	0%	
Lithium	A	mg/L	0.01266	0.01266		0.0125	0	0		1		101%	80	120	0%	
Magnesium	A	mg/L	0.2521	0.2521		0.25	0	0		1		101%	80	120	0%	
Manganese	A	mg/L	0.001005	0.001005		0.001	0	0		0.001		100%	80	120	0%	
Mercury	A	mg/L	0.00002052	0.00002052		0.00002	0	0		0.001		103%	80	120	0%	
Molybdenum	A	mg/L	0.001004	0.001004		0.001	0	0		0.001		100%	80	120	0%	
Nickel	A	mg/L	0.0009396	0.0009396		0.001	0	0		0.005		94%	80	120	0%	
Potassium	A	mg/L	0.2513	0.2513		0.25	0	0		1		101%	80	120	0%	
Selenium	A	mg/L	0.001007	0.001007		0.001	0	0		0.005		101%	80	120	0%	
Silicon	A	mg/L	0.004122	0.004122		0.004	0	0		0.1		103%	80	120	0%	
Silver	A	mg/L	0.0004012	0.0004012		0.0004	0	0		0.001		100%	80	120	0%	
Sodium	A	mg/L	0.2523	0.2523		0.25	0	0		1		101%	80	120	0%	
Strontium	A	mg/L	0.001013	0.001013		0.001	0	0		0.001		101%	80	120	0%	
Thallium	A	mg/L	0.001007	0.001007		0.001	0	0		0.001		101%	80	120	0%	
Thorium	A	mg/L	0.001024	0.001024		0.001	0	0		0.05		102%	80	120	0%	
Tin	A	mg/L	0.0009869	0.0009869		0.001	0	0		0.001		99%	80	120	0%	
Titanium	A	mg/L	0.001025	0.001025		0.001	0	0		0.001		102%	80	120	0%	
Uranium	A	mg/L	0.001004	0.001004		0.001	0	0		0.001		100%	80	120	0%	
Vanadium	A	mg/L	0.0009754	0.0009754		0.001	0	0		0.005		98%	80	120	0%	
Zinc	A	mg/L	0.001	0.001		0.001	0	0		0.01		100%	80	120	0%	
Iron, Ferrous	C	mg/L	0.02615	0.02615		0.001	0	0		0.01	5	2615%	80	120	0%	S

Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist					
14998061	1 ppb STD	ICPMS-6020B-C Ca15			1/21/2022 3:01:1	1	R373694			0	0					
Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
Silicon as SiO2	C	mg/L	0.00882108	0.00882108		0.0856	0	0		0.214	0.9	10%	80	120	0%	S

Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist					
14998062	Rinse	ICPMS-6020-W- SAMP			1/21/2022 4:59:1	1	R373694			0	0					
Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
Aluminum	A	mg/L	0.00002022	0		0	0	0	0.0006966	0.001	1	0%	0	0	0%	
Antimony	A	mg/L	0.0001475	0		0	0	0	0.0002882	0.001	0.1	0%	0	0	0%	
Arsenic	A	mg/L	-0.00007269	0		0	0	0	0.0001626	0.001	1	0%	0	0	0%	
Barium	A	mg/L	0.000002217	0		0	0	0	8.917E-05	0.001	1	0%	0	0	0%	
Beryllium	A	mg/L	-0.00003861	0		0	0	0	0.0001137	0.001	1	0%	0	0	0%	
Boron	A	mg/L	0.002623	0		0	0	0	0.0036397	0.0036397	1	0%	0	0	0%	L
Cadmium	A	mg/L	0.000008499	0		0	0	0	2.969E-05	0.001	1	0%	0	0	0%	
Calcium	A	mg/L	0.002869	0		0	0	0	0.0254163	0.0254163	50	0%	0	0	0%	L
Cerium	A	mg/L	-1.324E-07	0		0	0	0	8.97E-06	0.001	0.1	0%	0	0	0%	
Chromium	A	mg/L	-6.425E-06	0		0	0	0	0.0002078	0.001	1	0%	0	0	0%	
Cobalt	A	mg/L	-7.611E-06	0		0	0	0	2.037E-05	0.001	1	0%	0	0	0%	
Copper	A	mg/L	0.00002111	0		0	0	0	0.0001010	0.001	1	0%	0	0	0%	
Iron	A	mg/L	0.0001919	0		0	0	0	0.0021231	0.0021231	5	0%	0	0	0%	L
Lanthanum	A	mg/L	1.774E-07	0		0	0	0	1.209E-05	0.001	0.1	0%	0	0	0%	
Lead	A	mg/L	0.000003257	0		0	0	0	3.957E-05	0.001	1	0%	0	0	0%	
Magnesium	A	mg/L	0.0000601	0		0	0	0	0.0084694	0.0084694	50	0%	0	0	0%	L
Manganese	A	mg/L	0.0001208	0.0001208		0	0	0	5.319E-05	0.001	1	0%	0	0	0%	J
Mercury	A	mg/L	0.00000579	0		0	0	0	7.78E-06	0.001	0.002	0%	0	0	0%	
Molybdenum	A	mg/L	0.00001712	0		0	0	0	0.0000598	0.001	0.1	0%	0	0	0%	
Nickel	A	mg/L	-0.00001058	0		0	0	0	0.0001477	0.001	1	0%	0	0	0%	
Potassium	A	mg/L	-0.001194	0		0	0	0	0.0951865	0.0951865	50	0%	0	0	0%	L
Selenium	A	mg/L	-1.236E-06	0		0	0	0	6.961E-05	0.001	1	0%	0	0	0%	
Silicon	A	mg/L	0.0005902	0		0	0	0	0.0786454	0.1	0.4	0%	0	0	0%	
Silver	A	mg/L	0.000002693	0		0	0	0	1.541E-05	0.001	0.04	0%	0	0	0%	
Sodium	A	mg/L	0.007395	0		0	0	0	0.0321039	0.0321039	50	0%	0	0	0%	L
Strontium	A	mg/L	-9.162E-06	0		0	0	0	9.136E-05	0.001	1	0%	0	0	0%	
Thallium	A	mg/L	0.0002031	0.0002031		0	0	0	0.0001262	0.001	1	0%	0	0	0%	J
Thorium	A	mg/L	0.00004255	0		0	0	0	7.051E-05	0.001	1	0%	0	0	0%	
Tin	A	mg/L	0.00000282	0		0	0	0	0.0021596	0.0021596	0.1	0%	0	0	0%	L

Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist					
14998062	Rinse	ICPMS-6020-W-	SAMP		1/21/2022 4:59:1	1	R373694		0	0						
Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
Titanium	A	mg/L	-0.00004091	0		0	0	0	0.0001844	0.001	1	0%	0	0	0%	
Uranium	A	mg/L	0.000009162	0		0	0	0	1.948E-05	0.0003	1	0%	0	0	0%	
Vanadium	A	mg/L	-0.0006643	0		0	0	0	0.004194	0.004194	1	0%	0	0	0%	L
Zinc	A	mg/L	-5.355E-06	0		0	0	0	0.0006119	0.001	1	0%	0	0	0%	
Lithium	B	mg/L	0.0002573	0		0	0	0	0.05	0.05	1	0%	0	0	0%	L
Iron, Ferrous	C	mg/L	0.0001919	0		0	0	0	0.0021231	0.0021231	5	0%	0	0	0%	L

Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist					
14998063	10 ppb STD	ICPMS-6020B-C	Cal6		1/21/2022 5:05:3	1	R373694		0	0						
Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
Aluminum	A	mg/L	0.009983	0.009983		0.01	0	0		0.01		100%	90	110	0%	
Antimony	A	mg/L	0.01001	0.01001		0.01	0	0		0.001		100%	90	110	0%	
Arsenic	A	mg/L	0.009991	0.009991		0.01	0	0		0.001		100%	90	110	0%	
Barium	A	mg/L	0.01	0.01		0.01	0	0		0.0003		100%	90	110	0%	
Beryllium	A	mg/L	0.009983	0.009983		0.01	0	0		0.001		100%	90	110	0%	
Boron	A	mg/L	0.01009	0.01009		0.01	0	0		0.1		101%	90	110	0%	
Cadmium	A	mg/L	0.01001	0.01001		0.01	0	0		0.001		100%	90	110	0%	
Calcium	A	mg/L	2.499	2.499		2.5	0	0		1		100%	90	110	0%	
Cerium	A	mg/L	0.01	0.01		0.01	0	0		0.001		100%	90	110	0%	
Chromium	A	mg/L	0.009996	0.009996		0.01	0	0		0.001		100%	90	110	0%	
Cobalt	A	mg/L	0.009998	0.009998		0.01	0	0		0.001		100%	90	110	0%	
Copper	A	mg/L	0.009993	0.009993		0.01	0	0		0.005		100%	90	110	0%	
Iron	A	mg/L	0.2599	0.2599		0.25	0	0		0.01		104%	90	110	0%	
Lanthanum	A	mg/L	0.01	0.01		0.01	0	0		0.001		100%	90	110	0%	
Lead	A	mg/L	0.01001	0.01001		0.01	0	0		0.001		100%	90	110	0%	
Lithium	A	mg/L	0.1246	0.1246		0.125	0	0		1		100%	90	110	0%	
Magnesium	A	mg/L	2.5	2.5		2.5	0	0		1		100%	90	110	0%	
Manganese	A	mg/L	0.009997	0.009997		0.01	0	0		0.001		100%	90	110	0%	
Mercury	A	mg/L	0.0002003	0.0002003		0.0002	0	0		0.001		100%	90	110	0%	
Molybdenum	A	mg/L	0.01	0.01		0.01	0	0		0.001		100%	90	110	0%	
Nickel	A	mg/L	0.009988	0.009988		0.01	0	0		0.005		100%	90	110	0%	
Potassium	A	mg/L	2.495	2.495		2.5	0	0		1		100%	90	110	0%	
Selenium	A	mg/L	0.009999	0.009999		0.01	0	0		0.005		100%	90	110	0%	
Silicon	A	mg/L	0.04006	0.04006		0.04	0	0		0.1		100%	90	110	0%	

Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist					
14998063	10 ppb STD	ICPMS-6020B-C Cal6			1/21/2022 5:05:3	1	R373694		0	0						
Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
Silver	A	mg/L	0.004	0.004		0.004	0	0		0.001		100%	90	110	0%	
Sodium	A	mg/L	2.5	2.5		2.5	0	0		1		100%	90	110	0%	
Strontium	A	mg/L	0.009997	0.009997		0.01	0	0		0.001		100%	90	110	0%	
Thallium	A	mg/L	0.01	0.01		0.01	0	0		0.001		100%	90	110	0%	
Thorium	A	mg/L	0.01001	0.01001		0.01	0	0		0.05		100%	90	110	0%	
Tin	A	mg/L	0.01	0.01		0.01	0	0		0.001		100%	90	110	0%	
Titanium	A	mg/L	0.009991	0.009991		0.01	0	0		0.001		100%	90	110	0%	
Uranium	A	mg/L	0.01001	0.01001		0.01	0	0		0.001		100%	90	110	0%	
Vanadium	A	mg/L	0.009947	0.009947		0.01	0	0		0.005		99%	90	110	0%	
Zinc	A	mg/L	0.00999	0.00999		0.01	0	0		0.01		100%	90	110	0%	
Iron, Ferrous	C	mg/L	0.2599	0.2599		0.01	0	0		0.01	5	2599%	90	110	0%	S
Silicon as SiO2	C	mg/L	0.0857284	0.0857284		0.856	0	0		0.214	0.9	10%	90	110	0%	S

Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist					
14998064	Rinse	ICPMS-6020-W- SAMP			1/21/2022 5:13:2	1	R373694		0	0						
Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
Aluminum	A	mg/L	0.00002666	0		0	0	0	0.00086	0.001	1	0%	0	0	0%	
Antimony	A	mg/L	0.00005463	0		0	0	0	0.00042	0.001	0.1	0%	0	0	0%	
Arsenic	A	mg/L	-0.00003516	0		0	0	0	0.00019	0.001	1	0%	0	0	0%	
Barium	A	mg/L	-8.872E-08	0		0	0	0	0.000042	0.001	1	0%	0	0	0%	
Beryllium	A	mg/L	-0.00004181	0		0	0	0	0.00012	0.001	1	0%	0	0	0%	
Cadmium	A	mg/L	-1.428E-06	0		0	0	0	0.000025	0.001	1	0%	0	0	0%	
Cerium	A	mg/L	1.761E-07	0		0	0	0	0.000012	0.001	0.1	0%	0	0	0%	
Chromium	A	mg/L	-8.424E-06	0		0	0	0	0.00018	0.001	1	0%	0	0	0%	
Cobalt	A	mg/L	-9.796E-06	0		0	0	0	0.000042	0.001	1	0%	0	0	0%	
Copper	A	mg/L	0.00002117	0		0	0	0	0.00027	0.001	1	0%	0	0	0%	
Lanthanum	A	mg/L	5.515E-08	0		0	0	0	0.000011	0.001	0.1	0%	0	0	0%	
Lead	A	mg/L	-7.136E-06	0		0	0	0	0.000056	0.001	1	0%	0	0	0%	
Manganese	A	mg/L	0.0001132	0.0001132		0	0	0	0.000095	0.001	1	0%	0	0	0%	J
Mercury	A	mg/L	0.000004516	0		0	0	0	0.00016	0.001	0.002	0%	0	0	0%	
Molybdenum	A	mg/L	0.00001116	0		0	0	0	0.00005	0.001	0.1	0%	0	0	0%	
Nickel	A	mg/L	-0.00001493	0		0	0	0	0.00063	0.001	1	0%	0	0	0%	
Selenium	A	mg/L	-7.809E-06	0		0	0	0	0.00033	0.001	1	0%	0	0	0%	
Silicon	A	mg/L	0.0001637	0		0	0	0	0.01223	0.1	0.4	0%	0	0	0%	

Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist					
14998064	Rinse	ICPMS-6020-W- SAMP				1/21/2022 5:13:2	1	R373694		0	0					
Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
Silver	A	mg/L	-7.442E-07	0		0	0	0	0.00002	0.001	0.04	0%	0	0	0%	
Strontium	A	mg/L	-7.083E-06	0		0	0	0	0.00014	0.001	1	0%	0	0	0%	
Thallium	A	mg/L	0.00005505	0.00005505		0	0	0	0.000041	0.001	1	0%	0	0	0%	J
Thorium	A	mg/L	0.0000213	0		0	0	0	0.00061	0.001	1	0%	0	0	0%	
Titanium	A	mg/L	-0.00004749	0		0	0	0	0.000094	0.001	1	0%	0	0	0%	
Uranium	A	mg/L	9.827E-07	0		0	0	0	0.000052	0.0003	1	0%	0	0	0%	
Boron	B	mg/L	0.0004491	0		0	0	0	0.00561	0.00561	1	0%	0	0	0%	L
Calcium	B	mg/L	-0.00006374	0		0	0	0	0.02092	0.02092	50	0%	0	0	0%	L
Iron	B	mg/L	0.0001607	0		0	0	0	0.00119	0.00119	5	0%	0	0	0%	
Iron, Ferrous	B	mg/L	0.0001607	0		0	0	0	0.00119	0.00119	5	0%	0	0	0%	
Magnesium	B	mg/L	0.0004339	0		0	0	0	0.00564	0.00564	50	0%	0	0	0%	L
Potassium	B	mg/L	0.009801	0		0	0	0	0.08139	0.08139	50	0%	0	0	0%	L
Sodium	B	mg/L	0.006179	0		0	0	0	0.02171	0.02171	50	0%	0	0	0%	L
Tin	B	mg/L	-3.536E-06	0		0	0	0	0.00132	0.00132	0.1	0%	0	0	0%	
Vanadium	B	mg/L	-0.0003783	0		0	0	0	0.0013	0.0013	1	0%	0	0	0%	
Zinc	B	mg/L	-0.0000269	0		0	0	0	0.00273	0.00273	1	0%	0	0	0%	L

Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist					
14998065	Cal Blk	ICPMS-6020-W- SAMP				1/21/2022 5:19:3	1	R373694		0	0					
Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
Aluminum	A	mg/L	0	0		0	0	0	0.00086	0.001	1	0%	0	0	0%	
Antimony	A	mg/L	0	0		0	0	0	0.00042	0.001	0.1	0%	0	0	0%	
Arsenic	A	mg/L	0	0		0	0	0	0.00019	0.001	1	0%	0	0	0%	
Barium	A	mg/L	0	0		0	0	0	0.000042	0.001	1	0%	0	0	0%	
Beryllium	A	mg/L	0	0		0	0	0	0.00012	0.001	1	0%	0	0	0%	
Cadmium	A	mg/L	0	0		0	0	0	0.000025	0.001	1	0%	0	0	0%	
Cerium	A	mg/L	0	0		0	0	0	0.000012	0.001	0.1	0%	0	0	0%	
Chromium	A	mg/L	0	0		0	0	0	0.00018	0.001	1	0%	0	0	0%	
Cobalt	A	mg/L	0	0		0	0	0	0.000042	0.001	1	0%	0	0	0%	
Copper	A	mg/L	0	0		0	0	0	0.00027	0.001	1	0%	0	0	0%	
Lanthanum	A	mg/L	0	0		0	0	0	0.000011	0.001	0.1	0%	0	0	0%	
Lead	A	mg/L	0	0		0	0	0	0.000056	0.001	1	0%	0	0	0%	
Manganese	A	mg/L	0	0		0	0	0	0.000095	0.001	1	0%	0	0	0%	
Mercury	A	mg/L	0	0		0	0	0	0.00016	0.001	0.002	0%	0	0	0%	

Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist					
14998065	Cal Blk	ICPMS-6020-W-	SAMP		1/21/2022 5:19:3	1	R373694		0	0						
Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
Molybdenum	A	mg/L	0	0		0	0	0	0.00005	0.001	0.1	0%	0	0	0%	
Nickel	A	mg/L	0	0		0	0	0	0.00063	0.001	1	0%	0	0	0%	
Selenium	A	mg/L	0	0		0	0	0	0.00033	0.001	1	0%	0	0	0%	
Silicon	A	mg/L	0	0		0	0	0	0.01223	0.1	0.4	0%	0	0	0%	
Silver	A	mg/L	0	0		0	0	0	0.00002	0.001	0.04	0%	0	0	0%	
Strontium	A	mg/L	0	0		0	0	0	0.00014	0.001	1	0%	0	0	0%	
Thallium	A	mg/L	0	0		0	0	0	0.000041	0.001	1	0%	0	0	0%	
Thorium	A	mg/L	0	0		0	0	0	0.00061	0.001	1	0%	0	0	0%	
Titanium	A	mg/L	0	0		0	0	0	0.000094	0.001	1	0%	0	0	0%	
Uranium	A	mg/L	0	0		0	0	0	0.000052	0.0003	1	0%	0	0	0%	
Boron	B	mg/L	0	0		0	0	0	0.00561	0.00561	1	0%	0	0	0%	L
Calcium	B	mg/L	0	0		0	0	0	0.02092	0.02092	50	0%	0	0	0%	L
Iron	B	mg/L	0	0		0	0	0	0.00119	0.00119	5	0%	0	0	0%	
Iron, Ferrous	B	mg/L	0	0		0	0	0	0.00119	0.00119	5	0%	0	0	0%	
Magnesium	B	mg/L	0	0		0	0	0	0.00564	0.00564	50	0%	0	0	0%	L
Potassium	B	mg/L	0	0		0	0	0	0.08139	0.08139	50	0%	0	0	0%	L
Sodium	B	mg/L	0	0		0	0	0	0.02171	0.02171	50	0%	0	0	0%	L
Tin	B	mg/L	0	0		0	0	0	0.00132	0.00132	0.1	0%	0	0	0%	
Vanadium	B	mg/L	0	0		0	0	0	0.0013	0.0013	1	0%	0	0	0%	
Zinc	B	mg/L	0	0		0	0	0	0.00273	0.00273	1	0%	0	0	0%	L

Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist					
14998066	0.025 ppb STD	ICPMS-6020B-C	Cal1		1/21/2022 5:26:1	1	R373694		0	0						
Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
Aluminum	A	mg/L	0.0001404	0.0001404		0	0	0		0.01		0%			0%	
Antimony	A	mg/L	0.00001874	0.00001874		0	0	0		0.001		0%			0%	
Arsenic	A	mg/L	0.00004683	0.00004683		0.000025	0	0		0.001		187%	80	120	0%	S
Barium	A	mg/L	0.0000262	0.0000262		0.000025	0	0		0.0003		105%	80	120	0%	
Beryllium	A	mg/L	-9.124E-06	-9.124E-06		0.000025	0	0		0.001		-36%	80	120	0%	S
Boron	A	mg/L	-0.0001905	-0.0001905		0	0	0		0.1		0%			0%	
Cadmium	A	mg/L	0.00002166	0.00002166		0.000025	0	0		0.001		87%	80	120	0%	
Calcium	A	mg/L	0.0071	0.0071		0	0	0		1		0%			0%	
Cerium	A	mg/L	0.00002393	0.00002393		0.000025	0	0		0.001		96%	80	120	0%	
Chromium	A	mg/L	0.00004885	0.00004885		0.000025	0	0		0.001		195%	80	120	0%	S

Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist					
14998066	0.025 ppb STD	ICPMS-6020B-C Cal1			1/21/2022 5:26:1	1	R373694		0	0						
Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
Cobalt	A	mg/L	0.0001849	0.0001849		0.000025	0	0		0.001		740%	80	120	0%	S
Copper	A	mg/L	0.00004179	0.00004179		0	0	0		0.005		0%			0%	
Iron	A	mg/L	0.0007674	0.0007674		0	0	0		0.01		0%			0%	
Lanthanum	A	mg/L	0.00002302	0.00002302		0.000025	0	0		0.001		92%	80	120	0%	
Lead	A	mg/L	0.00002523	0.00002523		0.000025	0	0		0.001		101%	80	120	0%	
Lithium	A	mg/L	0.0003451	0.0003451		0.0003125	0	0		1		110%	80	120	0%	
Magnesium	A	mg/L	0.006719	0.006719		0	0	0		1		0%			0%	
Manganese	A	mg/L	0.00003278	0.00003278		0	0	0		0.001		0%			0%	
Mercury	A	mg/L	-7.019E-08	-7.019E-08		0	0	0		0.001		0%			0%	
Molybdenum	A	mg/L	0.00002382	0.00002382		0	0	0		0.001		0%			0%	
Nickel	A	mg/L	0.00003591	0.00003591		0	0	0		0.005		0%			0%	
Potassium	A	mg/L	0.008572	0.008572		0.00625	0	0		1		137%	80	120	0%	S
Selenium	A	mg/L	0.00002295	0.00002295		0.000025	0	0		0.005		92%	80	120	0%	
Silicon	A	mg/L	0.0004154	0.0004154		0	0	0		0.1		0%			0%	
Silver	A	mg/L	0.00001405	0.00001405		0	0	0		0.001		0%			0%	
Sodium	A	mg/L	0.005041	0.005041		0.00625	0	0		1		81%	80	120	0%	
Strontium	A	mg/L	0.00002101	0.00002101		0	0	0		0.001		0%	80	120	0%	
Thallium	A	mg/L	0.000009053	0.000009053		0	0	0		0.001		0%			0%	
Thorium	A	mg/L	0.00001263	0.00001263		0	0	0		0.05		0%			0%	
Tin	A	mg/L	0.00006137	0.00006137		0	0	0		0.001		0%			0%	
Titanium	A	mg/L	0.00004323	0.00004323		0	0	0		0.001		0%			0%	
Uranium	A	mg/L	0.00002386	0.00002386		0.000025	0	0		0.001		95%	80	120	0%	
Vanadium	A	mg/L	0.0002747	0.0002747		0	0	0		0.005		0%			0%	
Zinc	A	mg/L	0.00004065	0.00004065		0	0	0		0.01		0%			0%	
Iron, Ferrous	C	mg/L	0.0007674	0.0007674		0.000025	0	0		0.01	5	3070%	80	120	0%	S
Silicon as SiO2	C	mg/L	0.000888956	0.000888956		0.0000535	0	0		0.214	0.9	1662%	80	120	0%	S

Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist					
14998067	0.05 ppb STD	ICPMS-6020B-C Cal2			1/21/2022 5:32:5	1	R373694		0	0						
Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
Aluminum	A	mg/L	0.0001337	0.0001337		0	0	0		0.01		0%			0%	
Antimony	A	mg/L	0.00004488	0.00004488		0.00005	0	0		0.001		90%	80	120	0%	
Arsenic	A	mg/L	0.00006096	0.00006096		0.00005	0	0		0.001		122%	80	120	0%	S
Barium	A	mg/L	0.00004963	0.00004963		0.00005	0	0		0.0003		99%	80	120	0%	

Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist					
14998067	0.05 ppb STD	ICPMS-6020B-C	Cal2		1/21/2022 5:32:5	1	R373694		0	0						
Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
Beryllium	A	mg/L	0.00001828	0.00001828		0.00005	0	0		0.001		37%	80	120	0%	S
Boron	A	mg/L	-0.0002925	-0.0002925		0	0	0		0.1		0%			0%	
Cadmium	A	mg/L	0.00005136	0.00005136		0.00005	0	0		0.001		103%	80	120	0%	
Calcium	A	mg/L	0.01507	0.01507		0.0125	0	0		1		121%	80	120	0%	S
Cerium	A	mg/L	0.00005932	0.00005932		0.00005	0	0		0.001		119%	80	120	0%	
Chromium	A	mg/L	0.00007761	0.00007761		0.00005	0	0		0.001		155%	80	120	0%	S
Cobalt	A	mg/L	0.00006261	0.00006261		0	0	0		0.001		0%			0%	
Copper	A	mg/L	0.00007216	0.00007216		0.00005	0	0		0.005		144%	80	120	0%	S
Iron	A	mg/L	0.001609	0.001609		0.00125	0	0		0.01		129%	80	120	0%	S
Lanthanum	A	mg/L	0.00005619	0.00005619		0.00005	0	0		0.001		112%	80	120	0%	
Lead	A	mg/L	0.00005334	0.00005334		0.00005	0	0		0.001		107%	80	120	0%	
Lithium	A	mg/L	0.0006293	0.0006293		0.000625	0	0		1		101%	80	120	0%	
Magnesium	A	mg/L	0.01563	0.01563		0.0125	0	0		1		125%	80	120	0%	S
Manganese	A	mg/L	0.00006534	0.00006534		0.00005	0	0		0.001		131%	80	120	0%	S
Mercury	A	mg/L	0.000002148	0.000002148		0	0	0		0.001		0%			0%	
Molybdenum	A	mg/L	0.00005225	0.00005225		0.00005	0	0		0.001		104%	80	120	0%	
Nickel	A	mg/L	0.00008749	0.00008749		0	0	0		0.005		0%			0%	
Potassium	A	mg/L	0.01435	0.01435		0.0125	0	0		1		115%	80	120	0%	
Selenium	A	mg/L	0.00005083	0.00005083		0.00005	0	0		0.005		102%	80	120	0%	
Silicon	A	mg/L	0.0008223	0.0008223		0	0	0		0.1		0%			0%	
Silver	A	mg/L	0.00002572	0.00002572		0.00002	0	0		0.001		129%	80	120	0%	S
Sodium	A	mg/L	0.01459	0.01459		0.0125	0	0		1		117%	80	120	0%	
Strontium	A	mg/L	0.00005632	0.00005632		0.00005	0	0		0.001		113%	80	120	0%	
Thallium	A	mg/L	0.00003272	0.00003272		0	0	0		0.001		0%			0%	
Thorium	A	mg/L	0.0000328	0.0000328		0	0	0		0.05		0%			0%	
Tin	A	mg/L	0.0000384	0.0000384		0	0	0		0.001		0%			0%	
Titanium	A	mg/L	0.00006374	0.00006374		0	0	0		0.001		0%			0%	
Uranium	A	mg/L	0.00005603	0.00005603		0.00005	0	0		0.001		112%	80	120	0%	
Vanadium	A	mg/L	0.00006742	0.00006742		0	0	0		0.005		0%			0%	
Zinc	A	mg/L	0.00008042	0.00008042		0	0	0		0.01		0%			0%	
Iron, Ferrous	C	mg/L	0.001609	0.001609		0.00005	0	0		0.01	5	3218%	80	120	0%	S
Silicon as SiO2	C	mg/L	0.001759722	0.001759722		0.00428	0	0		0.214	0.9	41%	80	120	0%	S

Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist					
14998068	0.10 ppb STD	ICPMS-6020B-C	Cal3		1/21/2022 5:39:2	1	R373694		0	0						
Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
Aluminum	A	mg/L	0.0001671	0.0001671		0.0001	0	0		0.01		167%	80	120	0%	S
Antimony	A	mg/L	0.00008953	0.00008953		0.0001	0	0		0.001		90%	80	120	0%	
Arsenic	A	mg/L	0.0001116	0.0001116		0.0001	0	0		0.001		112%	80	120	0%	
Barium	A	mg/L	0.0001002	0.0001002		0.0001	0	0		0.0003		100%	80	120	0%	
Beryllium	A	mg/L	0.00005448	0.00005448		0.0001	0	0		0.001		54%	80	120	0%	S
Boron	A	mg/L	-0.0004185	-0.0004185		0	0	0		0.1		0%			0%	
Cadmium	A	mg/L	0.0001032	0.0001032		0.0001	0	0		0.001		103%	80	120	0%	
Calcium	A	mg/L	0.02825	0.02825		0.025	0	0		1		113%	80	120	0%	
Cerium	A	mg/L	0.0001106	0.0001106		0.0001	0	0		0.001		111%	80	120	0%	
Chromium	A	mg/L	0.0001311	0.0001311		0.0001	0	0		0.001		131%	80	120	0%	S
Cobalt	A	mg/L	0.0001095	0.0001095		0.0001	0	0		0.001		110%	80	120	0%	
Copper	A	mg/L	0.0001057	0.0001057		0.0001	0	0		0.005		106%	80	120	0%	
Iron	A	mg/L	0.002963	0.002963		0.0025	0	0		0.01		119%	80	120	0%	
Lanthanum	A	mg/L	0.0001063	0.0001063		0.0001	0	0		0.001		106%	80	120	0%	
Lead	A	mg/L	0.0001004	0.0001004		0.0001	0	0		0.001		100%	80	120	0%	
Lithium	A	mg/L	0.001105	0.001105		0.00125	0	0		1		88%	80	120	0%	
Magnesium	A	mg/L	0.02723	0.02723		0.025	0	0		1		109%	80	120	0%	
Manganese	A	mg/L	0.000116	0.000116		0.0001	0	0		0.001		116%	80	120	0%	
Mercury	A	mg/L	0.00002229	0.00002229		0.000002	0	0		0.001		111%	80	120	0%	
Molybdenum	A	mg/L	0.0001074	0.0001074		0.0001	0	0		0.001		107%	80	120	0%	
Nickel	A	mg/L	0.0001168	0.0001168		0.0001	0	0		0.005		117%	80	120	0%	
Potassium	A	mg/L	0.02028	0.02028		0.025	0	0		1		81%	80	120	0%	
Selenium	A	mg/L	0.00009813	0.00009813		0.0001	0	0		0.005		98%	80	120	0%	
Silicon	A	mg/L	0.0008781	0.0008781		0.0004	0	0		0.1		220%	80	120	0%	S
Silver	A	mg/L	0.00004498	0.00004498		0.00004	0	0		0.001		112%	80	120	0%	
Sodium	A	mg/L	0.02739	0.02739		0.025	0	0		1		110%	80	120	0%	
Strontium	A	mg/L	0.0001166	0.0001166		0.0001	0	0		0.001		117%	80	120	0%	
Thallium	A	mg/L	0.00007678	0.00007678		0.0001	0	0		0.001		77%	80	120	0%	S
Thorium	A	mg/L	0.00006987	0.00006987		0.0001	0	0		0.05		70%	80	120	0%	S
Tin	A	mg/L	0.00008883	0.00008883		0.0001	0	0		0.001		89%	80	120	0%	
Titanium	A	mg/L	0.000111	0.000111		0.0001	0	0		0.001		111%	80	120	0%	
Uranium	A	mg/L	0.0001017	0.0001017		0.0001	0	0		0.001		102%	80	120	0%	
Vanadium	A	mg/L	0.00003593	0.00003593		0.0001	0	0		0.005		4%	80	120	0%	S
Zinc	A	mg/L	0.00009014	0.00009014		0.0001	0	0		0.01		90%	80	120	0%	
Iron, Ferrous	C	mg/L	0.002963	0.002963		0.0001	0	0		0.01	5	2963%	80	120	0%	S

Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist					
14998068	0.10 ppb STD	ICPMS-6020B-C Cal3			1/21/2022 5:39:2	1	R373694		0	0						
Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
Silicon as SiO2	C	mg/L	0.001879134	0.001879134		0.00856	0	0		0.214	0.9	22%	80	120	0%	S

Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist					
14998069	0.5 ppb STD	ICPMS-6020B-C Cal4			1/21/2022 5:46:0	1	R373694		0	0						
Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
Aluminum	A	mg/L	0.0005973	0.0005973		0.0005	0	0		0.01		119%	80	120	0%	
Antimony	A	mg/L	0.0004713	0.0004713		0.0005	0	0		0.001		94%	80	120	0%	
Arsenic	A	mg/L	0.0005219	0.0005219		0.0005	0	0		0.001		104%	80	120	0%	
Barium	A	mg/L	0.0004824	0.0004824		0.0005	0	0		0.0003		96%	80	120	0%	
Beryllium	A	mg/L	0.0004066	0.0004066		0.0005	0	0		0.001		81%	80	120	0%	
Boron	A	mg/L	-0.0001012	-0.0001012		0.0005	0	0		0.1		-20%	80	120	0%	S
Cadmium	A	mg/L	0.000494	0.000494		0.0005	0	0		0.001		99%	80	120	0%	
Calcium	A	mg/L	0.133	0.133		0.125	0	0		1		106%	80	120	0%	
Cerium	A	mg/L	0.0004836	0.0004836		0.0005	0	0		0.001		97%	80	120	0%	
Chromium	A	mg/L	0.0005108	0.0005108		0.0005	0	0		0.001		102%	80	120	0%	
Cobalt	A	mg/L	0.0004835	0.0004835		0.0005	0	0		0.001		97%	80	120	0%	
Copper	A	mg/L	0.000679	0.000679		0.0005	0	0		0.005		136%	80	120	0%	S
Iron	A	mg/L	0.01371	0.01371		0.0125	0	0		0.01		110%	80	120	0%	
Lanthanum	A	mg/L	0.0004964	0.0004964		0.0005	0	0		0.001		99%	80	120	0%	
Lead	A	mg/L	0.0004824	0.0004824		0.0005	0	0		0.001		96%	80	120	0%	
Lithium	A	mg/L	0.005768	0.005768		0.00625	0	0		1		92%	80	120	0%	
Magnesium	A	mg/L	0.1302	0.1302		0.125	0	0		1		104%	80	120	0%	
Manganese	A	mg/L	0.0005191	0.0005191		0.0005	0	0		0.001		104%	80	120	0%	
Mercury	A	mg/L	0.00000783	0.00000783		0.00001	0	0		0.001		78%	80	120	0%	S
Molybdenum	A	mg/L	0.0004781	0.0004781		0.0005	0	0		0.001		96%	80	120	0%	
Nickel	A	mg/L	0.0006586	0.0006586		0.0005	0	0		0.005		132%	80	120	0%	S
Potassium	A	mg/L	0.1246	0.1246		0.125	0	0		1		100%	80	120	0%	
Selenium	A	mg/L	0.0005083	0.0005083		0.0005	0	0		0.005		102%	80	120	0%	
Silicon	A	mg/L	0.002053	0.002053		0.002	0	0		0.1		103%	80	120	0%	
Silver	A	mg/L	0.0002057	0.0002057		0.0002	0	0		0.001		103%	80	120	0%	
Sodium	A	mg/L	0.1277	0.1277		0.125	0	0		1		102%	80	120	0%	
Strontium	A	mg/L	0.0005183	0.0005183		0.0005	0	0		0.001		104%	80	120	0%	
Thallium	A	mg/L	0.000445	0.000445		0.0005	0	0		0.001		89%	80	120	0%	
Thorium	A	mg/L	0.0004019	0.0004019		0.0005	0	0		0.05		80%	80	120	0%	

Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist					
14998069	0.5 ppb STD	ICPMS-6020B-C Cal4			1/21/2022 5:46:0	1	R373694		0	0						
Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
Tin	A	mg/L	0.0005114	0.0005114		0.0005	0	0		0.001		102%	80	120	0%	
Titanium	A	mg/L	0.0004424	0.0004424		0.0005	0	0		0.001		88%	80	120	0%	
Uranium	A	mg/L	0.0004754	0.0004754		0.0005	0	0		0.001		95%	80	120	0%	
Vanadium	A	mg/L	0.0005702	0.0005702		0.0005	0	0		0.005		114%	80	120	0%	
Zinc	A	mg/L	0.0006091	0.0006091		0.0005	0	0		0.01		122%	80	120	0%	S
Iron, Ferrous	C	mg/L	0.01371	0.01371		0.0005	0	0		0.01	5	2742%	80	120	0%	S
Silicon as SiO2	C	mg/L	0.00439342	0.00439342		0.0428	0	0		0.214	0.9	10%	80	120	0%	S

Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist					
14998070	1 ppb STD	ICPMS-6020B-C Cal5			1/21/2022 5:52:4	1	R373694		0	0						
Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
Aluminum	A	mg/L	0.001108	0.001108		0.001	0	0		0.01		111%	80	120	0%	
Antimony	A	mg/L	0.0009708	0.0009708		0.001	0	0		0.001		97%	80	120	0%	
Arsenic	A	mg/L	0.001076	0.001076		0.001	0	0		0.001		108%	80	120	0%	
Barium	A	mg/L	0.0009819	0.0009819		0.001	0	0		0.0003		98%	80	120	0%	
Beryllium	A	mg/L	0.0009937	0.0009937		0.001	0	0		0.001		99%	80	120	0%	
Boron	A	mg/L	0.0004073	0.0004073		0.001	0	0		0.1		41%	80	120	0%	S
Cadmium	A	mg/L	0.001029	0.001029		0.001	0	0		0.001		103%	80	120	0%	
Calcium	A	mg/L	0.2751	0.2751		0.25	0	0		1		110%	80	120	0%	
Cerium	A	mg/L	0.001024	0.001024		0.001	0	0		0.001		102%	80	120	0%	
Chromium	A	mg/L	0.001061	0.001061		0.001	0	0		0.001		106%	80	120	0%	
Cobalt	A	mg/L	0.001069	0.001069		0.001	0	0		0.001		107%	80	120	0%	
Copper	A	mg/L	0.001101	0.001101		0.001	0	0		0.005		110%	80	120	0%	
Iron	A	mg/L	0.02826	0.02826		0.025	0	0		0.01		113%	80	120	0%	
Lanthanum	A	mg/L	0.00101	0.00101		0.001	0	0		0.001		101%	80	120	0%	
Lead	A	mg/L	0.0009965	0.0009965		0.001	0	0		0.001		100%	80	120	0%	
Lithium	A	mg/L	0.01329	0.01329		0.0125	0	0		1		106%	80	120	0%	
Magnesium	A	mg/L	0.2646	0.2646		0.25	0	0		1		106%	80	120	0%	
Manganese	A	mg/L	0.001071	0.001071		0.001	0	0		0.001		107%	80	120	0%	
Mercury	A	mg/L	0.00001879	0.00001879		0.00002	0	0		0.001		94%	80	120	0%	
Molybdenum	A	mg/L	0.0009484	0.0009484		0.001	0	0		0.001		95%	80	120	0%	
Nickel	A	mg/L	0.001084	0.001084		0.001	0	0		0.005		108%	80	120	0%	
Potassium	A	mg/L	0.2745	0.2745		0.25	0	0		1		110%	80	120	0%	
Selenium	A	mg/L	0.001047	0.001047		0.001	0	0		0.005		105%	80	120	0%	

Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist					
14998070	1 ppb STD	ICPMS-6020B-C	Cal5		1/21/2022 5:52:4	1	R373694		0	0						
Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
Silicon	A	mg/L	0.004072	0.004072		0.004	0	0		0.1		102%	80	120	0%	
Silver	A	mg/L	0.0004132	0.0004132		0.0004	0	0		0.001		103%	80	120	0%	
Sodium	A	mg/L	0.2633	0.2633		0.25	0	0		1		105%	80	120	0%	
Strontium	A	mg/L	0.00108	0.00108		0.001	0	0		0.001		108%	80	120	0%	
Thallium	A	mg/L	0.0009558	0.0009558		0.001	0	0		0.001		96%	80	120	0%	
Thorium	A	mg/L	0.0008981	0.0008981		0.001	0	0		0.05		90%	80	120	0%	
Tin	A	mg/L	0.0009755	0.0009755		0.001	0	0		0.001		98%	80	120	0%	
Titanium	A	mg/L	0.0009922	0.0009922		0.001	0	0		0.001		99%	80	120	0%	
Uranium	A	mg/L	0.0009902	0.0009902		0.001	0	0		0.001		99%	80	120	0%	
Vanadium	A	mg/L	0.001239	0.001239		0.001	0	0		0.005		124%	80	120	0%	S
Zinc	A	mg/L	0.001085	0.001085		0.001	0	0		0.01		108%	80	120	0%	
Iron, Ferrous	C	mg/L	0.02826	0.02826		0.001	0	0		0.01	5	2826%	80	120	0%	S
Silicon as SiO2	C	mg/L	0.00871408	0.00871408		0.0856	0	0		0.214	0.9	10%	80	120	0%	S

Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist					
14998071	10 ppb STD	ICPMS-6020B-C	Cal6		1/21/2022 5:59:2	1	R373694		0	0						
Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
Aluminum	A	mg/L	0.00945	0.00945		0.01	0	0		0.01		94%	90	110	0%	
Antimony	A	mg/L	0.009745	0.009745		0.01	0	0		0.001		97%	90	110	0%	
Arsenic	A	mg/L	0.01013	0.01013		0.01	0	0		0.001		101%	90	110	0%	
Barium	A	mg/L	0.009554	0.009554		0.01	0	0		0.0003		96%	90	110	0%	
Beryllium	A	mg/L	0.008746	0.008746		0.01	0	0		0.001		87%	90	110	0%	S
Boron	A	mg/L	0.00775	0.00775		0.01	0	0		0.1		78%	90	110	0%	S
Cadmium	A	mg/L	0.01001	0.01001		0.01	0	0		0.001		100%	90	110	0%	
Calcium	A	mg/L	2.589	2.589		2.5	0	0		1		104%	90	110	0%	
Cerium	A	mg/L	0.009931	0.009931		0.01	0	0		0.001		99%	90	110	0%	
Chromium	A	mg/L	0.01005	0.01005		0.01	0	0		0.001		101%	90	110	0%	
Cobalt	A	mg/L	0.01014	0.01014		0.01	0	0		0.001		101%	90	110	0%	
Copper	A	mg/L	0.01033	0.01033		0.01	0	0		0.005		103%	90	110	0%	
Iron	A	mg/L	0.2691	0.2691		0.25	0	0		0.01		108%	90	110	0%	
Lanthanum	A	mg/L	0.009873	0.009873		0.01	0	0		0.001		99%	90	110	0%	
Lead	A	mg/L	0.009602	0.009602		0.01	0	0		0.001		96%	90	110	0%	
Lithium	A	mg/L	0.1091	0.1091		0.125	0	0		1		87%	90	110	0%	S
Magnesium	A	mg/L	2.449	2.449		2.5	0	0		1		98%	90	110	0%	

Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist					
14998071	10 ppb STD	ICPMS-6020B-C	Cal6		1/21/2022 5:59:2	1	R373694		0	0						
Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
Manganese	A	mg/L	0.01031	0.01031		0.01	0	0		0.001		103%	90	110	0%	
Mercury	A	mg/L	0.000192	0.000192		0.0002	0	0		0.001		96%	90	110	0%	
Molybdenum	A	mg/L	0.009444	0.009444		0.01	0	0		0.001		94%	90	110	0%	
Nickel	A	mg/L	0.01014	0.01014		0.01	0	0		0.005		101%	90	110	0%	
Potassium	A	mg/L	2.525	2.525		2.5	0	0		1		101%	90	110	0%	
Selenium	A	mg/L	0.0101	0.0101		0.01	0	0		0.005		101%	90	110	0%	
Silicon	A	mg/L	0.03911	0.03911		0.04	0	0		0.1		98%	90	110	0%	
Silver	A	mg/L	0.003956	0.003956		0.004	0	0		0.001		99%	90	110	0%	
Sodium	A	mg/L	2.422	2.422		2.5	0	0		1		97%	90	110	0%	
Strontium	A	mg/L	0.01059	0.01059		0.01	0	0		0.001		106%	90	110	0%	
Thallium	A	mg/L	0.009739	0.009739		0.01	0	0		0.001		97%	90	110	0%	
Thorium	A	mg/L	0.009418	0.009418		0.01	0	0		0.05		94%	90	110	0%	
Tin	A	mg/L	0.009523	0.009523		0.01	0	0		0.001		95%	90	110	0%	
Titanium	A	mg/L	0.009497	0.009497		0.01	0	0		0.001		95%	90	110	0%	
Uranium	A	mg/L	0.009553	0.009553		0.01	0	0		0.001		96%	90	110	0%	
Vanadium	A	mg/L	0.009369	0.009369		0.01	0	0		0.005		94%	90	110	0%	
Zinc	A	mg/L	0.01001	0.01001		0.01	0	0		0.01		100%	90	110	0%	
Iron, Ferrous	C	mg/L	0.2691	0.2691		0.01	0	0		0.01	5	2691%	90	110	0%	S
Silicon as SiO2	C	mg/L	0.0836954	0.0836954		0.856	0	0		0.214	0.9	10%	90	110	0%	S

Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist					
14998072	50 ppb STD	ICPMS-6020B-C	Cal7		1/21/2022 6:06:0	1	R373694		0	0						
Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
Aluminum	A	mg/L	0.06011	0.06011		0.05	0	0		0.01		120%	90	110	0%	S
Antimony	A	mg/L	0.05334	0.05334		0.05	0	0		0.001		107%	90	110	0%	
Arsenic	A	mg/L	0.05045	0.05045		0.05	0	0		0.001		101%	90	110	0%	
Barium	A	mg/L	0.05114	0.05114		0.05	0	0		0.0003		102%	90	110	0%	
Beryllium	A	mg/L	0.04964	0.04964		0.05	0	0		0.001		99%	90	110	0%	
Boron	A	mg/L	0.04939	0.04939		0.05	0	0		0.1		99%	90	110	0%	
Cadmium	A	mg/L	0.05229	0.05229		0.05	0	0		0.001		105%	90	110	0%	
Calcium	A	mg/L	12.35	12.35		12.5	0	0		1		99%	90	110	0%	
Cerium	A	mg/L	0.05014	0.05014		0.05	0	0		0.001		100%	90	110	0%	
Chromium	A	mg/L	0.05029	0.05029		0.05	0	0		0.001		101%	90	110	0%	
Cobalt	A	mg/L	0.05117	0.05117		0.05	0	0		0.001		102%	90	110	0%	

Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist					
14998072	50 ppb STD	ICPMS-6020B-C	Cal7		1/21/2022 6:06:0	1	R373694		0	0						
Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
Copper	A	mg/L	0.05145	0.05145		0.05	0	0		0.005		103%	90	110	0%	
Iron	A	mg/L	1.316	1.316		1.25	0	0		0.01		105%	90	110	0%	
Lanthanum	A	mg/L	0.04976	0.04976		0.05	0	0		0.001		100%	90	110	0%	
Lead	A	mg/L	0.05144	0.05144		0.05	0	0		0.001		103%	90	110	0%	
Lithium	A	mg/L	0.6037	0.6037		0.625	0	0		1		97%	90	110	0%	
Magnesium	A	mg/L	12.12	12.12		12.5	0	0		1		97%	90	110	0%	
Manganese	A	mg/L	0.05085	0.05085		0.05	0	0		0.001		102%	90	110	0%	
Mercury	A	mg/L	0.001015	0.001015		0.001	0	0		0.001		101%	90	110	0%	
Molybdenum	A	mg/L	0.0527	0.0527		0.05	0	0		0.001		105%	90	110	0%	
Nickel	A	mg/L	0.05029	0.05029		0.05	0	0		0.005		101%	90	110	0%	
Potassium	A	mg/L	12.35	12.35		12.5	0	0		1		99%	90	110	0%	
Selenium	A	mg/L	0.05144	0.05144		0.05	0	0		0.005		103%	90	110	0%	
Silicon	A	mg/L	0.2183	0.2183		0.2	0	0		0.1		109%	90	110	0%	
Silver	A	mg/L	0.02043	0.02043		0.02	0	0		0.001		102%	90	110	0%	
Sodium	A	mg/L	12.28	12.28		12.5	0	0		1		98%	90	110	0%	
Strontium	A	mg/L	0.05099	0.05099		0.05	0	0		0.001		102%	90	110	0%	
Thallium	A	mg/L	0.0515	0.0515		0.05	0	0		0.001		103%	90	110	0%	
Thorium	A	mg/L	0.05055	0.05055		0.05	0	0		0.05		101%	90	110	0%	
Tin	A	mg/L	0.05237	0.05237		0.05	0	0		0.001		105%	90	110	0%	
Titanium	A	mg/L	0.0519	0.0519		0.05	0	0		0.001		104%	90	110	0%	
Uranium	A	mg/L	0.05073	0.05073		0.05	0	0		0.001		101%	90	110	0%	
Vanadium	A	mg/L	0.05014	0.05014		0.05	0	0		0.005		100%	90	110	0%	
Zinc	A	mg/L	0.05119	0.05119		0.05	0	0		0.01		102%	90	110	0%	
Iron, Ferrous	C	mg/L	1.316	1.316		0.05	0	0		0.01	5	2632%	90	110	0%	S
Silicon as SiO2	C	mg/L	0.467162	0.467162		4.28	0	0		0.214	0.9	11%	90	110	0%	S

Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist					
14998073	100 ppb STD	ICPMS-6020B-C	Cal8		1/21/2022 6:12:3	1	R373694		0	0						
Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
Aluminum	A	mg/L	0.095	0.095		0.1	0	0		0.01		95%	90	110	0%	
Antimony	A	mg/L	0.09836	0.09836		0.1	0	0		0.001		98%	90	110	0%	
Arsenic	A	mg/L	0.09976	0.09976		0.1	0	0		0.001		100%	90	110	0%	
Barium	A	mg/L	0.09948	0.09948		0.1	0	0		0.0003		99%	90	110	0%	
Beryllium	A	mg/L	0.1003	0.1003		0.1	0	0		0.001		100%	90	110	0%	

Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist					
14998073	100 ppb STD	ICPMS-6020B-C	Cal8		1/21/2022 6:12:3	1	R373694		0	0						
Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
Boron	A	mg/L	0.1005	0.1005		0.1	0	0		0.1		100%	90	110	0%	
Cadmium	A	mg/L	0.09885	0.09885		0.1	0	0		0.001		99%	90	110	0%	
Calcium	A	mg/L	25.07	25.07		25	0	0		1		100%	90	110	0%	
Cerium	A	mg/L	0.09994	0.09994		0.1	0	0		0.001		100%	90	110	0%	
Chromium	A	mg/L	0.09985	0.09985		0.1	0	0		0.001		100%	90	110	0%	
Cobalt	A	mg/L	0.0994	0.0994		0.1	0	0		0.001		99%	90	110	0%	
Copper	A	mg/L	0.09924	0.09924		0.1	0	0		0.005		99%	90	110	0%	
Iron	A	mg/L	2.591	2.591		2.5	0	0		0.01		104%	90	110	0%	
Lanthanum	A	mg/L	0.1001	0.1001		0.1	0	0		0.001		100%	90	110	0%	
Lead	A	mg/L	0.09932	0.09932		0.1	0	0		0.001		99%	90	110	0%	
Lithium	A	mg/L	1.262	1.262		1.25	0	0		1		101%	90	110	0%	
Magnesium	A	mg/L	25.2	25.2		25	0	0		1		101%	90	110	0%	
Manganese	A	mg/L	0.09954	0.09954		0.1	0	0		0.001		100%	90	110	0%	
Mercury	A	mg/L	0.001993	0.001993		0.002	0	0		0.001		100%	90	110	0%	
Molybdenum	A	mg/L	0.09871	0.09871		0.1	0	0		0.001		99%	90	110	0%	
Nickel	A	mg/L	0.09984	0.09984		0.1	0	0		0.005		100%	90	110	0%	
Potassium	A	mg/L	25.07	25.07		25	0	0		1		100%	90	110	0%	
Selenium	A	mg/L	0.09927	0.09927		0.1	0	0		0.005		99%	90	110	0%	
Silicon	A	mg/L	0.3909	0.3909		0.4	0	0		0.1		98%	90	110	0%	
Silver	A	mg/L	0.03979	0.03979		0.04	0	0		0.001		99%	90	110	0%	
Sodium	A	mg/L	25.12	25.12		25	0	0		1		100%	90	110	0%	
Strontium	A	mg/L	0.09944	0.09944		0.1	0	0		0.001		99%	90	110	0%	
Thallium	A	mg/L	0.09928	0.09928		0.1	0	0		0.001		99%	90	110	0%	
Thorium	A	mg/L	0.09978	0.09978		0.1	0	0		0.05		100%	90	110	0%	
Tin	A	mg/L	0.09886	0.09886		0.1	0	0		0.001		99%	90	110	0%	
Titanium	A	mg/L	0.0991	0.0991		0.1	0	0		0.001		99%	90	110	0%	
Uranium	A	mg/L	0.09968	0.09968		0.1	0	0		0.001		100%	90	110	0%	
Vanadium	A	mg/L	0.09999	0.09999		0.1	0	0		0.005		100%	90	110	0%	
Zinc	A	mg/L	0.0994	0.0994		0.1	0	0		0.01		99%	90	110	0%	
Iron, Ferrous	C	mg/L	2.591	2.591		0.1	0	0		0.01	5	2591%	90	110	0%	S
Silicon as SiO2	C	mg/L	0.836526	0.836526		8.56	0	0		0.214	0.9	10%	90	110	0%	S

Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist					
14998074	1000 ppb STD	ICPMS-6020B-C	Cal10		1/21/2022 6:19:0	1	R373694			0	0					
Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q

Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist					
14998075	100 ppb Br STD	ICPMS-6020-W-	SAMP		1/21/2022 6:25:3	1	R373694			0	0					
Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q

Aluminum	A	mg/L	0.00003531	0		0	0	0	0.00086	0.001	1	0%	0	0	0%	
Antimony	A	mg/L	0.00003111	0		0	0	0	0.00042	0.001	0.1	0%	0	0	0%	
Arsenic	A	mg/L	0.0000611	0		0	0	0	0.00019	0.001	1	0%	0	0	0%	
Barium	A	mg/L	0.000004834	0		0	0	0	0.000042	0.001	1	0%	0	0	0%	
Beryllium	A	mg/L	0.0000139	0		0	0	0	0.00012	0.001	1	0%	0	0	0%	
Cadmium	A	mg/L	0.00001458	0		0	0	0	0.000025	0.001	1	0%	0	0	0%	
Cerium	A	mg/L	4.754E-07	0		0	0	0	0.000012	0.001	0.1	0%	0	0	0%	
Chromium	A	mg/L	0.00001462	0		0	0	0	0.00018	0.001	1	0%	0	0	0%	
Cobalt	A	mg/L	0.000006656	0		0	0	0	0.000042	0.001	1	0%	0	0	0%	
Copper	A	mg/L	0.0000768	0		0	0	0	0.00027	0.001	1	0%	0	0	0%	
Lanthanum	A	mg/L	-1.678E-07	0		0	0	0	0.000011	0.001	0.1	0%	0	0	0%	
Lead	A	mg/L	0.00006783	0.00006783		0	0	0	0.000056	0.001	1	0%	0	0	0%	J
Manganese	A	mg/L	0.000008427	0		0	0	0	0.000095	0.001	1	0%	0	0	0%	
Mercury	A	mg/L	0.000006141	0		0	0	0	0.00016	0.001	0.002	0%	0	0	0%	
Molybdenum	A	mg/L	0.00001415	0		0	0	0	0.00005	0.001	0.1	0%	0	0	0%	
Nickel	A	mg/L	0.000006448	0		0	0	0	0.00063	0.001	1	0%	0	0	0%	
Selenium	A	mg/L	0.0001037	0		0	0	0	0.00033	0.001	1	0%	0	0	0%	
Silicon	A	mg/L	0.0006199	0		0	0	0	0.01223	0.1	0.4	0%	0	0	0%	
Silver	A	mg/L	0.0005808	0.0005808		0	0	0	0.00002	0.001	0.04	0%	0	0	0%	J
Strontium	A	mg/L	-1.186E-06	0		0	0	0	0.00014	0.001	1	0%	0	0	0%	
Thallium	A	mg/L	0.0009391	0.0009391		0	0	0	0.000041	0.001	1	0%	0	0	0%	J
Thorium	A	mg/L	0.0001209	0		0	0	0	0.00061	0.001	1	0%	0	0	0%	
Titanium	A	mg/L	0.00007028	0		0	0	0	0.000094	0.001	1	0%	0	0	0%	
Uranium	A	mg/L	0.00002808	0		0	0	0	0.000052	0.0003	1	0%	0	0	0%	
Boron	B	mg/L	0.01113	0.01113		0	0	0	0.00561	0.00561	1	0%	0	0	0%	D
Calcium	B	mg/L	0.0007862	0		0	0	0	0.02092	0.02092	50	0%	0	0	0%	L
Iron	B	mg/L	0.00007899	0		0	0	0	0.00119	0.00119	5	0%	0	0	0%	
Iron, Ferrous	B	mg/L	0.00007899	0		0	0	0	0.00119	0.00119	5	0%	0	0	0%	
Magnesium	B	mg/L	-0.0001945	0		0	0	0	0.00564	0.00564	50	0%	0	0	0%	L
Potassium	B	mg/L	0.6061	0.6061		0	0	0	0.08139	0.08139	50	0%	0	0	0%	D

Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist					
14998075	100 ppb Br STD	ICPMS-6020-W-	SAMP		1/21/2022 6:25:3	1	R373694		0	0						
Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
Sodium	B	mg/L	-0.004582	0		0	0	0	0.02171	0.02171	50	0%	0	0	0%	L
Tin	B	mg/L	0.0000425	0		0	0	0	0.00132	0.00132	0.1	0%	0	0	0%	
Vanadium	B	mg/L	-0.001381	0		0	0	0	0.0013	0.0013	1	0%	0	0	0%	
Zinc	B	mg/L	0.00004447	0		0	0	0	0.00273	0.00273	1	0%	0	0	0%	L

Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist					
14998076	Rinse	ICPMS-6020-W-	SAMP		1/21/2022 6:31:5	1	R373694		0	0						
Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
Aluminum	A	mg/L	-0.00005333	0		0	0	0	0.00086	0.001	1	0%	0	0	0%	
Antimony	A	mg/L	0.000004361	0		0	0	0	0.00042	0.001	0.1	0%	0	0	0%	
Arsenic	A	mg/L	-0.0000211	0		0	0	0	0.00019	0.001	1	0%	0	0	0%	
Barium	A	mg/L	0.000007504	0		0	0	0	0.000042	0.001	1	0%	0	0	0%	
Beryllium	A	mg/L	-0.00001805	0		0	0	0	0.00012	0.001	1	0%	0	0	0%	
Cadmium	A	mg/L	0.000004298	0		0	0	0	0.000025	0.001	1	0%	0	0	0%	
Cerium	A	mg/L	2.823E-07	0		0	0	0	0.000012	0.001	0.1	0%	0	0	0%	
Chromium	A	mg/L	0.000009549	0		0	0	0	0.00018	0.001	1	0%	0	0	0%	
Cobalt	A	mg/L	0.000001586	0		0	0	0	0.000042	0.001	1	0%	0	0	0%	
Copper	A	mg/L	0.000008062	0		0	0	0	0.00027	0.001	1	0%	0	0	0%	
Lanthanum	A	mg/L	-2.126E-07	0		0	0	0	0.000011	0.001	0.1	0%	0	0	0%	
Lead	A	mg/L	0.00003178	0		0	0	0	0.000056	0.001	1	0%	0	0	0%	
Manganese	A	mg/L	0.0001424	0.0001424		0	0	0	0.000095	0.001	1	0%	0	0	0%	J
Mercury	A	mg/L	0.000003171	0		0	0	0	0.00016	0.001	0.002	0%	0	0	0%	
Molybdenum	A	mg/L	0.000002182	0		0	0	0	0.00005	0.001	0.1	0%	0	0	0%	
Nickel	A	mg/L	-2.619E-06	0		0	0	0	0.00063	0.001	1	0%	0	0	0%	
Selenium	A	mg/L	0.00002265	0		0	0	0	0.00033	0.001	1	0%	0	0	0%	
Silicon	A	mg/L	-0.00009928	0		0	0	0	0.01223	0.1	0.4	0%	0	0	0%	
Silver	A	mg/L	0.00004842	0.00004842		0	0	0	0.00002	0.001	0.04	0%	0	0	0%	J
Strontium	A	mg/L	0.000001103	0		0	0	0	0.00014	0.001	1	0%	0	0	0%	
Thallium	A	mg/L	0.0002484	0.0002484		0	0	0	0.000041	0.001	1	0%	0	0	0%	J
Thorium	A	mg/L	0.00002154	0		0	0	0	0.00061	0.001	1	0%	0	0	0%	
Titanium	A	mg/L	0.000007355	0		0	0	0	0.000094	0.001	1	0%	0	0	0%	
Uranium	A	mg/L	0.000005192	0		0	0	0	0.000052	0.0003	1	0%	0	0	0%	
Boron	B	mg/L	0.004534	0		0	0	0	0.00561	0.00561	1	0%	0	0	0%	L
Calcium	B	mg/L	-0.00006762	0		0	0	0	0.02092	0.02092	50	0%	0	0	0%	L

Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist					
14998076	Rinse	ICPMS-6020-W- SAMP			1/21/2022 6:31:5	1	R373694		0	0						
Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
Iron	B	mg/L	0.0001241	0		0	0	0	0.00119	0.00119	5	0%	0	0	0%	
Iron, Ferrous	B	mg/L	0.0001241	0		0	0	0	0.00119	0.00119	5	0%	0	0	0%	
Magnesium	B	mg/L	0.0001039	0		0	0	0	0.00564	0.00564	50	0%	0	0	0%	L
Potassium	B	mg/L	0.009954	0		0	0	0	0.08139	0.08139	50	0%	0	0	0%	L
Sodium	B	mg/L	-0.005194	0		0	0	0	0.02171	0.02171	50	0%	0	0	0%	L
Tin	B	mg/L	6.858E-07	0		0	0	0	0.00132	0.00132	0.1	0%	0	0	0%	
Vanadium	B	mg/L	-0.001537	0		0	0	0	0.0013	0.0013	1	0%	0	0	0%	
Zinc	B	mg/L	0.00003112	0		0	0	0	0.00273	0.00273	1	0%	0	0	0%	L

Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist					
14998077	QCS	ICPMS-6020-W- ICV			1/21/2022 6:38:0	1	R373694		0	0						
Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
Aluminum	A	mg/L	0.2358	0.2358		0.25	0	0	0.00086	0.001	1	94%	90	110	0%	
Antimony	A	mg/L	0.0472	0.0472		0.05	0	0	0.00042	0.001	0.1	94%	90	110	0%	
Arsenic	A	mg/L	0.04819	0.04819		0.05	0	0	0.00019	0.001	1	96%	90	110	0%	
Barium	A	mg/L	0.04694	0.04694		0.05	0	0	0.000042	0.001	1	94%	90	110	0%	
Beryllium	A	mg/L	0.02369	0.02369		0.025	0	0	0.00012	0.001	1	95%	90	110	0%	
Boron	A	mg/L	0.05263	0.05263		0.05	0	0	0.00561	0.00561	1	105%	90	110	0%	
Cadmium	A	mg/L	0.02455	0.02455		0.025	0	0	0.000025	0.001	1	98%	90	110	0%	
Calcium	A	mg/L	2.495	2.495		2.5	0	0	0.02092	0.02092	50	100%	90	110	0%	
Cerium	A	mg/L	0.0507	0.0507		0.05	0	0	0.000012	0.001	0.1	101%	90	110	0%	
Chromium	A	mg/L	0.04834	0.04834		0.05	0	0	0.00018	0.001	1	97%	90	110	0%	
Cobalt	A	mg/L	0.05118	0.05118		0.05	0	0	0.000042	0.001	1	102%	90	110	0%	
Copper	A	mg/L	0.05061	0.05061		0.05	0	0	0.00027	0.001	1	101%	90	110	0%	
Iron	A	mg/L	0.2523	0.2523		0.25	0	0	0.00119	0.00119	5	101%	90	110	0%	
Lanthanum	A	mg/L	0.05085	0.05085		0.05	0	0	0.000011	0.001	0.1	102%	90	110	0%	
Lead	A	mg/L	0.04803	0.04803		0.05	0	0	0.000056	0.001	1	96%	90	110	0%	
Magnesium	A	mg/L	2.465	2.465		2.5	0	0	0.00564	0.00564	50	99%	90	110	0%	
Manganese	A	mg/L	0.2478	0.2478		0.25	0	0	0.000095	0.001	1	99%	90	110	0%	
Mercury	A	mg/L	0.0009719	0.0009719		0.001	0	0	0.00016	0.001	0.002	97%	90	110	0%	
Molybdenum	A	mg/L	0.04775	0.04775		0.05	0	0	0.00005	0.001	0.1	95%	90	110	0%	
Nickel	A	mg/L	0.0489	0.0489		0.05	0	0	0.00063	0.001	1	98%	90	110	0%	
Potassium	A	mg/L	2.436	2.436		2.5	0	0	0.08139	0.08139	50	97%	90	110	0%	
Selenium	A	mg/L	0.04891	0.04891		0.05	0	0	0.00033	0.001	1	98%	90	110	0%	

Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist					
14998077	QCS	ICPMS-6020-W- ICV			1/21/2022 6:38:0	1	R373694		0	0						
Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
Silicon	A	mg/L	0.4964	0.4964		0.5	0	0	0.01223	0.1	0.4	99%	90	110	0%	
Silver	A	mg/L	0.02475	0.02475		0.025	0	0	0.00002	0.001	0.04	99%	90	110	0%	
Sodium	A	mg/L	2.465	2.465		2.5	0	0	0.02171	0.02171	50	99%	90	110	0%	
Strontium	A	mg/L	0.05002	0.05002		0.05	0	0	0.00014	0.001	1	100%	90	110	0%	
Thallium	A	mg/L	0.04844	0.04844		0.05	0	0	0.000041	0.001	1	97%	90	110	0%	
Thorium	A	mg/L	0.04896	0.04896		0.05	0	0	0.00061	0.001	1	98%	90	110	0%	
Tin	A	mg/L	0.04891	0.04891		0.05	0	0	0.00132	0.00132	0.1	98%	90	110	0%	
Titanium	A	mg/L	0.0492	0.0492		0.05	0	0	0.000094	0.001	1	98%	90	110	0%	
Uranium	A	mg/L	0.051	0.051		0.05	0	0	0.000052	0.0003	1	102%	90	110	0%	
Vanadium	A	mg/L	0.0462	0.0462		0.05	0	0	0.0013	0.0013	1	92%	90	110	0%	
Zinc	A	mg/L	0.04867	0.04867		0.05	0	0	0.00273	0.00273	1	97%	90	110	0%	
Iron, Ferrous	C	mg/L	0.2523	0.2523		0	0	0	0.00119	0.00119	5	0%	0	0	0%	

Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist					
14998078	CCV	ICPMS-6020-W- CCV			1/21/2022 6:44:2	1	R373694		0	0						
Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
Aluminum	A	mg/L	0.06006	0.06006		0.05	0	0	0.00086	0.001	1	120%	90	110	0%	S
Antimony	A	mg/L	0.05343	0.05343		0.05	0	0	0.00042	0.001	0.1	107%	90	110	0%	
Arsenic	A	mg/L	0.05075	0.05075		0.05	0	0	0.00019	0.001	1	101%	90	110	0%	
Barium	A	mg/L	0.05058	0.05058		0.05	0	0	0.000042	0.001	1	101%	90	110	0%	
Beryllium	A	mg/L	0.05025	0.05025		0.05	0	0	0.00012	0.001	1	100%	90	110	0%	
Boron	A	mg/L	0.05449	0.05449		0.05	0	0	0.00561	0.00561	1	109%	90	110	0%	
Cadmium	A	mg/L	0.05195	0.05195		0.05	0	0	0.000025	0.001	1	104%	90	110	0%	
Calcium	A	mg/L	12.69	12.69		12.5	0	0	0.02092	0.02092	50	102%	90	110	0%	
Cerium	A	mg/L	0.05124	0.05124		0.05	0	0	0.000012	0.001	0.1	102%	90	110	0%	
Chromium	A	mg/L	0.05124	0.05124		0.05	0	0	0.00018	0.001	1	102%	90	110	0%	
Cobalt	A	mg/L	0.05169	0.05169		0.05	0	0	0.000042	0.001	1	103%	90	110	0%	
Copper	A	mg/L	0.05192	0.05192		0.05	0	0	0.00027	0.001	1	104%	90	110	0%	
Iron	A	mg/L	1.31	1.31		1.3	0	0	0.00119	0.00119	5	101%	90	110	0%	
Lanthanum	A	mg/L	0.04994	0.04994		0.05	0	0	0.000011	0.001	0.1	100%	90	110	0%	
Lead	A	mg/L	0.05105	0.05105		0.05	0	0	0.000056	0.001	1	102%	90	110	0%	
Magnesium	A	mg/L	12.35	12.35		12.5	0	0	0.00564	0.00564	50	99%	90	110	0%	
Manganese	A	mg/L	0.05119	0.05119		0.05	0	0	0.000095	0.001	1	102%	90	110	0%	
Mercury	A	mg/L	0.001006	0.001006		0.001	0	0	0.00016	0.001	0.002	101%	90	110	0%	

Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist					
14998078	CCV	ICPMS-6020-W- CCV			1/21/2022 6:44:2	1	R373694		0	0						
Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
Molybdenum	A	mg/L	0.05301	0.05301		0.05	0	0	0.00005	0.001	0.1	106%	90	110	0%	
Nickel	A	mg/L	0.05187	0.05187		0.05	0	0	0.00063	0.001	1	104%	90	110	0%	
Potassium	A	mg/L	12.36	12.36		12.5	0	0	0.08139	0.08139	50	99%	90	110	0%	
Selenium	A	mg/L	0.05164	0.05164		0.05	0	0	0.00033	0.001	1	103%	90	110	0%	
Silicon	A	mg/L	0.2215	0.2215		0.2	0	0	0.01223	0.1	0.4	111%	90	110	0%	S
Silver	A	mg/L	0.02071	0.02071		0.02	0	0	0.00002	0.001	0.04	104%	90	110	0%	
Sodium	A	mg/L	12.19	12.19		12.5	0	0	0.02171	0.02171	50	98%	90	110	0%	
Strontium	A	mg/L	0.05181	0.05181		0.05	0	0	0.00014	0.001	1	104%	90	110	0%	
Thallium	A	mg/L	0.05044	0.05044		0.05	0	0	0.000041	0.001	1	101%	90	110	0%	
Thorium	A	mg/L	0.04955	0.04955		0.05	0	0	0.00061	0.001	1	99%	90	110	0%	
Tin	A	mg/L	0.05271	0.05271		0.05	0	0	0.00132	0.00132	0.1	105%	90	110	0%	
Titanium	A	mg/L	0.05171	0.05171		0.05	0	0	0.000094	0.001	1	103%	90	110	0%	
Uranium	A	mg/L	0.05032	0.05032		0.05	0	0	0.000052	0.0003	1	101%	90	110	0%	
Vanadium	A	mg/L	0.04946	0.04946		0.05	0	0	0.0013	0.0013	1	99%	90	110	0%	
Zinc	A	mg/L	0.05038	0.05038		0.05	0	0	0.00273	0.00273	1	101%	90	110	0%	
Iron, Ferrous	C	mg/L	1.31	1.31		0	0	0	0.00119	0.00119	5	0%	0	0	0%	

Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist					
14998079	CCB	ICPMS-6020-W- CCB			1/21/2022 6:50:3	1	R373694		0	0						
Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
Aluminum	A	mg/L	-0.00008334	-0.00008334		0	0	0	0.00086	0.001	1	0%			0%	
Antimony	A	mg/L	0.00009752	0.00009752		0	0	0	0.00042	0.001	0.1	0%			0%	
Arsenic	A	mg/L	-0.00001788	-0.00001788		0	0	0	0.00019	0.001	1	0%			0%	
Barium	A	mg/L	-2.267E-06	-2.267E-06		0	0	0	0.000042	0.001	1	0%			0%	
Beryllium	A	mg/L	-0.0000297	-0.0000297		0	0	0	0.00012	0.001	1	0%			0%	
Boron	A	mg/L	0.003158	0.003158		0	0	0	0.00561	0.00561	1	0%			0%	
Cadmium	A	mg/L	-7.682E-08	-7.682E-08		0	0	0	0.000025	0.001	1	0%			0%	
Calcium	A	mg/L	-0.0006591	-0.0006591		0	0	0	0.02092	0.02092	50	0%			0%	
Cerium	A	mg/L	-3.093E-07	-3.093E-07		0	0	0	0.000012	0.001	0.1	0%	0	0	0%	
Chromium	A	mg/L	-0.00000562	-0.00000562		0	0	0	0.00018	0.001	1	0%			0%	
Cobalt	A	mg/L	-3.073E-08	-3.073E-08		0	0	0	0.000042	0.001	1	0%			0%	
Copper	A	mg/L	-3.925E-06	-3.925E-06		0	0	0	0.00027	0.001	1	0%			0%	
Iron	A	mg/L	-0.00002827	-0.00002827		0	0	0	0.00119	0.00119	5	0%			0%	
Lanthanum	A	mg/L	1.131E-07	1.131E-07		0	0	0	0.000011	0.001	0.1	0%	0	0	0%	

Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist					
14998079	CCB	ICPMS-6020-W-	CCB		1/21/2022 6:50:3	1	R373694		0	0						
Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
Lead	A	mg/L	0.00001708	0.00001708		0	0	0	0.000056	0.001	1	0%			0%	
Magnesium	A	mg/L	0.00000502	0.00000502		0	0	0	0.00564	0.00564	50	0%			0%	
Manganese	A	mg/L	-3.721E-06	-3.721E-06		0	0	0	0.000095	0.001	1	0%			0%	
Mercury	A	mg/L	0.000008847	0.000008847		0	0	0	0.00016	0.001	0.002	0%			0%	
Molybdenum	A	mg/L	0.00002745	0.00002745		0	0	0	0.00005	0.001	0.1	0%			0%	
Nickel	A	mg/L	-1.692E-06	-1.692E-06		0	0	0	0.00063	0.001	1	0%			0%	
Potassium	A	mg/L	0.005592	0.005592		0	0	0	0.08139	0.08139	50	0%			0%	
Selenium	A	mg/L	0.000002865	0.000002865		0	0	0	0.00033	0.001	1	0%			0%	
Silicon	A	mg/L	-0.0000577	-0.0000577		0	0	0	0.01223	0.1	0.4	0%	0	0	0%	
Silver	A	mg/L	-4.698E-07	-4.698E-07		0	0	0	0.00002	0.001	0.04	0%			0%	
Sodium	A	mg/L	-0.006108	-0.006108		0	0	0	0.02171	0.02171	50	0%			0%	
Strontium	A	mg/L	1.608E-07	1.608E-07		0	0	0	0.00014	0.001	1	0%	0	0	0%	
Thallium	A	mg/L	0.0001839	0.0001839		0	0	0	0.000041	0.001	1	0%	0	0	0%	
Thorium	A	mg/L	0.00002256	0.00002256		0	0	0	0.00061	0.001	1	0%	0	0	0%	
Tin	A	mg/L	0.00003255	0.00003255		0	0	0	0.00132	0.00132	0.1	0%	0	0	0%	
Titanium	A	mg/L	-2.121E-06	-2.121E-06		0	0	0	0.000094	0.001	1	0%	0	0	0%	
Uranium	A	mg/L	0.000003448	0.000003448		0	0	0	0.000052	0.0003	1	0%	0	0	0%	
Vanadium	A	mg/L	-0.001229	-0.001229		0	0	0	0.0013	0.0013	1	0%	0	0	0%	
Zinc	A	mg/L	0.00003239	0.00003239		0	0	0	0.00273	0.00273	1	0%	0	0	0%	
Iron, Ferrous	C	mg/L	-0.00002827	-0.00002827		0	0	0	0.00119	0.00119	5	0%	0	0	0%	

Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist					
14998080	Rinse	ICPMS-6020-W-	SAMP		1/21/2022 6:56:5	1	R373694		0	0						
Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
Antimony	A	mg/L	0.00002038	0		0	0	0	0.00042	0.001	0.1	0%	0	0	0%	
Arsenic	A	mg/L	-0.00002733	0		0	0	0	0.00019	0.001	1	0%	0	0	0%	
Barium	A	mg/L	0.000001837	0		0	0	0	0.000042	0.001	1	0%	0	0	0%	
Cadmium	A	mg/L	0.000003405	0		0	0	0	0.000025	0.001	1	0%	0	0	0%	
Cerium	A	mg/L	7.842E-08	0		0	0	0	0.000012	0.001	0.1	0%	0	0	0%	
Chromium	A	mg/L	0.000008644	0		0	0	0	0.00018	0.001	1	0%	0	0	0%	
Cobalt	A	mg/L	8.188E-07	0		0	0	0	0.000042	0.001	1	0%	0	0	0%	
Copper	A	mg/L	2.673E-07	0		0	0	0	0.00027	0.001	1	0%	0	0	0%	
Lanthanum	A	mg/L	-4.08E-07	0		0	0	0	0.000011	0.001	0.1	0%	0	0	0%	
Lead	A	mg/L	0.00001422	0		0	0	0	0.000056	0.001	1	0%	0	0	0%	

Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist					
14998080	Rinse	ICPMS-6020-W-	SAMP		1/21/2022 6:56:5	1	R373694		0	0						
Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
Manganese	A	mg/L	-9.366E-07	0		0	0	0	0.000095	0.001	1	0%	0	0	0%	
Mercury	A	mg/L	0.000007575	0		0	0	0	0.00016	0.001	0.002	0%	0	0	0%	
Molybdenum	A	mg/L	0.000006079	0		0	0	0	0.00005	0.001	0.1	0%	0	0	0%	
Nickel	A	mg/L	-2.986E-06	0		0	0	0	0.00063	0.001	1	0%	0	0	0%	
Selenium	A	mg/L	-4.479E-07	0		0	0	0	0.00033	0.001	1	0%	0	0	0%	
Silver	A	mg/L	5.487E-07	0		0	0	0	0.00002	0.001	0.04	0%	0	0	0%	
Strontium	A	mg/L	-6.478E-06	0		0	0	0	0.00014	0.001	1	0%	0	0	0%	
Thallium	A	mg/L	0.0000698	0.0000698		0	0	0	0.000041	0.001	1	0%	0	0	0%	J
Thorium	A	mg/L	0.000003569	0		0	0	0	0.00061	0.001	1	0%	0	0	0%	
Titanium	A	mg/L	-0.00001149	0		0	0	0	0.000094	0.001	1	0%	0	0	0%	
Uranium	A	mg/L	0.000001129	0		0	0	0	0.000052	0.0003	1	0%	0	0	0%	
Boron	B	mg/L	0.001589	0		0	0	0	0.00561	0.00561	1	0%	0	0	0%	L
Calcium	B	mg/L	-0.0001919	0		0	0	0	0.02092	0.02092	50	0%	0	0	0%	L
Iron	B	mg/L	-0.00003439	0		0	0	0	0.00119	0.00119	5	0%	0	0	0%	
Iron, Ferrous	B	mg/L	-0.00003439	0		0	0	0	0.00119	0.00119	5	0%	0	0	0%	
Magnesium	B	mg/L	0.0003372	0		0	0	0	0.00564	0.00564	50	0%	0	0	0%	L
Potassium	B	mg/L	0.006841	0		0	0	0	0.08139	0.08139	50	0%	0	0	0%	L
Sodium	B	mg/L	-0.005594	0		0	0	0	0.02171	0.02171	50	0%	0	0	0%	L
Tin	B	mg/L	0.00000474	0		0	0	0	0.00132	0.00132	0.1	0%	0	0	0%	
Vanadium	B	mg/L	-0.001174	0		0	0	0	0.0013	0.0013	1	0%	0	0	0%	
Zinc	B	mg/L	0.00001541	0		0	0	0	0.00273	0.00273	1	0%	0	0	0%	L

Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist					
14998081	LRB	ICPMS-6020-W-	MBLK		1/21/2022 7:03:0	1	R373694		0	0						
Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
Aluminum	A	mg/L	0.0004133	0		0	0	0	0.00086	0.001	1	0%	0	0	0%	
Antimony	A	mg/L	0.00000844	0		0	0	0	0.00042	0.001	0.1	0%	0	0	0%	
Arsenic	A	mg/L	-0.00002077	0		0	0	0	0.00019	0.001	1	0%	0	0	0%	
Barium	A	mg/L	0.00009291	0.00009291		0	0	0	0.000042	0.001	1	0%	0	0	0%	
Beryllium	A	mg/L	-0.00003403	0		0	0	0	0.00012	0.001	1	0%	0	0	0%	
Boron	A	mg/L	0.001155	0		0	0	0	0.00561	0.00561	1	0%	0	0	0%	
Cadmium	A	mg/L	0.00001985	0		0	0	0	0.000025	0.001	1	0%	0	0	0%	
Calcium	A	mg/L	0.008124	0		0	0	0	0.02092	0.02092	50	0%	0	0	0%	
Cerium	A	mg/L	0.000001558	0		0	0	0	0.000012	0.001	0.1	0%	0	0	0%	

Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist					
14998081	LRB	ICPMS-6020-W- MBLK			1/21/2022 7:03:0	1	R373694		0	0						
Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
Chromium	A	mg/L	0.00001146	0		0	0	0	0.00018	0.001	1	0%	0	0	0%	
Cobalt	A	mg/L	4.566E-07	0		0	0	0	0.000042	0.001	1	0%	0	0	0%	
Copper	A	mg/L	0.0000231	0		0	0	0	0.00027	0.001	1	0%	0	0	0%	
Iron	A	mg/L	0.0003366	0		0	0	0	0.00119	0.00119	5	0%	0	0	0%	
Lanthanum	A	mg/L	2.824E-07	0		0	0	0	0.000011	0.001	0.1	0%	0	0	0%	
Lead	A	mg/L	0.00002045	0		0	0	0	0.000056	0.0005	1	0%	0	0	0%	
Magnesium	A	mg/L	0.001005	0		0	0	0	0.00564	0.00564	50	0%	0	0	0%	
Manganese	A	mg/L	0.00002619	0		0	0	0	0.000095	0.001	1	0%	0	0	0%	
Mercury	A	mg/L	0.000004836	0		0	0	0	0.00016	0.001	0.002	0%	0	0	0%	
Molybdenum	A	mg/L	0.000007644	0		0	0	0	0.00005	0.001	0.1	0%	0	0	0%	
Nickel	A	mg/L	0.00002193	0		0	0	0	0.00063	0.001	1	0%	0	0	0%	
Potassium	A	mg/L	0.007913	0		0	0	0	0.08139	0.08139	50	0%	0	0	0%	
Selenium	A	mg/L	0.000000196	0		0	0	0	0.00033	0.001	1	0%	0	0	0%	
Silicon	A	mg/L	0.07265	0.07265		0	0	0	0.01223	0.1	0.4	0%	0	0	0%	
Silver	A	mg/L	-0.00006565	0		0	0	0	0.00002	0.001	0.04	0%	0	0	0%	
Sodium	A	mg/L	0.005793	0		0	0	0	0.02171	0.02171	50	0%	0	0	0%	
Strontium	A	mg/L	0.00003717	0		0	0	0	0.00014	0.001	1	0%	0	0	0%	
Thallium	A	mg/L	0.00002874	0		0	0	0	0.000041	0.001	1	0%	0	0	0%	
Thorium	A	mg/L	-2.522E-07	0		0	0	0	0.00061	0.001	1	0%	0	0	0%	
Tin	A	mg/L	0.00001472	0		0	0	0	0.00132	0.00132	0.1	0%	0	0	0%	
Titanium	A	mg/L	0.000007062	0		0	0	0	0.000094	0.001	1	0%	0	0	0%	
Uranium	A	mg/L	7.498E-07	0		0	0	0	0.000052	0.0003	1	0%	0	0	0%	
Vanadium	A	mg/L	-0.001178	0		0	0	0	0.0013	0.0013	1	0%	0	0	0%	
Zinc	A	mg/L	0.0002964	0		0	0	0	0.00273	0.00273	1	0%	0	0	0%	
Iron, Ferrous	C	mg/L	0.0003366	0		0	0	0	0.00119	0.00119	5	0%	0	0	0%	

Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist					
14998082	LFB	ICPMS-6020-W- LFB			1/21/2022 7:09:2	1.03	R373694		0	0						
Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
Aluminum	A	mg/L	0.04581	0.0471843		0.05	0	0	0.0008858	0.001	1	94%	85	115	0%	
Antimony	A	mg/L	0.04745	0.0488735		0.05	0	0	0.0004326	0.001	0.1	98%	85	115	0%	
Arsenic	A	mg/L	0.04834	0.0497902		0.05	0	0	0.0001957	0.001	1	100%	85	115	0%	
Barium	A	mg/L	0.04747	0.0488941		0.05	0	0	4.326E-05	0.001	1	98%	85	115	0%	
Beryllium	A	mg/L	0.04449	0.0458247		0.05	0	0	0.0001236	0.001	1	92%	85	115	0%	

Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist					
14998082	LFB	ICPMS-6020-W-	LFB		1/21/2022 7:09:2	1.03	R373694		0	0						
Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
Boron	A	mg/L	0.04596	0.0473388		0.05	0	0	0.0057783	0.0057783	1	95%	85	115	0%	
Cadmium	A	mg/L	0.04804	0.0494812		0.05	0	0	2.575E-05	0.001	1	99%	85	115	0%	
Calcium	A	mg/L	48.57	50.0271		50	0	0	0.0215476	0.0215476	50	100%	85	115	0%	
Cerium	A	mg/L	0.0491	0.050573		0.05	0	0	1.236E-05	0.001	0.1	101%	85	115	0%	
Chromium	A	mg/L	0.04655	0.0479465		0.05	0	0	0.0001854	0.001	1	96%	85	115	0%	
Cobalt	A	mg/L	0.04617	0.0475551		0.05	0	0	4.326E-05	0.001	1	95%	85	115	0%	
Copper	A	mg/L	0.04689	0.0482967		0.05	0	0	0.0002781	0.001	1	97%	85	115	0%	
Iron	A	mg/L	5.002	5.15206		5.05	0	0	0.0012257	0.0012257	5	102%	85	115	0%	
Lanthanum	A	mg/L	0.0000052	0		0.05	0	0	1.133E-05	0.001	0.1	0%	85	115	0%	S
Lead	A	mg/L	0.04866	0.0501198		0.05	0	0	5.768E-05	0.001	1	100%	88	115	0%	
Magnesium	A	mg/L	47.37	48.7911		50	0	0	0.0058092	0.0058092	50	98%	85	115	0%	
Manganese	A	mg/L	0.04765	0.0490795		0.05	0	0	9.785E-05	0.001	1	98%	85	115	0%	
Mercury	A	mg/L	0.0009606	0.000989418		0.001	0	0	0.0001648	0.001	0.002	99%	85	115	0%	
Molybdenum	A	mg/L	0.04766	0.0490898		0.05	0	0	0.0000515	0.001	0.1	98%	85	115	0%	
Nickel	A	mg/L	0.04623	0.0476169		0.05	0	0	0.0006489	0.001	1	95%	85	115	0%	
Potassium	A	mg/L	46.66	48.0598		50	0	0	0.0838317	0.0838317	50	96%	85	115	0%	
Selenium	A	mg/L	0.04896	0.0504288		0.05	0	0	0.0003399	0.001	1	101%	85	115	0%	
Silicon	A	mg/L	0.2636	0.271508		0.2	0	0	0.0125969	0.1	0.4	136%	85	115	0%	S
Silver	A	mg/L	0.01952	0.0201056		0.02	0	0	0.0000206	0.001	0.04	101%	85	115	0%	
Sodium	A	mg/L	46.79	48.1937		50	0	0	0.0223613	0.0223613	50	96%	85	115	0%	
Strontium	A	mg/L	0.04895	0.0504185		0.05	0	0	0.0001442	0.001	1	101%	85	115	0%	
Thallium	A	mg/L	0.04957	0.0510571		0.05	0	0	4.223E-05	0.001	1	102%	85	115	0%	
Thorium	A	mg/L	0.04787	0.0493061		0.05	0	0	0.0006283	0.001	1	99%	85	115	0%	
Tin	A	mg/L	0.04711	0.0485233		0.05	0	0	0.0013596	0.0013596	0.1	97%	85	115	0%	
Titanium	A	mg/L	0.04981	0.0513043		0.05	0	0	9.682E-05	0.001	1	103%	85	115	0%	
Uranium	A	mg/L	0.04894	0.0504082		0.05	0	0	5.356E-05	0.0003	1	101%	85	115	0%	
Vanadium	A	mg/L	0.04669	0.0480907		0.05	0	0	0.001339	0.001339	1	96%	85	115	0%	
Zinc	A	mg/L	0.04796	0.0493988		0.05	0	0	0.0028119	0.0028119	1	99%	85	115	0%	
Iron, Ferrous	C	mg/L	5.002	5.15206		0	0	0	0.0012257	0.0012257	5	0%	0	0	0%	

Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist					
14998083	ICSA	ICPMS-6020-W-	ICSA		1/21/2022 7:15:4	1	R373694		0	0						
Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q

Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist					
14998083	ICSA	ICPMS-6020-W- ICSA			1/21/2022 7:15:4	1	R373694		0	0						
Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
Aluminum	A	mg/L	36.61	36.61		40	0	0	0.00086	0.001	1	92%	80	120	0%	
Antimony	A	mg/L	0.0001483	0.0001483		0	0	0	0.00042	0.001	0.1	0%			0%	
Arsenic	A	mg/L	-6.573E-06	-6.573E-06		0	0	0	0.00019	0.001	1	0%			0%	
Barium	A	mg/L	0.00007164	0.00007164		0	0	0	0.000042	0.001	1	0%			0%	
Beryllium	A	mg/L	-0.00004143	-0.00004143		0	0	0	0.00012	0.001	1	0%			0%	
Boron	A	mg/L	0.001432	0.001432		0	0	0	0.00561	0.00561	1	0%			0%	
Cadmium	A	mg/L	0.00007616	0.00007616		0	0	0	0.000025	0.001	1	0%			0%	
Calcium	A	mg/L	123.4	123.4		120	0	0	0.02092	0.02092	50	103%	80	120	0%	
Cerium	A	mg/L	0.000002237	0.000002237		0	0	0	0.000012	0.001	0.1	0%			0%	
Chromium	A	mg/L	0.0008664	0.0008664		0	0	0	0.00018	0.001	1	0%			0%	
Cobalt	A	mg/L	0.0003428	0.0003428		0	0	0	0.000042	0.001	1	0%			0%	
Copper	A	mg/L	0.0000565	0.0000565		0	0	0	0.00027	0.001	1	0%			0%	
Iron	A	mg/L	105	105		100	0	0	0.00119	0.00119	5	105%	80	120	0%	
Lanthanum	A	mg/L	0.00000965	0.00000965		0	0	0	0.000011	0.001	0.1	0%			0%	
Lead	A	mg/L	0.00002378	0.00002378		0	0	0	0.000056	0.001	1	0%			0%	
Magnesium	A	mg/L	39.77	39.77		50	0	0	0.00564	0.00564	50	80%			0%	
Manganese	A	mg/L	0.000223	0.000223		0	0	0	0.000095	0.001	1	0%			0%	
Mercury	A	mg/L	0.000007912	0.000007912		0	0	0	0.00016	0.001	0.002	0%			0%	
Molybdenum	A	mg/L	0.79	0.79		0.8	0	0	0.00005	0.001	0.1	99%	80	120	0%	
Nickel	A	mg/L	0.0001824	0.0001824		0	0	0	0.00063	0.001	1	0%			0%	
Potassium	A	mg/L	40	40		50	0	0	0.08139	0.08139	50	80%			0%	
Selenium	A	mg/L	0.0001231	0.0001231		0	0	0	0.00033	0.001	1	0%			0%	
Silicon	A	mg/L	0.00401	0.00401		0	0	0	0.01223	0.1	0.4	0%			0%	
Silver	A	mg/L	0.000005626	0.000005626		0	0	0	0.00002	0.001	0.04	0%			0%	
Sodium	A	mg/L	98.15	98.15		100	0	0	0.02171	0.02171	50	98%			0%	
Strontium	A	mg/L	0.001213	0.001213		0	0	0	0.00014	0.001	1	0%			0%	
Thallium	A	mg/L	0.00007521	0.00007521		0	0	0	0.000041	0.001	1	0%			0%	
Thorium	A	mg/L	0.00002456	0.00002456		0	0	0	0.00061	0.001	1	0%			0%	
Tin	A	mg/L	0.00004425	0.00004425		0	0	0	0.00132	0.00132	0.1	0%			0%	
Titanium	A	mg/L	0.7665	0.7665		0.8	0	0	0.000094	0.001	1	96%			0%	
Uranium	A	mg/L	0.000002654	0.000002654		0	0	0	0.000052	0.0003	1	0%			0%	
Vanadium	A	mg/L	-0.002681	-0.002681		0	0	0	0.0013	0.0013	1	0%			0%	
Zinc	A	mg/L	0.0003461	0.0003461		0	0	0	0.00273	0.00273	1	0%			0%	
Iron, Ferrous	C	mg/L	105	105		0	0	0	0.00119	0.00119	5	0%			0%	

Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist					
14998084	ICSAB	ICPMS-6020-W- ICSAB			1/21/2022 7:21:5	1	R373694		0	0						
Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
Aluminum	A	mg/L	35.69	35.69		40	0	0	0.00086	0.001	1	89%	80	120	0%	
Antimony	A	mg/L	0.00004712	0.00004712		0	0	0	0.00042	0.001	0.1	0%			0%	
Arsenic	A	mg/L	0.009885	0.009885		0.01	0	0	0.00019	0.001	1	99%	80	120	0%	
Barium	A	mg/L	0.00005507	0.00005507		0	0	0	0.000042	0.001	1	0%			0%	
Beryllium	A	mg/L	-0.00004567	-0.00004567		0	0	0	0.00012	0.001	1	0%			0%	
Boron	A	mg/L	0.0007254	0.0007254		0	0	0	0.00561	0.00561	1	0%			0%	
Cadmium	A	mg/L	0.009671	0.009671		0.01	0	0	0.000025	0.001	1	97%	80	120	0%	
Calcium	A	mg/L	121.5	121.5		120	0	0	0.02092	0.02092	50	101%	80	120	0%	
Cerium	A	mg/L	0.000002861	0.000002861		0	0	0	0.000012	0.001	0.1	0%			0%	
Chromium	A	mg/L	0.02036	0.02036		0.02	0	0	0.00018	0.001	1	102%	80	120	0%	
Cobalt	A	mg/L	0.01951	0.01951		0.02	0	0	0.000042	0.001	1	98%	80	120	0%	
Copper	A	mg/L	0.0197	0.0197		0.02	0	0	0.00027	0.001	1	98%	80	120	0%	
Iron	A	mg/L	102.8	102.8		100	0	0	0.00119	0.00119	5	103%	80	120	0%	
Lanthanum	A	mg/L	0.000009375	0.000009375		0	0	0	0.000011	0.001	0.1	0%			0%	
Lead	A	mg/L	0.00001851	0.00001851		0	0	0	0.000056	0.001	1	0%			0%	
Magnesium	A	mg/L	39.38	39.38		40	0	0	0.00564	0.00564	50	98%	80	120	0%	
Manganese	A	mg/L	0.02002	0.02002		0.02	0	0	0.000095	0.001	1	100%	80	120	0%	
Mercury	A	mg/L	0.00000465	0.00000465		0	0	0	0.00016	0.001	0.002	0%			0%	
Molybdenum	A	mg/L	0.7937	0.7937		0.8	0	0	0.00005	0.001	0.1	99%	80	120	0%	
Nickel	A	mg/L	0.02011	0.02011		0.02	0	0	0.00063	0.001	1	101%	80	120	0%	
Potassium	A	mg/L	40.81	40.81		40	0	0	0.08139	0.08139	50	102%	80	120	0%	
Selenium	A	mg/L	0.01009	0.01009		0.01	0	0	0.00033	0.001	1	101%	80	120	0%	
Silicon	A	mg/L	0.002787	0.002787		0	0	0	0.01223	0.1	0.4	0%			0%	
Silver	A	mg/L	0.004652	0.004652		0.005	0	0	0.00002	0.001	0.04	93%	80	120	0%	
Sodium	A	mg/L	98.68	98.68		100	0	0	0.02171	0.02171	50	99%	80	120	0%	
Strontium	A	mg/L	0.001263	0.001263		0	0	0	0.00014	0.001	1	0%			0%	
Thallium	A	mg/L	0.0000178	0.0000178		0	0	0	0.000041	0.001	1	0%			0%	
Thorium	A	mg/L	0.000006585	0.000006585		0	0	0	0.00061	0.001	1	0%			0%	
Tin	A	mg/L	0.00003712	0.00003712		0	0	0	0.00132	0.00132	0.1	0%			0%	
Titanium	A	mg/L	0.7705	0.7705		0.8	0	0	0.000094	0.001	1	96%	80	120	0%	
Uranium	A	mg/L	0.000001175	0.000001175		0	0	0	0.000052	0.0003	1	0%			0%	
Vanadium	A	mg/L	0.01715	0.01715		0.02	0	0	0.0013	0.0013	1	86%	80	120	0%	
Zinc	A	mg/L	0.01006	0.01006		0.01	0	0	0.00273	0.00273	1	101%	80	120	0%	
Iron, Ferrous	C	mg/L	102.8	102.8		0	0	0	0.00119	0.00119	5	0%			0%	

Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist					
14998085	Rinse	ICPMS-6020-W-	SAMP		1/21/2022 7:28:1	1	R373694		0	0						
Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
Antimony	A	mg/L	0.00007088	0		0	0	0	0.00042	0.001	0.1	0%	0	0	0%	
Arsenic	A	mg/L	-0.0001086	0		0	0	0	0.00019	0.001	1	0%	0	0	0%	
Barium	A	mg/L	0.000004146	0		0	0	0	0.000042	0.001	1	0%	0	0	0%	
Cadmium	A	mg/L	0.000002559	0		0	0	0	0.000025	0.001	1	0%	0	0	0%	
Cerium	A	mg/L	1.433E-07	0		0	0	0	0.000012	0.001	0.1	0%	0	0	0%	
Chromium	A	mg/L	-0.00001438	0		0	0	0	0.00018	0.001	1	0%	0	0	0%	
Cobalt	A	mg/L	-2.535E-08	0		0	0	0	0.000042	0.001	1	0%	0	0	0%	
Copper	A	mg/L	-0.00000589	0		0	0	0	0.00027	0.001	1	0%	0	0	0%	
Lead	A	mg/L	0.000003567	0		0	0	0	0.000056	0.001	1	0%	0	0	0%	
Manganese	A	mg/L	0.0001269	0.0001269		0	0	0	0.000095	0.001	1	0%	0	0	0%	J
Mercury	A	mg/L	0.000003669	0		0	0	0	0.00016	0.001	0.002	0%	0	0	0%	
Molybdenum	A	mg/L	0.0001989	0.0001989		0	0	0	0.00005	0.001	0.1	0%	0	0	0%	J
Nickel	A	mg/L	0.000005669	0		0	0	0	0.00063	0.001	1	0%	0	0	0%	
Selenium	A	mg/L	-3.499E-06	0		0	0	0	0.00033	0.001	1	0%	0	0	0%	
Silver	A	mg/L	-9.111E-07	0		0	0	0	0.00002	0.001	0.04	0%	0	0	0%	
Strontium	A	mg/L	0.000001196	0		0	0	0	0.00014	0.001	1	0%	0	0	0%	
Thallium	A	mg/L	0.00001804	0		0	0	0	0.000041	0.001	1	0%	0	0	0%	
Thorium	A	mg/L	-3.359E-06	0		0	0	0	0.00061	0.001	1	0%	0	0	0%	
Titanium	A	mg/L	0.000119	0.000119		0	0	0	0.000094	0.001	1	0%	0	0	0%	J
Uranium	A	mg/L	5.372E-07	0		0	0	0	0.000052	0.0003	1	0%	0	0	0%	
Boron	B	mg/L	0.000005533	0		0	0	0	0.00561	0.00561	1	0%	0	0	0%	L
Calcium	B	mg/L	0.0006013	0		0	0	0	0.02092	0.02092	50	0%	0	0	0%	L
Iron	B	mg/L	0.0009312	0		0	0	0	0.00119	0.00119	5	0%	0	0	0%	
Iron, Ferrous	B	mg/L	0.0009312	0		0	0	0	0.00119	0.00119	5	0%	0	0	0%	
Magnesium	B	mg/L	-0.0005737	0		0	0	0	0.00564	0.00564	50	0%	0	0	0%	L
Potassium	B	mg/L	0.0002652	0		0	0	0	0.08139	0.08139	50	0%	0	0	0%	L
Sodium	B	mg/L	0.01295	0		0	0	0	0.02171	0.02171	50	0%	0	0	0%	L
Tin	B	mg/L	-0.00001041	0		0	0	0	0.00132	0.00132	0.1	0%	0	0	0%	
Zinc	B	mg/L	-0.0000111	0		0	0	0	0.00273	0.00273	1	0%	0	0	0%	L

Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist					
14998086	Rinse	ICPMS-6020-W-	SAMP		1/21/2022 7:34:2	1	R373694		0	0						
Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q

Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist					
14998086	Rinse	ICPMS-6020-W-	SAMP		1/21/2022 7:34:2	1	R373694		0	0						
Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
Antimony	A	mg/L	-1.651E-06	0		0	0	0	0.00042	0.001	0.1	0%	0	0	0%	
Arsenic	A	mg/L	-0.0001081	0		0	0	0	0.00019	0.001	1	0%	0	0	0%	
Barium	A	mg/L	5.064E-07	0		0	0	0	0.000042	0.001	1	0%	0	0	0%	
Cadmium	A	mg/L	0.000004055	0		0	0	0	0.000025	0.001	1	0%	0	0	0%	
Cerium	A	mg/L	1.251E-07	0		0	0	0	0.000012	0.001	0.1	0%	0	0	0%	
Chromium	A	mg/L	-5.182E-06	0		0	0	0	0.00018	0.001	1	0%	0	0	0%	
Cobalt	A	mg/L	0.000000561	0		0	0	0	0.000042	0.001	1	0%	0	0	0%	
Copper	A	mg/L	-0.0000108	0		0	0	0	0.00027	0.001	1	0%	0	0	0%	
Lead	A	mg/L	6.603E-07	0		0	0	0	0.000056	0.001	1	0%	0	0	0%	
Manganese	A	mg/L	0.0001285	0.0001285		0	0	0	0.000095	0.001	1	0%	0	0	0%	J
Mercury	A	mg/L	0.000002463	0		0	0	0	0.00016	0.001	0.002	0%	0	0	0%	
Molybdenum	A	mg/L	0.0000494	0		0	0	0	0.00005	0.001	0.1	0%	0	0	0%	
Nickel	A	mg/L	-1.024E-06	0		0	0	0	0.00063	0.001	1	0%	0	0	0%	
Selenium	A	mg/L	-0.00001492	0		0	0	0	0.00033	0.001	1	0%	0	0	0%	
Silver	A	mg/L	-2.846E-06	0		0	0	0	0.00002	0.001	0.04	0%	0	0	0%	
Strontium	A	mg/L	-1.864E-06	0		0	0	0	0.00014	0.001	1	0%	0	0	0%	
Thallium	A	mg/L	0.000007649	0		0	0	0	0.000041	0.001	1	0%	0	0	0%	
Thorium	A	mg/L	-5.463E-06	0		0	0	0	0.00061	0.001	1	0%	0	0	0%	
Titanium	A	mg/L	0.00005353	0		0	0	0	0.000094	0.001	1	0%	0	0	0%	
Uranium	A	mg/L	3.772E-07	0		0	0	0	0.000052	0.0003	1	0%	0	0	0%	
Boron	B	mg/L	-0.0001862	0		0	0	0	0.00561	0.00561	1	0%	0	0	0%	L
Calcium	B	mg/L	0.0001684	0		0	0	0	0.02092	0.02092	50	0%	0	0	0%	L
Iron	B	mg/L	0.0003866	0		0	0	0	0.00119	0.00119	5	0%	0	0	0%	
Iron, Ferrous	B	mg/L	0.0003866	0		0	0	0	0.00119	0.00119	5	0%	0	0	0%	
Magnesium	B	mg/L	-0.0006523	0		0	0	0	0.00564	0.00564	50	0%	0	0	0%	L
Potassium	B	mg/L	-0.004613	0		0	0	0	0.08139	0.08139	50	0%	0	0	0%	L
Sodium	B	mg/L	0.01026	0		0	0	0	0.02171	0.02171	50	0%	0	0	0%	L
Tin	B	mg/L	-5.751E-07	0		0	0	0	0.00132	0.00132	0.1	0%	0	0	0%	
Zinc	B	mg/L	0.00001647	0		0	0	0	0.00273	0.00273	1	0%	0	0	0%	L

Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist					
14998087	CCV	ICPMS-6020-W-	CCV		1/21/2022 7:40:4	1	R373694		0	0						
Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q

Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist					
14998087	CCV	ICPMS-6020-W-	CCV		1/21/2022 7:40:4	1	R373694		0	0						
Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
Aluminum	A	mg/L	0.05674	0.05674		0.05	0	0	0.00086	0.001	1	113%	90	110	0%	S
Antimony	A	mg/L	0.05264	0.05264		0.05	0	0	0.00042	0.001	0.1	105%	90	110	0%	
Arsenic	A	mg/L	0.05159	0.05159		0.05	0	0	0.00019	0.001	1	103%	90	110	0%	
Barium	A	mg/L	0.05006	0.05006		0.05	0	0	0.000042	0.001	1	100%	90	110	0%	
Beryllium	A	mg/L	0.04299	0.04299		0.05	0	0	0.00012	0.001	1	86%	90	110	0%	S
Boron	A	mg/L	0.04481	0.04481		0.05	0	0	0.00561	0.00561	1	90%	90	110	0%	
Cadmium	A	mg/L	0.05089	0.05089		0.05	0	0	0.000025	0.001	1	102%	90	110	0%	
Calcium	A	mg/L	12.55	12.55		12.5	0	0	0.02092	0.02092	50	100%	90	110	0%	
Cerium	A	mg/L	0.05163	0.05163		0.05	0	0	0.000012	0.001	0.1	103%	90	110	0%	
Chromium	A	mg/L	0.05015	0.05015		0.05	0	0	0.00018	0.001	1	100%	90	110	0%	
Cobalt	A	mg/L	0.04966	0.04966		0.05	0	0	0.000042	0.001	1	99%	90	110	0%	
Copper	A	mg/L	0.05197	0.05197		0.05	0	0	0.00027	0.001	1	104%	90	110	0%	
Iron	A	mg/L	1.323	1.323		1.3	0	0	0.00119	0.00119	5	102%	90	110	0%	
Lanthanum	A	mg/L	0.05074	0.05074		0.05	0	0	0.000011	0.001	0.1	101%	90	110	0%	
Lead	A	mg/L	0.05044	0.05044		0.05	0	0	0.000056	0.001	1	101%	90	110	0%	
Magnesium	A	mg/L	11.96	11.96		12.5	0	0	0.00564	0.00564	50	96%	90	110	0%	
Manganese	A	mg/L	0.05099	0.05099		0.05	0	0	0.000095	0.001	1	102%	90	110	0%	
Mercury	A	mg/L	0.0009792	0.0009792		0.001	0	0	0.00016	0.001	0.002	98%	90	110	0%	
Molybdenum	A	mg/L	0.0513	0.0513		0.05	0	0	0.00005	0.001	0.1	103%	90	110	0%	
Nickel	A	mg/L	0.05013	0.05013		0.05	0	0	0.00063	0.001	1	100%	90	110	0%	
Potassium	A	mg/L	12.2	12.2		12.5	0	0	0.08139	0.08139	50	98%	90	110	0%	
Selenium	A	mg/L	0.05215	0.05215		0.05	0	0	0.00033	0.001	1	104%	90	110	0%	
Silicon	A	mg/L	0.2188	0.2188		0.2	0	0	0.01223	0.1	0.4	109%	90	110	0%	
Silver	A	mg/L	0.01984	0.01984		0.02	0	0	0.00002	0.001	0.04	99%	90	110	0%	
Sodium	A	mg/L	12.24	12.24		12.5	0	0	0.02171	0.02171	50	98%	90	110	0%	
Strontium	A	mg/L	0.0531	0.0531		0.05	0	0	0.00014	0.001	1	106%	90	110	0%	
Thallium	A	mg/L	0.05027	0.05027		0.05	0	0	0.000041	0.001	1	101%	90	110	0%	
Thorium	A	mg/L	0.04876	0.04876		0.05	0	0	0.00061	0.001	1	98%	90	110	0%	
Tin	A	mg/L	0.0524	0.0524		0.05	0	0	0.00132	0.00132	0.1	105%	90	110	0%	
Titanium	A	mg/L	0.04973	0.04973		0.05	0	0	0.000094	0.001	1	99%	90	110	0%	
Uranium	A	mg/L	0.04973	0.04973		0.05	0	0	0.000052	0.0003	1	99%	90	110	0%	
Vanadium	A	mg/L	0.04853	0.04853		0.05	0	0	0.0013	0.0013	1	97%	90	110	0%	
Zinc	A	mg/L	0.05256	0.05256		0.05	0	0	0.00273	0.00273	1	105%	90	110	0%	
Iron, Ferrous	C	mg/L	1.323	1.323		0	0	0	0.00119	0.00119	5	0%	0	0	0%	

Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist					
14998088	CCB	ICPMS-6020-W-	CCB		1/21/2022 7:46:5	1	R373694		0	0						
Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
Aluminum	A	mg/L	0.00002508	0.00002508		0	0	0	0.00086	0.001	1	0%			0%	
Antimony	A	mg/L	0.00007866	0.00007866		0	0	0	0.00042	0.001	0.1	0%			0%	
Arsenic	A	mg/L	-0.00007487	-0.00007487		0	0	0	0.00019	0.001	1	0%			0%	
Barium	A	mg/L	0.000003741	0.000003741		0	0	0	0.000042	0.001	1	0%			0%	
Beryllium	A	mg/L	-0.00003987	-0.00003987		0	0	0	0.00012	0.001	1	0%			0%	
Boron	A	mg/L	0.0003892	0.0003892		0	0	0	0.00561	0.00561	1	0%			0%	
Cadmium	A	mg/L	0.000001919	0.000001919		0	0	0	0.000025	0.001	1	0%			0%	
Calcium	A	mg/L	-0.00009227	-0.00009227		0	0	0	0.02092	0.02092	50	0%			0%	
Cerium	A	mg/L	1.426E-07	1.426E-07		0	0	0	0.000012	0.001	0.1	0%	0	0	0%	
Chromium	A	mg/L	0.0001156	0.0001156		0	0	0	0.00018	0.001	1	0%			0%	
Cobalt	A	mg/L	-1.747E-06	-1.747E-06		0	0	0	0.000042	0.001	1	0%			0%	
Copper	A	mg/L	-5.861E-06	-5.861E-06		0	0	0	0.00027	0.001	1	0%			0%	
Iron	A	mg/L	0.0001494	0.0001494		0	0	0	0.00119	0.00119	5	0%			0%	
Lanthanum	A	mg/L	-2.293E-07	-2.293E-07		0	0	0	0.000011	0.001	0.1	0%	0	0	0%	
Lead	A	mg/L	0.00000459	0.00000459		0	0	0	0.000056	0.001	1	0%			0%	
Magnesium	A	mg/L	-0.0001894	-0.0001894		0	0	0	0.00564	0.00564	50	0%			0%	
Manganese	A	mg/L	-6.619E-06	-6.619E-06		0	0	0	0.000095	0.001	1	0%			0%	
Mercury	A	mg/L	0.000005715	0.000005715		0	0	0	0.00016	0.001	0.002	0%			0%	
Molybdenum	A	mg/L	0.00003537	0.00003537		0	0	0	0.00005	0.001	0.1	0%			0%	
Nickel	A	mg/L	-3.952E-06	-3.952E-06		0	0	0	0.00063	0.001	1	0%			0%	
Potassium	A	mg/L	0.006306	0.006306		0	0	0	0.08139	0.08139	50	0%			0%	
Selenium	A	mg/L	0.000003006	0.000003006		0	0	0	0.00033	0.001	1	0%			0%	
Silicon	A	mg/L	0.0003604	0.0003604		0	0	0	0.01223	0.1	0.4	0%	0	0	0%	
Silver	A	mg/L	0.000000495	0.000000495		0	0	0	0.00002	0.001	0.04	0%			0%	
Sodium	A	mg/L	0.001802	0.001802		0	0	0	0.02171	0.02171	50	0%			0%	
Strontium	A	mg/L	-1.406E-06	-1.406E-06		0	0	0	0.00014	0.001	1	0%	0	0	0%	
Thallium	A	mg/L	0.0001487	0.0001487		0	0	0	0.000041	0.001	1	0%	0	0	0%	
Thorium	A	mg/L	0.000009463	0.000009463		0	0	0	0.00061	0.001	1	0%	0	0	0%	
Tin	A	mg/L	0.000009815	0.000009815		0	0	0	0.00132	0.00132	0.1	0%	0	0	0%	
Titanium	A	mg/L	0.0000232	0.0000232		0	0	0	0.000094	0.001	1	0%	0	0	0%	
Uranium	A	mg/L	0.000002263	0.000002263		0	0	0	0.000052	0.0003	1	0%	0	0	0%	
Vanadium	A	mg/L	-0.00189	-0.00189		0	0	0	0.0013	0.0013	1	0%	0	0	0%	
Zinc	A	mg/L	0.000003594	0.000003594		0	0	0	0.00273	0.00273	1	0%	0	0	0%	
Iron, Ferrous	C	mg/L	0.0001494	0.0001494		0	0	0	0.00119	0.00119	5	0%	0	0	0%	

Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist					
14998089	Rinse	ICPMS-6020-W-	SAMP		1/21/2022 7:53:0	1	R373694		0	0						
Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
Antimony	A	mg/L	0.00001246	0		0	0	0	0.00042	0.001	0.1	0%	0	0	0%	
Arsenic	A	mg/L	-0.0001017	0		0	0	0	0.00019	0.001	1	0%	0	0	0%	
Barium	A	mg/L	0.000003602	0		0	0	0	0.000042	0.001	1	0%	0	0	0%	
Cadmium	A	mg/L	-7.908E-07	0		0	0	0	0.000025	0.001	1	0%	0	0	0%	
Cerium	A	mg/L	1.429E-07	0		0	0	0	0.000012	0.001	0.1	0%	0	0	0%	
Chromium	A	mg/L	-0.00001397	0		0	0	0	0.00018	0.001	1	0%	0	0	0%	
Cobalt	A	mg/L	1.402E-07	0		0	0	0	0.000042	0.001	1	0%	0	0	0%	
Copper	A	mg/L	-0.0000181	0		0	0	0	0.00027	0.001	1	0%	0	0	0%	
Lead	A	mg/L	4.629E-07	0		0	0	0	0.000056	0.001	1	0%	0	0	0%	
Manganese	A	mg/L	0.0001224	0.0001224		0	0	0	0.000095	0.001	1	0%	0	0	0%	J
Mercury	A	mg/L	0.000003829	0		0	0	0	0.00016	0.001	0.002	0%	0	0	0%	
Molybdenum	A	mg/L	0.00001699	0		0	0	0	0.00005	0.001	0.1	0%	0	0	0%	
Nickel	A	mg/L	0.000008455	0		0	0	0	0.00063	0.001	1	0%	0	0	0%	
Selenium	A	mg/L	-8.408E-06	0		0	0	0	0.00033	0.001	1	0%	0	0	0%	
Silver	A	mg/L	-2.615E-06	0		0	0	0	0.00002	0.001	0.04	0%	0	0	0%	
Strontium	A	mg/L	0.000002821	0		0	0	0	0.00014	0.001	1	0%	0	0	0%	
Thallium	A	mg/L	0.00004065	0		0	0	0	0.000041	0.001	1	0%	0	0	0%	
Thorium	A	mg/L	-6.483E-07	0		0	0	0	0.00061	0.001	1	0%	0	0	0%	
Titanium	A	mg/L	0.00002228	0		0	0	0	0.000094	0.001	1	0%	0	0	0%	
Uranium	A	mg/L	7.061E-07	0		0	0	0	0.000052	0.0003	1	0%	0	0	0%	
Calcium	B	mg/L	0.0001239	0		0	0	0	0.02092	0.02092	50	0%	0	0	0%	L
Iron	B	mg/L	0.0002098	0		0	0	0	0.00119	0.00119	5	0%	0	0	0%	
Iron, Ferrous	B	mg/L	0.0002098	0		0	0	0	0.00119	0.00119	5	0%	0	0	0%	
Magnesium	B	mg/L	-0.0002552	0		0	0	0	0.00564	0.00564	50	0%	0	0	0%	L
Tin	B	mg/L	-8.11E-07	0		0	0	0	0.00132	0.00132	0.1	0%	0	0	0%	
Zinc	B	mg/L	0.00002085	0		0	0	0	0.00273	0.00273	1	0%	0	0	0%	L

Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist					
14998090	MB-163063	ICPMS-6020-W-	MBLK		1/21/2022 7:59:2	1	163063	1/19/2022 1:	0	0						
Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
Aluminum	A	mg/L	0.001822	0		0	0	0	0.0038747	0.0031975	1	0%	0	0	0%	
Antimony	A	mg/L	0.00001392	0		0	0	0	0.0002799	0.001	0.1	0%	0	0	0%	
Arsenic	A	mg/L	0.00001998	0		0	0	0	0.0003412	0.001	1	0%	0	0	0%	
Barium	A	mg/L	0.00001236	0		0	0	0	0.0002682	0.001	1	0%	0	0	0%	

Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist					
14998090	MB-163063	ICPMS-6020-W- MBLK				1/21/2022 7:59:2	1	163063	1/19/2022 1:	0	0					
Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
Beryllium	A	mg/L	-0.00003736	0		0	0	0	0.0001071	0.01	1	0%	0	0	0%	
Boron	A	mg/L	0.001124	0		0	0	0	0.0203802	0.01467	1	0%	0	0	0%	
Cadmium	A	mg/L	2.05E-08	0		0	0	0	1.821E-05	0.005	1	0%	0	0	0%	
Calcium	A	mg/L	0.03579	0		0	0	0	0.0372936	0.1103481	50	0%	0	0	0%	
Cerium	A	mg/L	0.000000717	0		0	0	0	2.738E-05	0.001	0.1	0%	0	0	0%	
Chromium	A	mg/L	0.00006561	0		0	0	0	0.0015375	0.0015375	1	0%	0	0	0%	
Cobalt	A	mg/L	0.00009103	0		0	0	0	9.541E-05	0.001	1	0%	0	0	0%	
Copper	A	mg/L	0.0001901	0		0	0	0	0.0008747	0.00198	1	0%	0	0	0%	
Iron	A	mg/L	0.001119	0		0	0	0	0.007424	0.00513	5	0%	0	0	0%	
Lanthanum	A	mg/L	-4.713E-08	0		0	0	0	0.000055	0.001	0.1	0%	0	0	0%	
Lead	A	mg/L	0.00004518	0		0	0	0	7.716E-05	0.0005	1	0%	0	0	0%	
Magnesium	A	mg/L	0.0009207	0		0	0	0	0.0104254	0.0081522	50	0%	0	0	0%	
Manganese	A	mg/L	0.0001296	0		0	0	0	0.0005399	0.001	1	0%	0	0	0%	
Molybdenum	A	mg/L	0.0004262	0.0004262		0	0	0	0.0001763	0.001	0.1	0%	0	0	0%	
Nickel	A	mg/L	0.000001977	0		0	0	0	0.0002288	0.0024200	1	0%	0	0	0%	
Potassium	A	mg/L	-0.006019	0		0	0	0	0.0765619	0.0261205	50	0%	0	0	0%	
Selenium	A	mg/L	0.00001768	0		0	0	0	0.0001357	0.001	1	0%	0	0	0%	
Silicon	A	mg/L	0.0212	0		0	0	0	0.0422089	0.0053212	0.4	0%	0	0	0%	
Silver	A	mg/L	-0.00006609	0		0	0	0	4.281E-05	0.001	0.04	0%	0	0	0%	
Sodium	A	mg/L	0.02295	0		0	0	0	0.1019461	0.7330269	50	0%	0	0	0%	
Strontium	A	mg/L	0.00003298	0		0	0	0	0.0002433	0.001	1	0%	0	0	0%	
Thallium	A	mg/L	0.00007001	0		0	0	0	0.0001114	0.001	1	0%	0	0	0%	
Thorium	A	mg/L	0.00004142	0		0	0	0	0.0003796	0.00415	1	0%	0	0	0%	
Tin	A	mg/L	0.0004151	0		0	0	0	0.0018932	0.0011175	0.1	0%	0	0	0%	
Titanium	A	mg/L	0.0004782	0		0	0	0	0.0005733	0.001	1	0%	0	0	0%	
Uranium	A	mg/L	0.000001236	0		0	0	0	1.699E-05	0.0003	1	0%	0	0	0%	
Vanadium	A	mg/L	-0.001483	0		0	0	0	0.0039127	0.0021085	1	0%	0	0	0%	
Zinc	A	mg/L	0.0001935	0		0	0	0	0.0011617	0.0065544	1	0%	0	0	0%	
Silica	C	mg/L	0.04535104	0		0	0	0	0.0902933	0.0113831	5	0%	0	0	0%	
Silicon as SiO2	C	mg/L	0.04535104	0		0	0	0	0.0902933	0.0113831	5	0%	0	0	0%	

Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist					
14998091	MB-163116	ICPMS-6020-W- MBLK				1/21/2022 8:05:3	1	163116	1/20/2022 1:	0	0					
Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q

Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist					
14998091	MB-163116	ICPMS-6020-W- MBLK			1/21/2022 8:05:3	1	163116	1/20/2022 1:	0	0						
Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
Aluminum	A	mg/L	0.001598	0		0	0	0	0.0038747	0.0031975	1	0%	0	0	0%	
Antimony	A	mg/L	0.000002878	0		0	0	0	0.0002799	0.001	0.1	0%	0	0	0%	
Arsenic	A	mg/L	-7.995E-06	0		0	0	0	0.0003412	0.001	1	0%	0	0	0%	
Barium	A	mg/L	0.0000275	0		0	0	0	0.0002682	0.001	1	0%	0	0	0%	
Beryllium	A	mg/L	-0.00003843	0		0	0	0	0.0001071	0.01	1	0%	0	0	0%	
Boron	A	mg/L	0.0006974	0		0	0	0	0.0203802	0.01467	1	0%	0	0	0%	
Cadmium	A	mg/L	-5.223E-07	0		0	0	0	1.821E-05	0.005	1	0%	0	0	0%	
Calcium	A	mg/L	0.01045	0		0	0	0	0.0372936	0.1103481	50	0%	0	0	0%	
Cerium	A	mg/L	0.000001407	0		0	0	0	2.738E-05	0.001	0.1	0%	0	0	0%	
Chromium	A	mg/L	0.00005231	0		0	0	0	0.0015375	0.0015375	1	0%	0	0	0%	
Cobalt	A	mg/L	0.0001202	0.0001202		0	0	0	9.541E-05	0.001	1	0%	0	0	0%	
Copper	A	mg/L	0.0002007	0		0	0	0	0.0008747	0.00198	1	0%	0	0	0%	
Iron	A	mg/L	0.000419	0		0	0	0	0.007424	0.00513	5	0%	0	0	0%	
Lanthanum	A	mg/L	3.481E-07	0		0	0	0	0.000055	0.001	0.1	0%	0	0	0%	
Lead	A	mg/L	0.0000448	0		0	0	0	7.716E-05	0.0005	1	0%	0	0	0%	
Magnesium	A	mg/L	0.0009618	0		0	0	0	0.0104254	0.0081522	50	0%	0	0	0%	
Manganese	A	mg/L	0.0001126	0		0	0	0	0.0005399	0.001	1	0%	0	0	0%	
Molybdenum	A	mg/L	0.0004248	0.0004248		0	0	0	0.0001763	0.001	0.1	0%	0	0	0%	
Nickel	A	mg/L	0.00001253	0		0	0	0	0.0002288	0.0024200	1	0%	0	0	0%	
Potassium	A	mg/L	-0.007508	0		0	0	0	0.0765619	0.0261205	50	0%	0	0	0%	
Selenium	A	mg/L	0.000005379	0		0	0	0	0.0001357	0.001	1	0%	0	0	0%	
Silicon	A	mg/L	0.01756	0		0	0	0	0.0422089	0.0053212	0.4	0%	0	0	0%	
Silver	A	mg/L	-0.00006533	0		0	0	0	4.281E-05	0.001	0.04	0%	0	0	0%	
Sodium	A	mg/L	0.01967	0		0	0	0	0.1019461	0.7330269	50	0%	0	0	0%	
Strontium	A	mg/L	0.000009853	0		0	0	0	0.0002433	0.001	1	0%	0	0	0%	
Thallium	A	mg/L	0.00004269	0		0	0	0	0.0001114	0.001	1	0%	0	0	0%	
Thorium	A	mg/L	0.00001587	0		0	0	0	0.0003796	0.00415	1	0%	0	0	0%	
Tin	A	mg/L	0.000426	0		0	0	0	0.0018932	0.0011175	0.1	0%	0	0	0%	
Titanium	A	mg/L	0.000312	0		0	0	0	0.0005733	0.001	1	0%	0	0	0%	
Uranium	A	mg/L	5.096E-07	0		0	0	0	1.699E-05	0.0003	1	0%	0	0	0%	
Vanadium	A	mg/L	-0.001676	0		0	0	0	0.0039127	0.0021085	1	0%	0	0	0%	
Zinc	A	mg/L	0.0001642	0		0	0	0	0.0011617	0.0065544	1	0%	0	0	0%	
Silica	C	mg/L	0.037564352	0		0	0	0	0.0902933	0.0113831	5	0%	0	0	0%	
Silicon as SiO2	C	mg/L	0.037564352	0		0	0	0	0.0902933	0.0113831	5	0%	0	0	0%	

Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist					
14998092	LCS4-163063	ICPMS-6020-W- LCS4			1/21/2022 8:11:5	1	163063	1/19/2022 1:	0	0						
Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
Aluminum	A	mg/L	0.4537	0.4537		0.5	0	0	0.0038747	0.0031975	1	91%	80	120	0%	
Antimony	A	mg/L	0.1003	0.1003		0.1	0	0	0.0002799	0.001	0.1	100%	80	120	0%	
Arsenic	A	mg/L	0.09751	0.09751		0.1	0	0	0.0003412	0.001	1	98%	80	120	0%	
Barium	A	mg/L	0.09345	0.09345		0.1	0	0	0.0002682	0.001	1	93%	80	120	0%	
Beryllium	A	mg/L	0.04142	0.04142		0.05	0	0	0.0001071	0.01	1	83%	80	120	0%	
Boron	A	mg/L	0.0887	0.0887		0.1	0	0	0.0203802	0.01467	1	89%	80	120	0%	
Cadmium	A	mg/L	0.05101	0.05101		0.05	0	0	1.821E-05	0.005	1	102%	80	120	0%	
Calcium	A	mg/L	5.696	5.696		5	0	0	0.0372936	0.1103481	50	114%	80	120	0%	
Cerium	A	mg/L	0.1096	0.1096		0.1	0	0	2.738E-05	0.001	0.1	110%	80	120	0%	
Chromium	A	mg/L	0.09602	0.09602		0.1	0	0	0.0015375	0.0015375	1	96%	80	120	0%	
Cobalt	A	mg/L	0.09954	0.09954		0.1	0	0	9.541E-05	0.001	1	100%	80	120	0%	
Copper	A	mg/L	0.1015	0.1015		0.1	0	0	0.0008747	0.00198	1	101%	80	120	0%	
Iron	A	mg/L	0.6022	0.6022		0.5	0	0	0.007424	0.00513	5	120%	80	120	0%	
Lanthanum	A	mg/L	0.1076	0.1076		0.1	0	0	0.000055	0.001	0.1	108%	80	120	0%	
Lead	A	mg/L	0.1013	0.1013		0.1	0	0	7.716E-05	0.001	1	101%	88	115	0%	
Magnesium	A	mg/L	4.951	4.951		5	0	0	0.0104254	0.0081522	50	99%	80	120	0%	
Manganese	A	mg/L	0.488	0.488		0.5	0	0	0.0005399	0.001	1	98%	80	120	0%	
Molybdenum	A	mg/L	0.0942	0.0942		0.1	0	0	0.0001763	0.001	0.1	94%	80	120	0%	
Nickel	A	mg/L	0.09914	0.09914		0.1	0	0	0.0002288	0.0024200	1	99%	80	120	0%	
Potassium	A	mg/L	4.564	4.564		5	0	0	0.0765619	0.0261205	50	91%	80	120	0%	
Selenium	A	mg/L	0.1174	0.1174		0.1	0	0	0.0001357	0.001	1	117%	80	120	0%	
Silicon	A	mg/L	1.251	1.251		1	0	0	0.0422089	0.0053212	0.4	125%	80	120	0%	S
Silver	A	mg/L	0.009614	0.009614		0.01	0	0	4.281E-05	0.001	0.04	96%	80	120	0%	
Sodium	A	mg/L	4.986	4.986		5	0	0	0.1019461	0.7330269	50	100%	80	120	0%	
Strontium	A	mg/L	0.1031	0.1031		0.1	0	0	0.0002433	0.001	1	103%	80	120	0%	
Thallium	A	mg/L	0.1026	0.1026		0.1	0	0	0.0001114	0.001	1	103%	80	120	0%	
Thorium	A	mg/L	0.1018	0.1018		0.1	0	0	0.0003796	0.00415	1	102%	80	120	0%	
Tin	A	mg/L	0.09919	0.09919		0.1	0	0	0.0018932	0.0011175	0.1	99%	80	120	0%	
Titanium	A	mg/L	0.08756	0.08756		0.1	0	0	0.0005733	0.001	1	88%	80	120	0%	
Uranium	A	mg/L	0.1034	0.1034		0.1	0	0	1.699E-05	0.0003	1	103%	80	120	0%	
Vanadium	A	mg/L	0.09547	0.09547		0.1	0	0	0.0039127	0.0021085	1	95%	80	120	0%	
Zinc	A	mg/L	0.09751	0.09751		0.1	0	0	0.0011617	0.0065544	1	98%	80	120	0%	
Silica	C	mg/L	2.6761392	2.6761392		0	0	0	0.0902933	0.0113831	5	0%	0	0	0%	
Silicon as SiO2	C	mg/L	2.6761392	2.6761392		2.14	0	0	0.0902933	0.0113831	5	125%	80	120	0%	S

Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist					
14998093	LCS4-163116	ICPMS-6020-W-	LCS4		1/21/2022 8:18:0	1	163116	1/20/2022 1:	0	0						
Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
Aluminum	A	mg/L	0.402	0.402		0.5	0	0	0.0038747	0.0031975	1	80%	80	120	0%	
Antimony	A	mg/L	0.09856	0.09856		0.1	0	0	0.0002799	0.001	0.1	99%	80	120	0%	
Arsenic	A	mg/L	0.1007	0.1007		0.1	0	0	0.0003412	0.001	1	101%	80	120	0%	
Barium	A	mg/L	0.09206	0.09206		0.1	0	0	0.0002682	0.001	1	92%	80	120	0%	
Beryllium	A	mg/L	0.03757	0.03757		0.05	0	0	0.0001071	0.01	1	75%	80	120	0%	S
Boron	A	mg/L	0.07989	0.07989		0.1	0	0	0.0203802	0.01467	1	80%	80	120	0%	
Cadmium	A	mg/L	0.05154	0.05154		0.05	0	0	1.821E-05	0.005	1	103%	80	120	0%	
Calcium	A	mg/L	5.358	5.358		5	0	0	0.0372936	0.1103481	50	107%	80	120	0%	
Cerium	A	mg/L	0.1107	0.1107		0.1	0	0	2.738E-05	0.001	0.1	111%	80	120	0%	
Chromium	A	mg/L	0.09835	0.09835		0.1	0	0	0.0015375	0.0015375	1	98%	80	120	0%	
Cobalt	A	mg/L	0.09268	0.09268		0.1	0	0	9.541E-05	0.001	1	93%	80	120	0%	
Copper	A	mg/L	0.104	0.104		0.1	0	0	0.0008747	0.00198	1	104%	80	120	0%	
Iron	A	mg/L	0.5579	0.5579		0.5	0	0	0.007424	0.00513	5	112%	80	120	0%	
Lanthanum	A	mg/L	0.1095	0.1095		0.1	0	0	0.000055	0.001	0.1	109%	80	120	0%	
Lead	A	mg/L	0.09816	0.09816		0.1	0	0	7.716E-05	0.001	1	98%	88	115	0%	
Magnesium	A	mg/L	4.943	4.943		5	0	0	0.0104254	0.0081522	50	99%	80	120	0%	
Manganese	A	mg/L	0.4997	0.4997		0.5	0	0	0.0005399	0.001	1	100%	80	120	0%	
Molybdenum	A	mg/L	0.09342	0.09342		0.1	0	0	0.0001763	0.001	0.1	93%	80	120	0%	
Nickel	A	mg/L	0.1013	0.1013		0.1	0	0	0.0002288	0.0024200	1	101%	80	120	0%	
Potassium	A	mg/L	4.743	4.743		5	0	0	0.0765619	0.0261205	50	95%	80	120	0%	
Selenium	A	mg/L	0.1095	0.1095		0.1	0	0	0.0001357	0.001	1	109%	80	120	0%	
Silicon	A	mg/L	1.101	1.101		1	0	0	0.0422089	0.0053212	0.4	110%	80	120	0%	
Silver	A	mg/L	0.009573	0.009573		0.01	0	0	4.281E-05	0.001	0.04	96%	80	120	0%	
Sodium	A	mg/L	4.936	4.936		5	0	0	0.1019461	0.7330269	50	99%	80	120	0%	
Strontium	A	mg/L	0.106	0.106		0.1	0	0	0.0002433	0.001	1	106%	80	120	0%	
Thallium	A	mg/L	0.1059	0.1059		0.1	0	0	0.0001114	0.001	1	106%	80	120	0%	
Thorium	A	mg/L	0.1049	0.1049		0.1	0	0	0.0003796	0.00415	1	105%	80	120	0%	
Tin	A	mg/L	0.09952	0.09952		0.1	0	0	0.0018932	0.0011175	0.1	100%	80	120	0%	
Titanium	A	mg/L	0.08689	0.08689		0.1	0	0	0.0005733	0.001	1	87%	80	120	0%	
Uranium	A	mg/L	0.09956	0.09956		0.1	0	0	1.699E-05	0.0003	1	100%	80	120	0%	
Vanadium	A	mg/L	0.09793	0.09793		0.1	0	0	0.0039127	0.0021085	1	98%	80	120	0%	
Zinc	A	mg/L	0.09955	0.09955		0.1	0	0	0.0011617	0.0065544	1	100%	80	120	0%	
Silica	C	mg/L	2.3552592	2.3552592		0	0	0	0.0902933	0.0113831	5	0%	0	0	0%	
Silicon as SiO2	C	mg/L	2.3552592	2.3552592		2.14	0	0	0.0902933	0.0113831	5	110%	80	120	0%	

Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist					
14998094	Rinse	ICPMS-6020-W-	SAMP		1/21/2022 8:24:2	1	R373694		0	0						
Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
Antimony	A	mg/L	0.0001541	0		0	0	0	0.00042	0.001	0.1	0%	0	0	0%	
Arsenic	A	mg/L	-0.00009479	0		0	0	0	0.00019	0.001	1	0%	0	0	0%	
Barium	A	mg/L	0.000002622	0		0	0	0	0.000042	0.001	1	0%	0	0	0%	
Cadmium	A	mg/L	0.000007312	0		0	0	0	0.000025	0.001	1	0%	0	0	0%	
Cerium	A	mg/L	6.085E-08	0		0	0	0	0.000012	0.001	0.1	0%	0	0	0%	
Chromium	A	mg/L	-0.00001005	0		0	0	0	0.00018	0.001	1	0%	0	0	0%	
Cobalt	A	mg/L	6.296E-07	0		0	0	0	0.000042	0.001	1	0%	0	0	0%	
Copper	A	mg/L	-8.101E-06	0		0	0	0	0.00027	0.001	1	0%	0	0	0%	
Lead	A	mg/L	0.00001832	0		0	0	0	0.000056	0.001	1	0%	0	0	0%	
Manganese	A	mg/L	0.0001408	0.0001408		0	0	0	0.000095	0.001	1	0%	0	0	0%	J
Mercury	A	mg/L	0.000002739	0		0	0	0	0.00016	0.001	0.002	0%	0	0	0%	
Molybdenum	A	mg/L	0.00001692	0		0	0	0	0.00005	0.001	0.1	0%	0	0	0%	
Nickel	A	mg/L	0.000004118	0		0	0	0	0.00063	0.001	1	0%	0	0	0%	
Selenium	A	mg/L	-1.954E-07	0		0	0	0	0.00033	0.001	1	0%	0	0	0%	
Silver	A	mg/L	-6.469E-07	0		0	0	0	0.00002	0.001	0.04	0%	0	0	0%	
Strontium	A	mg/L	-1.404E-06	0		0	0	0	0.00014	0.001	1	0%	0	0	0%	
Thallium	A	mg/L	0.000227	0.000227		0	0	0	0.000041	0.001	1	0%	0	0	0%	J
Thorium	A	mg/L	0.00002163	0		0	0	0	0.00061	0.001	1	0%	0	0	0%	
Titanium	A	mg/L	0.00001195	0		0	0	0	0.000094	0.001	1	0%	0	0	0%	
Uranium	A	mg/L	0.00000244	0		0	0	0	0.000052	0.0003	1	0%	0	0	0%	
Calcium	B	mg/L	-0.0006537	0		0	0	0	0.02092	0.02092	50	0%	0	0	0%	L
Iron	B	mg/L	0.0001706	0		0	0	0	0.00119	0.00119	5	0%	0	0	0%	
Iron, Ferrous	B	mg/L	0.0001706	0		0	0	0	0.00119	0.00119	5	0%	0	0	0%	
Magnesium	B	mg/L	-0.0001556	0		0	0	0	0.00564	0.00564	50	0%	0	0	0%	L
Tin	B	mg/L	0.00002562	0		0	0	0	0.00132	0.00132	0.1	0%	0	0	0%	
Zinc	B	mg/L	0.00006911	0		0	0	0	0.00273	0.00273	1	0%	0	0	0%	L

Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist					
14998095	B22011124-001	ICPMS-6020-W-	SAMP		1/21/2022 8:30:3	1	R373694		0	0						
Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
Antimony	A	mg/L	0.0000231	0		0	0	0	0.00042	0.001	0.1	0%	0	0	0%	
Arsenic	A	mg/L	-0.0001194	0		0	0	0	0.00019	0.001	1	0%	0	0	0%	
Barium	A	mg/L	0.003061	0.003061		0	0	0	0.000042	0.001	1	0%	0	0	0%	
Cadmium	A	mg/L	0.0000385	0.0000385		0	0	0	0.000025	0.001	1	0%	0	0	0%	J

Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist					
14998095	B22011124-001	ICPMS-6020-W-	SAMP		1/21/2022 8:30:3	1	R373694		0	0						
Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
Cerium	A	mg/L	-4.259E-08	0		0	0	0	0.000012	0.001	0.1	0%	0	0	0%	
Chromium	A	mg/L	0.001809	0.001809		0	0	0	0.00018	0.001	1	0%	0	0	0%	
Cobalt	A	mg/L	0.00003108	0		0	0	0	0.000042	0.001	1	0%	0	0	0%	
Copper	A	mg/L	0.0002981	0.0002981		0	0	0	0.00027	0.001	1	0%	0	0	0%	J
Lead	A	mg/L	0.00001097	0		0	0	0	0.000056	0.001	1	0%	0	0	0%	U
Manganese	A	mg/L	0.0004958	0.0004958		0	0	0	0.000095	0.001	1	0%	0	0	0%	J
Mercury	A	mg/L	0.00000635	0		0	0	0	0.00016	0.001	0.002	0%	0	0	0%	
Molybdenum	A	mg/L	0.0004954	0.0004954		0	0	0	0.00005	0.001	0.1	0%	0	0	0%	J
Nickel	A	mg/L	0.001756	0.001756		0	0	0	0.00063	0.001	1	0%	0	0	0%	
Selenium	A	mg/L	0.0001444	0		0	0	0	0.00033	0.001	1	0%	0	0	0%	
Silver	A	mg/L	-0.00006192	0		0	0	0	0.00002	0.001	0.04	0%	0	0	0%	
Strontium	A	mg/L	0.06572	0.06572		0	0	0	0.00014	0.001	1	0%	0	0	0%	
Thallium	A	mg/L	0.00009305	0.00009305		0	0	0	0.000041	0.001	1	0%	0	0	0%	J
Thorium	A	mg/L	-2.214E-06	0		0	0	0	0.00061	0.001	1	0%	0	0	0%	
Titanium	A	mg/L	0.001801	0.001801		0	0	0	0.000094	0.001	1	0%	0	0	0%	
Uranium	A	mg/L	0.000009692	0		0	0	0	0.000052	0.0003	1	0%	0	0	0%	
Calcium	B	mg/L	9.723	9.723		0	0	0	0.02092	0.02092	50	0%	0	0	0%	D
Iron	B	mg/L	0.001158	0		0	0	0	0.00119	0.00119	5	0%	0	0	0%	
Iron, Ferrous	B	mg/L	0.001158	0		0	0	0	0.00119	0.00119	5	0%	0	0	0%	
Magnesium	B	mg/L	10.95	10.95		0	0	0	0.00564	0.00564	50	0%	0	0	0%	D
Sodium	B	mg/L	36.85	36.85		0	0	0	0.02171	0.02171	50	0%	0	0	0%	D
Tin	B	mg/L	-0.0000779	0		0	0	0	0.00132	0.00132	0.1	0%	0	0	0%	
Zinc	B	mg/L	0.004587	0.004587		0	0	0	0.00273	0.00273	1	0%	0	0	0%	D

Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist					
14998096	B22011124-001	ICPMS-6020-W-	SD		1/21/2022 8:36:5	5	R373694		0	1E+07						
Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
Aluminum	A	mg/L	0.001441	0.007205		0	0	0.0014	0.0043	0.0043	1	0%				N
Antimony	A	mg/L	0.000008366	0		0	0	0	0.0021	0.0021	0.1	0%				
Arsenic	A	mg/L	-0.0001162	0		0	0	0	0.00095	0.001	1	0%				
Barium	A	mg/L	0.003128	0.01564		0	0	0.003061	0.00021	0.001	1	0%			135%	R
Beryllium	A	mg/L	-0.0000364	0		0	0	0	0.0006	0.001	1	0%				
Boron	A	mg/L	0.0593	0.2965		0	0	0.05841	0.02805	0.02805	1	0%				N
Cadmium	A	mg/L	0.00003872	0.0001936		0	0	0.0000385	0.000125	0.001	1	0%				N

Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist					
14998096	B22011124-001	ICPMS-6020-W- SD			1/21/2022 8:36:5	5	R373694			0	1E+07					
Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
Calcium	A	mg/L	9.848	49.24		0	0	9.723	0.1046	0.1046	50	0%			134%	R
Cerium	A	mg/L	0.000001027	0		0	0	0	0.00006	0.001	0.1	0%				
Chromium	A	mg/L	0.001727	0.008635		0	0	0.001809	0.0009	0.001	1	0%				N
Cobalt	A	mg/L	0.00003126	0		0	0	0	0.00021	0.001	1	0%				
Copper	A	mg/L	0.0003097	0.0015485		0	0	0.0002981	0.00135	0.00135	1	0%				N
Iron	A	mg/L	0.001167	0		0	0	0	0.00595	0.00595	5	0%				
Lanthanum	A	mg/L	-7.459E-08	0		0	0	0	0.000055	0.001	0.1	0%				
Lead	A	mg/L	0.00001086	0		0	0	0	0.00028	0.001	1	0%				
Magnesium	A	mg/L	10.57	52.85		0	0	10.95	0.0282	0.0282	50	0%			131%	R
Manganese	A	mg/L	0.0004773	0.0023865		0	0	0.0004958	0.000475	0.001	1	0%				N
Mercury	A	mg/L	0.00000371	0		0	0	0	0.0008	0.001	0.002	0%				
Molybdenum	A	mg/L	0.0004994	0.002497		0	0	0.0004954	0.00025	0.001	0.1	0%				N
Nickel	A	mg/L	0.001683	0.008415		0	0	0.001756	0.00315	0.00315	1	0%				N
Potassium	A	mg/L	1.897	9.485		0	0	1.949	0.40695	0.40695	50	0%				N
Selenium	A	mg/L	0.0001541	0		0	0	0	0.00165	0.00165	1	0%				
Silicon	A	mg/L	24.81	124.05		0	0	24.61	0.06115	0.1	0.4	0%			134%	R
Silver	A	mg/L	-0.00006333	0		0	0	0	0.0001	0.001	0.04	0%				
Sodium	A	mg/L	36.36	181.8		0	0	36.85	0.10855	0.10855	50	0%			133%	R
Strontium	A	mg/L	0.06465	0.32325		0	0	0.06572	0.0007	0.001	1	0%			132%	R
Thallium	A	mg/L	0.00003703	0		0	0	9.305E-05	0.000205	0.001	1	0%				
Thorium	A	mg/L	-6.291E-06	0		0	0	0	0.00305	0.00305	1	0%				
Tin	A	mg/L	-0.00008544	0		0	0	0	0.0066	0.0066	0.1	0%				
Titanium	A	mg/L	0.001843	0.009215		0	0	0.001801	0.00047	0.001	1	0%				N
Uranium	A	mg/L	0.000009172	0		0	0	0	0.00026	0.0003	1	0%				
Vanadium	A	mg/L	0.01712	0.0856		0	0	0.01726	0.0065	0.0065	1	0%				N
Zinc	A	mg/L	0.00458	0.0229		0	0	0.004587	0.01365	0.01365	1	0%				N
Iron, Ferrous	C	mg/L	0.001167	0		0	0	0	0.00595	0.00595	5	0%				

Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist					
14998097	B22011124-001	ICPMS-6020-W- MS			1/21/2022 8:43:0	1.03	R373694			1E+07	0					
Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
Aluminum	A	mg/L	0.0455	0.046865		0.05	0.0014	0	0.0008858	0.001	1	91%	75	125	0%	
Antimony	A	mg/L	0.04762	0.0490486		0.05	0	0	0.0004326	0.001	0.1	98%	75	125	0%	
Arsenic	A	mg/L	0.04836	0.0498108		0.05	0	0	0.0001957	0.001	1	100%	75	125	0%	

Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist					
14998097	B22011124-001	ICPMS-6020-W- MS			1/21/2022 8:43:0	1.03	R373694		1E+07	0						
Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
Barium	A	mg/L	0.05069	0.0522107		0.05	0.003061	0	4.326E-05	0.001	1	98%	75	125	0%	
Beryllium	A	mg/L	0.04392	0.0452376		0.05	0	0	0.0001236	0.001	1	90%	75	125	0%	
Boron	A	mg/L	0.09776	0.1006928		0.05	0.05841	0	0.0057783	0.0057783	1	85%	75	125	0%	
Cadmium	A	mg/L	0.04941	0.0508923		0.05	0.0000385	0	2.575E-05	0.001	1	102%	75	125	0%	
Calcium	A	mg/L	9.325	9.60475		50	9.723	0	0.0215476	0.0215476	50	0%	75	125	0%	S
Cerium	A	mg/L	0.04966	0.0511498		0.05	0	0	1.236E-05	0.001	0.1	102%	75	125	0%	
Chromium	A	mg/L	0.04958	0.0510674		0.05	0.001809	0	0.0001854	0.001	1	99%	75	125	0%	
Cobalt	A	mg/L	0.04835	0.0498005		0.05	0	0	4.326E-05	0.001	1	100%	75	125	0%	
Copper	A	mg/L	0.05026	0.0517678		0.05	0.0002981	0	0.0002781	0.001	1	103%	75	125	0%	
Iron	A	mg/L	0.05176	0.0533128		5.05	0	0	0.0012257	0.0012257	5	1%	75	125	0%	S
Lanthanum	A	mg/L	0.000001721	0		0.05	0	0	1.133E-05	0.001	0.1	0%	75	125	0%	S
Lead	A	mg/L	0.04796	0.0493988		0.05	0	0	5.768E-05	0.001	1	99%	88	115	0%	
Magnesium	A	mg/L	10.72	11.0416		50	10.95	0	0.0058092	0.0058092	50	0%	75	125	0%	S
Manganese	A	mg/L	0.04956	0.0510468		0.05	0.0004958	0	9.785E-05	0.001	1	101%	75	125	0%	
Mercury	A	mg/L	0.0009467	0.000975101		0.001	0	0	0.0001648	0.001	0.002	98%	75	125	0%	
Molybdenum	A	mg/L	0.04663	0.0480289		0.05	0.0004954	0	0.0000515	0.001	0.1	95%	75	125	0%	
Nickel	A	mg/L	0.05053	0.0520459		0.05	0.001756	0	0.0006489	0.001	1	101%	75	125	0%	
Potassium	A	mg/L	1.908	1.96524		50	1.949	0	0.0838317	0.0838317	50	0%	75	125	0%	S
Selenium	A	mg/L	0.05011	0.0516133		0.05	0	0	0.0003399	0.001	1	103%	75	125	0%	
Silicon	A	mg/L	23.89	24.6067		0.2	24.61	0	0.0125969	0.1	0.4		75	125	0%	AE
Silver	A	mg/L	0.0193	0.019879		0.02	0	0	0.0000206	0.001	0.04	99%	75	125	0%	
Sodium	A	mg/L	35.72	36.7916		50	36.85	0	0.0223613	0.0223613	50	0%	75	125	0%	S
Strontium	A	mg/L	0.1135	0.116905		0.05	0.06572	0	0.0001442	0.001	1	102%	75	125	0%	
Thallium	A	mg/L	0.04809	0.0495327		0.05	9.305E-05	0	4.223E-05	0.001	1	99%	75	125	0%	
Thorium	A	mg/L	0.04669	0.0480907		0.05	0	0	0.0006283	0.001	1	96%	75	125	0%	
Tin	A	mg/L	0.0439	0.045217		0.05	0	0	0.0013596	0.0013596	0.1	90%	75	125	0%	
Titanium	A	mg/L	0.04723	0.0486469		0.05	0.001801	0	9.682E-05	0.001	1	94%	75	125	0%	
Uranium	A	mg/L	0.04749	0.0489147		0.05	0	0	5.356E-05	0.0003	1	98%	75	125	0%	
Vanadium	A	mg/L	0.06656	0.0685568		0.05	0.01726	0	0.001339	0.001339	1	103%	75	125	0%	
Zinc	A	mg/L	0.05509	0.0567427		0.05	0.004587	0	0.0028119	0.0028119	1	104%	75	125	0%	
Iron, Ferrous	C	mg/L	0.05176	0.0533128		0	0	0	0.0012257	0.0012257	5	0%	0	0	0%	

Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist					
14998098	B22011124-001	ICPMS-6020-W- MSD			1/21/2022 8:49:1	1.03	R373694		1E+07	1E+07						
Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
Aluminum	A	mg/L	0.04822	0.0496666		0.05	0.0014	0.046865	0.0008858	0.001	1	97%	75	125	6%	
Antimony	A	mg/L	0.04786	0.0492958		0.05	0	0.0490486	0.0004326	0.001	0.1	99%	75	125	1%	
Arsenic	A	mg/L	0.04817	0.0496151		0.05	0	0.0498108	0.0001957	0.001	1	99%	75	125	0%	
Barium	A	mg/L	0.05237	0.0539411		0.05	0.003061	0.0522107	4.326E-05	0.001	1	102%	75	125	3%	
Beryllium	A	mg/L	0.04867	0.0501301		0.05	0	0.0452376	0.0001236	0.001	1	100%	75	125	10%	
Boron	A	mg/L	0.1074	0.110622		0.05	0.05841	0.1006928	0.0057783	0.0057783	1	104%	75	125	9%	
Cadmium	A	mg/L	0.04987	0.0513661		0.05	0.0000385	0.0508923	2.575E-05	0.001	1	103%	75	125	1%	
Calcium	A	mg/L	9.245	9.52235		50	9.723	9.60475	0.0215476	0.0215476	50	0%	75	125	1%	S
Cerium	A	mg/L	0.05002	0.0515206		0.05	0	0.0511498	1.236E-05	0.001	0.1	103%	75	125	1%	
Chromium	A	mg/L	0.0498	0.051294		0.05	0.001809	0.0510674	0.0001854	0.001	1	99%	75	125	0%	
Cobalt	A	mg/L	0.04895	0.0504185		0.05	0	0.0498005	4.326E-05	0.001	1	101%	75	125	1%	
Copper	A	mg/L	0.04993	0.0514279		0.05	0.0002981	0.0517678	0.0002781	0.001	1	102%	75	125	1%	
Iron	A	mg/L	0.05155	0.0530965		5.05	0	0.0533128	0.0012257	0.0012257	5	1%	75	125	0%	S
Lanthanum	A	mg/L	0.000001304	0		0.05	0	0	1.133E-05	0.001	0.1	0%	75	125		S
Lead	A	mg/L	0.04811	0.0495533		0.05	0	0.0493988	5.768E-05	0.001	1	99%	88	115	0%	
Magnesium	A	mg/L	10.38	10.6914		50	10.95	11.0416	0.0058092	0.0058092	50	-1%	75	125	3%	S
Manganese	A	mg/L	0.04858	0.0500374		0.05	0.0004958	0.0510468	9.785E-05	0.001	1	99%	75	125	2%	
Mercury	A	mg/L	0.0009434	0.000971702		0.001	0	0.0009751	0.0001648	0.001	0.002	97%	75	125		
Molybdenum	A	mg/L	0.04687	0.0482761		0.05	0.0004954	0.0480289	0.0000515	0.001	0.1	96%	75	125	1%	
Nickel	A	mg/L	0.05028	0.0517884		0.05	0.001756	0.0520459	0.0006489	0.001	1	100%	75	125	0%	
Potassium	A	mg/L	1.872	1.92816		50	1.949	1.96524	0.0838317	0.0838317	50	0%	75	125	2%	S
Selenium	A	mg/L	0.04969	0.0511807		0.05	0	0.0516133	0.0003399	0.001	1	102%	75	125	1%	
Silicon	A	mg/L	24.47	25.2041		0.2	24.61	24.6067	0.0125969	0.1	0.4		75	125	2%	AE
Silver	A	mg/L	0.0194	0.019982		0.02	0	0.019879	0.0000206	0.001	0.04	100%	75	125	1%	
Sodium	A	mg/L	35.82	36.8946		50	36.85	36.7916	0.0223613	0.0223613	50	0%	75	125	0%	S
Strontium	A	mg/L	0.1119	0.115257		0.05	0.06572	0.116905	0.0001442	0.001	1	99%	75	125	1%	
Thallium	A	mg/L	0.04867	0.0501301		0.05	9.305E-05	0.0495327	4.223E-05	0.001	1	100%	75	125	1%	
Thorium	A	mg/L	0.04631	0.0476993		0.05	0	0.0480907	0.0006283	0.001	1	95%	75	125	1%	
Tin	A	mg/L	0.04544	0.0468032		0.05	0	0.045217	0.0013596	0.0013596	0.1	94%	75	125	3%	
Titanium	A	mg/L	0.04718	0.0485954		0.05	0.001801	0.0486469	9.682E-05	0.001	1	94%	75	125	0%	
Uranium	A	mg/L	0.04764	0.0490692		0.05	0	0.0489147	5.356E-05	0.0003	1	98%	75	125	0%	
Vanadium	A	mg/L	0.06535	0.0673105		0.05	0.01726	0.0685568	0.001339	0.001339	1	100%	75	125	2%	
Zinc	A	mg/L	0.05399	0.0556097		0.05	0.004587	0.0567427	0.0028119	0.0028119	1	102%	75	125	2%	
Iron, Ferrous	C	mg/L	0.05155	0.0530965		0	0	0.0533128	0.0012257	0.0012257	5	0%	0	0	0%	

Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist					
14998099	Rinse	ICPMS-6020-W-	SAMP		1/21/2022 8:55:3	1	R373694		0	0						
Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
Antimony	A	mg/L	0.0001252	0		0	0	0	0.00042	0.001	0.1	0%	0	0	0%	
Arsenic	A	mg/L	-0.00003828	0		0	0	0	0.00019	0.001	1	0%	0	0	0%	
Barium	A	mg/L	0.000001763	0		0	0	0	0.000042	0.001	1	0%	0	0	0%	
Cadmium	A	mg/L	0.000008458	0		0	0	0	0.000025	0.001	1	0%	0	0	0%	
Cerium	A	mg/L	6.671E-07	0		0	0	0	0.000012	0.001	0.1	0%	0	0	0%	
Chromium	A	mg/L	0.00002542	0		0	0	0	0.00018	0.001	1	0%	0	0	0%	
Cobalt	A	mg/L	0.000003293	0		0	0	0	0.000042	0.001	1	0%	0	0	0%	
Copper	A	mg/L	-0.00001955	0		0	0	0	0.00027	0.001	1	0%	0	0	0%	
Lead	A	mg/L	0.000008772	0		0	0	0	0.000056	0.001	1	0%	0	0	0%	
Manganese	A	mg/L	0.0001423	0.0001423		0	0	0	0.000095	0.001	1	0%	0	0	0%	J
Mercury	A	mg/L	0.00001045	0		0	0	0	0.00016	0.001	0.002	0%	0	0	0%	
Molybdenum	A	mg/L	0.00008399	0.00008399		0	0	0	0.00005	0.001	0.1	0%	0	0	0%	J
Nickel	A	mg/L	0.000001254	0		0	0	0	0.00063	0.001	1	0%	0	0	0%	
Selenium	A	mg/L	0.00001192	0		0	0	0	0.00033	0.001	1	0%	0	0	0%	
Silver	A	mg/L	4.236E-07	0		0	0	0	0.00002	0.001	0.04	0%	0	0	0%	
Strontium	A	mg/L	-4.289E-06	0		0	0	0	0.00014	0.001	1	0%	0	0	0%	
Thallium	A	mg/L	0.0000921	0.0000921		0	0	0	0.000041	0.001	1	0%	0	0	0%	J
Thorium	A	mg/L	0.00006281	0		0	0	0	0.00061	0.001	1	0%	0	0	0%	
Titanium	A	mg/L	0.00001551	0		0	0	0	0.000094	0.001	1	0%	0	0	0%	
Uranium	A	mg/L	0.000005677	0		0	0	0	0.000052	0.0003	1	0%	0	0	0%	
Calcium	B	mg/L	-0.0008198	0		0	0	0	0.02092	0.02092	50	0%	0	0	0%	L
Iron	B	mg/L	0.0001346	0		0	0	0	0.00119	0.00119	5	0%	0	0	0%	
Iron, Ferrous	B	mg/L	0.0001346	0		0	0	0	0.00119	0.00119	5	0%	0	0	0%	
Magnesium	B	mg/L	0.0002666	0		0	0	0	0.00564	0.00564	50	0%	0	0	0%	L
Tin	B	mg/L	0.0003834	0		0	0	0	0.00132	0.00132	0.1	0%	0	0	0%	
Zinc	B	mg/L	0.00000872	0		0	0	0	0.00273	0.00273	1	0%	0	0	0%	L

Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist					
14998100	B22011124-001	ICPMS-6020-W-	SAMP		1/21/2022 9:01:4	1	163063	1/19/2022 2:	0	0						
Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
Antimony	A	mg/L	0.00007826	0		0	0	0	0.0002799	0.001	0.1	0%	0	0	0%	U
Arsenic	A	mg/L	0.0001823	0		0	0	0	0.0003412	0.001	1	0%	0	0	0%	U
Barium	A	mg/L	0.00359	0.00359		0	0	0	0.0002682	0.001	1	0%	0	0	0%	
Cadmium	A	mg/L	-1.146E-06	0		0	0	0	1.821E-05	0.005	1	0%	0	0	0%	U

Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist					
14998100	B22011124-001	ICPMS-6020-W-	SAMP		1/21/2022 9:01:4	1	163063	1/19/2022 2:	0	0						
Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
Cerium	A	mg/L	0.000004107	0		0	0	0	2.738E-05	0.001	0.1	0%	0	0	0%	U
Cobalt	A	mg/L	0.0001341	0.0001341		0	0	0	9.541E-05	0.001	1	0%	0	0	0%	J
Lanthanum	A	mg/L	8.622E-07	0		0	0	0	0.000055	0.001	0.1	0%	0	0	0%	U
Lead	A	mg/L	0.00007028	0		0	0	0	7.716E-05	0.001	1	0%	0	0	0%	U
Manganese	A	mg/L	0.001292	0.001292		0	0	0	0.0005399	0.001	1	0%	0	0	0%	
Molybdenum	A	mg/L	0.001922	0.001922		0	0	0	0.0001763	0.001	0.1	0%	0	0	0%	
Selenium	A	mg/L	0.0002152	0.0002152		0	0	0	0.0001357	0.001	1	0%	0	0	0%	J
Silver	A	mg/L	-0.00006126	0		0	0	0	4.281E-05	0.001	0.04	0%	0	0	0%	U
Strontium	A	mg/L	0.06807	0.06807		0	0	0	0.0002433	0.001	1	0%	0	0	0%	
Thallium	A	mg/L	0.00006973	0		0	0	0	0.0001114	0.001	1	0%	0	0	0%	U
Titanium	A	mg/L	0.001994	0.001994		0	0	0	0.0005733	0.001	1	0%	0	0	0%	
Uranium	A	mg/L	0.00001403	0		0	0	0	1.699E-05	0.0003	1	0%	0	0	0%	U
Calcium	B	mg/L	9.449	9.449		0	0	0	0.0372936	0.1103481	50	0%	0	0	0%	D
Chromium	B	mg/L	0.00223	0.00223		0	0	0	0.0015375	0.0015375	1	0%	0	0	0%	UD
Copper	B	mg/L	0.0003667	0		0	0	0	0.0008747	0.00198	1	0%	0	0	0%	UL
Iron	B	mg/L	0.01605	0.01605		0	0	0	0.007424	0.00513	5	0%	0	0	0%	UD
Magnesium	B	mg/L	10.49	10.49		0	0	0	0.0104254	0.0081522	50	0%	0	0	0%	D
Nickel	B	mg/L	0.001935	0.001935		0	0	0	0.0002288	0.0024200	1	0%	0	0	0%	JL
Sodium	B	mg/L	37.99	37.99		0	0	0	0.1019461	0.7330269	50	0%	0	0	0%	D
Thorium	B	mg/L	0.00009462	0		0	0	0	0.0003796	0.00415	1	0%	0	0	0%	UL
Tin	B	mg/L	0.0008274	0		0	0	0	0.0018932	0.0011175	0.1	0%	0	0	0%	U
Vanadium	B	mg/L	0.02148	0.02148		0	0	0	0.0039127	0.0021085	1	0%	0	0	0%	D
Zinc	B	mg/L	0.005856	0.005856		0	0	0	0.0011617	0.0065544	1	0%	0	0	0%	JL

Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist					
14998101	B22011124-001	ICPMS-6020-W-	SD		1/21/2022 9:08:0	5	163063	1/19/2022 2:	0	1E+07						
Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
Aluminum	A	mg/L	0.001378	0		0	0	0.005018	0.0193736	0.0159875	1	0%	0	0		
Antimony	A	mg/L	0.00001286	0		0	0	0	0.0013997	0.0049	0.1	0%	0	0		
Arsenic	A	mg/L	-0.00001687	0		0	0	0	0.0017061	0.0013383	1	0%	0	0		
Barium	A	mg/L	0.0006541	0.0032705		0	0	0.00359	0.0013411	0.0012039	1	0%	0	0		N
Beryllium	A	mg/L	-0.0000423	0		0	0	0	0.0005353	0.01	1	0%	0	0		
Boron	A	mg/L	0.01059	0		0	0	0.05482	0.1019008	0.07335	1	0%	0	0		
Cadmium	A	mg/L	0.000001671	0		0	0	0	9.105E-05	0.005	1	0%	0	0		

Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist					
14998101	B22011124-001	ICPMS-6020-W-	SD		1/21/2022 9:08:0	5	163063	1/19/2022 2:	0	1E+07						
Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
Calcium	A	mg/L	1.826	9.13		0	0	9.449	0.1864681	0.5517403	50	0%	0	0	3%	
Cerium	A	mg/L	8.874E-07	0		0	0	0	0.0001369	0.001	0.1	0%	0	0		
Chromium	A	mg/L	0.0004859	0		0	0	0.00223	0.0076875	0.0076875	1	0%	0	0		
Cobalt	A	mg/L	0.00002453	0		0	0	0.0001341	0.0004771	0.001	1	0%	0	0		
Copper	A	mg/L	0.0003059	0		0	0	0	0.0043735	0.0099	1	0%	0	0		
Iron	A	mg/L	0.003216	0		0	0	0.01605	0.0371198	0.02565	5	0%	0	0		
Lanthanum	A	mg/L	1.328E-07	0		0	0	0	0.000275	0.001	0.1	0%	0	0		
Lead	A	mg/L	0.00003256	0		0	0	0	0.0003858	0.001	1	0%	0	0		
Magnesium	A	mg/L	2.082	10.41		0	0	10.49	0.0521269	0.0407608	50	0%	0	0	1%	
Manganese	A	mg/L	0.0002714	0		0	0	0.001292	0.0026994	0.0010695	1	0%	0	0		
Molybdenum	A	mg/L	0.0003526	0.001763		0	0	0.001922	0.0008814	0.001	0.1	0%	0	0		N
Nickel	A	mg/L	0.000445	0.002225		0	0	0.001935	0.0011441	0.0121000	1	0%	0	0		N
Potassium	A	mg/L	0.3199	1.5995		0	0	1.709	0.3828097	0.1306027	50	0%	0	0		N
Selenium	A	mg/L	0.00003401	0		0	0	0.0002152	0.0006787	0.0029274	1	0%	0	0		
Silicon	A	mg/L	4.731	23.655		0	0	23.63	0.2110446	0.026606	0.4	0%	0	0	0%	
Silver	A	mg/L	-0.00006531	0		0	0	0	0.0002141	0.001	0.04	0%	0	0		
Sodium	A	mg/L	7.331	36.655		0	0	37.99	0.5097304	3.6651346	50	0%	0	0	4%	
Strontium	A	mg/L	0.0135	0.0675		0	0	0.06807	0.0012164	0.001	1	0%	0	0	1%	
Thallium	A	mg/L	0.00001115	0		0	0	0	0.0005569	0.001	1	0%	0	0		
Thorium	A	mg/L	0.000007756	0		0	0	0	0.0018981	0.02075	1	0%	0	0		
Tin	A	mg/L	0.0001427	0		0	0	0	0.0094659	0.0055874	0.1	0%	0	0		
Titanium	A	mg/L	0.000412	0		0	0	0.001994	0.0028666	0.001	1	0%	0	0		
Uranium	A	mg/L	0.000002203	0		0	0	0	8.495E-05	0.0004224	1	0%	0	0		
Vanadium	A	mg/L	0.004067	0.020335		0	0	0.02148	0.0195637	0.0105423	1	0%	0	0		N
Zinc	A	mg/L	0.001694	0.00847		0	0	0.005856	0.0058087	0.0327721	1	0%	0	0		N
Silica	C	mg/L	10.1205552	50.602776		0	0	0	0.4514666	0.0569155	5	0%	0	0		N
Silicon as SiO2	C	mg/L	10.1205552	50.602776		0	0	0	0.4514666	0.0569155	5	0%	0	0		N

Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist					
14998102	CCV	ICPMS-6020-W-	CCV		1/21/2022 9:14:1	1	R373694		0	0						
Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
Aluminum	A	mg/L	0.05165	0.05165		0.05	0	0	0.00086	0.001	1	103%	90	110	0%	
Antimony	A	mg/L	0.05463	0.05463		0.05	0	0	0.00042	0.001	0.1	109%	90	110	0%	
Arsenic	A	mg/L	0.05063	0.05063		0.05	0	0	0.00019	0.001	1	101%	90	110	0%	

Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist					
14998102	CCV	ICPMS-6020-W-	CCV		1/21/2022 9:14:1	1	R373694		0	0						
Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
Barium	A	mg/L	0.05192	0.05192		0.05	0	0	0.000042	0.001	1	104%	90	110	0%	
Beryllium	A	mg/L	0.03782	0.03782		0.05	0	0	0.00012	0.001	1	76%	90	110	0%	S
Boron	A	mg/L	0.03888	0.03888		0.05	0	0	0.00561	0.00561	1	78%	90	110	0%	S
Cadmium	A	mg/L	0.05214	0.05214		0.05	0	0	0.000025	0.001	1	104%	90	110	0%	
Calcium	A	mg/L	11.63	11.63		12.5	0	0	0.02092	0.02092	50	93%	90	110	0%	
Cerium	A	mg/L	0.05311	0.05311		0.05	0	0	0.000012	0.001	0.1	106%	90	110	0%	
Chromium	A	mg/L	0.04825	0.04825		0.05	0	0	0.00018	0.001	1	96%	90	110	0%	
Cobalt	A	mg/L	0.04819	0.04819		0.05	0	0	0.000042	0.001	1	96%	90	110	0%	
Copper	A	mg/L	0.05255	0.05255		0.05	0	0	0.00027	0.001	1	105%	90	110	0%	
Iron	A	mg/L	1.298	1.298		1.3	0	0	0.00119	0.00119	5	100%	90	110	0%	
Lanthanum	A	mg/L	0.05238	0.05238		0.05	0	0	0.000011	0.001	0.1	105%	90	110	0%	
Lead	A	mg/L	0.05076	0.05076		0.05	0	0	0.000056	0.001	1	102%	90	110	0%	
Magnesium	A	mg/L	11.36	11.36		12.5	0	0	0.00564	0.00564	50	91%	90	110	0%	
Manganese	A	mg/L	0.04942	0.04942		0.05	0	0	0.000095	0.001	1	99%	90	110	0%	
Mercury	A	mg/L	0.001018	0.001018		0.001	0	0	0.00016	0.001	0.002	102%	90	110	0%	
Molybdenum	A	mg/L	0.05113	0.05113		0.05	0	0	0.00005	0.001	0.1	102%	90	110	0%	
Nickel	A	mg/L	0.05081	0.05081		0.05	0	0	0.00063	0.001	1	102%	90	110	0%	
Potassium	A	mg/L	11.05	11.05		12.5	0	0	0.08139	0.08139	50	88%	90	110	0%	S
Selenium	A	mg/L	0.05108	0.05108		0.05	0	0	0.00033	0.001	1	102%	90	110	0%	
Silicon	A	mg/L	0.2145	0.2145		0.2	0	0	0.01223	0.1	0.4	107%	90	110	0%	
Silver	A	mg/L	0.02028	0.02028		0.02	0	0	0.00002	0.001	0.04	101%	90	110	0%	
Sodium	A	mg/L	11.83	11.83		12.5	0	0	0.02171	0.02171	50	95%	90	110	0%	
Strontium	A	mg/L	0.05248	0.05248		0.05	0	0	0.00014	0.001	1	105%	90	110	0%	
Thallium	A	mg/L	0.05081	0.05081		0.05	0	0	0.000041	0.001	1	102%	90	110	0%	
Thorium	A	mg/L	0.05043	0.05043		0.05	0	0	0.00061	0.001	1	101%	90	110	0%	
Tin	A	mg/L	0.05351	0.05351		0.05	0	0	0.00132	0.00132	0.1	107%	90	110	0%	
Titanium	A	mg/L	0.04587	0.04587		0.05	0	0	0.000094	0.001	1	92%	90	110	0%	
Uranium	A	mg/L	0.05176	0.05176		0.05	0	0	0.000052	0.0003	1	104%	90	110	0%	
Vanadium	A	mg/L	0.04844	0.04844		0.05	0	0	0.0013	0.0013	1	97%	90	110	0%	
Zinc	A	mg/L	0.05247	0.05247		0.05	0	0	0.00273	0.00273	1	105%	90	110	0%	
Iron, Ferrous	C	mg/L	1.298	1.298		0	0	0	0.00119	0.00119	5	0%	0	0	0%	

Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist					
14998103	CCB	ICPMS-6020-W-	CCB		1/21/2022 9:20:2	1	R373694		0	0						
Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
Aluminum	A	mg/L	-0.00007167	-0.00007167		0	0	0	0.00086	0.001	1	0%				0%
Antimony	A	mg/L	0.00008578	0.00008578		0	0	0	0.00042	0.001	0.1	0%				0%
Arsenic	A	mg/L	-0.00002921	-0.00002921		0	0	0	0.00019	0.001	1	0%				0%
Barium	A	mg/L	7.547E-07	7.547E-07		0	0	0	0.000042	0.001	1	0%				0%
Beryllium	A	mg/L	-0.00003933	-0.00003933		0	0	0	0.00012	0.001	1	0%				0%
Boron	A	mg/L	-0.00004055	-0.00004055		0	0	0	0.00561	0.00561	1	0%				0%
Cadmium	A	mg/L	0.000002051	0.000002051		0	0	0	0.000025	0.001	1	0%				0%
Calcium	A	mg/L	-0.001107	-0.001107		0	0	0	0.02092	0.02092	50	0%				0%
Cerium	A	mg/L	2.799E-07	2.799E-07		0	0	0	0.000012	0.001	0.1	0%	0	0		0%
Chromium	A	mg/L	0.00002558	0.00002558		0	0	0	0.00018	0.001	1	0%				0%
Cobalt	A	mg/L	-1.549E-06	-1.549E-06		0	0	0	0.000042	0.001	1	0%				0%
Copper	A	mg/L	-6.049E-06	-6.049E-06		0	0	0	0.00027	0.001	1	0%				0%
Iron	A	mg/L	0.0001025	0.0001025		0	0	0	0.00119	0.00119	5	0%				0%
Lanthanum	A	mg/L	-2.237E-07	-2.237E-07		0	0	0	0.000011	0.001	0.1	0%	0	0		0%
Lead	A	mg/L	0.000004574	0.000004574		0	0	0	0.000056	0.001	1	0%				0%
Magnesium	A	mg/L	0.0009753	0.0009753		0	0	0	0.00564	0.00564	50	0%				0%
Manganese	A	mg/L	0.000004863	0.000004863		0	0	0	0.000095	0.001	1	0%				0%
Mercury	A	mg/L	0.000006137	0.000006137		0	0	0	0.00016	0.001	0.002	0%				0%
Molybdenum	A	mg/L	0.00002357	0.00002357		0	0	0	0.00005	0.001	0.1	0%				0%
Nickel	A	mg/L	-9.516E-06	-9.516E-06		0	0	0	0.00063	0.001	1	0%				0%
Potassium	A	mg/L	-0.0251	-0.0251		0	0	0	0.08139	0.08139	50	0%				0%
Selenium	A	mg/L	0.000001435	0.000001435		0	0	0	0.00033	0.001	1	0%				0%
Silicon	A	mg/L	0.001196	0.001196		0	0	0	0.01223	0.1	0.4	0%	0	0		0%
Silver	A	mg/L	-1.021E-06	-1.021E-06		0	0	0	0.00002	0.001	0.04	0%				0%
Sodium	A	mg/L	0.02685	0.02685		0	0	0	0.02171	0.02171	50	0%				0%
Strontium	A	mg/L	-7.619E-06	-7.619E-06		0	0	0	0.00014	0.001	1	0%	0	0		0%
Thallium	A	mg/L	0.0001347	0.0001347		0	0	0	0.000041	0.001	1	0%	0	0		0%
Thorium	A	mg/L	0.00001441	0.00001441		0	0	0	0.00061	0.001	1	0%	0	0		0%
Tin	A	mg/L	0.00003594	0.00003594		0	0	0	0.00132	0.00132	0.1	0%	0	0		0%
Titanium	A	mg/L	0.00001715	0.00001715		0	0	0	0.000094	0.001	1	0%	0	0		0%
Uranium	A	mg/L	0.000002519	0.000002519		0	0	0	0.000052	0.0003	1	0%	0	0		0%
Vanadium	A	mg/L	0.0008204	0.0008204		0	0	0	0.0013	0.0013	1	0%	0	0		0%
Zinc	A	mg/L	0.00007603	0.00007603		0	0	0	0.00273	0.00273	1	0%	0	0		0%
Iron, Ferrous	C	mg/L	0.0001025	0.0001025		0	0	0	0.00119	0.00119	5	0%	0	0		0%

Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist					
14998104	B22011124-001	ICPMS-6020-W-	PDS1		1/21/2022 9:26:4	1.03	163063	1/19/2022 2:	1E+07	0						
Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
Aluminum	A	mg/L	0.0461	0.047483		0.0515	0.005018	0	0.003991	0.0032934	1	82%	75	125	0%	
Antimony	A	mg/L	0.0504	0.051912		0.0515	0	0	0.0002883	0.0010094	0.1	101%	75	125	0%	
Arsenic	A	mg/L	0.04813	0.0495739		0.0515	0	0	0.0003514	0.001	1	96%	75	125	0%	
Barium	A	mg/L	0.05281	0.0543943		0.0515	0.00359	0	0.0002763	0.001	1	99%	75	125	0%	
Beryllium	A	mg/L	0.03634	0.0374302		0.0515	0	0	0.0001103	0.01	1	73%	75	125	0%	S
Boron	A	mg/L	0.09189	0.0946467		0.0515	0.05482	0	0.0209916	0.0151101	1	77%	75	125	0%	
Cadmium	A	mg/L	0.05002	0.0515206		0.0515	0	0	1.876E-05	0.005	1	100%	75	125	0%	
Calcium	A	mg/L	8.557	8.81371		51.5	9.449	0	0.0384124	0.1136585	50	-1%	75	125	0%	S
Cerium	A	mg/L	0.05275	0.0543325		0.0515	0	0	2.820E-05	0.001	0.1	105%	75	125	0%	
Chromium	A	mg/L	0.04727	0.0486881		0.0515	0.00223	0	0.0015836	0.0015836	1	90%	75	125	0%	
Cobalt	A	mg/L	0.0469	0.048307		0.0515	0.0001341	0	9.827E-05	0.001	1	94%	75	125	0%	
Copper	A	mg/L	0.04952	0.0510056		0.0515	0	0	0.0009009	0.0020394	1	99%	75	125	0%	
Iron	A	mg/L	0.06438	0.0663114		5.15	0.01605	0	0.0076467	0.0052839	5	1%	75	125	0%	S
Lanthanum	A	mg/L	0.000003055	0		0.0515	0	0	5.665E-05	0.001	0.1	0%	75	125	0%	S
Lead	A	mg/L	0.05043	0.0519429		0.0515	0	0	7.947E-05	0.001	1	101%	80	120	0%	
Magnesium	A	mg/L	10.05	10.3515		51.5	10.49	0	0.0107381	0.0083967	50	0%	75	125	0%	S
Manganese	A	mg/L	0.04775	0.0491825		0.0515	0.001292	0	0.0005561	0.001	1	93%	75	125	0%	
Molybdenum	A	mg/L	0.04863	0.0500889		0.0515	0.001922	0	0.0001816	0.001	0.1	94%	75	125	0%	
Nickel	A	mg/L	0.04905	0.0505215		0.0515	0.001935	0	0.0002357	0.0024926	1	94%	75	125	0%	
Potassium	A	mg/L	1.615	1.66345		51.5	1.709	0	0.0788588	0.0269042	50	0%	75	125	0%	S
Selenium	A	mg/L	0.04984	0.0513352		0.0515	0.0002152	0	0.0001398	0.001	1	99%	75	125	0%	
Silicon	A	mg/L	23.05	23.7415		0.206	23.63	0	0.0434752	0.0054808	0.4		0	0	0%	A
Silver	A	mg/L	0.01932	0.0198996		0.0206	0	0	4.409E-05	0.001	0.04	97%	75	125	0%	
Sodium	A	mg/L	34.8	35.844		51.5	37.99	0	0.1050045	0.7550177	50	-4%	75	125	0%	S
Strontium	A	mg/L	0.1157	0.119171		0.0515	0.06807	0	0.0002506	0.001	1	99%	75	125	0%	
Thallium	A	mg/L	0.04944	0.0509232		0.0515	0	0	0.0001147	0.001	1	99%	75	125	0%	
Thorium	A	mg/L	0.04992	0.0514176		0.0515	0	0	0.000391	0.0042745	1	100%	75	125	0%	
Tin	A	mg/L	0.05225	0.0538175		0.0515	0	0	0.00195	0.001151	0.1	104%	75	125	0%	
Titanium	A	mg/L	0.04203	0.0432909		0.0515	0.001994	0	0.0005905	0.001	1	80%	75	125	0%	
Uranium	A	mg/L	0.05193	0.0534879		0.0515	0	0	1.75E-05	0.0003	1	104%	75	125	0%	
Vanadium	A	mg/L	0.0667	0.068701		0.0515	0.02148	0	0.0040301	0.0021717	1	92%	75	125	0%	
Zinc	A	mg/L	0.05425	0.0558775		0.0515	0.005856	0	0.0011966	0.0067511	1	97%	75	125	0%	
Silica	C	mg/L	49.30856	50.7878168		0	0	0	0.0930021	0.0117246	5	0%	0	0	0%	
Silicon as SiO2	C	mg/L	49.30856	50.7878168		0.0515	0	0	0.0930021	0.0117246	5	98617%	75	125	0%	S

Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist					
14998105	B22011124-001	ICPMS-6020-W- MS4			1/21/2022 9:32:5	1	163063	1/19/2022 2:	1E+07	0						
Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
Aluminum	A	mg/L	0.4014	0.4014		0.5	0.005018	0	0.0038747	0.0031975	1	79%	75	125	0%	
Antimony	A	mg/L	0.1045	0.1045		0.1	0	0	0.0002799	0.001	0.1	104%	75	125	0%	
Arsenic	A	mg/L	0.099	0.099		0.1	0	0	0.0003412	0.001	1	99%	75	125	0%	
Barium	A	mg/L	0.1004	0.1004		0.1	0.00359	0	0.0002682	0.001	1	97%	75	125	0%	
Beryllium	A	mg/L	0.0363	0.0363		0.05	0	0	0.0001071	0.01	1	73%	75	125	0%	S
Boron	A	mg/L	0.1268	0.1268		0.1	0.05482	0	0.0203802	0.01467	1	72%	75	125	0%	S
Cadmium	A	mg/L	0.05	0.05		0.05	0	0	1.821E-05	0.005	1	100%	75	125	0%	
Calcium	A	mg/L	13.71	13.71		5	9.449	0	0.0372936	0.1103481	50	85%	75	125	0%	
Cerium	A	mg/L	0.1072	0.1072		0.1	0	0	2.738E-05	0.001	0.1	107%	75	125	0%	
Chromium	A	mg/L	0.09595	0.09595		0.1	0.00223	0	0.0015375	0.0015375	1	94%	75	125	0%	
Cobalt	A	mg/L	0.09239	0.09239		0.1	0.0001341	0	9.541E-05	0.001	1	92%	75	125	0%	
Copper	A	mg/L	0.1007	0.1007		0.1	0	0	0.0008747	0.00198	1	101%	75	125	0%	
Iron	A	mg/L	0.5215	0.5215		0.5	0.01605	0	0.007424	0.00513	5	101%	75	125	0%	
Lanthanum	A	mg/L	0.1061	0.1061		0.1	0	0	0.000055	0.001	0.1	106%	75	125	0%	
Lead	A	mg/L	0.1033	0.1033		0.1	0	0	7.716E-05	0.001	1	103%	88	115	0%	
Magnesium	A	mg/L	14.69	14.69		5	10.49	0	0.0104254	0.0081522	50	84%	75	125	0%	
Manganese	A	mg/L	0.4802	0.4802		0.5	0.001292	0	0.0005399	0.001	1	96%	75	125	0%	
Molybdenum	A	mg/L	0.09676	0.09676		0.1	0.001922	0	0.0001763	0.001	0.1	95%	75	125	0%	
Nickel	A	mg/L	0.1003	0.1003		0.1	0.001935	0	0.0002288	0.0024200	1	98%	75	125	0%	
Potassium	A	mg/L	5.989	5.989		5	1.709	0	0.0765619	0.0261205	50	86%	75	125	0%	
Selenium	A	mg/L	0.1031	0.1031		0.1	0.0002152	0	0.0001357	0.001	1	103%	75	125	0%	
Silicon	A	mg/L	23.17	23.17		1	23.63	0	0.0422089	0.0053212	0.4		75	125	0%	A
Silver	A	mg/L	0.009614	0.009614		0.01	0	0	4.281E-05	0.001	0.04	96%	75	125	0%	
Sodium	A	mg/L	38.95	38.95		5	37.99	0	0.1019461	0.7330269	50		75	125	0%	A
Strontium	A	mg/L	0.1705	0.1705		0.1	0.06807	0	0.0002433	0.001	1	102%	75	125	0%	
Thallium	A	mg/L	0.1001	0.1001		0.1	0	0	0.0001114	0.001	1	100%	75	125	0%	
Thorium	A	mg/L	0.1025	0.1025		0.1	0	0	0.0003796	0.00415	1	102%	75	125	0%	
Tin	A	mg/L	0.1044	0.1044		0.1	0	0	0.0018932	0.0011175	0.1	104%	75	125	0%	
Titanium	A	mg/L	0.08462	0.08462		0.1	0.001994	0	0.0005733	0.001	1	83%	75	125	0%	
Uranium	A	mg/L	0.107	0.107		0.1	0	0	1.699E-05	0.0003	1	107%	75	125	0%	
Vanadium	A	mg/L	0.112	0.112		0.1	0.02148	0	0.0039127	0.0021085	1	91%	75	125	0%	
Zinc	A	mg/L	0.1044	0.1044		0.1	0.005856	0	0.0011617	0.0065544	1	99%	75	125	0%	
Silica	C	mg/L	49.565264	49.565264		0	0	0	0.0902933	0.0113831	5	0%	0	0	0%	
Silicon as SiO2	C	mg/L	49.565264	49.565264		2.14	0	0	0.0902933	0.0113831	5	2316%	75	125	0%	S

Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist					
14998106	B22011124-001	ICPMS-6020-W-MSD4			1/21/2022 9:39:1	1	163063	1/19/2022 2:	1E+07	1E+07						
Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
Aluminum	A	mg/L	0.4083	0.4083		0.5	0.005018	0.4014	0.0038747	0.0031975	1	81%	75	125	2%	
Antimony	A	mg/L	0.1028	0.1028		0.1	0	0.1045	0.0002799	0.001	0.1	103%	75	125	2%	
Arsenic	A	mg/L	0.09892	0.09892		0.1	0	0.099	0.0003412	0.001	1	99%	75	125	0%	
Barium	A	mg/L	0.09639	0.09639		0.1	0.00359	0.1004	0.0002682	0.001	1	93%	75	125	4%	
Beryllium	A	mg/L	0.03834	0.03834		0.05	0	0.0363	0.0001071	0.01	1	77%	75	125	5%	
Boron	A	mg/L	0.1362	0.1362		0.1	0.05482	0.1268	0.0203802	0.01467	1	81%	75	125	7%	
Cadmium	A	mg/L	0.05163	0.05163		0.05	0	0.05	1.821E-05	0.005	1	103%	75	125	3%	
Calcium	A	mg/L	13.56	13.56		5	9.449	13.71	0.0372936	0.1103481	50	82%	75	125	1%	
Cerium	A	mg/L	0.1109	0.1109		0.1	0	0.1072	2.738E-05	0.001	0.1	111%	75	125	3%	
Chromium	A	mg/L	0.09618	0.09618		0.1	0.00223	0.09595	0.0015375	0.0015375	1	94%	75	125	0%	
Cobalt	A	mg/L	0.09313	0.09313		0.1	0.0001341	0.09239	9.541E-05	0.001	1	93%	75	125	1%	
Copper	A	mg/L	0.1008	0.1008		0.1	0	0.1007	0.0008747	0.00198	1	101%	75	125	0%	
Iron	A	mg/L	0.5306	0.5306		0.5	0.01605	0.5215	0.007424	0.00513	5	103%	75	125	2%	
Lanthanum	A	mg/L	0.1087	0.1087		0.1	0	0.1061	0.000055	0.001	0.1	109%	75	125	2%	
Lead	A	mg/L	0.103	0.103		0.1	0	0.1033	7.716E-05	0.001	1	103%	88	115	0%	
Magnesium	A	mg/L	14.9	14.9		5	10.49	14.69	0.0104254	0.0081522	50	88%	75	125	1%	
Manganese	A	mg/L	0.4771	0.4771		0.5	0.001292	0.4802	0.0005399	0.001	1	95%	75	125	1%	
Molybdenum	A	mg/L	0.0936	0.0936		0.1	0.001922	0.09676	0.0001763	0.001	0.1	92%	75	125	3%	
Nickel	A	mg/L	0.09979	0.09979		0.1	0.001935	0.1003	0.0002288	0.0024200	1	98%	75	125	1%	
Potassium	A	mg/L	5.914	5.914		5	1.709	5.989	0.0765619	0.0261205	50	84%	75	125	1%	
Selenium	A	mg/L	0.1036	0.1036		0.1	0.0002152	0.1031	0.0001357	0.001	1	103%	75	125	0%	
Silicon	A	mg/L	24.25	24.25		1	23.63	23.17	0.0422089	0.0053212	0.4		75	125	5%	A
Silver	A	mg/L	0.009406	0.009406		0.01	0	0.009614	4.281E-05	0.001	0.04	94%	75	125	2%	
Sodium	A	mg/L	40.37	40.37		5	37.99	38.95	0.1019461	0.7330269	50		75	125	4%	A
Strontium	A	mg/L	0.1688	0.1688		0.1	0.06807	0.1705	0.0002433	0.001	1	101%	75	125	1%	
Thallium	A	mg/L	0.1009	0.1009		0.1	0	0.1001	0.0001114	0.001	1	101%	75	125	1%	
Thorium	A	mg/L	0.1025	0.1025		0.1	0	0.1025	0.0003796	0.00415	1	102%	75	125	0%	
Tin	A	mg/L	0.1005	0.1005		0.1	0	0.1044	0.0018932	0.0011175	0.1	100%	75	125	4%	
Titanium	A	mg/L	0.08518	0.08518		0.1	0.001994	0.08462	0.0005733	0.001	1	83%	75	125	1%	
Uranium	A	mg/L	0.1077	0.1077		0.1	0	0.107	1.699E-05	0.0003	1	108%	75	125	1%	
Vanadium	A	mg/L	0.1138	0.1138		0.1	0.02148	0.112	0.0039127	0.0021085	1	92%	75	125	2%	
Zinc	A	mg/L	0.1046	0.1046		0.1	0.005856	0.1044	0.0011617	0.0065544	1	99%	75	125	0%	
Silica	C	mg/L	51.8756	51.8756		0	0	49.565264	0.0902933	0.0113831	5	0%	0	0	5%	
Silicon as SiO2	C	mg/L	51.8756	51.8756		2.14	0	49.565264	0.0902933	0.0113831	5	2424%	75	125	5%	S

Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist					
14998107	Rinse	ICPMS-6020-W-	SAMP		1/21/2022 9:45:2	1	R373694		0	0						
Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
Aluminum	A	mg/L	-0.00006942	0		0	0	0	0.00086	0.001	1	0%	0	0	0%	
Antimony	A	mg/L	0.0001285	0		0	0	0	0.00042	0.001	0.1	0%	0	0	0%	
Arsenic	A	mg/L	-0.00001208	0		0	0	0	0.00019	0.001	1	0%	0	0	0%	
Barium	A	mg/L	0.000001666	0		0	0	0	0.000042	0.001	1	0%	0	0	0%	
Cadmium	A	mg/L	0.00001081	0		0	0	0	0.000025	0.001	1	0%	0	0	0%	
Cerium	A	mg/L	2.057E-07	0		0	0	0	0.000012	0.001	0.1	0%	0	0	0%	
Chromium	A	mg/L	0.00003542	0		0	0	0	0.00018	0.001	1	0%	0	0	0%	
Cobalt	A	mg/L	0.00000908	0		0	0	0	0.000042	0.001	1	0%	0	0	0%	
Copper	A	mg/L	0.00001031	0		0	0	0	0.00027	0.001	1	0%	0	0	0%	
Lead	A	mg/L	0.00002159	0		0	0	0	0.000056	0.001	1	0%	0	0	0%	
Manganese	A	mg/L	0.0001513	0.0001513		0	0	0	0.000095	0.001	1	0%	0	0	0%	J
Mercury	A	mg/L	0.000005269	0		0	0	0	0.00016	0.001	0.002	0%	0	0	0%	
Molybdenum	A	mg/L	0.00001757	0		0	0	0	0.00005	0.001	0.1	0%	0	0	0%	
Nickel	A	mg/L	0.00001016	0		0	0	0	0.00063	0.001	1	0%	0	0	0%	
Selenium	A	mg/L	-3.671E-07	0		0	0	0	0.00033	0.001	1	0%	0	0	0%	
Silver	A	mg/L	-0.000002	0		0	0	0	0.00002	0.001	0.04	0%	0	0	0%	
Strontium	A	mg/L	-7.061E-06	0		0	0	0	0.00014	0.001	1	0%	0	0	0%	
Thallium	A	mg/L	0.0002405	0.0002405		0	0	0	0.000041	0.001	1	0%	0	0	0%	J
Thorium	A	mg/L	0.00002148	0		0	0	0	0.00061	0.001	1	0%	0	0	0%	
Titanium	A	mg/L	0.000008772	0		0	0	0	0.000094	0.001	1	0%	0	0	0%	
Uranium	A	mg/L	0.000002617	0		0	0	0	0.000052	0.0003	1	0%	0	0	0%	
Calcium	B	mg/L	-0.001546	0		0	0	0	0.02092	0.02092	50	0%	0	0	0%	L
Iron	B	mg/L	0.0001585	0		0	0	0	0.00119	0.00119	5	0%	0	0	0%	
Iron, Ferrous	B	mg/L	0.0001585	0		0	0	0	0.00119	0.00119	5	0%	0	0	0%	
Magnesium	B	mg/L	0.00107	0		0	0	0	0.00564	0.00564	50	0%	0	0	0%	L
Tin	B	mg/L	0.00003449	0		0	0	0	0.00132	0.00132	0.1	0%	0	0	0%	
Vanadium	B	mg/L	0.0004567	0		0	0	0	0.0013	0.0013	1	0%	0	0	0%	
Zinc	B	mg/L	0.0000938	0		0	0	0	0.00273	0.00273	1	0%	0	0	0%	L

Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist					
14998108	B22011125-001	ICPMS-6020-W-	SAMP		1/21/2022 9:51:3	1	R373694		0	0						
Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q

Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist					
14998108	B22011125-001	ICPMS-6020-W-	SAMP		1/21/2022 9:51:3	1	R373694		0	0						
Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
Aluminum	A	mg/L	0.004066	0.004066		0	0	0	0.00086	0.001	1	0%	0	0	0%	
Antimony	A	mg/L	0.0002138	0		0	0	0	0.00042	0.001	0.1	0%	0	0	0%	
Arsenic	A	mg/L	-0.0001032	0		0	0	0	0.00019	0.001	1	0%	0	0	0%	
Barium	A	mg/L	0.003792	0.003792		0	0	0	0.000042	0.001	1	0%	0	0	0%	
Cadmium	A	mg/L	0.00003714	0.00003714		0	0	0	0.000025	0.001	1	0%	0	0	0%	J
Cerium	A	mg/L	0.00001353	0.00001353		0	0	0	0.000012	0.001	0.1	0%	0	0	0%	J
Chromium	A	mg/L	0.002359	0.002359		0	0	0	0.00018	0.001	1	0%	0	0	0%	
Cobalt	A	mg/L	0.00004129	0		0	0	0	0.000042	0.001	1	0%	0	0	0%	
Copper	A	mg/L	0.0004906	0.0004906		0	0	0	0.00027	0.001	1	0%	0	0	0%	J
Lead	A	mg/L	0.0000539	0		0	0	0	0.000056	0.001	1	0%	0	0	0%	U
Manganese	A	mg/L	0.002899	0.002899		0	0	0	0.000095	0.001	1	0%	0	0	0%	
Mercury	A	mg/L	0.00002553	0		0	0	0	0.00016	0.001	0.002	0%	0	0	0%	
Molybdenum	A	mg/L	0.0001139	0.0001139		0	0	0	0.00005	0.001	0.1	0%	0	0	0%	J
Nickel	A	mg/L	0.0004793	0		0	0	0	0.00063	0.001	1	0%	0	0	0%	
Selenium	A	mg/L	0.0001554	0		0	0	0	0.00033	0.001	1	0%	0	0	0%	
Silver	A	mg/L	-0.00005479	0		0	0	0	0.00002	0.001	0.04	0%	0	0	0%	
Strontium	A	mg/L	0.09612	0.09612		0	0	0	0.00014	0.001	1	0%	0	0	0%	
Thallium	A	mg/L	0.00009317	0.00009317		0	0	0	0.000041	0.001	1	0%	0	0	0%	J
Thorium	A	mg/L	-1.886E-06	0		0	0	0	0.00061	0.001	1	0%	0	0	0%	
Titanium	A	mg/L	0.001742	0.001742		0	0	0	0.000094	0.001	1	0%	0	0	0%	
Uranium	A	mg/L	0.000009425	0		0	0	0	0.000052	0.0003	1	0%	0	0	0%	
Calcium	B	mg/L	15.15	15.15		0	0	0	0.02092	0.02092	50	0%	0	0	0%	D
Iron	B	mg/L	0.008715	0.008715		0	0	0	0.00119	0.00119	5	0%	0	0	0%	
Iron, Ferrous	B	mg/L	0.008715	0.008715		0	0	0	0.00119	0.00119	5	0%	0	0	0%	
Magnesium	B	mg/L	15.11	15.11		0	0	0	0.00564	0.00564	50	0%	0	0	0%	D
Sodium	B	mg/L	32.13	32.13		0	0	0	0.02171	0.02171	50	0%	0	0	0%	D
Tin	B	mg/L	-0.00005527	0		0	0	0	0.00132	0.00132	0.1	0%	0	0	0%	
Vanadium	B	mg/L	0.0154	0.0154		0	0	0	0.0013	0.0013	1	0%	0	0	0%	
Zinc	B	mg/L	0.007734	0.007734		0	0	0	0.00273	0.00273	1	0%	0	0	0%	D

Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist					
14998109	B22011125-001	ICPMS-6020-W-	SAMP		1/21/2022 9:57:5	1	163063	1/19/2022 2:	0	0						
Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q

Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist					
14998109	B22011125-001	ICPMS-6020-W-	SAMP		1/21/2022 9:57:5	1	163063	1/19/2022 2:	0	0						
Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
Antimony	A	mg/L	0.0002437	0		0	0	0	0.0002799	0.001	0.1	0%	0	0	0%	U
Arsenic	A	mg/L	0.0002297	0		0	0	0	0.0003412	0.001	1	0%	0	0	0%	U
Barium	A	mg/L	0.004502	0.004502		0	0	0	0.0002682	0.001	1	0%	0	0	0%	
Cadmium	A	mg/L	0.000003712	0		0	0	0	1.821E-05	0.005	1	0%	0	0	0%	U
Cerium	A	mg/L	0.0001316	0.0001316		0	0	0	2.738E-05	0.001	0.1	0%	0	0	0%	J
Cobalt	A	mg/L	0.0002311	0.0002311		0	0	0	9.541E-05	0.001	1	0%	0	0	0%	J
Lanthanum	A	mg/L	0.00005065	0		0	0	0	0.000055	0.001	0.1	0%	0	0	0%	U
Lead	A	mg/L	0.0002582	0.0002582		0	0	0	7.716E-05	0.001	1	0%	0	0	0%	J
Manganese	A	mg/L	0.01903	0.01903		0	0	0	0.0005399	0.001	1	0%	0	0	0%	
Molybdenum	A	mg/L	0.0002049	0.0002049		0	0	0	0.0001763	0.001	0.1	0%	0	0	0%	J
Selenium	A	mg/L	0.0002044	0.0002044		0	0	0	0.0001357	0.001	1	0%	0	0	0%	J
Silver	A	mg/L	0.0005407	0.0005407		0	0	0	4.281E-05	0.001	0.04	0%	0	0	0%	J
Strontium	A	mg/L	0.09759	0.09759		0	0	0	0.0002433	0.001	1	0%	0	0	0%	
Thallium	A	mg/L	0.00009311	0		0	0	0	0.0001114	0.001	1	0%	0	0	0%	U
Titanium	A	mg/L	0.009402	0.009402		0	0	0	0.0005733	0.001	1	0%	0	0	0%	
Uranium	A	mg/L	0.0000125	0		0	0	0	1.699E-05	0.0003	1	0%	0	0	0%	U
Aluminum	B	mg/L	0.1141	0.1141		0	0	0	0.0038747	0.0031975	1	0%	0	0	0%	D
Calcium	B	mg/L	14.6	14.6		0	0	0	0.0372936	0.1103481	50	0%	0	0	0%	D
Chromium	B	mg/L	0.00287	0.00287		0	0	0	0.0015375	0.0015375	1	0%	0	0	0%	UD
Copper	B	mg/L	0.001253	0.001253		0	0	0	0.0008747	0.00198	1	0%	0	0	0%	JL
Iron	B	mg/L	0.1489	0.1489		0	0	0	0.007424	0.00513	5	0%	0	0	0%	D
Magnesium	B	mg/L	15.41	15.41		0	0	0	0.0104254	0.0081522	50	0%	0	0	0%	D
Nickel	B	mg/L	0.00124	0.00124		0	0	0	0.0002288	0.0024200	1	0%	0	0	0%	JL
Sodium	B	mg/L	32.18	32.18		0	0	0	0.1019461	0.7330269	50	0%	0	0	0%	D
Thorium	B	mg/L	0.00005105	0		0	0	0	0.0003796	0.00415	1	0%	0	0	0%	UL
Tin	B	mg/L	0.0005899	0		0	0	0	0.0018932	0.0011175	0.1	0%	0	0	0%	U
Vanadium	B	mg/L	0.02021	0.02021		0	0	0	0.0039127	0.0021085	1	0%	0	0	0%	D
Zinc	B	mg/L	0.01571	0.01571		0	0	0	0.0011617	0.0065544	1	0%	0	0	0%	D

Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist					
14998110	B22011126-001	ICPMS-6020-W-	SAMP		1/21/2022 10:04:	1	R373694		0	0						
Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q

Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist					
14998110	B22011126-001	ICPMS-6020-W-	SAMP		1/21/2022 10:04:	1	R373694		0	0						
Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
Aluminum	A	mg/L	0.002161	0.002161		0	0	0	0.00086	0.001	1	0%	0	0	0%	
Antimony	A	mg/L	0.0003699	0		0	0	0	0.00042	0.001	0.1	0%	0	0	0%	
Arsenic	A	mg/L	0.0004696	0.0004696		0	0	0	0.00019	0.001	1	0%	0	0	0%	J
Barium	A	mg/L	0.004042	0.004042		0	0	0	0.000042	0.001	1	0%	0	0	0%	
Cadmium	A	mg/L	0.0000435	0.0000435		0	0	0	0.000025	0.001	1	0%	0	0	0%	J
Cerium	A	mg/L	0.000001199	0		0	0	0	0.000012	0.001	0.1	0%	0	0	0%	
Chromium	A	mg/L	0.000131	0		0	0	0	0.00018	0.001	1	0%	0	0	0%	
Cobalt	A	mg/L	0.0003131	0.0003131		0	0	0	0.000042	0.001	1	0%	0	0	0%	J
Copper	A	mg/L	0.0006295	0.0006295		0	0	0	0.00027	0.001	1	0%	0	0	0%	J
Lead	A	mg/L	0.00001032	0		0	0	0	0.000056	0.001	1	0%	0	0	0%	U
Manganese	A	mg/L	0.1873	0.1873		0	0	0	0.000095	0.001	1	0%	0	0	0%	
Mercury	A	mg/L	0.00004407	0		0	0	0	0.00016	0.001	0.002	0%	0	0	0%	
Molybdenum	A	mg/L	0.01036	0.01036		0	0	0	0.00005	0.001	0.1	0%	0	0	0%	
Nickel	A	mg/L	0.002021	0.002021		0	0	0	0.00063	0.001	1	0%	0	0	0%	
Selenium	A	mg/L	0.0001064	0		0	0	0	0.00033	0.001	1	0%	0	0	0%	
Silver	A	mg/L	-0.00006365	0		0	0	0	0.00002	0.001	0.04	0%	0	0	0%	
Strontium	A	mg/L	0.2243	0.2243		0	0	0	0.00014	0.001	1	0%	0	0	0%	
Thallium	A	mg/L	0.00003253	0		0	0	0	0.000041	0.001	1	0%	0	0	0%	
Thorium	A	mg/L	-6.938E-06	0		0	0	0	0.00061	0.001	1	0%	0	0	0%	
Titanium	A	mg/L	0.001181	0.001181		0	0	0	0.000094	0.001	1	0%	0	0	0%	
Uranium	A	mg/L	0.00007607	0.00007607		0	0	0	0.000052	0.0003	1	0%	0	0	0%	J
Calcium	B	mg/L	29.67	29.67		0	0	0	0.02092	0.02092	50	0%	0	0	0%	D
Iron	B	mg/L	0.0009801	0		0	0	0	0.00119	0.00119	5	0%	0	0	0%	
Iron, Ferrous	B	mg/L	0.0009801	0		0	0	0	0.00119	0.00119	5	0%	0	0	0%	
Magnesium	B	mg/L	30.98	30.98		0	0	0	0.00564	0.00564	50	0%	0	0	0%	D
Tin	B	mg/L	-0.00002674	0		0	0	0	0.00132	0.00132	0.1	0%	0	0	0%	
Vanadium	B	mg/L	0.006104	0.006104		0	0	0	0.0013	0.0013	1	0%	0	0	0%	
Zinc	B	mg/L	0.002205	0		0	0	0	0.00273	0.00273	1	0%	0	0	0%	L

Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist					
14998111	B22011126-001	ICPMS-6020-W-	SAMP		1/21/2022 10:10:	1	163063	1/19/2022 2:	0	0						
Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q

Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist					
14998111	B22011126-001	ICPMS-6020-W-	SAMP		1/21/2022 10:10:	1	163063	1/19/2022 2:	0	0						
Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
Antimony	A	mg/L	0.000452	0.000452		0	0	0	0.0002799	0.001	0.1	0%	0	0	0%	J
Arsenic	A	mg/L	0.0007835	0.0007835		0	0	0	0.0003412	0.001	1	0%	0	0	0%	J
Barium	A	mg/L	0.004579	0.004579		0	0	0	0.0002682	0.001	1	0%	0	0	0%	
Cadmium	A	mg/L	0.000006907	0		0	0	0	1.821E-05	0.005	1	0%	0	0	0%	U
Cerium	A	mg/L	0.0000174	0		0	0	0	2.738E-05	0.001	0.1	0%	0	0	0%	U
Cobalt	A	mg/L	0.0004374	0.0004374		0	0	0	9.541E-05	0.001	1	0%	0	0	0%	J
Lanthanum	A	mg/L	0.000006599	0		0	0	0	0.000055	0.001	0.1	0%	0	0	0%	U
Lead	A	mg/L	0.0000345	0		0	0	0	7.716E-05	0.001	1	0%	0	0	0%	U
Manganese	A	mg/L	0.185	0.185		0	0	0	0.0005399	0.001	1	0%	0	0	0%	
Molybdenum	A	mg/L	0.01126	0.01126		0	0	0	0.0001763	0.001	0.1	0%	0	0	0%	
Selenium	A	mg/L	0.0001557	0.0001557		0	0	0	0.0001357	0.001	1	0%	0	0	0%	J
Silver	A	mg/L	-0.00006405	0		0	0	0	4.281E-05	0.001	0.04	0%	0	0	0%	U
Strontium	A	mg/L	0.2314	0.2314		0	0	0	0.0002433	0.001	1	0%	0	0	0%	
Thallium	A	mg/L	0.00005505	0		0	0	0	0.0001114	0.001	1	0%	0	0	0%	U
Titanium	A	mg/L	0.001805	0.001805		0	0	0	0.0005733	0.001	1	0%	0	0	0%	
Uranium	A	mg/L	0.00008927	0.00008927		0	0	0	1.699E-05	0.0003	1	0%	0	0	0%	J
Aluminum	B	mg/L	0.009249	0.009249		0	0	0	0.0038747	0.0031975	1	0%	0	0	0%	UD
Calcium	B	mg/L	27.78	27.78		0	0	0	0.0372936	0.1103481	50	0%	0	0	0%	D
Chromium	B	mg/L	0.0003555	0		0	0	0	0.0015375	0.0015375	1	0%	0	0	0%	UL
Copper	B	mg/L	0.0009667	0.0009667		0	0	0	0.0008747	0.00198	1	0%	0	0	0%	JL
Iron	B	mg/L	0.0115	0.0115		0	0	0	0.007424	0.00513	5	0%	0	0	0%	UD
Magnesium	B	mg/L	29.56	29.56		0	0	0	0.0104254	0.0081522	50	0%	0	0	0%	D
Nickel	B	mg/L	0.00223	0.00223		0	0	0	0.0002288	0.0024200	1	0%	0	0	0%	JL
Thorium	B	mg/L	0.00002297	0		0	0	0	0.0003796	0.00415	1	0%	0	0	0%	UL
Tin	B	mg/L	0.0005359	0		0	0	0	0.0018932	0.0011175	0.1	0%	0	0	0%	U
Vanadium	B	mg/L	0.01052	0.01052		0	0	0	0.0039127	0.0021085	1	0%	0	0	0%	D
Zinc	B	mg/L	0.001796	0.001796		0	0	0	0.0011617	0.0065544	1	0%	0	0	0%	JL

Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist					
14998112	B22011127-001	ICPMS-6020-W-	SAMP		1/21/2022 10:16:	1	R373694		0	0						
Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
Aluminum	A	mg/L	0.01392	0.01392		0	0	0	0.00086	0.001	1	0%	0	0	0%	
Antimony	A	mg/L	0.00008236	0		0	0	0	0.00042	0.001	0.1	0%	0	0	0%	
Arsenic	A	mg/L	0.00165	0.00165		0	0	0	0.00019	0.001	1	0%	0	0	0%	

Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist					
14998112	B22011127-001	ICPMS-6020-W-	SAMP		1/21/2022 10:16:	1	R373694		0	0						
Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
Barium	A	mg/L	0.009899	0.009899		0	0	0	0.000042	0.001	1	0%	0	0	0%	
Cadmium	A	mg/L	0.00003916	0.00003916		0	0	0	0.000025	0.001	1	0%	0	0	0%	J
Cerium	A	mg/L	0.00009301	0.00009301		0	0	0	0.000012	0.001	0.1	0%	0	0	0%	J
Chromium	A	mg/L	0.001127	0.001127		0	0	0	0.00018	0.001	1	0%	0	0	0%	
Cobalt	A	mg/L	0.0001308	0.0001308		0	0	0	0.000042	0.001	1	0%	0	0	0%	J
Copper	A	mg/L	0.0012	0.0012		0	0	0	0.00027	0.001	1	0%	0	0	0%	
Lead	A	mg/L	0.0001686	0.0001686		0	0	0	0.000056	0.001	1	0%	0	0	0%	J
Manganese	A	mg/L	0.004952	0.004952		0	0	0	0.000095	0.001	1	0%	0	0	0%	
Mercury	A	mg/L	0.001813	0.001813		0	0	0	0.00016	0.001	0.002	0%	0	0	0%	
Molybdenum	A	mg/L	0.003684	0.003684		0	0	0	0.00005	0.001	0.1	0%	0	0	0%	
Nickel	A	mg/L	0.000793	0.000793		0	0	0	0.00063	0.001	1	0%	0	0	0%	J
Selenium	A	mg/L	0.0003919	0.0003919		0	0	0	0.00033	0.001	1	0%	0	0	0%	J
Silver	A	mg/L	-0.00005187	0		0	0	0	0.00002	0.001	0.04	0%	0	0	0%	
Strontium	A	mg/L	0.3052	0.3052		0	0	0	0.00014	0.001	1	0%	0	0	0%	
Thallium	A	mg/L	0.00001268	0		0	0	0	0.000041	0.001	1	0%	0	0	0%	
Thorium	A	mg/L	-8.024E-06	0		0	0	0	0.00061	0.001	1	0%	0	0	0%	
Titanium	A	mg/L	0.002499	0.002499		0	0	0	0.000094	0.001	1	0%	0	0	0%	
Uranium	A	mg/L	0.00018	0.00018		0	0	0	0.000052	0.0003	1	0%	0	0	0%	J
Calcium	B	mg/L	41.73	41.73		0	0	0	0.02092	0.02092	50	0%	0	0	0%	D
Iron	B	mg/L	0.06021	0.06021		0	0	0	0.00119	0.00119	5	0%	0	0	0%	
Iron, Ferrous	B	mg/L	0.06021	0.06021		0	0	0	0.00119	0.00119	5	0%	0	0	0%	
Magnesium	B	mg/L	34.75	34.75		0	0	0	0.00564	0.00564	50	0%	0	0	0%	D
Tin	B	mg/L	-4.321E-06	0		0	0	0	0.00132	0.00132	0.1	0%	0	0	0%	
Vanadium	B	mg/L	0.0121	0.0121		0	0	0	0.0013	0.0013	1	0%	0	0	0%	
Zinc	B	mg/L	0.00354	0.00354		0	0	0	0.00273	0.00273	1	0%	0	0	0%	D

Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist					
14998113	B22011127-001	ICPMS-6020-W-	SAMP		1/21/2022 10:22:	1	163063	1/19/2022 2:	0	0						
Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
Antimony	A	mg/L	0.0001208	0		0	0	0	0.0002799	0.001	0.1	0%	0	0	0%	U
Arsenic	A	mg/L	0.002082	0.002082		0	0	0	0.0003412	0.001	1	0%	0	0	0%	
Barium	A	mg/L	0.01113	0.01113		0	0	0	0.0002682	0.001	1	0%	0	0	0%	
Cadmium	A	mg/L	0.000004347	0		0	0	0	1.821E-05	0.005	1	0%	0	0	0%	U
Cerium	A	mg/L	0.0001824	0.0001824		0	0	0	2.738E-05	0.001	0.1	0%	0	0	0%	J

Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist					
14998113	B22011127-001	ICPMS-6020-W-	SAMP		1/21/2022 10:22:	1	163063	1/19/2022 2:	0	0						
Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
Cobalt	A	mg/L	0.0002806	0.0002806		0	0	0	9.541E-05	0.001	1	0%	0	0	0%	J
Lanthanum	A	mg/L	0.00007698	0.00007698		0	0	0	0.000055	0.001	0.1	0%	0	0	0%	J
Lead	A	mg/L	0.0002916	0.0002916		0	0	0	7.716E-05	0.001	1	0%	0	0	0%	J
Manganese	A	mg/L	0.006022	0.006022		0	0	0	0.0005399	0.001	1	0%	0	0	0%	
Molybdenum	A	mg/L	0.004159	0.004159		0	0	0	0.0001763	0.001	0.1	0%	0	0	0%	
Selenium	A	mg/L	0.0004623	0.0004623		0	0	0	0.0001357	0.001	1	0%	0	0	0%	J
Silver	A	mg/L	-0.0000486	0		0	0	0	4.281E-05	0.001	0.04	0%	0	0	0%	U
Strontium	A	mg/L	0.3159	0.3159		0	0	0	0.0002433	0.001	1	0%	0	0	0%	
Thallium	A	mg/L	0.00004101	0		0	0	0	0.0001114	0.001	1	0%	0	0	0%	U
Titanium	A	mg/L	0.005825	0.005825		0	0	0	0.0005733	0.001	1	0%	0	0	0%	
Uranium	A	mg/L	0.0002072	0.0002072		0	0	0	1.699E-05	0.0003	1	0%	0	0	0%	J
Aluminum	B	mg/L	0.05781	0.05781		0	0	0	0.0038747	0.0031975	1	0%	0	0	0%	D
Calcium	B	mg/L	39.98	39.98		0	0	0	0.0372936	0.1103481	50	0%	0	0	0%	D
Chromium	B	mg/L	0.001543	0.001543		0	0	0	0.0015375	0.0015375	1	0%	0	0	0%	UD
Copper	B	mg/L	0.001255	0.001255		0	0	0	0.0008747	0.00198	1	0%	0	0	0%	JL
Iron	B	mg/L	0.1518	0.1518		0	0	0	0.007424	0.00513	5	0%	0	0	0%	D
Magnesium	B	mg/L	34.29	34.29		0	0	0	0.0104254	0.0081522	50	0%	0	0	0%	D
Nickel	B	mg/L	0.0007839	0.0007839		0	0	0	0.0002288	0.0024200	1	0%	0	0	0%	JL
Thorium	B	mg/L	0.00001332	0		0	0	0	0.0003796	0.00415	1	0%	0	0	0%	UL
Tin	B	mg/L	0.0005704	0		0	0	0	0.0018932	0.0011175	0.1	0%	0	0	0%	U
Vanadium	B	mg/L	0.01694	0.01694		0	0	0	0.0039127	0.0021085	1	0%	0	0	0%	D
Zinc	B	mg/L	0.003933	0.003933		0	0	0	0.0011617	0.0065544	1	0%	0	0	0%	JL

Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist					
14998114	B22011128-001	ICPMS-6020-W-	SAMP		1/21/2022 10:29:	1	R373694		0	0						
Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
Aluminum	A	mg/L	0.0006959	0		0	0	0	0.00086	0.001	1	0%	0	0	0%	
Antimony	A	mg/L	0.0003044	0		0	0	0	0.00042	0.001	0.1	0%	0	0	0%	
Arsenic	A	mg/L	0.003308	0.003308		0	0	0	0.00019	0.001	1	0%	0	0	0%	
Barium	A	mg/L	0.02513	0.02513		0	0	0	0.000042	0.001	1	0%	0	0	0%	
Cadmium	A	mg/L	0.00003939	0.00003939		0	0	0	0.000025	0.001	1	0%	0	0	0%	J
Cerium	A	mg/L	0.00002324	0.00002324		0	0	0	0.000012	0.001	0.1	0%	0	0	0%	J
Chromium	A	mg/L	0.001325	0.001325		0	0	0	0.00018	0.001	1	0%	0	0	0%	
Cobalt	A	mg/L	0.00003827	0		0	0	0	0.000042	0.001	1	0%	0	0	0%	

Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist					
14998114	B22011128-001	ICPMS-6020-W- SAMP			1/21/2022 10:29:	1	R373694		0	0						
Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
Copper	A	mg/L	0.0004894	0.0004894		0	0	0	0.00027	0.001	1	0%	0	0	0%	J
Lead	A	mg/L	0.0000162	0		0	0	0	0.000056	0.001	1	0%	0	0	0%	U
Manganese	A	mg/L	0.0002209	0.0002209		0	0	0	0.000095	0.001	1	0%	0	0	0%	J
Mercury	A	mg/L	0.0009325	0.0009325		0	0	0	0.00016	0.001	0.002	0%	0	0	0%	J
Molybdenum	A	mg/L	0.009835	0.009835		0	0	0	0.00005	0.001	0.1	0%	0	0	0%	
Nickel	A	mg/L	0.000818	0.000818		0	0	0	0.00063	0.001	1	0%	0	0	0%	J
Selenium	A	mg/L	0.0007143	0.0007143		0	0	0	0.00033	0.001	1	0%	0	0	0%	J
Silver	A	mg/L	-0.0000616	0		0	0	0	0.00002	0.001	0.04	0%	0	0	0%	
Strontium	A	mg/L	0.2844	0.2844		0	0	0	0.00014	0.001	1	0%	0	0	0%	
Thallium	A	mg/L	0.000007936	0		0	0	0	0.000041	0.001	1	0%	0	0	0%	
Thorium	A	mg/L	-6.415E-06	0		0	0	0	0.00061	0.001	1	0%	0	0	0%	
Titanium	A	mg/L	0.001655	0.001655		0	0	0	0.000094	0.001	1	0%	0	0	0%	
Uranium	A	mg/L	0.0003772	0.0003772		0	0	0	0.000052	0.0003	1	0%	0	0	0%	
Calcium	B	mg/L	25.97	25.97		0	0	0	0.02092	0.02092	50	0%	0	0	0%	D
Iron	B	mg/L	0.0004299	0		0	0	0	0.00119	0.00119	5	0%	0	0	0%	
Iron, Ferrous	B	mg/L	0.0004299	0		0	0	0	0.00119	0.00119	5	0%	0	0	0%	
Magnesium	B	mg/L	27.45	27.45		0	0	0	0.00564	0.00564	50	0%	0	0	0%	D
Tin	B	mg/L	0.0001548	0		0	0	0	0.00132	0.00132	0.1	0%	0	0	0%	
Vanadium	B	mg/L	0.01046	0.01046		0	0	0	0.0013	0.0013	1	0%	0	0	0%	
Zinc	B	mg/L	0.0005752	0		0	0	0	0.00273	0.00273	1	0%	0	0	0%	L

Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist					
14998115	CCV	ICPMS-6020-W- CCV			1/21/2022 10:35:	1	R373694		0	0						
Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
Aluminum	A	mg/L	0.05359	0.05359		0.05	0	0	0.00086	0.001	1	107%	90	110	0%	
Antimony	A	mg/L	0.05283	0.05283		0.05	0	0	0.00042	0.001	0.1	106%	90	110	0%	
Arsenic	A	mg/L	0.05037	0.05037		0.05	0	0	0.00019	0.001	1	101%	90	110	0%	
Barium	A	mg/L	0.04935	0.04935		0.05	0	0	0.000042	0.001	1	99%	90	110	0%	
Beryllium	A	mg/L	0.04336	0.04336		0.05	0	0	0.00012	0.001	1	87%	90	110	0%	S
Boron	A	mg/L	0.04567	0.04567		0.05	0	0	0.00561	0.00561	1	91%	90	110	0%	
Cadmium	A	mg/L	0.05058	0.05058		0.05	0	0	0.000025	0.001	1	101%	90	110	0%	
Calcium	A	mg/L	12.08	12.08		12.5	0	0	0.02092	0.02092	50	97%	90	110	0%	
Cerium	A	mg/L	0.05247	0.05247		0.05	0	0	0.000012	0.001	0.1	105%	90	110	0%	
Chromium	A	mg/L	0.0477	0.0477		0.05	0	0	0.00018	0.001	1	95%	90	110	0%	

Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist					
14998115	CCV	ICPMS-6020-W-	CCV		1/21/2022 10:35:	1	R373694		0	0						
Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
Cobalt	A	mg/L	0.04916	0.04916		0.05	0	0	0.000042	0.001	1	98%	90	110	0%	
Copper	A	mg/L	0.05093	0.05093		0.05	0	0	0.00027	0.001	1	102%	90	110	0%	
Iron	A	mg/L	1.297	1.297		1.3	0	0	0.00119	0.00119	5	100%	90	110	0%	
Lanthanum	A	mg/L	0.05138	0.05138		0.05	0	0	0.000011	0.001	0.1	103%	90	110	0%	
Lead	A	mg/L	0.04991	0.04991		0.05	0	0	0.000056	0.001	1	100%	90	110	0%	
Magnesium	A	mg/L	12.18	12.18		12.5	0	0	0.00564	0.00564	50	97%	90	110	0%	
Manganese	A	mg/L	0.04861	0.04861		0.05	0	0	0.000095	0.001	1	97%	90	110	0%	
Mercury	A	mg/L	0.001019	0.001019		0.001	0	0	0.00016	0.001	0.002	102%	90	110	0%	
Molybdenum	A	mg/L	0.04935	0.04935		0.05	0	0	0.00005	0.001	0.1	99%	90	110	0%	
Nickel	A	mg/L	0.04991	0.04991		0.05	0	0	0.00063	0.001	1	100%	90	110	0%	
Potassium	A	mg/L	11.29	11.29		12.5	0	0	0.08139	0.08139	50	90%	90	110	0%	
Selenium	A	mg/L	0.05185	0.05185		0.05	0	0	0.00033	0.001	1	104%	90	110	0%	
Silicon	A	mg/L	0.2252	0.2252		0.2	0	0	0.01223	0.1	0.4	113%	90	110	0%	S
Silver	A	mg/L	0.01967	0.01967		0.02	0	0	0.00002	0.001	0.04	98%	90	110	0%	
Sodium	A	mg/L	12.42	12.42		12.5	0	0	0.02171	0.02171	50	99%	90	110	0%	
Strontium	A	mg/L	0.05075	0.05075		0.05	0	0	0.00014	0.001	1	101%	90	110	0%	
Thallium	A	mg/L	0.04963	0.04963		0.05	0	0	0.000041	0.001	1	99%	90	110	0%	
Thorium	A	mg/L	0.0508	0.0508		0.05	0	0	0.00061	0.001	1	102%	90	110	0%	
Tin	A	mg/L	0.05124	0.05124		0.05	0	0	0.00132	0.00132	0.1	102%	90	110	0%	
Titanium	A	mg/L	0.04717	0.04717		0.05	0	0	0.000094	0.001	1	94%	90	110	0%	
Uranium	A	mg/L	0.05089	0.05089		0.05	0	0	0.000052	0.0003	1	102%	90	110	0%	
Vanadium	A	mg/L	0.04946	0.04946		0.05	0	0	0.0013	0.0013	1	99%	90	110	0%	
Zinc	A	mg/L	0.0515	0.0515		0.05	0	0	0.00273	0.00273	1	103%	90	110	0%	
Iron, Ferrous	C	mg/L	1.297	1.297		0	0	0	0.00119	0.00119	5	0%	0	0	0%	

Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist					
14998116	CCB	ICPMS-6020-W-	CCB		1/21/2022 10:41:	1	R373694		0	0						
Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
Aluminum	A	mg/L	-0.0002342	-0.0002342		0	0	0	0.00086	0.001	1	0%			0%	
Antimony	A	mg/L	0.00007343	0.00007343		0	0	0	0.00042	0.001	0.1	0%			0%	
Arsenic	A	mg/L	-0.00000649	-0.00000649		0	0	0	0.00019	0.001	1	0%			0%	
Barium	A	mg/L	0.000003068	0.000003068		0	0	0	0.000042	0.001	1	0%			0%	
Beryllium	A	mg/L	-0.00004855	-0.00004855		0	0	0	0.00012	0.001	1	0%			0%	
Boron	A	mg/L	0.0006872	0.0006872		0	0	0	0.00561	0.00561	1	0%			0%	

Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist					
14998116	CCB	ICPMS-6020-W-	CCB		1/21/2022 10:41:	1	R373694		0	0						
Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
Cadmium	A	mg/L	0.000005468	0.000005468		0	0	0	0.000025	0.001	1	0%			0%	
Calcium	A	mg/L	-0.000987	-0.000987		0	0	0	0.02092	0.02092	50	0%			0%	
Cerium	A	mg/L	-3.184E-07	-3.184E-07		0	0	0	0.000012	0.001	0.1	0%	0	0	0%	
Chromium	A	mg/L	0.00003726	0.00003726		0	0	0	0.00018	0.001	1	0%			0%	
Cobalt	A	mg/L	6.183E-07	6.183E-07		0	0	0	0.000042	0.001	1	0%			0%	
Copper	A	mg/L	-1.554E-06	-1.554E-06		0	0	0	0.00027	0.001	1	0%			0%	
Iron	A	mg/L	0.0000364	0.0000364		0	0	0	0.00119	0.00119	5	0%			0%	
Lanthanum	A	mg/L	-1.565E-07	-1.565E-07		0	0	0	0.000011	0.001	0.1	0%	0	0	0%	
Lead	A	mg/L	0.000005666	0.000005666		0	0	0	0.000056	0.001	1	0%			0%	
Magnesium	A	mg/L	0.0006683	0.0006683		0	0	0	0.00564	0.00564	50	0%			0%	
Manganese	A	mg/L	0.000003757	0.000003757		0	0	0	0.000095	0.001	1	0%			0%	
Mercury	A	mg/L	0.000008504	0.000008504		0	0	0	0.00016	0.001	0.002	0%			0%	
Molybdenum	A	mg/L	0.00001933	0.00001933		0	0	0	0.00005	0.001	0.1	0%			0%	
Nickel	A	mg/L	0.00000654	0.00000654		0	0	0	0.00063	0.001	1	0%			0%	
Potassium	A	mg/L	-0.02305	-0.02305		0	0	0	0.08139	0.08139	50	0%			0%	
Selenium	A	mg/L	2.318E-08	2.318E-08		0	0	0	0.00033	0.001	1	0%			0%	
Silicon	A	mg/L	0.004356	0.004356		0	0	0	0.01223	0.1	0.4	0%	0	0	0%	
Silver	A	mg/L	-3.884E-06	-3.884E-06		0	0	0	0.00002	0.001	0.04	0%			0%	
Sodium	A	mg/L	0.04638	0.04638		0	0	0	0.02171	0.02171	50	0%			0%	
Strontium	A	mg/L	-5.696E-06	-5.696E-06		0	0	0	0.00014	0.001	1	0%	0	0	0%	
Thallium	A	mg/L	0.0001082	0.0001082		0	0	0	0.000041	0.001	1	0%	0	0	0%	
Thorium	A	mg/L	0.0000127	0.0000127		0	0	0	0.00061	0.001	1	0%	0	0	0%	
Tin	A	mg/L	0.00003041	0.00003041		0	0	0	0.00132	0.00132	0.1	0%	0	0	0%	
Titanium	A	mg/L	0.00001862	0.00001862		0	0	0	0.000094	0.001	1	0%	0	0	0%	
Uranium	A	mg/L	0.000002186	0.000002186		0	0	0	0.000052	0.0003	1	0%	0	0	0%	
Vanadium	A	mg/L	0.001181	0.001181		0	0	0	0.0013	0.0013	1	0%	0	0	0%	
Zinc	A	mg/L	0.00002549	0.00002549		0	0	0	0.00273	0.00273	1	0%	0	0	0%	
Iron, Ferrous	C	mg/L	0.0000364	0.0000364		0	0	0	0.00119	0.00119	5	0%	0	0	0%	

Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist					
14998117	B22011128-001	ICPMS-6020-W-	SAMP		1/21/2022 10:47:	1	163063	1/19/2022 2:	0	0						
Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q

Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist					
14998117	B22011128-001	ICPMS-6020-W-	SAMP		1/21/2022 10:47:	1	163063	1/19/2022 2:	0	0						
Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
Antimony	A	mg/L	0.0003759	0.0003759		0	0	0	0.0002799	0.001	0.1	0%	0	0	0%	J
Arsenic	A	mg/L	0.003608	0.003608		0	0	0	0.0003412	0.001	1	0%	0	0	0%	
Barium	A	mg/L	0.0268	0.0268		0	0	0	0.0002682	0.001	1	0%	0	0	0%	
Cadmium	A	mg/L	0.00000783	0		0	0	0	1.821E-05	0.005	1	0%	0	0	0%	U
Cerium	A	mg/L	0.000007195	0		0	0	0	2.738E-05	0.001	0.1	0%	0	0	0%	U
Cobalt	A	mg/L	0.0001425	0.0001425		0	0	0	9.541E-05	0.001	1	0%	0	0	0%	J
Lanthanum	A	mg/L	0.000003703	0		0	0	0	0.000055	0.001	0.1	0%	0	0	0%	U
Lead	A	mg/L	0.0000379	0		0	0	0	7.716E-05	0.001	1	0%	0	0	0%	U
Manganese	A	mg/L	0.001683	0.001683		0	0	0	0.0005399	0.001	1	0%	0	0	0%	
Molybdenum	A	mg/L	0.0102	0.0102		0	0	0	0.0001763	0.001	0.1	0%	0	0	0%	
Selenium	A	mg/L	0.0007998	0.0007998		0	0	0	0.0001357	0.001	1	0%	0	0	0%	J
Silver	A	mg/L	-0.00005617	0		0	0	0	4.281E-05	0.001	0.04	0%	0	0	0%	U
Strontium	A	mg/L	0.2849	0.2849		0	0	0	0.0002433	0.001	1	0%	0	0	0%	
Thallium	A	mg/L	0.00007017	0		0	0	0	0.0001114	0.001	1	0%	0	0	0%	U
Titanium	A	mg/L	0.001805	0.001805		0	0	0	0.0005733	0.001	1	0%	0	0	0%	
Uranium	A	mg/L	0.0003928	0.0003928		0	0	0	1.699E-05	0.0003	1	0%	0	0	0%	
Boron	B	mg/L	0.08254	0.08254		0	0	0	0.0203802	0.01467	1	0%	0	0	0%	D
Calcium	B	mg/L	24.71	24.71		0	0	0	0.0372936	0.1103481	50	0%	0	0	0%	D
Chromium	B	mg/L	0.001512	0		0	0	0	0.0015375	0.0015375	1	0%	0	0	0%	UL
Copper	B	mg/L	0.0007977	0		0	0	0	0.0008747	0.00198	1	0%	0	0	0%	UL
Iron	B	mg/L	0.003754	0		0	0	0	0.007424	0.00513	5	0%	0	0	0%	UL
Magnesium	B	mg/L	25.86	25.86		0	0	0	0.0104254	0.0081522	50	0%	0	0	0%	D
Nickel	B	mg/L	0.0009634	0.0009634		0	0	0	0.0002288	0.0024200	1	0%	0	0	0%	JL
Potassium	B	mg/L	6.077	6.077		0	0	0	0.0765619	0.0261205	50	0%	0	0	0%	D
Thorium	B	mg/L	0.00004114	0		0	0	0	0.0003796	0.00415	1	0%	0	0	0%	UL
Tin	B	mg/L	0.0007007	0		0	0	0	0.0018932	0.0011175	0.1	0%	0	0	0%	U
Vanadium	B	mg/L	0.01481	0.01481		0	0	0	0.0039127	0.0021085	1	0%	0	0	0%	D
Zinc	B	mg/L	0.000614	0		0	0	0	0.0011617	0.0065544	1	0%	0	0	0%	UL

Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist					
14998118	B22011129-001	ICPMS-6020-W-	SAMP		1/21/2022 10:54:	1	R373694		0	0						
Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q

Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist					
14998118	B22011129-001	ICPMS-6020-W-	SAMP		1/21/2022 10:54:	1	R373694		0	0						
Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
Antimony	A	mg/L	0.0003035	0		0	0	0	0.00042	0.001	0.1	0%	0	0	0%	
Arsenic	A	mg/L	-0.0001268	0		0	0	0	0.00019	0.001	1	0%	0	0	0%	
Barium	A	mg/L	0.003714	0.003714		0	0	0	0.000042	0.001	1	0%	0	0	0%	
Cadmium	A	mg/L	0.00003405	0.00003405		0	0	0	0.000025	0.001	1	0%	0	0	0%	J
Cerium	A	mg/L	0.000006259	0		0	0	0	0.000012	0.001	0.1	0%	0	0	0%	
Chromium	A	mg/L	0.002164	0.002164		0	0	0	0.00018	0.001	1	0%	0	0	0%	
Cobalt	A	mg/L	0.00004395	0.00004395		0	0	0	0.000042	0.001	1	0%	0	0	0%	J
Copper	A	mg/L	0.0001157	0		0	0	0	0.00027	0.001	1	0%	0	0	0%	
Lead	A	mg/L	0.00001611	0		0	0	0	0.000056	0.001	1	0%	0	0	0%	U
Manganese	A	mg/L	0.01176	0.01176		0	0	0	0.000095	0.001	1	0%	0	0	0%	
Mercury	A	mg/L	0.00000423	0		0	0	0	0.00016	0.001	0.002	0%	0	0	0%	
Molybdenum	A	mg/L	0.0001148	0.0001148		0	0	0	0.00005	0.001	0.1	0%	0	0	0%	J
Nickel	A	mg/L	0.0007181	0.0007181		0	0	0	0.00063	0.001	1	0%	0	0	0%	J
Selenium	A	mg/L	0.0001645	0		0	0	0	0.00033	0.001	1	0%	0	0	0%	
Silver	A	mg/L	-0.00006297	0		0	0	0	0.00002	0.001	0.04	0%	0	0	0%	
Strontium	A	mg/L	0.09483	0.09483		0	0	0	0.00014	0.001	1	0%	0	0	0%	
Thallium	A	mg/L	0.00002111	0		0	0	0	0.000041	0.001	1	0%	0	0	0%	
Thorium	A	mg/L	-9.202E-06	0		0	0	0	0.00061	0.001	1	0%	0	0	0%	
Titanium	A	mg/L	0.001382	0.001382		0	0	0	0.000094	0.001	1	0%	0	0	0%	
Uranium	A	mg/L	0.000009759	0		0	0	0	0.000052	0.0003	1	0%	0	0	0%	
Boron	B	mg/L	0.03027	0.03027		0	0	0	0.00561	0.00561	1	0%	0	0	0%	D
Calcium	B	mg/L	14.83	14.83		0	0	0	0.02092	0.02092	50	0%	0	0	0%	D
Iron	B	mg/L	0.01851	0.01851		0	0	0	0.00119	0.00119	5	0%	0	0	0%	
Iron, Ferrous	B	mg/L	0.01851	0.01851		0	0	0	0.00119	0.00119	5	0%	0	0	0%	
Magnesium	B	mg/L	15.64	15.64		0	0	0	0.00564	0.00564	50	0%	0	0	0%	D
Potassium	B	mg/L	1.815	1.815		0	0	0	0.08139	0.08139	50	0%	0	0	0%	D
Sodium	B	mg/L	33.23	33.23		0	0	0	0.02171	0.02171	50	0%	0	0	0%	D
Tin	B	mg/L	-0.0000648	0		0	0	0	0.00132	0.00132	0.1	0%	0	0	0%	
Zinc	B	mg/L	0.001553	0		0	0	0	0.00273	0.00273	1	0%	0	0	0%	L

Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist					
14998119	B22011129-001	ICPMS-6020-W-	SAMP		1/21/2022 11:00:	1	163063	1/19/2022 2:	0	0						
Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q

Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist					
14998119	B22011129-001	ICPMS-6020-W-	SAMP		1/21/2022 11:00:	1	163063	1/19/2022 2:	0	0						
Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
Antimony	A	mg/L	0.0008115	0.0008115		0	0	0	0.0002799	0.001	0.1	0%	0	0	0%	J
Arsenic	A	mg/L	0.0001816	0		0	0	0	0.0003412	0.001	1	0%	0	0	0%	U
Barium	A	mg/L	0.004978	0.004978		0	0	0	0.0002682	0.001	1	0%	0	0	0%	
Cadmium	A	mg/L	0.000006782	0		0	0	0	1.821E-05	0.005	1	0%	0	0	0%	U
Cerium	A	mg/L	0.0003684	0.0003684		0	0	0	2.738E-05	0.001	0.1	0%	0	0	0%	J
Cobalt	A	mg/L	0.0003824	0.0003824		0	0	0	9.541E-05	0.001	1	0%	0	0	0%	J
Lanthanum	A	mg/L	0.0001393	0.0001393		0	0	0	0.000055	0.001	0.1	0%	0	0	0%	J
Lead	A	mg/L	0.0003998	0.0003998		0	0	0	7.716E-05	0.001	1	0%	0	0	0%	J
Manganese	A	mg/L	0.03747	0.03747		0	0	0	0.0005399	0.001	1	0%	0	0	0%	
Molybdenum	A	mg/L	0.0005254	0.0005254		0	0	0	0.0001763	0.001	0.1	0%	0	0	0%	J
Selenium	A	mg/L	0.0002099	0.0002099		0	0	0	0.0001357	0.001	1	0%	0	0	0%	J
Silver	A	mg/L	-0.00002879	0		0	0	0	4.281E-05	0.001	0.04	0%	0	0	0%	U
Strontium	A	mg/L	0.1025	0.1025		0	0	0	0.0002433	0.001	1	0%	0	0	0%	
Thallium	A	mg/L	0.0000373	0		0	0	0	0.0001114	0.001	1	0%	0	0	0%	U
Titanium	A	mg/L	0.02633	0.02633		0	0	0	0.0005733	0.001	1	0%	0	0	0%	
Uranium	A	mg/L	0.00001665	0		0	0	0	1.699E-05	0.0003	1	0%	0	0	0%	U
Boron	B	mg/L	0.0285	0.0285		0	0	0	0.0203802	0.01467	1	0%	0	0	0%	UD
Calcium	B	mg/L	14.51	14.51		0	0	0	0.0372936	0.1103481	50	0%	0	0	0%	D
Chromium	B	mg/L	0.003322	0.003322		0	0	0	0.0015375	0.0015375	1	0%	0	0	0%	UD
Copper	B	mg/L	0.002172	0.002172		0	0	0	0.0008747	0.00198	1	0%	0	0	0%	D
Iron	B	mg/L	0.4776	0.4776		0	0	0	0.007424	0.00513	5	0%	0	0	0%	D
Magnesium	B	mg/L	14.55	14.55		0	0	0	0.0104254	0.0081522	50	0%	0	0	0%	D
Nickel	B	mg/L	0.003188	0.003188		0	0	0	0.0002288	0.0024200	1	0%	0	0	0%	D
Potassium	B	mg/L	1.65	1.65		0	0	0	0.0765619	0.0261205	50	0%	0	0	0%	D
Sodium	B	mg/L	31.15	31.15		0	0	0	0.1019461	0.7330269	50	0%	0	0	0%	D
Thorium	B	mg/L	0.00002183	0		0	0	0	0.0003796	0.00415	1	0%	0	0	0%	UL
Tin	B	mg/L	0.0006242	0		0	0	0	0.0018932	0.0011175	0.1	0%	0	0	0%	U
Vanadium	B	mg/L	0.01937	0.01937		0	0	0	0.0039127	0.0021085	1	0%	0	0	0%	D
Zinc	B	mg/L	0.0137	0.0137		0	0	0	0.0011617	0.0065544	1	0%	0	0	0%	D

Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist					
14998120	B22011130-001	ICPMS-6020-W-	SAMP		1/21/2022 11:06:	1	R373694		0	0						
Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q

Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist					
14998120	B22011130-001	ICPMS-6020-W-	SAMP		1/21/2022 11:06:	1	R373694		0	0						
Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
Antimony	A	mg/L	-7.031E-06	0		0	0	0	0.00042	0.001	0.1	0%	0	0	0%	
Arsenic	A	mg/L	0.0002981	0.0002981		0	0	0	0.00019	0.001	1	0%	0	0	0%	J
Barium	A	mg/L	0.005723	0.005723		0	0	0	0.000042	0.001	1	0%	0	0	0%	
Cadmium	A	mg/L	0.00003637	0.00003637		0	0	0	0.000025	0.001	1	0%	0	0	0%	J
Cerium	A	mg/L	0.000002374	0		0	0	0	0.000012	0.001	0.1	0%	0	0	0%	
Chromium	A	mg/L	0.00163	0.00163		0	0	0	0.00018	0.001	1	0%	0	0	0%	
Cobalt	A	mg/L	0.00001793	0		0	0	0	0.000042	0.001	1	0%	0	0	0%	
Copper	A	mg/L	0.0001957	0		0	0	0	0.00027	0.001	1	0%	0	0	0%	
Lead	A	mg/L	0.00001067	0		0	0	0	0.000056	0.001	1	0%	0	0	0%	U
Manganese	A	mg/L	0.00007648	0		0	0	0	0.000095	0.001	1	0%	0	0	0%	
Mercury	A	mg/L	0.000002265	0		0	0	0	0.00016	0.001	0.002	0%	0	0	0%	
Molybdenum	A	mg/L	0.0007269	0.0007269		0	0	0	0.00005	0.001	0.1	0%	0	0	0%	J
Nickel	A	mg/L	0.0002081	0		0	0	0	0.00063	0.001	1	0%	0	0	0%	
Selenium	A	mg/L	0.00005329	0		0	0	0	0.00033	0.001	1	0%	0	0	0%	
Silver	A	mg/L	-0.00005767	0		0	0	0	0.00002	0.001	0.04	0%	0	0	0%	
Strontium	A	mg/L	0.1164	0.1164		0	0	0	0.00014	0.001	1	0%	0	0	0%	
Thallium	A	mg/L	0.000007126	0		0	0	0	0.000041	0.001	1	0%	0	0	0%	
Thorium	A	mg/L	-0.00001035	0		0	0	0	0.00061	0.001	1	0%	0	0	0%	
Titanium	A	mg/L	0.001035	0.001035		0	0	0	0.000094	0.001	1	0%	0	0	0%	
Uranium	A	mg/L	0.00003377	0		0	0	0	0.000052	0.0003	1	0%	0	0	0%	
Boron	B	mg/L	0.02148	0.02148		0	0	0	0.00561	0.00561	1	0%	0	0	0%	D
Calcium	B	mg/L	17.32	17.32		0	0	0	0.02092	0.02092	50	0%	0	0	0%	D
Iron	B	mg/L	0.001948	0.001948		0	0	0	0.00119	0.00119	5	0%	0	0	0%	
Iron, Ferrous	B	mg/L	0.001948	0.001948		0	0	0	0.00119	0.00119	5	0%	0	0	0%	
Magnesium	B	mg/L	15.49	15.49		0	0	0	0.00564	0.00564	50	0%	0	0	0%	D
Potassium	B	mg/L	2.341	2.341		0	0	0	0.08139	0.08139	50	0%	0	0	0%	D
Sodium	B	mg/L	36.41	36.41		0	0	0	0.02171	0.02171	50	0%	0	0	0%	D
Tin	B	mg/L	-0.00008137	0		0	0	0	0.00132	0.00132	0.1	0%	0	0	0%	
Zinc	B	mg/L	0.003024	0.003024		0	0	0	0.00273	0.00273	1	0%	0	0	0%	D

Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist					
14998121	B22011130-001	ICPMS-6020-W-	SAMP		1/21/2022 11:12:	1	163063	1/19/2022 2:	0	0						
Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q

Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist					
14998121	B22011130-001	ICPMS-6020-W-	SAMP		1/21/2022 11:12:	1	163063	1/19/2022 2:	0	0						
Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
Antimony	A	mg/L	0.00001403	0		0	0	0	0.0002799	0.001	0.1	0%	0	0	0%	U
Arsenic	A	mg/L	0.0005917	0.0005917		0	0	0	0.0003412	0.001	1	0%	0	0	0%	J
Barium	A	mg/L	0.005966	0.005966		0	0	0	0.0002682	0.001	1	0%	0	0	0%	
Cadmium	A	mg/L	-0.00000208	0		0	0	0	1.821E-05	0.005	1	0%	0	0	0%	U
Cerium	A	mg/L	0.000009284	0		0	0	0	2.738E-05	0.001	0.1	0%	0	0	0%	U
Cobalt	A	mg/L	0.0001026	0.0001026		0	0	0	9.541E-05	0.001	1	0%	0	0	0%	J
Lanthanum	A	mg/L	0.000003889	0		0	0	0	0.000055	0.001	0.1	0%	0	0	0%	U
Lead	A	mg/L	0.00002102	0		0	0	0	7.716E-05	0.001	1	0%	0	0	0%	U
Manganese	A	mg/L	0.0002813	0		0	0	0	0.0005399	0.001	1	0%	0	0	0%	U
Molybdenum	A	mg/L	0.0008844	0.0008844		0	0	0	0.0001763	0.001	0.1	0%	0	0	0%	J
Selenium	A	mg/L	0.0001055	0		0	0	0	0.0001357	0.001	1	0%	0	0	0%	U
Silver	A	mg/L	-0.00005202	0		0	0	0	4.281E-05	0.001	0.04	0%	0	0	0%	U
Strontium	A	mg/L	0.1227	0.1227		0	0	0	0.0002433	0.001	1	0%	0	0	0%	
Thallium	A	mg/L	0.00002462	0		0	0	0	0.0001114	0.001	1	0%	0	0	0%	U
Titanium	A	mg/L	0.002082	0.002082		0	0	0	0.0005733	0.001	1	0%	0	0	0%	
Uranium	A	mg/L	0.00003605	0.00003605		0	0	0	1.699E-05	0.0003	1	0%	0	0	0%	J
Boron	B	mg/L	0.0206	0.0206		0	0	0	0.0203802	0.01467	1	0%	0	0	0%	UD
Calcium	B	mg/L	16.34	16.34		0	0	0	0.0372936	0.1103481	50	0%	0	0	0%	D
Chromium	B	mg/L	0.001867	0.001867		0	0	0	0.0015375	0.0015375	1	0%	0	0	0%	UD
Copper	B	mg/L	0.0003099	0		0	0	0	0.0008747	0.00198	1	0%	0	0	0%	UL
Iron	B	mg/L	0.01164	0.01164		0	0	0	0.007424	0.00513	5	0%	0	0	0%	UD
Magnesium	B	mg/L	14.13	14.13		0	0	0	0.0104254	0.0081522	50	0%	0	0	0%	D
Nickel	B	mg/L	0.0003234	0.0003234		0	0	0	0.0002288	0.0024200	1	0%	0	0	0%	JL
Potassium	B	mg/L	2.04	2.04		0	0	0	0.0765619	0.0261205	50	0%	0	0	0%	D
Sodium	B	mg/L	34.05	34.05		0	0	0	0.1019461	0.7330269	50	0%	0	0	0%	D
Thorium	B	mg/L	0.000005429	0		0	0	0	0.0003796	0.00415	1	0%	0	0	0%	UL
Tin	B	mg/L	0.0003966	0		0	0	0	0.0018932	0.0011175	0.1	0%	0	0	0%	U
Vanadium	B	mg/L	0.01096	0.01096		0	0	0	0.0039127	0.0021085	1	0%	0	0	0%	D
Zinc	B	mg/L	0.00538	0.00538		0	0	0	0.0011617	0.0065544	1	0%	0	0	0%	JL

Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist					
14998122	B22011131-001	ICPMS-6020-W-	SAMP		1/21/2022 11:19:	1	R373694		0	0						
Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q

Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist					
14998122	B22011131-001	ICPMS-6020-W-	SAMP		1/21/2022 11:19:	1	R373694		0	0						
Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
Antimony	A	mg/L	0.0003964	0		0	0	0	0.00042	0.001	0.1	0%	0	0	0%	
Arsenic	A	mg/L	0.00119	0.00119		0	0	0	0.00019	0.001	1	0%	0	0	0%	
Barium	A	mg/L	0.02133	0.02133		0	0	0	0.000042	0.001	1	0%	0	0	0%	
Cadmium	A	mg/L	0.00003512	0.00003512		0	0	0	0.000025	0.001	1	0%	0	0	0%	J
Cerium	A	mg/L	0.000001339	0		0	0	0	0.000012	0.001	0.1	0%	0	0	0%	
Chromium	A	mg/L	0.002006	0.002006		0	0	0	0.00018	0.001	1	0%	0	0	0%	
Cobalt	A	mg/L	0.0000125	0		0	0	0	0.000042	0.001	1	0%	0	0	0%	
Copper	A	mg/L	0.0002487	0		0	0	0	0.00027	0.001	1	0%	0	0	0%	
Lead	A	mg/L	0.000004602	0		0	0	0	0.000056	0.001	1	0%	0	0	0%	U
Manganese	A	mg/L	0.001987	0.001987		0	0	0	0.000095	0.001	1	0%	0	0	0%	
Mercury	A	mg/L	0.0001852	0.0001852		0	0	0	0.00016	0.001	0.002	0%	0	0	0%	J
Molybdenum	A	mg/L	0.00396	0.00396		0	0	0	0.00005	0.001	0.1	0%	0	0	0%	
Nickel	A	mg/L	0.0002827	0		0	0	0	0.00063	0.001	1	0%	0	0	0%	
Selenium	A	mg/L	0.00007606	0		0	0	0	0.00033	0.001	1	0%	0	0	0%	
Silver	A	mg/L	-0.00006117	0		0	0	0	0.00002	0.001	0.04	0%	0	0	0%	
Strontium	A	mg/L	0.1168	0.1168		0	0	0	0.00014	0.001	1	0%	0	0	0%	
Thallium	A	mg/L	0.000003154	0		0	0	0	0.000041	0.001	1	0%	0	0	0%	
Thorium	A	mg/L	-9.881E-06	0		0	0	0	0.00061	0.001	1	0%	0	0	0%	
Titanium	A	mg/L	0.0009548	0.0009548		0	0	0	0.000094	0.001	1	0%	0	0	0%	J
Uranium	A	mg/L	0.0002855	0.0002855		0	0	0	0.000052	0.0003	1	0%	0	0	0%	J
Boron	B	mg/L	0.02886	0.02886		0	0	0	0.00561	0.00561	1	0%	0	0	0%	D
Calcium	B	mg/L	12.86	12.86		0	0	0	0.02092	0.02092	50	0%	0	0	0%	D
Iron	B	mg/L	0.001219	0.001219		0	0	0	0.00119	0.00119	5	0%	0	0	0%	
Iron, Ferrous	B	mg/L	0.001219	0.001219		0	0	0	0.00119	0.00119	5	0%	0	0	0%	
Magnesium	B	mg/L	8.939	8.939		0	0	0	0.00564	0.00564	50	0%	0	0	0%	D
Potassium	B	mg/L	2.826	2.826		0	0	0	0.08139	0.08139	50	0%	0	0	0%	D
Sodium	B	mg/L	41.59	41.59		0	0	0	0.02171	0.02171	50	0%	0	0	0%	D
Tin	B	mg/L	-0.00001483	0		0	0	0	0.00132	0.00132	0.1	0%	0	0	0%	
Zinc	B	mg/L	0.0005341	0		0	0	0	0.00273	0.00273	1	0%	0	0	0%	L

Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist					
14998123	B22011131-001	ICPMS-6020-W-	SAMP		1/21/2022 11:25:	1	163063	1/19/2022 2:	0	0						
Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q

Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist					
14998123	B22011131-001	ICPMS-6020-W-	SAMP		1/21/2022 11:25:	1	163063	1/19/2022 2:	0	0						
Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
Antimony	A	mg/L	0.0004222	0.0004222		0	0	0	0.0002799	0.001	0.1	0%	0	0	0%	J
Arsenic	A	mg/L	0.00151	0.00151		0	0	0	0.0003412	0.001	1	0%	0	0	0%	
Barium	A	mg/L	0.02184	0.02184		0	0	0	0.0002682	0.001	1	0%	0	0	0%	
Cadmium	A	mg/L	-6.33E-07	0		0	0	0	1.821E-05	0.005	1	0%	0	0	0%	U
Cerium	A	mg/L	0.00004346	0.00004346		0	0	0	2.738E-05	0.001	0.1	0%	0	0	0%	J
Cobalt	A	mg/L	0.0001109	0.0001109		0	0	0	9.541E-05	0.001	1	0%	0	0	0%	J
Lanthanum	A	mg/L	0.00002156	0		0	0	0	0.000055	0.001	0.1	0%	0	0	0%	U
Lead	A	mg/L	0.00002434	0		0	0	0	7.716E-05	0.001	1	0%	0	0	0%	U
Manganese	A	mg/L	0.004207	0.004207		0	0	0	0.0005399	0.001	1	0%	0	0	0%	
Molybdenum	A	mg/L	0.004046	0.004046		0	0	0	0.0001763	0.001	0.1	0%	0	0	0%	
Selenium	A	mg/L	0.0001249	0		0	0	0	0.0001357	0.001	1	0%	0	0	0%	U
Silver	A	mg/L	-0.00005452	0		0	0	0	4.281E-05	0.001	0.04	0%	0	0	0%	U
Strontium	A	mg/L	0.1233	0.1233		0	0	0	0.0002433	0.001	1	0%	0	0	0%	
Thallium	A	mg/L	0.00001807	0		0	0	0	0.0001114	0.001	1	0%	0	0	0%	U
Titanium	A	mg/L	0.002296	0.002296		0	0	0	0.0005733	0.001	1	0%	0	0	0%	
Uranium	A	mg/L	0.0003055	0.0003055		0	0	0	1.699E-05	0.0003	1	0%	0	0	0%	
Boron	B	mg/L	0.02929	0.02929		0	0	0	0.0203802	0.01467	1	0%	0	0	0%	UD
Calcium	B	mg/L	12.47	12.47		0	0	0	0.0372936	0.1103481	50	0%	0	0	0%	D
Chromium	B	mg/L	0.002285	0.002285		0	0	0	0.0015375	0.0015375	1	0%	0	0	0%	UD
Copper	B	mg/L	0.000574	0		0	0	0	0.0008747	0.00198	1	0%	0	0	0%	UL
Iron	B	mg/L	0.02325	0.02325		0	0	0	0.007424	0.00513	5	0%	0	0	0%	D
Magnesium	B	mg/L	8.757	8.757		0	0	0	0.0104254	0.0081522	50	0%	0	0	0%	D
Nickel	B	mg/L	0.0003763	0.0003763		0	0	0	0.0002288	0.0024200	1	0%	0	0	0%	JL
Potassium	B	mg/L	2.544	2.544		0	0	0	0.0765619	0.0261205	50	0%	0	0	0%	D
Sodium	B	mg/L	39.57	39.57		0	0	0	0.1019461	0.7330269	50	0%	0	0	0%	D
Thorium	B	mg/L	0.000008811	0		0	0	0	0.0003796	0.00415	1	0%	0	0	0%	UL
Tin	B	mg/L	0.0004992	0		0	0	0	0.0018932	0.0011175	0.1	0%	0	0	0%	U
Vanadium	B	mg/L	0.01128	0.01128		0	0	0	0.0039127	0.0021085	1	0%	0	0	0%	D
Zinc	B	mg/L	0.002062	0.002062		0	0	0	0.0011617	0.0065544	1	0%	0	0	0%	JL

Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist					
14998124	B22011132-001	ICPMS-6020-W-	SAMP		1/21/2022 11:31:	1	R373694		0	0						
Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q

Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist					
14998124	B22011132-001	ICPMS-6020-W-	SAMP		1/21/2022 11:31:	1	R373694		0	0						
Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
Antimony	A	mg/L	0.000281	0		0	0	0	0.00042	0.001	0.1	0%	0	0	0%	
Arsenic	A	mg/L	-0.0000949	0		0	0	0	0.00019	0.001	1	0%	0	0	0%	
Barium	A	mg/L	0.004471	0.004471		0	0	0	0.000042	0.001	1	0%	0	0	0%	
Cadmium	A	mg/L	0.0000375	0.0000375		0	0	0	0.000025	0.001	1	0%	0	0	0%	J
Cerium	A	mg/L	5.524E-07	0		0	0	0	0.000012	0.001	0.1	0%	0	0	0%	
Chromium	A	mg/L	0.002114	0.002114		0	0	0	0.00018	0.001	1	0%	0	0	0%	
Cobalt	A	mg/L	0.000007926	0		0	0	0	0.000042	0.001	1	0%	0	0	0%	
Copper	A	mg/L	0.0004087	0.0004087		0	0	0	0.00027	0.001	1	0%	0	0	0%	J
Lead	A	mg/L	0.00001169	0		0	0	0	0.000056	0.001	1	0%	0	0	0%	U
Manganese	A	mg/L	0.00006936	0		0	0	0	0.000095	0.001	1	0%	0	0	0%	
Mercury	A	mg/L	0.00001301	0		0	0	0	0.00016	0.001	0.002	0%	0	0	0%	
Molybdenum	A	mg/L	0.0001644	0.0001644		0	0	0	0.00005	0.001	0.1	0%	0	0	0%	J
Nickel	A	mg/L	0.0002531	0		0	0	0	0.00063	0.001	1	0%	0	0	0%	
Selenium	A	mg/L	0.0001895	0		0	0	0	0.00033	0.001	1	0%	0	0	0%	
Silver	A	mg/L	-0.00006244	0		0	0	0	0.00002	0.001	0.04	0%	0	0	0%	
Strontium	A	mg/L	0.07706	0.07706		0	0	0	0.00014	0.001	1	0%	0	0	0%	
Thallium	A	mg/L	-5.263E-06	0		0	0	0	0.000041	0.001	1	0%	0	0	0%	
Thorium	A	mg/L	-9.944E-06	0		0	0	0	0.00061	0.001	1	0%	0	0	0%	
Titanium	A	mg/L	0.001217	0.001217		0	0	0	0.000094	0.001	1	0%	0	0	0%	
Uranium	A	mg/L	0.00001479	0		0	0	0	0.000052	0.0003	1	0%	0	0	0%	
Boron	B	mg/L	0.04169	0.04169		0	0	0	0.00561	0.00561	1	0%	0	0	0%	D
Calcium	B	mg/L	11.02	11.02		0	0	0	0.02092	0.02092	50	0%	0	0	0%	D
Iron	B	mg/L	0.0006713	0		0	0	0	0.00119	0.00119	5	0%	0	0	0%	
Iron, Ferrous	B	mg/L	0.0006713	0		0	0	0	0.00119	0.00119	5	0%	0	0	0%	
Magnesium	B	mg/L	11.14	11.14		0	0	0	0.00564	0.00564	50	0%	0	0	0%	D
Potassium	B	mg/L	1.775	1.775		0	0	0	0.08139	0.08139	50	0%	0	0	0%	D
Sodium	B	mg/L	35.44	35.44		0	0	0	0.02171	0.02171	50	0%	0	0	0%	D
Tin	B	mg/L	-0.00007773	0		0	0	0	0.00132	0.00132	0.1	0%	0	0	0%	
Zinc	B	mg/L	0.01025	0.01025		0	0	0	0.00273	0.00273	1	0%	0	0	0%	D

Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist					
14998125	B22011132-001	ICPMS-6020-W-	SAMP		1/21/2022 11:37:	1	163063	1/20/2022 8:	0	0						
Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q

Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist					
14998125	B22011132-001	ICPMS-6020-W-	SAMP		1/21/2022 11:37:	1	163063	1/20/2022 8:	0	0						
Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
Antimony	A	mg/L	0.0002859	0.0002859		0	0	0	0.0002799	0.001	0.1	0%	0	0	0%	J
Arsenic	A	mg/L	0.0001667	0		0	0	0	0.0003412	0.001	1	0%	0	0	0%	U
Barium	A	mg/L	0.005615	0.005615		0	0	0	0.0002682	0.001	1	0%	0	0	0%	
Cadmium	A	mg/L	0.000002037	0		0	0	0	1.821E-05	0.005	1	0%	0	0	0%	U
Cerium	A	mg/L	0.00003508	0.00003508		0	0	0	2.738E-05	0.001	0.1	0%	0	0	0%	J
Cobalt	A	mg/L	0.0001119	0.0001119		0	0	0	9.541E-05	0.001	1	0%	0	0	0%	J
Lanthanum	A	mg/L	0.00001699	0		0	0	0	0.000055	0.001	0.1	0%	0	0	0%	U
Lead	A	mg/L	0.0001426	0.0001426		0	0	0	7.716E-05	0.001	1	0%	0	0	0%	J
Manganese	A	mg/L	0.001212	0.001212		0	0	0	0.0005399	0.001	1	0%	0	0	0%	
Molybdenum	A	mg/L	0.0002204	0.0002204		0	0	0	0.0001763	0.001	0.1	0%	0	0	0%	J
Selenium	A	mg/L	0.0002263	0.0002263		0	0	0	0.0001357	0.001	1	0%	0	0	0%	J
Silver	A	mg/L	-0.00002552	0		0	0	0	4.281E-05	0.001	0.04	0%	0	0	0%	U
Strontium	A	mg/L	0.08028	0.08028		0	0	0	0.0002433	0.001	1	0%	0	0	0%	
Thallium	A	mg/L	0.00001324	0		0	0	0	0.0001114	0.001	1	0%	0	0	0%	U
Titanium	A	mg/L	0.002541	0.002541		0	0	0	0.0005733	0.001	1	0%	0	0	0%	
Uranium	A	mg/L	0.00001675	0		0	0	0	1.699E-05	0.0003	1	0%	0	0	0%	U
Boron	B	mg/L	0.0414	0.0414		0	0	0	0.0203802	0.01467	1	0%	0	0	0%	UD
Calcium	B	mg/L	10.85	10.85		0	0	0	0.0372936	0.1103481	50	0%	0	0	0%	D
Chromium	B	mg/L	0.002464	0.002464		0	0	0	0.0015375	0.0015375	1	0%	0	0	0%	UD
Copper	B	mg/L	0.0009106	0.0009106		0	0	0	0.0008747	0.00198	1	0%	0	0	0%	JL
Iron	B	mg/L	0.04234	0.04234		0	0	0	0.007424	0.00513	5	0%	0	0	0%	D
Magnesium	B	mg/L	10.88	10.88		0	0	0	0.0104254	0.0081522	50	0%	0	0	0%	D
Nickel	B	mg/L	0.0004257	0.0004257		0	0	0	0.0002288	0.0024200	1	0%	0	0	0%	JL
Potassium	B	mg/L	1.57	1.57		0	0	0	0.0765619	0.0261205	50	0%	0	0	0%	D
Sodium	B	mg/L	34.22	34.22		0	0	0	0.1019461	0.7330269	50	0%	0	0	0%	D
Thorium	B	mg/L	0.000002105	0		0	0	0	0.0003796	0.00415	1	0%	0	0	0%	UL
Tin	B	mg/L	0.0005064	0		0	0	0	0.0018932	0.0011175	0.1	0%	0	0	0%	U
Vanadium	B	mg/L	0.01758	0.01758		0	0	0	0.0039127	0.0021085	1	0%	0	0	0%	D
Zinc	B	mg/L	0.02314	0.02314		0	0	0	0.0011617	0.0065544	1	0%	0	0	0%	D

Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist					
14998126	B22011133-001	ICPMS-6020-W-	SAMP		1/21/2022 11:44:	1	R373694		0	0						
Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q

Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist					
14998126	B22011133-001	ICPMS-6020-W-	SAMP		1/21/2022 11:44:	1	R373694		0	0						
Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
Antimony	A	mg/L	0.0001326	0		0	0	0	0.00042	0.001	0.1	0%	0	0	0%	
Arsenic	A	mg/L	0.001093	0.001093		0	0	0	0.00019	0.001	1	0%	0	0	0%	
Barium	A	mg/L	0.0724	0.0724		0	0	0	0.000042	0.001	1	0%	0	0	0%	
Cadmium	A	mg/L	0.00003774	0.00003774		0	0	0	0.000025	0.001	1	0%	0	0	0%	J
Cerium	A	mg/L	6.775E-07	0		0	0	0	0.000012	0.001	0.1	0%	0	0	0%	
Chromium	A	mg/L	0.009272	0.009272		0	0	0	0.00018	0.001	1	0%	0	0	0%	
Cobalt	A	mg/L	0.0008989	0.0008989		0	0	0	0.000042	0.001	1	0%	0	0	0%	J
Copper	A	mg/L	0.0009924	0.0009924		0	0	0	0.00027	0.001	1	0%	0	0	0%	J
Lead	A	mg/L	0.000005822	0		0	0	0	0.000056	0.001	1	0%	0	0	0%	U
Manganese	A	mg/L	0.002718	0.002718		0	0	0	0.000095	0.001	1	0%	0	0	0%	
Mercury	A	mg/L	0.00002674	0		0	0	0	0.00016	0.001	0.002	0%	0	0	0%	
Molybdenum	A	mg/L	0.0009996	0.0009996		0	0	0	0.00005	0.001	0.1	0%	0	0	0%	J
Nickel	A	mg/L	0.05779	0.05779		0	0	0	0.00063	0.001	1	0%	0	0	0%	
Selenium	A	mg/L	0.004427	0.004427		0	0	0	0.00033	0.001	1	0%	0	0	0%	
Silver	A	mg/L	-0.00005871	0		0	0	0	0.00002	0.001	0.04	0%	0	0	0%	
Thallium	A	mg/L	-0.00001612	0		0	0	0	0.000041	0.001	1	0%	0	0	0%	
Thorium	A	mg/L	-9.707E-06	0		0	0	0	0.00061	0.001	1	0%	0	0	0%	
Titanium	A	mg/L	0.001958	0.001958		0	0	0	0.000094	0.001	1	0%	0	0	0%	
Uranium	A	mg/L	0.00007574	0.00007574		0	0	0	0.000052	0.0003	1	0%	0	0	0%	J
Boron	B	mg/L	0.04515	0.04515		0	0	0	0.00561	0.00561	1	0%	0	0	0%	D
Iron	B	mg/L	0.004351	0.004351		0	0	0	0.00119	0.00119	5	0%	0	0	0%	
Iron, Ferrous	B	mg/L	0.004351	0.004351		0	0	0	0.00119	0.00119	5	0%	0	0	0%	
Potassium	B	mg/L	7.22	7.22		0	0	0	0.08139	0.08139	50	0%	0	0	0%	D
Tin	B	mg/L	-0.00006635	0		0	0	0	0.00132	0.00132	0.1	0%	0	0	0%	
Zinc	B	mg/L	0.001154	0		0	0	0	0.00273	0.00273	1	0%	0	0	0%	L

Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist					
14998127	CCV	ICPMS-6020-W-	CCV		1/21/2022 11:50:	1	R373694		0	0						
Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
Aluminum	A	mg/L	0.05818	0.05818		0.05	0	0	0.00086	0.001	1	116%	90	110	0%	S
Antimony	A	mg/L	0.0523	0.0523		0.05	0	0	0.00042	0.001	0.1	105%	90	110	0%	
Arsenic	A	mg/L	0.05116	0.05116		0.05	0	0	0.00019	0.001	1	102%	90	110	0%	
Barium	A	mg/L	0.04946	0.04946		0.05	0	0	0.000042	0.001	1	99%	90	110	0%	
Beryllium	A	mg/L	0.04736	0.04736		0.05	0	0	0.00012	0.001	1	95%	90	110	0%	

Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist					
14998127	CCV	ICPMS-6020-W-	CCV		1/21/2022 11:50:	1	R373694		0	0						
Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
Boron	A	mg/L	0.04881	0.04881		0.05	0	0	0.00561	0.00561	1	98%	90	110	0%	
Cadmium	A	mg/L	0.05042	0.05042		0.05	0	0	0.000025	0.001	1	101%	90	110	0%	
Calcium	A	mg/L	12.71	12.71		12.5	0	0	0.02092	0.02092	50	102%	90	110	0%	
Cerium	A	mg/L	0.05136	0.05136		0.05	0	0	0.000012	0.001	0.1	103%	90	110	0%	
Chromium	A	mg/L	0.04926	0.04926		0.05	0	0	0.00018	0.001	1	99%	90	110	0%	
Cobalt	A	mg/L	0.04884	0.04884		0.05	0	0	0.000042	0.001	1	98%	90	110	0%	
Copper	A	mg/L	0.05085	0.05085		0.05	0	0	0.00027	0.001	1	102%	90	110	0%	
Iron	A	mg/L	1.344	1.344		1.3	0	0	0.00119	0.00119	5	103%	90	110	0%	
Lanthanum	A	mg/L	0.05041	0.05041		0.05	0	0	0.000011	0.001	0.1	101%	90	110	0%	
Lead	A	mg/L	0.05097	0.05097		0.05	0	0	0.000056	0.001	1	102%	90	110	0%	
Magnesium	A	mg/L	12.22	12.22		12.5	0	0	0.00564	0.00564	50	98%	90	110	0%	
Manganese	A	mg/L	0.05027	0.05027		0.05	0	0	0.000095	0.001	1	101%	90	110	0%	
Mercury	A	mg/L	0.0009697	0.0009697		0.001	0	0	0.00016	0.001	0.002	97%	90	110	0%	
Molybdenum	A	mg/L	0.05008	0.05008		0.05	0	0	0.00005	0.001	0.1	100%	90	110	0%	
Nickel	A	mg/L	0.05044	0.05044		0.05	0	0	0.00063	0.001	1	101%	90	110	0%	
Potassium	A	mg/L	12.18	12.18		12.5	0	0	0.08139	0.08139	50	97%	90	110	0%	
Selenium	A	mg/L	0.05209	0.05209		0.05	0	0	0.00033	0.001	1	104%	90	110	0%	
Silicon	A	mg/L	0.2286	0.2286		0.2	0	0	0.01223	0.1	0.4	114%	90	110	0%	S
Silver	A	mg/L	0.01981	0.01981		0.02	0	0	0.00002	0.001	0.04	99%	90	110	0%	
Sodium	A	mg/L	12.58	12.58		12.5	0	0	0.02171	0.02171	50	101%	90	110	0%	
Strontium	A	mg/L	0.05114	0.05114		0.05	0	0	0.00014	0.001	1	102%	90	110	0%	
Thallium	A	mg/L	0.05191	0.05191		0.05	0	0	0.000041	0.001	1	104%	90	110	0%	
Thorium	A	mg/L	0.04975	0.04975		0.05	0	0	0.00061	0.001	1	99%	90	110	0%	
Tin	A	mg/L	0.0523	0.0523		0.05	0	0	0.00132	0.00132	0.1	105%	90	110	0%	
Titanium	A	mg/L	0.04937	0.04937		0.05	0	0	0.000094	0.001	1	99%	90	110	0%	
Uranium	A	mg/L	0.05085	0.05085		0.05	0	0	0.000052	0.0003	1	102%	90	110	0%	
Vanadium	A	mg/L	0.05149	0.05149		0.05	0	0	0.0013	0.0013	1	103%	90	110	0%	
Zinc	A	mg/L	0.05105	0.05105		0.05	0	0	0.00273	0.00273	1	102%	90	110	0%	
Iron, Ferrous	C	mg/L	1.344	1.344		0	0	0	0.00119	0.00119	5	0%	0	0	0%	

Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist					
14998128	CCB	ICPMS-6020-W-	CCB		1/21/2022 11:56:	1	R373694		0	0						
Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q

Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist					
14998128	CCB	ICPMS-6020-W-	CCB		1/21/2022 11:56:	1	R373694		0	0						
Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
Aluminum	A	mg/L	-0.000339	-0.000339		0	0	0	0.00086	0.001	1	0%				0%
Antimony	A	mg/L	0.00007495	0.00007495		0	0	0	0.00042	0.001	0.1	0%				0%
Arsenic	A	mg/L	0.00006573	0.00006573		0	0	0	0.00019	0.001	1	0%				0%
Barium	A	mg/L	-1.733E-06	-1.733E-06		0	0	0	0.000042	0.001	1	0%				0%
Beryllium	A	mg/L	-0.00005059	-0.00005059		0	0	0	0.00012	0.001	1	0%				0%
Boron	A	mg/L	0.0003157	0.0003157		0	0	0	0.00561	0.00561	1	0%				0%
Cadmium	A	mg/L	-1.127E-06	-1.127E-06		0	0	0	0.000025	0.001	1	0%				0%
Calcium	A	mg/L	-0.0002939	-0.0002939		0	0	0	0.02092	0.02092	50	0%				0%
Cerium	A	mg/L	5.567E-08	5.567E-08		0	0	0	0.000012	0.001	0.1	0%	0	0		0%
Chromium	A	mg/L	0.00002364	0.00002364		0	0	0	0.00018	0.001	1	0%				0%
Cobalt	A	mg/L	-1.098E-06	-1.098E-06		0	0	0	0.000042	0.001	1	0%				0%
Copper	A	mg/L	0.000002342	0.000002342		0	0	0	0.00027	0.001	1	0%				0%
Iron	A	mg/L	0.00006397	0.00006397		0	0	0	0.00119	0.00119	5	0%				0%
Lanthanum	A	mg/L	-2.341E-07	-2.341E-07		0	0	0	0.000011	0.001	0.1	0%	0	0		0%
Lead	A	mg/L	0.000004174	0.000004174		0	0	0	0.000056	0.001	1	0%				0%
Magnesium	A	mg/L	0.0008478	0.0008478		0	0	0	0.00564	0.00564	50	0%				0%
Manganese	A	mg/L	5.339E-07	5.339E-07		0	0	0	0.000095	0.001	1	0%				0%
Mercury	A	mg/L	0.000003297	0.000003297		0	0	0	0.00016	0.001	0.002	0%				0%
Molybdenum	A	mg/L	0.00001823	0.00001823		0	0	0	0.00005	0.001	0.1	0%				0%
Nickel	A	mg/L	-6.251E-07	-6.251E-07		0	0	0	0.00063	0.001	1	0%				0%
Potassium	A	mg/L	-0.01622	-0.01622		0	0	0	0.08139	0.08139	50	0%				0%
Selenium	A	mg/L	0.00001621	0.00001621		0	0	0	0.00033	0.001	1	0%				0%
Silicon	A	mg/L	0.003727	0.003727		0	0	0	0.01223	0.1	0.4	0%	0	0		0%
Silver	A	mg/L	-8.698E-07	-8.698E-07		0	0	0	0.00002	0.001	0.04	0%				0%
Sodium	A	mg/L	0.02506	0.02506		0	0	0	0.02171	0.02171	50	0%				0%
Strontium	A	mg/L	-9.843E-06	-9.843E-06		0	0	0	0.00014	0.001	1	0%	0	0		0%
Thallium	A	mg/L	0.0001068	0.0001068		0	0	0	0.000041	0.001	1	0%	0	0		0%
Thorium	A	mg/L	0.0000115	0.0000115		0	0	0	0.00061	0.001	1	0%	0	0		0%
Tin	A	mg/L	0.0000378	0.0000378		0	0	0	0.00132	0.00132	0.1	0%	0	0		0%
Titanium	A	mg/L	0.0000113	0.0000113		0	0	0	0.000094	0.001	1	0%	0	0		0%
Uranium	A	mg/L	0.000002424	0.000002424		0	0	0	0.000052	0.0003	1	0%	0	0		0%
Vanadium	A	mg/L	0.001974	0.001974		0	0	0	0.0013	0.0013	1	0%	0	0		0%
Zinc	A	mg/L	0.00002787	0.00002787		0	0	0	0.00273	0.00273	1	0%	0	0		0%
Iron, Ferrous	C	mg/L	0.00006397	0.00006397		0	0	0	0.00119	0.00119	5	0%	0	0		0%

Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist					
14998129	B22011133-001	ICPMS-6020-W-	SAMP		1/22/2022 12:02:	1	163063	1/19/2022 2:	0	0						
Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
Antimony	A	mg/L	0.0002347	0		0	0	0	0.0002799	0.001	0.1	0%	0	0	0%	U
Arsenic	A	mg/L	0.001634	0.001634		0	0	0	0.0003412	0.001	1	0%	0	0	0%	
Barium	A	mg/L	0.07329	0.07329		0	0	0	0.0002682	0.001	1	0%	0	0	0%	
Cadmium	A	mg/L	0.000006096	0		0	0	0	1.821E-05	0.005	1	0%	0	0	0%	U
Cerium	A	mg/L	0.000001372	0		0	0	0	2.738E-05	0.001	0.1	0%	0	0	0%	U
Cobalt	A	mg/L	0.001106	0.001106		0	0	0	9.541E-05	0.001	1	0%	0	0	0%	
Lanthanum	A	mg/L	0.000001288	0		0	0	0	0.000055	0.001	0.1	0%	0	0	0%	U
Lead	A	mg/L	0.00002835	0		0	0	0	7.716E-05	0.001	1	0%	0	0	0%	U
Manganese	A	mg/L	0.00293	0.00293		0	0	0	0.0005399	0.001	1	0%	0	0	0%	
Molybdenum	A	mg/L	0.001347	0.001347		0	0	0	0.0001763	0.001	0.1	0%	0	0	0%	
Selenium	A	mg/L	0.004572	0.004572		0	0	0	0.0001357	0.001	1	0%	0	0	0%	
Silver	A	mg/L	-0.00005973	0		0	0	0	4.281E-05	0.001	0.04	0%	0	0	0%	U
Thallium	A	mg/L	0.00005017	0		0	0	0	0.0001114	0.001	1	0%	0	0	0%	U
Titanium	A	mg/L	0.002131	0.002131		0	0	0	0.0005733	0.001	1	0%	0	0	0%	
Uranium	A	mg/L	0.00007933	0.00007933		0	0	0	1.699E-05	0.0003	1	0%	0	0	0%	J
Boron	B	mg/L	0.04443	0.04443		0	0	0	0.0203802	0.01467	1	0%	0	0	0%	UD
Chromium	B	mg/L	0.01244	0.01244		0	0	0	0.0015375	0.0015375	1	0%	0	0	0%	D
Copper	B	mg/L	0.0004663	0		0	0	0	0.0008747	0.00198	1	0%	0	0	0%	UL
Iron	B	mg/L	0.08678	0.08678		0	0	0	0.007424	0.00513	5	0%	0	0	0%	D
Nickel	B	mg/L	0.05736	0.05736		0	0	0	0.0002288	0.0024200	1	0%	0	0	0%	D
Thorium	B	mg/L	0.00003278	0		0	0	0	0.0003796	0.00415	1	0%	0	0	0%	UL
Tin	B	mg/L	0.0003988	0		0	0	0	0.0018932	0.0011175	0.1	0%	0	0	0%	U
Vanadium	B	mg/L	0.01162	0.01162		0	0	0	0.0039127	0.0021085	1	0%	0	0	0%	D
Zinc	B	mg/L	0.0003888	0		0	0	0	0.0011617	0.0065544	1	0%	0	0	0%	UL

Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist					
14998130	B22011134-001	ICPMS-6020-W-	SAMP		1/22/2022 12:09:	1	R373694		0	0						
Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
Antimony	A	mg/L	0.00008048	0		0	0	0	0.00042	0.001	0.1	0%	0	0	0%	
Arsenic	A	mg/L	0.0008035	0.0008035		0	0	0	0.00019	0.001	1	0%	0	0	0%	J
Barium	A	mg/L	0.003737	0.003737		0	0	0	0.000042	0.001	1	0%	0	0	0%	
Cadmium	A	mg/L	0.0000314	0.0000314		0	0	0	0.000025	0.001	1	0%	0	0	0%	J
Cerium	A	mg/L	0.00003768	0.00003768		0	0	0	0.000012	0.001	0.1	0%	0	0	0%	J
Chromium	A	mg/L	0.00000358	0		0	0	0	0.00018	0.001	1	0%	0	0	0%	

Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist					
14998130	B22011134-001	ICPMS-6020-W-	SAMP		1/22/2022 12:09:	1	R373694		0	0						
Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
Cobalt	A	mg/L	0.0004601	0.0004601		0	0	0	0.000042	0.001	1	0%	0	0	0%	J
Copper	A	mg/L	0.0003775	0.0003775		0	0	0	0.00027	0.001	1	0%	0	0	0%	J
Lead	A	mg/L	0.0000166	0		0	0	0	0.000056	0.001	1	0%	0	0	0%	U
Manganese	A	mg/L	0.4932	0.4932		0	0	0	0.000095	0.001	1	0%	0	0	0%	
Mercury	A	mg/L	0.0002537	0.0002537		0	0	0	0.00016	0.001	0.002	0%	0	0	0%	J
Molybdenum	A	mg/L	0.0003488	0.0003488		0	0	0	0.00005	0.001	0.1	0%	0	0	0%	J
Nickel	A	mg/L	0.0009309	0.0009309		0	0	0	0.00063	0.001	1	0%	0	0	0%	J
Selenium	A	mg/L	0.000008798	0		0	0	0	0.00033	0.001	1	0%	0	0	0%	
Silver	A	mg/L	-0.00005972	0		0	0	0	0.00002	0.001	0.04	0%	0	0	0%	
Strontium	A	mg/L	0.07085	0.07085		0	0	0	0.00014	0.001	1	0%	0	0	0%	
Thallium	A	mg/L	0.000004007	0		0	0	0	0.000041	0.001	1	0%	0	0	0%	
Thorium	A	mg/L	-0.00000893	0		0	0	0	0.00061	0.001	1	0%	0	0	0%	
Titanium	A	mg/L	0.003167	0.003167		0	0	0	0.000094	0.001	1	0%	0	0	0%	
Uranium	A	mg/L	0.00002087	0		0	0	0	0.000052	0.0003	1	0%	0	0	0%	
Boron	B	mg/L	0.06345	0.06345		0	0	0	0.00561	0.00561	1	0%	0	0	0%	D
Calcium	B	mg/L	10.68	10.68		0	0	0	0.02092	0.02092	50	0%	0	0	0%	D
Iron	B	mg/L	0.4005	0.4005		0	0	0	0.00119	0.00119	5	0%	0	0	0%	
Iron, Ferrous	B	mg/L	0.4005	0.4005		0	0	0	0.00119	0.00119	5	0%	0	0	0%	
Magnesium	B	mg/L	10.5	10.5		0	0	0	0.00564	0.00564	50	0%	0	0	0%	D
Sodium	B	mg/L	40.65	40.65		0	0	0	0.02171	0.02171	50	0%	0	0	0%	D
Tin	B	mg/L	-0.00006832	0		0	0	0	0.00132	0.00132	0.1	0%	0	0	0%	
Zinc	B	mg/L	0.001452	0		0	0	0	0.00273	0.00273	1	0%	0	0	0%	L

Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist					
14998131	B22011134-001	ICPMS-6020-W-	SAMP		1/22/2022 12:15:	1	163063	1/19/2022 3:	0	0						
Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
Antimony	A	mg/L	0.0001376	0		0	0	0	0.0002799	0.001	0.1	0%	0	0	0%	U
Arsenic	A	mg/L	0.001298	0.001298		0	0	0	0.0003412	0.001	1	0%	0	0	0%	
Barium	A	mg/L	0.004069	0.004069		0	0	0	0.0002682	0.001	1	0%	0	0	0%	
Cadmium	A	mg/L	-4.955E-07	0		0	0	0	1.821E-05	0.005	1	0%	0	0	0%	U
Cerium	A	mg/L	0.00006226	0.00006226		0	0	0	2.738E-05	0.001	0.1	0%	0	0	0%	J
Cobalt	A	mg/L	0.00053	0.00053		0	0	0	9.541E-05	0.001	1	0%	0	0	0%	J
Lanthanum	A	mg/L	0.00001538	0		0	0	0	0.000055	0.001	0.1	0%	0	0	0%	U
Lead	A	mg/L	0.00004677	0		0	0	0	7.716E-05	0.001	1	0%	0	0	0%	U

Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist					
14998131	B22011134-001	ICPMS-6020-W- SAMP			1/22/2022 12:15:	1	163063	1/19/2022 3:	0	0						
Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
Manganese	A	mg/L	0.5033	0.5033		0	0	0	0.0005399	0.001	1	0%	0	0	0%	
Molybdenum	A	mg/L	0.000556	0.000556		0	0	0	0.0001763	0.001	0.1	0%	0	0	0%	J
Selenium	A	mg/L	0.00005191	0		0	0	0	0.0001357	0.001	1	0%	0	0	0%	U
Silver	A	mg/L	-0.00004862	0		0	0	0	4.281E-05	0.001	0.04	0%	0	0	0%	U
Strontium	A	mg/L	0.07368	0.07368		0	0	0	0.0002433	0.001	1	0%	0	0	0%	
Thallium	A	mg/L	0.00001669	0		0	0	0	0.0001114	0.001	1	0%	0	0	0%	U
Titanium	A	mg/L	0.003704	0.003704		0	0	0	0.0005733	0.001	1	0%	0	0	0%	
Uranium	A	mg/L	0.00001766	0.00001766		0	0	0	1.699E-05	0.0003	1	0%	0	0	0%	J
Boron	B	mg/L	0.06786	0.06786		0	0	0	0.0203802	0.01467	1	0%	0	0	0%	D
Calcium	B	mg/L	10.28	10.28		0	0	0	0.0372936	0.1103481	50	0%	0	0	0%	D
Chromium	B	mg/L	0.0002112	0		0	0	0	0.0015375	0.0015375	1	0%	0	0	0%	UL
Copper	B	mg/L	0.0008374	0		0	0	0	0.0008747	0.00198	1	0%	0	0	0%	UL
Iron	B	mg/L	0.4364	0.4364		0	0	0	0.007424	0.00513	5	0%	0	0	0%	D
Magnesium	B	mg/L	10.4	10.4		0	0	0	0.0104254	0.0081522	50	0%	0	0	0%	D
Nickel	B	mg/L	0.0009891	0.0009891		0	0	0	0.0002288	0.0024200	1	0%	0	0	0%	JL
Sodium	B	mg/L	40.71	40.71		0	0	0	0.1019461	0.7330269	50	0%	0	0	0%	D
Thorium	B	mg/L	0.000007451	0		0	0	0	0.0003796	0.00415	1	0%	0	0	0%	UL
Tin	B	mg/L	0.000406	0		0	0	0	0.0018932	0.0011175	0.1	0%	0	0	0%	U
Vanadium	B	mg/L	0.004989	0.004989		0	0	0	0.0039127	0.0021085	1	0%	0	0	0%	UD
Zinc	B	mg/L	0.001219	0.001219		0	0	0	0.0011617	0.0065544	1	0%	0	0	0%	JL

Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist					
14998132	B22011134-001	ICPMS-6020-W- SD			1/22/2022 12:21:	5	163063	1/19/2022 3:	0	1E+07						
Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
Aluminum	A	mg/L	0.006725	0.033625		0	0	0.02013	0.0193736	0.0159875	1	0%	0	0		N
Antimony	A	mg/L	0.00002141	0		0	0	0	0.0013997	0.0049	0.1	0%	0	0		
Arsenic	A	mg/L	0.000278	0		0	0	0.001298	0.0017061	0.0013383	1	0%	0	0		
Barium	A	mg/L	0.0008329	0.0041645		0	0	0.004069	0.0013411	0.0012039	1	0%	0	0		N
Beryllium	A	mg/L	-0.00005756	0		0	0	0	0.0005353	0.01	1	0%	0	0		
Boron	A	mg/L	0.01329	0		0	0	0.06786	0.1019008	0.07335	1	0%	0	0		
Cadmium	A	mg/L	0.00001864	0.0000932		0	0	0	9.105E-05	0.005	1	0%	0	0		N
Calcium	A	mg/L	2.083	10.415		0	0	10.28	0.1864681	0.5517403	50	0%	0	0	1%	
Cerium	A	mg/L	0.0000151	0		0	0	6.226E-05	0.0001369	0.001	0.1	0%	0	0		
Chromium	A	mg/L	0.0001023	0		0	0	0	0.0076875	0.0076875	1	0%	0	0		

Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist					
14998132	B22011134-001	ICPMS-6020-W-	SD		1/22/2022 12:21:	5	163063	1/19/2022 3:	0	1E+07						
Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
Cobalt	A	mg/L	0.0001173	0.0005865		0	0	0.00053	0.0004771	0.001	1	0%	0	0		N
Copper	A	mg/L	0.01838	0.0919		0	0	0	0.0043735	0.0099	1	0%	0	0		N
Iron	A	mg/L	0.08611	0.43055		0	0	0.4364	0.0371198	0.02565	5	0%	0	0	1%	
Lanthanum	A	mg/L	0.00000554	0		0	0	0	0.000275	0.001	0.1	0%	0	0		
Lead	A	mg/L	0.0007391	0.0036955		0	0	0	0.0003858	0.001	1	0%	0	0		N
Magnesium	A	mg/L	2.07	10.35		0	0	10.4	0.0521269	0.0407608	50	0%	0	0	0%	
Manganese	A	mg/L	0.09624	0.4812		0	0	0.5033	0.0026994	0.0010695	1	0%	0	0	4%	
Molybdenum	A	mg/L	0.0001216	0		0	0	0.000556	0.0008814	0.001	0.1	0%	0	0		
Nickel	A	mg/L	0.00437	0.02185		0	0	0.0009891	0.0011441	0.0121000	1	0%	0	0		N
Potassium	A	mg/L	0.4126	2.063		0	0	2.03	0.3828097	0.1306027	50	0%	0	0		N
Selenium	A	mg/L	0.000005841	0		0	0	0	0.0006787	0.0029274	1	0%	0	0		
Silicon	A	mg/L	5.199	25.995		0	0	27.21	0.2110446	0.026606	0.4	0%	0	0	5%	
Silver	A	mg/L	-0.00005765	0		0	0	0	0.0002141	0.001	0.04	0%	0	0		
Sodium	A	mg/L	8.248	41.24		0	0	40.71	0.5097304	3.6651346	50	0%	0	0	1%	
Strontium	A	mg/L	0.0146	0.073		0	0	0.07368	0.0012164	0.001	1	0%	0	0	1%	
Thallium	A	mg/L	-3.479E-06	0		0	0	0	0.0005569	0.001	1	0%	0	0		
Thorium	A	mg/L	-6.331E-06	0		0	0	0	0.0018981	0.02075	1	0%	0	0		
Tin	A	mg/L	0.000173	0		0	0	0	0.0094659	0.0055874	0.1	0%	0	0		
Titanium	A	mg/L	0.000759	0.003795		0	0	0.003704	0.0028666	0.001	1	0%	0	0		N
Uranium	A	mg/L	0.000004316	0		0	0	1.766E-05	8.495E-05	0.0004224	1	0%	0	0		
Vanadium	A	mg/L	0.002104	0		0	0	0.004989	0.0195637	0.0105423	1	0%	0	0		
Zinc	A	mg/L	0.02073	0.10365		0	0	0.001219	0.0058087	0.0327721	1	0%	0	0		N
Silica	C	mg/L	11.1217008	55.608504		0	0	0	0.4514666	0.0569155	5	0%	0	0		N
Silicon as SiO2	C	mg/L	11.1217008	55.608504		0	0	0	0.4514666	0.0569155	5	0%	0	0		N

Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist					
14998133	B22011134-001	ICPMS-6020-W-	PDS1		1/22/2022 12:27:	1.03	163063	1/19/2022 3:	1E+07	0						
Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
Aluminum	A	mg/L	0.06077	0.0625931		0.0515	0.02013	0	0.003991	0.0032934	1	82%	75	125	0%	
Antimony	A	mg/L	0.04912	0.0505936		0.0515	0	0	0.0002883	0.0010094	0.1	98%	75	125	0%	
Arsenic	A	mg/L	0.04937	0.0508511		0.0515	0.001298	0	0.0003514	0.001	1	96%	75	125	0%	
Barium	A	mg/L	0.05395	0.0555685		0.0515	0.004069	0	0.0002763	0.001	1	100%	75	125	0%	
Beryllium	A	mg/L	0.04113	0.0423639		0.0515	0	0	0.0001103	0.01	1	82%	75	125	0%	
Boron	A	mg/L	0.1095	0.112785		0.0515	0.06786	0	0.0209916	0.0151101	1	87%	75	125	0%	

Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist					
14998133	B22011134-001	ICPMS-6020-W-	PDS1		1/22/2022 12:27:	1.03	163063	1/19/2022 3:	1E+07	0						
Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
Cadmium	A	mg/L	0.04978	0.0512734		0.0515	0	0	1.876E-05	0.005	1	100%	75	125	0%	
Calcium	A	mg/L	9.635	9.92405		51.5	10.28	0	0.0384124	0.1136585	50	-1%	75	125	0%	S
Cerium	A	mg/L	0.05329	0.0548887		0.0515	6.226E-05	0	2.820E-05	0.001	0.1	106%	75	125	0%	
Chromium	A	mg/L	0.04843	0.0498829		0.0515	0	0	0.0015836	0.0015836	1	97%	75	125	0%	
Cobalt	A	mg/L	0.0455	0.046865		0.0515	0.00053	0	9.827E-05	0.001	1	90%	75	125	0%	
Copper	A	mg/L	0.05065	0.0521695		0.0515	0	0	0.0009009	0.0020394	1	101%	75	125	0%	
Iron	A	mg/L	0.4579	0.471637		5.15	0.4364	0	0.0076467	0.0052839	5	1%	75	125	0%	S
Lanthanum	A	mg/L	0.00001607	0		0.0515	0	0	5.665E-05	0.001	0.1	0%	75	125	0%	S
Lead	A	mg/L	0.04984	0.0513352		0.0515	0	0	7.947E-05	0.001	1	100%	80	120	0%	
Magnesium	A	mg/L	9.869	10.16507		51.5	10.4	0	0.0107381	0.0083967	50	0%	75	125	0%	S
Manganese	A	mg/L	0.5208	0.536424		0.0515	0.5033	0	0.0005561	0.001	1		75	125	0%	A
Molybdenum	A	mg/L	0.04734	0.0487602		0.0515	0.000556	0	0.0001816	0.001	0.1	94%	75	125	0%	
Nickel	A	mg/L	0.04986	0.0513558		0.0515	0.0009891	0	0.0002357	0.0024926	1	98%	75	125	0%	
Potassium	A	mg/L	1.88	1.9364		51.5	2.03	0	0.0788588	0.0269042	50	0%	75	125	0%	S
Selenium	A	mg/L	0.04962	0.0511086		0.0515	0	0	0.0001398	0.001	1	99%	75	125	0%	
Silicon	A	mg/L	25.95	26.7285		0.206	27.21	0	0.0434752	0.0054808	0.4		0	0	0%	A
Silver	A	mg/L	0.01897	0.0195391		0.0206	0	0	4.409E-05	0.001	0.04	95%	75	125	0%	
Sodium	A	mg/L	38.65	39.8095		51.5	40.71	0	0.1050045	0.7550177	50	-2%	75	125	0%	S
Strontium	A	mg/L	0.1229	0.126587		0.0515	0.07368	0	0.0002506	0.001	1	103%	75	125	0%	
Thallium	A	mg/L	0.04894	0.0504082		0.0515	0	0	0.0001147	0.001	1	98%	75	125	0%	
Thorium	A	mg/L	0.04934	0.0508202		0.0515	0	0	0.000391	0.0042745	1	99%	75	125	0%	
Tin	A	mg/L	0.05008	0.0515824		0.0515	0	0	0.00195	0.001151	0.1	100%	75	125	0%	
Titanium	A	mg/L	0.0457	0.047071		0.0515	0.003704	0	0.0005905	0.001	1	84%	75	125	0%	
Uranium	A	mg/L	0.05122	0.0527566		0.0515	1.766E-05	0	1.75E-05	0.0003	1	102%	75	125	0%	
Vanadium	A	mg/L	0.05331	0.0549093		0.0515	0.004989	0	0.0040301	0.0021717	1	97%	75	125	0%	
Zinc	A	mg/L	0.04939	0.0508717		0.0515	0.001219	0	0.0011966	0.0067511	1	96%	75	125	0%	
Silica	C	mg/L	55.51224	57.1776072		0	0	0	0.0930021	0.0117246	5	0%	0	0	0%	
Silicon as SiO2	C	mg/L	55.51224	57.1776072		0.0515	0	0	0.0930021	0.0117246	5	111024%	75	125	0%	S

Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist					
14998134	B22011134-001	ICPMS-6020-W-	MS4		1/22/2022 12:34:	1	163063	1/19/2022 3:	1E+07	0						
Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q

Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist					
14998134	B22011134-001	ICPMS-6020-W- MS4			1/22/2022 12:34:	1	163063	1/19/2022 3:	1E+07	0						
Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
Aluminum	A	mg/L	0.4393	0.4393		0.5	0.02013	0	0.0038747	0.0031975	1	84%	75	125	0%	
Antimony	A	mg/L	0.1043	0.1043		0.1	0	0	0.0002799	0.001	0.1	104%	75	125	0%	
Arsenic	A	mg/L	0.09844	0.09844		0.1	0.001298	0	0.0003412	0.001	1	97%	75	125	0%	
Barium	A	mg/L	0.09918	0.09918		0.1	0.004069	0	0.0002682	0.001	1	95%	75	125	0%	
Beryllium	A	mg/L	0.04076	0.04076		0.05	0	0	0.0001071	0.01	1	82%	75	125	0%	
Boron	A	mg/L	0.1432	0.1432		0.1	0.06786	0	0.0203802	0.01467	1	75%	75	125	0%	
Cadmium	A	mg/L	0.05102	0.05102		0.05	0	0	1.821E-05	0.005	1	102%	75	125	0%	
Calcium	A	mg/L	14.38	14.38		5	10.28	0	0.0372936	0.1103481	50	82%	75	125	0%	
Cerium	A	mg/L	0.11	0.11		0.1	6.226E-05	0	2.738E-05	0.001	0.1	110%	75	125	0%	
Chromium	A	mg/L	0.09392	0.09392		0.1	0	0	0.0015375	0.0015375	1	94%	75	125	0%	
Cobalt	A	mg/L	0.09023	0.09023		0.1	0.00053	0	9.541E-05	0.001	1	90%	75	125	0%	
Copper	A	mg/L	0.101	0.101		0.1	0	0	0.0008747	0.00198	1	101%	75	125	0%	
Iron	A	mg/L	0.9186	0.9186		0.5	0.4364	0	0.007424	0.00513	5	96%	75	125	0%	
Lanthanum	A	mg/L	0.1078	0.1078		0.1	0	0	0.000055	0.001	0.1	108%	75	125	0%	
Lead	A	mg/L	0.1016	0.1016		0.1	0	0	7.716E-05	0.001	1	102%	88	115	0%	
Magnesium	A	mg/L	14.87	14.87		5	10.4	0	0.0104254	0.0081522	50	89%	75	125	0%	
Manganese	A	mg/L	0.9413	0.9413		0.5	0.5033	0	0.0005399	0.001	1	88%	75	125	0%	
Molybdenum	A	mg/L	0.0932	0.0932		0.1	0.000556	0	0.0001763	0.001	0.1	93%	75	125	0%	
Nickel	A	mg/L	0.09932	0.09932		0.1	0.0009891	0	0.0002288	0.0024200	1	98%	75	125	0%	
Potassium	A	mg/L	6.359	6.359		5	2.03	0	0.0765619	0.0261205	50	87%	75	125	0%	
Selenium	A	mg/L	0.1013	0.1013		0.1	0	0	0.0001357	0.001	1	101%	75	125	0%	
Silicon	A	mg/L	26.6	26.6		1	27.21	0	0.0422089	0.0053212	0.4		75	125	0%	A
Silver	A	mg/L	0.009493	0.009493		0.01	0	0	4.281E-05	0.001	0.04	95%	75	125	0%	
Sodium	A	mg/L	42.57	42.57		5	40.71	0	0.1019461	0.7330269	50		75	125	0%	A
Strontium	A	mg/L	0.1736	0.1736		0.1	0.07368	0	0.0002433	0.001	1	100%	75	125	0%	
Thallium	A	mg/L	0.1023	0.1023		0.1	0	0	0.0001114	0.001	1	102%	75	125	0%	
Thorium	A	mg/L	0.1047	0.1047		0.1	0	0	0.0003796	0.00415	1	105%	75	125	0%	
Tin	A	mg/L	0.1028	0.1028		0.1	0	0	0.0018932	0.0011175	0.1	103%	75	125	0%	
Titanium	A	mg/L	0.08566	0.08566		0.1	0.003704	0	0.0005733	0.001	1	82%	75	125	0%	
Uranium	A	mg/L	0.1048	0.1048		0.1	1.766E-05	0	1.699E-05	0.0003	1	105%	75	125	0%	
Vanadium	A	mg/L	0.1005	0.1005		0.1	0.004989	0	0.0039127	0.0021085	1	96%	75	125	0%	
Zinc	A	mg/L	0.09728	0.09728		0.1	0.001219	0	0.0011617	0.0065544	1	96%	75	125	0%	
Silica	C	mg/L	56.90272	56.90272		0	0	0	0.0902933	0.0113831	5	0%	0	0	0%	
Silicon as SiO2	C	mg/L	56.90272	56.90272		2.14	0	0	0.0902933	0.0113831	5	2659%	75	125	0%	S

Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist					
14998135	B22011134-001	ICPMS-6020-W-MSD4			1/22/2022 12:40:	1	163063	1/19/2022 3:	1E+07	1E+07						
Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
Aluminum	A	mg/L	0.4412	0.4412		0.5	0.02013	0.4393	0.0038747	0.0031975	1	84%	75	125	0%	
Antimony	A	mg/L	0.104	0.104		0.1	0	0.1043	0.0002799	0.001	0.1	104%	75	125	0%	
Arsenic	A	mg/L	0.1005	0.1005		0.1	0.001298	0.09844	0.0003412	0.001	1	99%	75	125	2%	
Barium	A	mg/L	0.09932	0.09932		0.1	0.004069	0.09918	0.0002682	0.001	1	95%	75	125	0%	
Beryllium	A	mg/L	0.04001	0.04001		0.05	0	0.04076	0.0001071	0.01	1	80%	75	125	2%	
Boron	A	mg/L	0.1433	0.1433		0.1	0.06786	0.1432	0.0203802	0.01467	1	75%	75	125	0%	
Cadmium	A	mg/L	0.05129	0.05129		0.05	0	0.05102	1.821E-05	0.005	1	103%	75	125	1%	
Calcium	A	mg/L	14.57	14.57		5	10.28	14.38	0.0372936	0.1103481	50	86%	75	125	1%	
Cerium	A	mg/L	0.113	0.113		0.1	6.226E-05	0.11	2.738E-05	0.001	0.1	113%	75	125	3%	
Chromium	A	mg/L	0.09607	0.09607		0.1	0	0.09392	0.0015375	0.0015375	1	96%	75	125	2%	
Cobalt	A	mg/L	0.09411	0.09411		0.1	0.00053	0.09023	9.541E-05	0.001	1	94%	75	125	4%	
Copper	A	mg/L	0.1035	0.1035		0.1	0	0.101	0.0008747	0.00198	1	103%	75	125	2%	
Iron	A	mg/L	0.9421	0.9421		0.5	0.4364	0.9186	0.007424	0.00513	5	101%	75	125	3%	
Lanthanum	A	mg/L	0.1082	0.1082		0.1	0	0.1078	0.000055	0.001	0.1	108%	75	125	0%	
Lead	A	mg/L	0.1018	0.1018		0.1	0	0.1016	7.716E-05	0.001	1	102%	88	115	0%	
Magnesium	A	mg/L	15.27	15.27		5	10.4	14.87	0.0104254	0.0081522	50	97%	75	125	3%	
Manganese	A	mg/L	0.9761	0.9761		0.5	0.5033	0.9413	0.0005399	0.001	1	95%	75	125	4%	
Molybdenum	A	mg/L	0.09678	0.09678		0.1	0.000556	0.0932	0.0001763	0.001	0.1	96%	75	125	4%	
Nickel	A	mg/L	0.09922	0.09922		0.1	0.0009891	0.09932	0.0002288	0.0024200	1	98%	75	125	0%	
Potassium	A	mg/L	6.351	6.351		5	2.03	6.359	0.0765619	0.0261205	50	86%	75	125	0%	
Selenium	A	mg/L	0.1028	0.1028		0.1	0	0.1013	0.0001357	0.001	1	103%	75	125	1%	
Silicon	A	mg/L	28.05	28.05		1	27.21	26.6	0.0422089	0.0053212	0.4		75	125	5%	A
Silver	A	mg/L	0.009668	0.009668		0.01	0	0.009493	4.281E-05	0.001	0.04	97%	75	125	2%	
Sodium	A	mg/L	43.43	43.43		5	40.71	42.57	0.1019461	0.7330269	50		75	125	2%	A
Strontium	A	mg/L	0.1809	0.1809		0.1	0.07368	0.1736	0.0002433	0.001	1	107%	75	125	4%	
Thallium	A	mg/L	0.1029	0.1029		0.1	0	0.1023	0.0001114	0.001	1	103%	75	125	1%	
Thorium	A	mg/L	0.1052	0.1052		0.1	0	0.1047	0.0003796	0.00415	1	105%	75	125	0%	
Tin	A	mg/L	0.1063	0.1063		0.1	0	0.1028	0.0018932	0.0011175	0.1	106%	75	125	3%	
Titanium	A	mg/L	0.08762	0.08762		0.1	0.003704	0.08566	0.0005733	0.001	1	84%	75	125	2%	
Uranium	A	mg/L	0.1056	0.1056		0.1	1.766E-05	0.1048	1.699E-05	0.0003	1	106%	75	125	1%	
Vanadium	A	mg/L	0.1027	0.1027		0.1	0.004989	0.1005	0.0039127	0.0021085	1	98%	75	125	2%	
Zinc	A	mg/L	0.09952	0.09952		0.1	0.001219	0.09728	0.0011617	0.0065544	1	98%	75	125	2%	
Silica	C	mg/L	60.00456	60.00456		0	0	56.90272	0.0902933	0.0113831	5	0%	0	0	5%	
Silicon as SiO2	C	mg/L	60.00456	60.00456		2.14	0	56.90272	0.0902933	0.0113831	5	2804%	75	125	5%	S

Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist					
14998136	Rinse	ICPMS-6020-W-	SAMP		1/22/2022 12:46:	1	R373694		0	0						
Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
Antimony	A	mg/L	0.0001346	0		0	0	0	0.00042	0.001	0.1	0%	0	0	0%	
Arsenic	A	mg/L	-9.123E-06	0		0	0	0	0.00019	0.001	1	0%	0	0	0%	
Barium	A	mg/L	0.000006929	0		0	0	0	0.000042	0.001	1	0%	0	0	0%	
Cadmium	A	mg/L	0.000004348	0		0	0	0	0.000025	0.001	1	0%	0	0	0%	
Cerium	A	mg/L	3.027E-07	0		0	0	0	0.000012	0.001	0.1	0%	0	0	0%	
Chromium	A	mg/L	0.000009059	0		0	0	0	0.00018	0.001	1	0%	0	0	0%	
Cobalt	A	mg/L	4.247E-07	0		0	0	0	0.000042	0.001	1	0%	0	0	0%	
Copper	A	mg/L	0.000006011	0		0	0	0	0.00027	0.001	1	0%	0	0	0%	
Lead	A	mg/L	0.00001085	0		0	0	0	0.000056	0.001	1	0%	0	0	0%	
Manganese	A	mg/L	0.0001407	0.0001407		0	0	0	0.000095	0.001	1	0%	0	0	0%	J
Mercury	A	mg/L	0.000001212	0		0	0	0	0.00016	0.001	0.002	0%	0	0	0%	
Molybdenum	A	mg/L	0.00001309	0		0	0	0	0.00005	0.001	0.1	0%	0	0	0%	
Nickel	A	mg/L	-4.908E-06	0		0	0	0	0.00063	0.001	1	0%	0	0	0%	
Selenium	A	mg/L	0.00001129	0		0	0	0	0.00033	0.001	1	0%	0	0	0%	
Silver	A	mg/L	-2.358E-06	0		0	0	0	0.00002	0.001	0.04	0%	0	0	0%	
Strontium	A	mg/L	-4.417E-06	0		0	0	0	0.00014	0.001	1	0%	0	0	0%	
Thallium	A	mg/L	0.0001766	0.0001766		0	0	0	0.000041	0.001	1	0%	0	0	0%	J
Thorium	A	mg/L	0.00001894	0		0	0	0	0.00061	0.001	1	0%	0	0	0%	
Titanium	A	mg/L	-0.00001827	0		0	0	0	0.000094	0.001	1	0%	0	0	0%	
Uranium	A	mg/L	0.000007227	0		0	0	0	0.000052	0.0003	1	0%	0	0	0%	
Boron	B	mg/L	0.0008795	0		0	0	0	0.00561	0.00561	1	0%	0	0	0%	L
Calcium	B	mg/L	-0.001237	0		0	0	0	0.02092	0.02092	50	0%	0	0	0%	L
Iron	B	mg/L	0.0001313	0		0	0	0	0.00119	0.00119	5	0%	0	0	0%	
Iron, Ferrous	B	mg/L	0.0001313	0		0	0	0	0.00119	0.00119	5	0%	0	0	0%	
Magnesium	B	mg/L	-0.0001401	0		0	0	0	0.00564	0.00564	50	0%	0	0	0%	L
Tin	B	mg/L	0.00001692	0		0	0	0	0.00132	0.00132	0.1	0%	0	0	0%	
Vanadium	B	mg/L	0.0009567	0		0	0	0	0.0013	0.0013	1	0%	0	0	0%	
Zinc	B	mg/L	0.00003354	0		0	0	0	0.00273	0.00273	1	0%	0	0	0%	L

Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist					
14998137	B22011135-001	ICPMS-6020-W-	SAMP		1/22/2022 12:52:	1	R373694		0	0						
Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q

Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist					
14998137	B22011135-001	ICPMS-6020-W-	SAMP		1/22/2022 12:52:	1	R373694		0	0						
Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
Antimony	A	mg/L	0.0002136	0		0	0	0	0.00042	0.001	0.1	0%	0	0	0%	
Arsenic	A	mg/L	0.0003938	0.0003938		0	0	0	0.00019	0.001	1	0%	0	0	0%	J
Barium	A	mg/L	0.0138	0.0138		0	0	0	0.000042	0.001	1	0%	0	0	0%	
Cadmium	A	mg/L	0.00003609	0.00003609		0	0	0	0.000025	0.001	1	0%	0	0	0%	J
Cerium	A	mg/L	0.00001845	0.00001845		0	0	0	0.000012	0.001	0.1	0%	0	0	0%	J
Chromium	A	mg/L	0.0007728	0.0007728		0	0	0	0.00018	0.001	1	0%	0	0	0%	J
Cobalt	A	mg/L	0.001331	0.001331		0	0	0	0.000042	0.001	1	0%	0	0	0%	
Copper	A	mg/L	0.001005	0.001005		0	0	0	0.00027	0.001	1	0%	0	0	0%	
Lead	A	mg/L	0.00002741	0		0	0	0	0.000056	0.001	1	0%	0	0	0%	U
Manganese	A	mg/L	0.1061	0.1061		0	0	0	0.000095	0.001	1	0%	0	0	0%	
Mercury	A	mg/L	0.0004051	0.0004051		0	0	0	0.00016	0.001	0.002	0%	0	0	0%	J
Molybdenum	A	mg/L	0.002947	0.002947		0	0	0	0.00005	0.001	0.1	0%	0	0	0%	
Nickel	A	mg/L	0.005145	0.005145		0	0	0	0.00063	0.001	1	0%	0	0	0%	
Selenium	A	mg/L	0.0001791	0		0	0	0	0.00033	0.001	1	0%	0	0	0%	
Silver	A	mg/L	-0.00006214	0		0	0	0	0.00002	0.001	0.04	0%	0	0	0%	
Strontium	A	mg/L	0.1479	0.1479		0	0	0	0.00014	0.001	1	0%	0	0	0%	
Thallium	A	mg/L	0.00008312	0.00008312		0	0	0	0.000041	0.001	1	0%	0	0	0%	J
Thorium	A	mg/L	-2.638E-06	0		0	0	0	0.00061	0.001	1	0%	0	0	0%	
Titanium	A	mg/L	0.002716	0.002716		0	0	0	0.000094	0.001	1	0%	0	0	0%	
Uranium	A	mg/L	0.0001504	0.0001504		0	0	0	0.000052	0.0003	1	0%	0	0	0%	J
Boron	B	mg/L	0.1602	0.1602		0	0	0	0.00561	0.00561	1	0%	0	0	0%	D
Calcium	B	mg/L	23.46	23.46		0	0	0	0.02092	0.02092	50	0%	0	0	0%	D
Iron	B	mg/L	0.05962	0.05962		0	0	0	0.00119	0.00119	5	0%	0	0	0%	
Iron, Ferrous	B	mg/L	0.05962	0.05962		0	0	0	0.00119	0.00119	5	0%	0	0	0%	
Magnesium	B	mg/L	31.91	31.91		0	0	0	0.00564	0.00564	50	0%	0	0	0%	D
Tin	B	mg/L	-0.00008316	0		0	0	0	0.00132	0.00132	0.1	0%	0	0	0%	
Zinc	B	mg/L	0.002062	0		0	0	0	0.00273	0.00273	1	0%	0	0	0%	L

Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist					
14998138	B22011135-001	ICPMS-6020-W-	SAMP		1/22/2022 12:59:	1	163063	1/19/2022 3:	0	0						
Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
Antimony	A	mg/L	0.0002841	0.0002841		0	0	0	0.0002799	0.001	0.1	0%	0	0	0%	J
Arsenic	A	mg/L	0.0008096	0.0008096		0	0	0	0.0003412	0.001	1	0%	0	0	0%	J
Barium	A	mg/L	0.01462	0.01462		0	0	0	0.0002682	0.001	1	0%	0	0	0%	

Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist					
14998138	B22011135-001	ICPMS-6020-W-	SAMP		1/22/2022 12:59:	1	163063	1/19/2022 3:	0	0						
Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
Cadmium	A	mg/L	0.00007105	0		0	0	0	1.821E-05	0.005	1	0%	0	0	0%	U
Cerium	A	mg/L	0.0001721	0.0001721		0	0	0	2.738E-05	0.001	0.1	0%	0	0	0%	J
Cobalt	A	mg/L	0.001588	0.001588		0	0	0	9.541E-05	0.001	1	0%	0	0	0%	
Lanthanum	A	mg/L	0.00006475	0.00006475		0	0	0	0.000055	0.001	0.1	0%	0	0	0%	J
Lead	A	mg/L	0.0003191	0.0003191		0	0	0	7.716E-05	0.001	1	0%	0	0	0%	J
Manganese	A	mg/L	0.1149	0.1149		0	0	0	0.0005399	0.001	1	0%	0	0	0%	
Molybdenum	A	mg/L	0.003231	0.003231		0	0	0	0.0001763	0.001	0.1	0%	0	0	0%	
Selenium	A	mg/L	0.0002169	0.0002169		0	0	0	0.0001357	0.001	1	0%	0	0	0%	J
Silver	A	mg/L	-0.00004722	0		0	0	0	4.281E-05	0.001	0.04	0%	0	0	0%	U
Strontium	A	mg/L	0.1508	0.1508		0	0	0	0.0002433	0.001	1	0%	0	0	0%	
Thallium	A	mg/L	0.0000838	0		0	0	0	0.0001114	0.001	1	0%	0	0	0%	U
Titanium	A	mg/L	0.02189	0.02189		0	0	0	0.0005733	0.001	1	0%	0	0	0%	
Uranium	A	mg/L	0.0001558	0.0001558		0	0	0	1.699E-05	0.0003	1	0%	0	0	0%	J
Boron	B	mg/L	0.1572	0.1572		0	0	0	0.0203802	0.01467	1	0%	0	0	0%	D
Calcium	B	mg/L	23.17	23.17		0	0	0	0.0372936	0.1103481	50	0%	0	0	0%	D
Chromium	B	mg/L	0.001211	0		0	0	0	0.0015375	0.0015375	1	0%	0	0	0%	UL
Copper	B	mg/L	0.001779	0.001779		0	0	0	0.0008747	0.00198	1	0%	0	0	0%	JL
Iron	B	mg/L	0.301	0.301		0	0	0	0.007424	0.00513	5	0%	0	0	0%	D
Magnesium	B	mg/L	32.1	32.1		0	0	0	0.0104254	0.0081522	50	0%	0	0	0%	D
Nickel	B	mg/L	0.005891	0.005891		0	0	0	0.0002288	0.0024200	1	0%	0	0	0%	D
Thorium	B	mg/L	0.00004476	0		0	0	0	0.0003796	0.00415	1	0%	0	0	0%	UL
Tin	B	mg/L	0.0004502	0		0	0	0	0.0018932	0.0011175	0.1	0%	0	0	0%	U
Vanadium	B	mg/L	0.02217	0.02217		0	0	0	0.0039127	0.0021085	1	0%	0	0	0%	D
Zinc	B	mg/L	0.002569	0.002569		0	0	0	0.0011617	0.0065544	1	0%	0	0	0%	JL

Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist					
14998139	B22011136-001	ICPMS-6020-W-	SAMP		1/22/2022 1:05:1	1	R373694		0	0						
Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
Antimony	A	mg/L	0.0001026	0		0	0	0	0.00042	0.001	0.1	0%	0	0	0%	
Arsenic	A	mg/L	0.00007658	0		0	0	0	0.00019	0.001	1	0%	0	0	0%	
Barium	A	mg/L	0.006474	0.006474		0	0	0	0.000042	0.001	1	0%	0	0	0%	
Cadmium	A	mg/L	0.00003543	0.00003543		0	0	0	0.000025	0.001	1	0%	0	0	0%	J
Cerium	A	mg/L	0.0001735	0.0001735		0	0	0	0.000012	0.001	0.1	0%	0	0	0%	J
Chromium	A	mg/L	0.004521	0.004521		0	0	0	0.00018	0.001	1	0%	0	0	0%	

Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist					
14998139	B22011136-001	ICPMS-6020-W- SAMP			1/22/2022 1:05:1	1	R373694		0	0						
Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
Cobalt	A	mg/L	0.0001579	0.0001579		0	0	0	0.000042	0.001	1	0%	0	0	0%	J
Copper	A	mg/L	0.0004486	0.0004486		0	0	0	0.00027	0.001	1	0%	0	0	0%	J
Lead	A	mg/L	0.00004496	0		0	0	0	0.000056	0.001	1	0%	0	0	0%	U
Manganese	A	mg/L	0.005341	0.005341		0	0	0	0.000095	0.001	1	0%	0	0	0%	
Mercury	A	mg/L	0.00000764	0		0	0	0	0.00016	0.001	0.002	0%	0	0	0%	
Molybdenum	A	mg/L	0.0005291	0.0005291		0	0	0	0.00005	0.001	0.1	0%	0	0	0%	J
Nickel	A	mg/L	0.0003266	0		0	0	0	0.00063	0.001	1	0%	0	0	0%	
Selenium	A	mg/L	0.0004467	0.0004467		0	0	0	0.00033	0.001	1	0%	0	0	0%	J
Silver	A	mg/L	-0.00006166	0		0	0	0	0.00002	0.001	0.04	0%	0	0	0%	
Strontium	A	mg/L	0.0591	0.0591		0	0	0	0.00014	0.001	1	0%	0	0	0%	
Thallium	A	mg/L	0.00001638	0		0	0	0	0.000041	0.001	1	0%	0	0	0%	
Thorium	A	mg/L	-5.018E-06	0		0	0	0	0.00061	0.001	1	0%	0	0	0%	
Titanium	A	mg/L	0.004524	0.004524		0	0	0	0.000094	0.001	1	0%	0	0	0%	
Uranium	A	mg/L	0.00002209	0		0	0	0	0.000052	0.0003	1	0%	0	0	0%	
Boron	B	mg/L	0.2113	0.2113		0	0	0	0.00561	0.00561	1	0%	0	0	0%	D
Calcium	B	mg/L	5.95	5.95		0	0	0	0.02092	0.02092	50	0%	0	0	0%	D
Iron	B	mg/L	0.03456	0.03456		0	0	0	0.00119	0.00119	5	0%	0	0	0%	
Iron, Ferrous	B	mg/L	0.03456	0.03456		0	0	0	0.00119	0.00119	5	0%	0	0	0%	
Magnesium	B	mg/L	9.737	9.737		0	0	0	0.00564	0.00564	50	0%	0	0	0%	D
Tin	B	mg/L	-0.00007277	0		0	0	0	0.00132	0.00132	0.1	0%	0	0	0%	
Vanadium	B	mg/L	0.04633	0.04633		0	0	0	0.0013	0.0013	1	0%	0	0	0%	
Zinc	B	mg/L	0.0008192	0		0	0	0	0.00273	0.00273	1	0%	0	0	0%	L

Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist					
14998140	CCV	ICPMS-6020-W- CCV			1/22/2022 1:11:2	1	R373694		0	0						
Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
Aluminum	A	mg/L	0.05298	0.05298		0.05	0	0	0.00086	0.001	1	106%	90	110	0%	
Antimony	A	mg/L	0.05313	0.05313		0.05	0	0	0.00042	0.001	0.1	106%	90	110	0%	
Arsenic	A	mg/L	0.05029	0.05029		0.05	0	0	0.00019	0.001	1	101%	90	110	0%	
Barium	A	mg/L	0.04976	0.04976		0.05	0	0	0.000042	0.001	1	100%	90	110	0%	
Beryllium	A	mg/L	0.04012	0.04012		0.05	0	0	0.00012	0.001	1	80%	90	110	0%	S
Boron	A	mg/L	0.04485	0.04485		0.05	0	0	0.00561	0.00561	1	90%	90	110	0%	
Cadmium	A	mg/L	0.05064	0.05064		0.05	0	0	0.000025	0.001	1	101%	90	110	0%	
Calcium	A	mg/L	11.91	11.91		12.5	0	0	0.02092	0.02092	50	95%	90	110	0%	

Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist					
14998140	CCV	ICPMS-6020-W-	CCV		1/22/2022 1:11:2	1	R373694		0	0						
Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
Cerium	A	mg/L	0.05302	0.05302		0.05	0	0	0.000012	0.001	0.1	106%	90	110	0%	
Chromium	A	mg/L	0.04764	0.04764		0.05	0	0	0.00018	0.001	1	95%	90	110	0%	
Cobalt	A	mg/L	0.04841	0.04841		0.05	0	0	0.000042	0.001	1	97%	90	110	0%	
Copper	A	mg/L	0.05104	0.05104		0.05	0	0	0.00027	0.001	1	102%	90	110	0%	
Iron	A	mg/L	1.316	1.316		1.3	0	0	0.00119	0.00119	5	101%	90	110	0%	
Lanthanum	A	mg/L	0.05265	0.05265		0.05	0	0	0.000011	0.001	0.1	105%	90	110	0%	
Lead	A	mg/L	0.05081	0.05081		0.05	0	0	0.000056	0.001	1	102%	90	110	0%	
Magnesium	A	mg/L	12.01	12.01		12.5	0	0	0.00564	0.00564	50	96%	90	110	0%	
Manganese	A	mg/L	0.04879	0.04879		0.05	0	0	0.000095	0.001	1	98%	90	110	0%	
Mercury	A	mg/L	0.0009872	0.0009872		0.001	0	0	0.00016	0.001	0.002	99%	90	110	0%	
Molybdenum	A	mg/L	0.04988	0.04988		0.05	0	0	0.00005	0.001	0.1	100%	90	110	0%	
Nickel	A	mg/L	0.04964	0.04964		0.05	0	0	0.00063	0.001	1	99%	90	110	0%	
Potassium	A	mg/L	11.14	11.14		12.5	0	0	0.08139	0.08139	50	89%	90	110	0%	S
Selenium	A	mg/L	0.05124	0.05124		0.05	0	0	0.00033	0.001	1	102%	90	110	0%	
Silicon	A	mg/L	0.2483	0.2483		0.2	0	0	0.01223	0.1	0.4	124%	90	110	0%	S
Silver	A	mg/L	0.01986	0.01986		0.02	0	0	0.00002	0.001	0.04	99%	90	110	0%	
Sodium	A	mg/L	11.99	11.99		12.5	0	0	0.02171	0.02171	50	96%	90	110	0%	
Strontium	A	mg/L	0.05081	0.05081		0.05	0	0	0.00014	0.001	1	102%	90	110	0%	
Thallium	A	mg/L	0.05114	0.05114		0.05	0	0	0.000041	0.001	1	102%	90	110	0%	
Thorium	A	mg/L	0.05039	0.05039		0.05	0	0	0.00061	0.001	1	101%	90	110	0%	
Tin	A	mg/L	0.05162	0.05162		0.05	0	0	0.00132	0.00132	0.1	103%	90	110	0%	
Titanium	A	mg/L	0.04676	0.04676		0.05	0	0	0.000094	0.001	1	94%	90	110	0%	
Uranium	A	mg/L	0.05151	0.05151		0.05	0	0	0.000052	0.0003	1	103%	90	110	0%	
Vanadium	A	mg/L	0.04991	0.04991		0.05	0	0	0.0013	0.0013	1	100%	90	110	0%	
Zinc	A	mg/L	0.05115	0.05115		0.05	0	0	0.00273	0.00273	1	102%	90	110	0%	
Iron, Ferrous	C	mg/L	1.316	1.316		0	0	0	0.00119	0.00119	5	0%	0	0	0%	

Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist					
14998141	CCB	ICPMS-6020-W-	CCB		1/22/2022 1:17:4	1	R373694		0	0						
Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
Aluminum	A	mg/L	-0.0003638	-0.0003638		0	0	0	0.00086	0.001	1	0%			0%	
Antimony	A	mg/L	0.00009745	0.00009745		0	0	0	0.00042	0.001	0.1	0%			0%	
Arsenic	A	mg/L	-5.488E-06	-5.488E-06		0	0	0	0.00019	0.001	1	0%			0%	
Barium	A	mg/L	-1.724E-06	-1.724E-06		0	0	0	0.000042	0.001	1	0%			0%	

Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist					
14998141	CCB	ICPMS-6020-W-	CCB		1/22/2022 1:17:4	1	R373694		0	0						
Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
Beryllium	A	mg/L	-0.00005206	-0.00005206		0	0	0	0.00012	0.001	1	0%			0%	
Boron	A	mg/L	0.001818	0.001818		0	0	0	0.00561	0.00561	1	0%			0%	
Cadmium	A	mg/L	0.000000561	0.000000561		0	0	0	0.000025	0.001	1	0%			0%	
Calcium	A	mg/L	-0.001531	-0.001531		0	0	0	0.02092	0.02092	50	0%			0%	
Cerium	A	mg/L	1.181E-07	1.181E-07		0	0	0	0.000012	0.001	0.1	0%	0	0	0%	
Chromium	A	mg/L	0.00001537	0.00001537		0	0	0	0.00018	0.001	1	0%			0%	
Cobalt	A	mg/L	-3.912E-06	-3.912E-06		0	0	0	0.000042	0.001	1	0%			0%	
Copper	A	mg/L	0.000001722	0.000001722		0	0	0	0.00027	0.001	1	0%			0%	
Iron	A	mg/L	0.00003353	0.00003353		0	0	0	0.00119	0.00119	5	0%			0%	
Lanthanum	A	mg/L	-3.135E-07	-3.135E-07		0	0	0	0.000011	0.001	0.1	0%	0	0	0%	
Lead	A	mg/L	0.000002011	0.000002011		0	0	0	0.000056	0.001	1	0%			0%	
Magnesium	A	mg/L	-0.0008366	-0.0008366		0	0	0	0.00564	0.00564	50	0%			0%	
Manganese	A	mg/L	0.000004002	0.000004002		0	0	0	0.000095	0.001	1	0%			0%	
Mercury	A	mg/L	0.000002674	0.000002674		0	0	0	0.00016	0.001	0.002	0%			0%	
Molybdenum	A	mg/L	0.00002283	0.00002283		0	0	0	0.00005	0.001	0.1	0%			0%	
Nickel	A	mg/L	-1.618E-06	-1.618E-06		0	0	0	0.00063	0.001	1	0%			0%	
Potassium	A	mg/L	-0.02705	-0.02705		0	0	0	0.08139	0.08139	50	0%			0%	
Selenium	A	mg/L	0.00000525	0.00000525		0	0	0	0.00033	0.001	1	0%			0%	
Silicon	A	mg/L	0.01876	0.01876		0	0	0	0.01223	0.1	0.4	0%	0	0	0%	
Silver	A	mg/L	-2.995E-06	-2.995E-06		0	0	0	0.00002	0.001	0.04	0%			0%	
Sodium	A	mg/L	0.03448	0.03448		0	0	0	0.02171	0.02171	50	0%			0%	
Strontium	A	mg/L	-0.00001572	-0.00001572		0	0	0	0.00014	0.001	1	0%	0	0	0%	
Thallium	A	mg/L	0.00008574	0.00008574		0	0	0	0.000041	0.001	1	0%	0	0	0%	
Thorium	A	mg/L	0.00001358	0.00001358		0	0	0	0.00061	0.001	1	0%	0	0	0%	
Tin	A	mg/L	0.000031	0.000031		0	0	0	0.00132	0.00132	0.1	0%	0	0	0%	
Titanium	A	mg/L	0.00001636	0.00001636		0	0	0	0.000094	0.001	1	0%	0	0	0%	
Uranium	A	mg/L	0.00000271	0.00000271		0	0	0	0.000052	0.0003	1	0%	0	0	0%	
Vanadium	A	mg/L	0.001287	0.001287		0	0	0	0.0013	0.0013	1	0%	0	0	0%	
Zinc	A	mg/L	0.00005958	0.00005958		0	0	0	0.00273	0.00273	1	0%	0	0	0%	
Iron, Ferrous	C	mg/L	0.00003353	0.00003353		0	0	0	0.00119	0.00119	5	0%	0	0	0%	

Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist					
14998142	B22011136-001	ICPMS-6020-W-	SAMP		1/22/2022 1:23:5	1	163063	1/19/2022 3:	0	0						
Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q

Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist					
14998142	B22011136-001	ICPMS-6020-W-	SAMP		1/22/2022 1:23:5	1	163063	1/19/2022 3:	0	0						
Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
Antimony	A	mg/L	0.0001346	0		0	0	0	0.0002799	0.001	0.1	0%	0	0	0%	U
Arsenic	A	mg/L	0.0003859	0.0003859		0	0	0	0.0003412	0.001	1	0%	0	0	0%	J
Barium	A	mg/L	0.007208	0.007208		0	0	0	0.0002682	0.001	1	0%	0	0	0%	
Cadmium	A	mg/L	0.00002012	0.00002012		0	0	0	1.821E-05	0.005	1	0%	0	0	0%	J
Cerium	A	mg/L	0.0006819	0.0006819		0	0	0	2.738E-05	0.001	0.1	0%	0	0	0%	J
Cobalt	A	mg/L	0.0006875	0.0006875		0	0	0	9.541E-05	0.001	1	0%	0	0	0%	J
Lanthanum	A	mg/L	0.0001704	0.0001704		0	0	0	0.000055	0.001	0.1	0%	0	0	0%	J
Lead	A	mg/L	0.0001561	0.0001561		0	0	0	7.716E-05	0.001	1	0%	0	0	0%	J
Manganese	A	mg/L	0.03167	0.03167		0	0	0	0.0005399	0.001	1	0%	0	0	0%	
Molybdenum	A	mg/L	0.0006598	0.0006598		0	0	0	0.0001763	0.001	0.1	0%	0	0	0%	J
Selenium	A	mg/L	0.0004708	0.0004708		0	0	0	0.0001357	0.001	1	0%	0	0	0%	J
Silver	A	mg/L	-0.0000573	0		0	0	0	4.281E-05	0.001	0.04	0%	0	0	0%	U
Strontium	A	mg/L	0.0601	0.0601		0	0	0	0.0002433	0.001	1	0%	0	0	0%	
Thallium	A	mg/L	0.00006718	0		0	0	0	0.0001114	0.001	1	0%	0	0	0%	U
Titanium	A	mg/L	0.03679	0.03679		0	0	0	0.0005733	0.001	1	0%	0	0	0%	
Uranium	A	mg/L	0.00003167	0.00003167		0	0	0	1.699E-05	0.0003	1	0%	0	0	0%	J
Aluminum	B	mg/L	0.5826	0.5826		0	0	0	0.0038747	0.0031975	1	0%	0	0	0%	D
Calcium	B	mg/L	5.729	5.729		0	0	0	0.0372936	0.1103481	50	0%	0	0	0%	D
Chromium	B	mg/L	0.005995	0.005995		0	0	0	0.0015375	0.0015375	1	0%	0	0	0%	D
Copper	B	mg/L	0.001751	0.001751		0	0	0	0.0008747	0.00198	1	0%	0	0	0%	JL
Iron	B	mg/L	0.6689	0.6689		0	0	0	0.007424	0.00513	5	0%	0	0	0%	D
Magnesium	B	mg/L	9.16	9.16		0	0	0	0.0104254	0.0081522	50	0%	0	0	0%	D
Nickel	B	mg/L	0.001605	0.001605		0	0	0	0.0002288	0.0024200	1	0%	0	0	0%	JL
Thorium	B	mg/L	0.00008295	0		0	0	0	0.0003796	0.00415	1	0%	0	0	0%	UL
Tin	B	mg/L	0.0004166	0		0	0	0	0.0018932	0.0011175	0.1	0%	0	0	0%	U
Vanadium	B	mg/L	0.04888	0.04888		0	0	0	0.0039127	0.0021085	1	0%	0	0	0%	D
Zinc	B	mg/L	0.001455	0.001455		0	0	0	0.0011617	0.0065544	1	0%	0	0	0%	JL

Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist					
14998143	B22011137-001	ICPMS-6020-W-	SAMP		1/22/2022 1:30:1	1	R373694		0	0						
Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
Aluminum	A	mg/L	0.003414	0.003414		0	0	0	0.00086	0.001	1	0%	0	0	0%	
Antimony	A	mg/L	0.00006368	0		0	0	0	0.00042	0.001	0.1	0%	0	0	0%	
Arsenic	A	mg/L	-0.0001433	0		0	0	0	0.00019	0.001	1	0%	0	0	0%	

Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist					
14998143	B22011137-001	ICPMS-6020-W-	SAMP		1/22/2022 1:30:1	1	R373694		0	0						
Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
Barium	A	mg/L	0.0208	0.0208		0	0	0	0.000042	0.001	1	0%	0	0	0%	
Cadmium	A	mg/L	0.00002881	0.00002881		0	0	0	0.000025	0.001	1	0%	0	0	0%	J
Cerium	A	mg/L	0.00009176	0.00009176		0	0	0	0.000012	0.001	0.1	0%	0	0	0%	J
Chromium	A	mg/L	0.000293	0.000293		0	0	0	0.00018	0.001	1	0%	0	0	0%	J
Cobalt	A	mg/L	0.0002678	0.0002678		0	0	0	0.000042	0.001	1	0%	0	0	0%	J
Copper	A	mg/L	0.0004622	0.0004622		0	0	0	0.00027	0.001	1	0%	0	0	0%	J
Lead	A	mg/L	0.00002083	0		0	0	0	0.000056	0.001	1	0%	0	0	0%	U
Mercury	A	mg/L	0.00001851	0		0	0	0	0.00016	0.001	0.002	0%	0	0	0%	
Molybdenum	A	mg/L	0.00009411	0.00009411		0	0	0	0.00005	0.001	0.1	0%	0	0	0%	J
Nickel	A	mg/L	0.0005522	0		0	0	0	0.00063	0.001	1	0%	0	0	0%	
Selenium	A	mg/L	0.0001518	0		0	0	0	0.00033	0.001	1	0%	0	0	0%	
Silver	A	mg/L	-0.00006368	0		0	0	0	0.00002	0.001	0.04	0%	0	0	0%	
Strontium	A	mg/L	0.1113	0.1113		0	0	0	0.00014	0.001	1	0%	0	0	0%	
Thallium	A	mg/L	0.00001165	0		0	0	0	0.000041	0.001	1	0%	0	0	0%	
Thorium	A	mg/L	-6.226E-06	0		0	0	0	0.00061	0.001	1	0%	0	0	0%	
Titanium	A	mg/L	0.003678	0.003678		0	0	0	0.000094	0.001	1	0%	0	0	0%	
Uranium	A	mg/L	0.00002218	0		0	0	0	0.000052	0.0003	1	0%	0	0	0%	
Calcium	B	mg/L	13.96	13.96		0	0	0	0.02092	0.02092	50	0%	0	0	0%	D
Iron	B	mg/L	2.942	2.942		0	0	0	0.00119	0.00119	5	0%	0	0	0%	
Iron, Ferrous	B	mg/L	2.942	2.942		0	0	0	0.00119	0.00119	5	0%	0	0	0%	
Magnesium	B	mg/L	27.7	27.7		0	0	0	0.00564	0.00564	50	0%	0	0	0%	D
Tin	B	mg/L	-0.0000703	0		0	0	0	0.00132	0.00132	0.1	0%	0	0	0%	
Vanadium	B	mg/L	-0.0006251	0		0	0	0	0.0013	0.0013	1	0%	0	0	0%	
Zinc	B	mg/L	0.0005433	0		0	0	0	0.00273	0.00273	1	0%	0	0	0%	L

Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist					
14998144	B22011137-001	ICPMS-6020-W-	SAMP		1/22/2022 1:36:2	1	163063	1/19/2022 3:	0	0						
Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
Antimony	A	mg/L	0.0003641	0.0003641		0	0	0	0.0002799	0.001	0.1	0%	0	0	0%	J
Arsenic	A	mg/L	0.0001458	0		0	0	0	0.0003412	0.001	1	0%	0	0	0%	U
Barium	A	mg/L	0.02129	0.02129		0	0	0	0.0002682	0.001	1	0%	0	0	0%	
Cadmium	A	mg/L	0.000001281	0		0	0	0	1.821E-05	0.005	1	0%	0	0	0%	U
Cerium	A	mg/L	0.0002418	0.0002418		0	0	0	2.738E-05	0.001	0.1	0%	0	0	0%	J
Cobalt	A	mg/L	0.0003532	0.0003532		0	0	0	9.541E-05	0.001	1	0%	0	0	0%	J

Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist					
14998144	B22011137-001	ICPMS-6020-W-	SAMP		1/22/2022 1:36:2	1	163063	1/19/2022 3:	0	0						
Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
Lanthanum	A	mg/L	0.00006666	0.00006666		0	0	0	0.000055	0.001	0.1	0%	0	0	0%	J
Lead	A	mg/L	0.0001987	0.0001987		0	0	0	7.716E-05	0.001	1	0%	0	0	0%	J
Molybdenum	A	mg/L	0.0005055	0.0005055		0	0	0	0.0001763	0.001	0.1	0%	0	0	0%	J
Selenium	A	mg/L	0.00007791	0		0	0	0	0.0001357	0.001	1	0%	0	0	0%	U
Silver	A	mg/L	-0.0000171	0		0	0	0	4.281E-05	0.001	0.04	0%	0	0	0%	U
Strontium	A	mg/L	0.1115	0.1115		0	0	0	0.0002433	0.001	1	0%	0	0	0%	
Thallium	A	mg/L	0.00002195	0		0	0	0	0.0001114	0.001	1	0%	0	0	0%	U
Titanium	A	mg/L	0.01063	0.01063		0	0	0	0.0005733	0.001	1	0%	0	0	0%	
Uranium	A	mg/L	0.000006939	0		0	0	0	1.699E-05	0.0003	1	0%	0	0	0%	U
Aluminum	B	mg/L	0.08101	0.08101		0	0	0	0.0038747	0.0031975	1	0%	0	0	0%	D
Calcium	B	mg/L	13.45	13.45		0	0	0	0.0372936	0.1103481	50	0%	0	0	0%	D
Chromium	B	mg/L	0.0007076	0		0	0	0	0.0015375	0.0015375	1	0%	0	0	0%	UL
Copper	B	mg/L	0.00263	0.00263		0	0	0	0.0008747	0.00198	1	0%	0	0	0%	D
Iron	B	mg/L	2.98	2.98		0	0	0	0.007424	0.00513	5	0%	0	0	0%	D
Magnesium	B	mg/L	26.71	26.71		0	0	0	0.0104254	0.0081522	50	0%	0	0	0%	D
Nickel	B	mg/L	0.0007148	0.0007148		0	0	0	0.0002288	0.0024200	1	0%	0	0	0%	JL
Sodium	B	mg/L	49.7	49.7		0	0	0	0.1019461	0.7330269	50	0%	0	0	0%	D
Thorium	B	mg/L	0.00001566	0		0	0	0	0.0003796	0.00415	1	0%	0	0	0%	UL
Tin	B	mg/L	0.0004435	0		0	0	0	0.0018932	0.0011175	0.1	0%	0	0	0%	U
Vanadium	B	mg/L	0.004879	0.004879		0	0	0	0.0039127	0.0021085	1	0%	0	0	0%	UD
Zinc	B	mg/L	0.002309	0.002309		0	0	0	0.0011617	0.0065544	1	0%	0	0	0%	JL

Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist					
14998145	B22011214-001	ICPMS-6020-W-	SAMP		1/22/2022 1:42:4	1	R373694		0	0						
Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
Aluminum	A	mg/L	0.001889	0.001889		0	0	0	0.00086	0.001	1	0%	0	0	0%	
Antimony	A	mg/L	0.0004132	0		0	0	0	0.00042	0.001	0.1	0%	0	0	0%	
Arsenic	A	mg/L	0.00655	0.00655		0	0	0	0.00019	0.001	1	0%	0	0	0%	
Barium	A	mg/L	0.00329	0.00329		0	0	0	0.000042	0.001	1	0%	0	0	0%	
Cadmium	A	mg/L	0.00003073	0.00003073		0	0	0	0.000025	0.001	1	0%	0	0	0%	J
Cerium	A	mg/L	0.000002301	0		0	0	0	0.000012	0.001	0.1	0%	0	0	0%	
Chromium	A	mg/L	0.0007013	0.0007013		0	0	0	0.00018	0.001	1	0%	0	0	0%	J
Cobalt	A	mg/L	0.0001773	0.0001773		0	0	0	0.000042	0.001	1	0%	0	0	0%	J
Copper	A	mg/L	0.0002103	0		0	0	0	0.00027	0.001	1	0%	0	0	0%	

Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist					
14998145	B22011214-001	ICPMS-6020-W-	SAMP		1/22/2022 1:42:4	1	R373694		0	0						
Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
Lead	A	mg/L	0.00002909	0		0	0	0	0.000056	0.001	1	0%	0	0	0%	U
Manganese	A	mg/L	0.02699	0.02699		0	0	0	0.000095	0.001	1	0%	0	0	0%	
Molybdenum	A	mg/L	0.01058	0.01058		0	0	0	0.00005	0.001	0.1	0%	0	0	0%	
Nickel	A	mg/L	0.001069	0.001069		0	0	0	0.00063	0.001	1	0%	0	0	0%	
Selenium	A	mg/L	0.0006024	0.0006024		0	0	0	0.00033	0.001	1	0%	0	0	0%	J
Silver	A	mg/L	-0.00006067	0		0	0	0	0.00002	0.001	0.04	0%	0	0	0%	
Strontium	A	mg/L	0.1083	0.1083		0	0	0	0.00014	0.001	1	0%	0	0	0%	
Thallium	A	mg/L	-6.135E-06	0		0	0	0	0.000041	0.001	1	0%	0	0	0%	
Thorium	A	mg/L	-0.00000944	0		0	0	0	0.00061	0.001	1	0%	0	0	0%	
Titanium	A	mg/L	0.001592	0.001592		0	0	0	0.000094	0.001	1	0%	0	0	0%	
Uranium	A	mg/L	0.0003322	0.0003322		0	0	0	0.000052	0.0003	1	0%	0	0	0%	
Calcium	B	mg/L	22.69	22.69		0	0	0	0.02092	0.02092	50	0%	0	0	0%	D
Iron	B	mg/L	0.03201	0.03201		0	0	0	0.00119	0.00119	5	0%	0	0	0%	
Iron, Ferrous	B	mg/L	0.03201	0.03201		0	0	0	0.00119	0.00119	5	0%	0	0	0%	
Magnesium	B	mg/L	24.12	24.12		0	0	0	0.00564	0.00564	50	0%	0	0	0%	D
Tin	B	mg/L	0.000008231	0		0	0	0	0.00132	0.00132	0.1	0%	0	0	0%	
Vanadium	B	mg/L	0.02334	0.02334		0	0	0	0.0013	0.0013	1	0%	0	0	0%	
Zinc	B	mg/L	0.004047	0.004047		0	0	0	0.00273	0.00273	1	0%	0	0	0%	D

Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist					
14998146	B22011214-001	ICPMS-6020-W-	SAMP		1/22/2022 1:48:5	1	163116	1/20/2022 1:	0	0						
Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
Antimony	A	mg/L	0.0006315	0.0006315		0	0	0	0.0002799	0.001	0.1	0%	0	0	0%	J
Arsenic	A	mg/L	0.006696	0.006696		0	0	0	0.0003412	0.001	1	0%	0	0	0%	
Barium	A	mg/L	0.003181	0.003181		0	0	0	0.0002682	0.001	1	0%	0	0	0%	
Cadmium	A	mg/L	0.000004536	0		0	0	0	1.821E-05	0.005	1	0%	0	0	0%	U
Cerium	A	mg/L	0.00008488	0.00008488		0	0	0	2.738E-05	0.001	0.1	0%	0	0	0%	J
Cobalt	A	mg/L	0.0002681	0.0002681		0	0	0	9.541E-05	0.001	1	0%	0	0	0%	J
Lanthanum	A	mg/L	0.00003495	0		0	0	0	0.000055	0.001	0.1	0%	0	0	0%	U
Lead	A	mg/L	0.0002526	0.0002526		0	0	0	7.716E-05	0.001	1	0%	0	0	0%	J
Manganese	A	mg/L	0.008747	0.008747		0	0	0	0.0005399	0.001	1	0%	0	0	0%	
Molybdenum	A	mg/L	0.008346	0.008346		0	0	0	0.0001763	0.001	0.1	0%	0	0	0%	
Selenium	A	mg/L	0.0007745	0.0007745		0	0	0	0.0001357	0.001	1	0%	0	0	0%	J
Silver	A	mg/L	0.0005027	0.0005027		0	0	0	4.281E-05	0.001	0.04	0%	0	0	0%	J

Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist					
14998146	B22011214-001	ICPMS-6020-W-	SAMP		1/22/2022 1:48:5	1	163116	1/20/2022 1:	0	0						
Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
Strontium	A	mg/L	0.1072	0.1072		0	0	0	0.0002433	0.001	1	0%	0	0	0%	
Thallium	A	mg/L	0.00001753	0		0	0	0	0.0001114	0.001	1	0%	0	0	0%	U
Titanium	A	mg/L	0.006146	0.006146		0	0	0	0.0005733	0.001	1	0%	0	0	0%	
Uranium	A	mg/L	0.0003685	0.0003685		0	0	0	1.699E-05	0.0003	1	0%	0	0	0%	
Aluminum	B	mg/L	0.06016	0.06016		0	0	0	0.0038747	0.0031975	1	0%	0	0	0%	D
Calcium	B	mg/L	21.66	21.66		0	0	0	0.0372936	0.1103481	50	0%	0	0	0%	D
Chromium	B	mg/L	0.003263	0.003263		0	0	0	0.0015375	0.0015375	1	0%	0	0	0%	UD
Copper	B	mg/L	0.001405	0.001405		0	0	0	0.0008747	0.00198	1	0%	0	0	0%	JL
Iron	B	mg/L	0.1721	0.1721		0	0	0	0.007424	0.00513	5	0%	0	0	0%	D
Magnesium	B	mg/L	23.23	23.23		0	0	0	0.0104254	0.0081522	50	0%	0	0	0%	D
Nickel	B	mg/L	0.001608	0.001608		0	0	0	0.0002288	0.0024200	1	0%	0	0	0%	JL
Thorium	B	mg/L	0.00000845	0		0	0	0	0.0003796	0.00415	1	0%	0	0	0%	UL
Tin	B	mg/L	0.0008632	0		0	0	0	0.0018932	0.0011175	0.1	0%	0	0	0%	U
Vanadium	B	mg/L	0.03835	0.03835		0	0	0	0.0039127	0.0021085	1	0%	0	0	0%	D
Zinc	B	mg/L	0.02829	0.02829		0	0	0	0.0011617	0.0065544	1	0%	0	0	0%	D

Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist					
14998147	B22011214-001	ICPMS-6020-W-	SD		1/22/2022 1:55:1	5	163116	1/20/2022 1:	0	1E+07						
Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
Aluminum	A	mg/L	0.01251	0.06255		0	0	0.06016	0.0193736	0.0159875	1	0%	0	0		N
Antimony	A	mg/L	0.0001208	0		0	0	0.0006315	0.0013997	0.0049	0.1	0%	0	0		
Arsenic	A	mg/L	0.00129	0.00645		0	0	0.006696	0.0017061	0.0013383	1	0%	0	0		N
Barium	A	mg/L	0.0006477	0.0032385		0	0	0.003181	0.0013411	0.0012039	1	0%	0	0		N
Beryllium	A	mg/L	-0.00005684	0		0	0	0	0.0005353	0.01	1	0%	0	0		
Boron	A	mg/L	0.01847	0		0	0	0.08695	0.1019008	0.07335	1	0%	0	0		
Cadmium	A	mg/L	0.000001202	0		0	0	0	9.105E-05	0.005	1	0%	0	0		
Calcium	A	mg/L	4.352	21.76		0	0	21.66	0.1864681	0.5517403	50	0%	0	0	0%	
Cerium	A	mg/L	0.00001863	0		0	0	8.488E-05	0.0001369	0.001	0.1	0%	0	0		
Chromium	A	mg/L	0.00069	0		0	0	0.003263	0.0076875	0.0076875	1	0%	0	0		
Cobalt	A	mg/L	0.00004986	0		0	0	0.0002681	0.0004771	0.001	1	0%	0	0		
Copper	A	mg/L	0.0006963	0		0	0	0.001405	0.0043735	0.0099	1	0%	0	0		
Iron	A	mg/L	0.03374	0.1687		0	0	0.1721	0.0371198	0.02565	5	0%	0	0		N
Lanthanum	A	mg/L	0.000006827	0		0	0	0	0.000275	0.001	0.1	0%	0	0		
Lead	A	mg/L	0.00004799	0		0	0	0.0002526	0.0003858	0.001	1	0%	0	0		

Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist					
14998147	B22011214-001	ICPMS-6020-W- SD			1/22/2022 1:55:1	5	163116	1/20/2022 1:	0	1E+07						
Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
Magnesium	A	mg/L	4.71	23.55		0	0	23.23	0.0521269	0.0407608	50	0%	0	0	1%	
Manganese	A	mg/L	0.001729	0.008645		0	0	0.008747	0.0026994	0.0010695	1	0%	0	0		N
Molybdenum	A	mg/L	0.001617	0.008085		0	0	0.008346	0.0008814	0.001	0.1	0%	0	0		N
Nickel	A	mg/L	0.0003412	0.001706		0	0	0.001608	0.0011441	0.0121000	1	0%	0	0		N
Potassium	A	mg/L	0.4382	2.191		0	0	2.362	0.3828097	0.1306027	50	0%	0	0		N
Selenium	A	mg/L	0.0001511	0.0007555		0	0	0.0007745	0.0006787	0.0029274	1	0%	0	0		N
Silicon	A	mg/L	4.844	24.22		0	0	25.15	0.2110446	0.026606	0.4	0%	0	0	4%	
Silver	A	mg/L	0.00004953	0.00024765		0	0	0.0005027	0.0002141	0.001	0.04	0%	0	0		N
Sodium	A	mg/L	14.99	74.95		0	0	76.02	0.5097304	3.6651346	50	0%	0	0	1%	
Strontium	A	mg/L	0.02038	0.1019		0	0	0.1072	0.0012164	0.001	1	0%	0	0	5%	
Thallium	A	mg/L	-9.394E-06	0		0	0	0	0.0005569	0.001	1	0%	0	0		
Thorium	A	mg/L	-7.361E-06	0		0	0	0	0.0018981	0.02075	1	0%	0	0		
Tin	A	mg/L	0.0001743	0		0	0	0	0.0094659	0.0055874	0.1	0%	0	0		
Titanium	A	mg/L	0.001172	0.00586		0	0	0.006146	0.0028666	0.001	1	0%	0	0		N
Uranium	A	mg/L	0.00006949	0.00034745		0	0	0.0003685	8.495E-05	0.0004224	1	0%	0	0		N
Vanadium	A	mg/L	0.008198	0.04099		0	0	0.03835	0.0195637	0.0105423	1	0%	0	0		N
Zinc	A	mg/L	0.005979	0.029895		0	0	0.02829	0.0058087	0.0327721	1	0%	0	0		N
Silica	C	mg/L	10.3622848	51.811424		0	0	0	0.4514666	0.0569155	5	0%	0	0		N
Silicon as SiO2	C	mg/L	10.3622848	51.811424		0	0	0	0.4514666	0.0569155	5	0%	0	0		N

Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist					
14998148	B22011214-001	ICPMS-6020-W- PDS1			1/22/2022 2:01:2	1.03	163116	1/20/2022 1:	1E+07	0						
Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
Aluminum	A	mg/L	0.1085	0.111755		0.0515	0.06016	0	0.003991	0.0032934	1	100%	75	125	0%	
Antimony	A	mg/L	0.05079	0.0523137		0.0515	0.0006315	0	0.0002883	0.0010094	0.1	100%	75	125	0%	
Arsenic	A	mg/L	0.05494	0.0565882		0.0515	0.006696	0	0.0003514	0.001	1	97%	75	125	0%	
Barium	A	mg/L	0.05487	0.0565161		0.0515	0.003181	0	0.0002763	0.001	1	104%	75	125	0%	
Beryllium	A	mg/L	0.03614	0.0372242		0.0515	0	0	0.0001103	0.01	1	72%	75	125	0%	S
Boron	A	mg/L	0.1263	0.130089		0.0515	0.08695	0	0.0209916	0.0151101	1	84%	75	125	0%	
Cadmium	A	mg/L	0.05042	0.0519326		0.0515	0	0	1.876E-05	0.005	1	101%	75	125	0%	
Calcium	A	mg/L	21.24	21.8772		51.5	21.66	0	0.0384124	0.1136585	50	0%	75	125	0%	S
Cerium	A	mg/L	0.05493	0.0565779		0.0515	8.488E-05	0	2.820E-05	0.001	0.1	110%	75	125	0%	
Chromium	A	mg/L	0.04984	0.0513352		0.0515	0.003263	0	0.0015836	0.0015836	1	93%	75	125	0%	
Cobalt	A	mg/L	0.04435	0.0456805		0.0515	0.0002681	0	9.827E-05	0.001	1	88%	75	125	0%	

Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist					
14998148	B22011214-001	ICPMS-6020-W-	PDS1		1/22/2022 2:01:2	1.03	163116	1/20/2022 1:	1E+07	0						
Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
Copper	A	mg/L	0.05079	0.0523137		0.0515	0.001405	0	0.0009009	0.0020394	1	99%	75	125	0%	
Iron	A	mg/L	0.2171	0.223613		5.15	0.1721	0	0.0076467	0.0052839	5	1%	75	125	0%	S
Lanthanum	A	mg/L	0.0000385	0		0.0515	0	0	5.665E-05	0.001	0.1	0%	75	125	0%	S
Lead	A	mg/L	0.05117	0.0527051		0.0515	0.0002526	0	7.947E-05	0.001	1	102%	80	120	0%	
Magnesium	A	mg/L	22.95	23.6385		51.5	23.23	0	0.0107381	0.0083967	50	1%	75	125	0%	S
Manganese	A	mg/L	0.05523	0.0568869		0.0515	0.008747	0	0.0005561	0.001	1	93%	75	125	0%	
Molybdenum	A	mg/L	0.05523	0.0568869		0.0515	0.008346	0	0.0001816	0.001	0.1	94%	75	125	0%	
Nickel	A	mg/L	0.05022	0.0517266		0.0515	0.001608	0	0.0002357	0.0024926	1	97%	75	125	0%	
Potassium	A	mg/L	2.367	2.43801		51.5	2.362	0	0.0788588	0.0269042	50	0%	75	125	0%	S
Selenium	A	mg/L	0.05066	0.0521798		0.0515	0.0007745	0	0.0001398	0.001	1	100%	75	125	0%	
Silicon	A	mg/L	25.79	26.5637		0.206	25.15	0	0.0434752	0.0054808	0.4		0	0	0%	A
Silver	A	mg/L	0.01972	0.0203116		0.0206	0.0005027	0	4.409E-05	0.001	0.04	96%	75	125	0%	
Sodium	A	mg/L	72.03	74.1909		51.5	76.02	0	0.1050045	0.7550177	50	-4%	75	125	0%	S
Strontium	A	mg/L	0.156	0.16068		0.0515	0.1072	0	0.0002506	0.001	1	104%	75	125	0%	
Thallium	A	mg/L	0.05047	0.0519841		0.0515	0	0	0.0001147	0.001	1	101%	75	125	0%	
Thorium	A	mg/L	0.05189	0.0534467		0.0515	0	0	0.000391	0.0042745	1	104%	75	125	0%	
Tin	A	mg/L	0.05014	0.0516442		0.0515	0	0	0.00195	0.001151	0.1	100%	75	125	0%	
Titanium	A	mg/L	0.04493	0.0462779		0.0515	0.006146	0	0.0005905	0.001	1	78%	75	125	0%	
Uranium	A	mg/L	0.05312	0.0547136		0.0515	0.0003685	0	1.75E-05	0.0003	1	106%	75	125	0%	
Vanadium	A	mg/L	0.08595	0.0885285		0.0515	0.03835	0	0.0040301	0.0021717	1	97%	75	125	0%	
Zinc	A	mg/L	0.07577	0.0780431		0.0515	0.02829	0	0.0011966	0.0067511	1	97%	75	125	0%	
Silica	C	mg/L	55.169968	56.82506704		0	0	0	0.0930021	0.0117246	5	0%	0	0	0%	
Silicon as SiO2	C	mg/L	55.169968	56.82506704		0.0515	0	0	0.0930021	0.0117246	5	110340%	75	125	0%	S

Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist					
14998149	B22011214-001	ICPMS-6020-W-	MS4		1/22/2022 2:07:4	1	163116	1/20/2022 1:	1E+07	0						
Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
Aluminum	A	mg/L	0.4816	0.4816		0.5	0.06016	0	0.0038747	0.0031975	1	84%	75	125	0%	
Antimony	A	mg/L	0.1058	0.1058		0.1	0.0006315	0	0.0002799	0.001	0.1	105%	75	125	0%	
Arsenic	A	mg/L	0.1049	0.1049		0.1	0.006696	0	0.0003412	0.001	1	98%	75	125	0%	
Barium	A	mg/L	0.1004	0.1004		0.1	0.003181	0	0.0002682	0.001	1	97%	75	125	0%	
Beryllium	A	mg/L	0.03767	0.03767		0.05	0	0	0.0001071	0.01	1	75%	75	125	0%	
Boron	A	mg/L	0.1712	0.1712		0.1	0.08695	0	0.0203802	0.01467	1	84%	75	125	0%	
Cadmium	A	mg/L	0.05174	0.05174		0.05	0	0	1.821E-05	0.005	1	103%	75	125	0%	

Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist					
14998149	B22011214-001	ICPMS-6020-W- MS4			1/22/2022 2:07:4	1	163116	1/20/2022 1:	1E+07	0						
Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
Calcium	A	mg/L	26.96	26.96		5	21.66	0	0.0372936	0.1103481	50		75	125	0%	A
Cerium	A	mg/L	0.1135	0.1135		0.1	8.488E-05	0	2.738E-05	0.001	0.1	113%	75	125	0%	
Chromium	A	mg/L	0.1002	0.1002		0.1	0.003263	0	0.0015375	0.0015375	1	97%	75	125	0%	
Cobalt	A	mg/L	0.0882	0.0882		0.1	0.0002681	0	9.541E-05	0.001	1	88%	75	125	0%	
Copper	A	mg/L	0.1009	0.1009		0.1	0.001405	0	0.0008747	0.00198	1	99%	75	125	0%	
Iron	A	mg/L	0.687	0.687		0.5	0.1721	0	0.007424	0.00513	5	103%	75	125	0%	
Lanthanum	A	mg/L	0.1114	0.1114		0.1	0	0	0.000055	0.001	0.1	111%	75	125	0%	
Lead	A	mg/L	0.1038	0.1038		0.1	0.0002526	0	7.716E-05	0.001	1	104%	88	115	0%	
Magnesium	A	mg/L	29.3	29.3		5	23.23	0	0.0104254	0.0081522	50		75	125	0%	A
Manganese	A	mg/L	0.482	0.482		0.5	0.008747	0	0.0005399	0.001	1	95%	75	125	0%	
Molybdenum	A	mg/L	0.1019	0.1019		0.1	0.008346	0	0.0001763	0.001	0.1	94%	75	125	0%	
Nickel	A	mg/L	0.09627	0.09627		0.1	0.001608	0	0.0002288	0.0024200	1	95%	75	125	0%	
Potassium	A	mg/L	6.899	6.899		5	2.362	0	0.0765619	0.0261205	50	91%	75	125	0%	
Selenium	A	mg/L	0.1036	0.1036		0.1	0.0007745	0	0.0001357	0.001	1	103%	75	125	0%	
Silicon	A	mg/L	28.83	28.83		1	25.15	0	0.0422089	0.0053212	0.4		75	125	0%	A
Silver	A	mg/L	0.009718	0.009718		0.01	0.0005027	0	4.281E-05	0.001	0.04	92%	75	125	0%	
Sodium	A	mg/L	80.8	80.8		5	76.02	0	0.1019461	0.7330269	50		75	125	0%	A
Strontium	A	mg/L	0.2093	0.2093		0.1	0.1072	0	0.0002433	0.001	1	102%	75	125	0%	
Thallium	A	mg/L	0.1037	0.1037		0.1	0	0	0.0001114	0.001	1	104%	75	125	0%	
Thorium	A	mg/L	0.1069	0.1069		0.1	0	0	0.0003796	0.00415	1	107%	75	125	0%	
Tin	A	mg/L	0.1055	0.1055		0.1	0	0	0.0018932	0.0011175	0.1	105%	75	125	0%	
Titanium	A	mg/L	0.0864	0.0864		0.1	0.006146	0	0.0005733	0.001	1	80%	75	125	0%	
Uranium	A	mg/L	0.1094	0.1094		0.1	0.0003685	0	1.699E-05	0.0003	1	109%	75	125	0%	
Vanadium	A	mg/L	0.1371	0.1371		0.1	0.03835	0	0.0039127	0.0021085	1	99%	75	125	0%	
Zinc	A	mg/L	0.124	0.124		0.1	0.02829	0	0.0011617	0.0065544	1	96%	75	125	0%	
Silica	C	mg/L	61.673136	61.673136		0	0	0	0.0902933	0.0113831	5	0%	0	0	0%	
Silicon as SiO2	C	mg/L	61.673136	61.673136		2.14	0	0	0.0902933	0.0113831	5	2882%	75	125	0%	S

Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist					
14998150	B22011214-001	ICPMS-6020-W- MSD4			1/22/2022 2:13:5	1	163116	1/20/2022 1:	1E+07	1E+07						
Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
Aluminum	A	mg/L	0.508	0.508		0.5	0.06016	0.4816	0.0038747	0.0031975	1	90%	75	125	5%	
Antimony	A	mg/L	0.1075	0.1075		0.1	0.0006315	0.1058	0.0002799	0.001	0.1	107%	75	125	2%	
Arsenic	A	mg/L	0.1046	0.1046		0.1	0.006696	0.1049	0.0003412	0.001	1	98%	75	125	0%	

Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist					
14998150	B22011214-001	ICPMS-6020-W-	MSD4		1/22/2022 2:13:5	1	163116	1/20/2022 1:	1E+07	1E+07						
Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
Barium	A	mg/L	0.1034	0.1034		0.1	0.003181	0.1004	0.0002682	0.001	1	100%	75	125	3%	
Beryllium	A	mg/L	0.03989	0.03989		0.05	0	0.03767	0.0001071	0.01	1	80%	75	125	6%	
Boron	A	mg/L	0.1774	0.1774		0.1	0.08695	0.1712	0.0203802	0.01467	1	90%	75	125	4%	
Cadmium	A	mg/L	0.05079	0.05079		0.05	0	0.05174	1.821E-05	0.005	1	102%	75	125	2%	
Calcium	A	mg/L	25.86	25.86		5	21.66	26.96	0.0372936	0.1103481	50		75	125	4%	A
Cerium	A	mg/L	0.1119	0.1119		0.1	8.488E-05	0.1135	2.738E-05	0.001	0.1	112%	75	125	1%	
Chromium	A	mg/L	0.09917	0.09917		0.1	0.003263	0.1002	0.0015375	0.0015375	1	96%	75	125	1%	
Cobalt	A	mg/L	0.08956	0.08956		0.1	0.0002681	0.0882	9.541E-05	0.001	1	89%	75	125	2%	
Copper	A	mg/L	0.09923	0.09923		0.1	0.001405	0.1009	0.0008747	0.00198	1	98%	75	125	2%	
Iron	A	mg/L	0.6549	0.6549		0.5	0.1721	0.687	0.007424	0.00513	5	97%	75	125	5%	
Lanthanum	A	mg/L	0.1095	0.1095		0.1	0	0.1114	0.000055	0.001	0.1	109%	75	125	2%	
Lead	A	mg/L	0.1054	0.1054		0.1	0.0002526	0.1038	7.716E-05	0.001	1	105%	88	115	2%	
Magnesium	A	mg/L	28.36	28.36		5	23.23	29.3	0.0104254	0.0081522	50		75	125	3%	A
Manganese	A	mg/L	0.4776	0.4776		0.5	0.008747	0.482	0.0005399	0.001	1	94%	75	125	1%	
Molybdenum	A	mg/L	0.1072	0.1072		0.1	0.008346	0.1019	0.0001763	0.001	0.1	99%	75	125	5%	
Nickel	A	mg/L	0.09836	0.09836		0.1	0.001608	0.09627	0.0002288	0.0024200	1	97%	75	125	2%	
Potassium	A	mg/L	7.05	7.05		5	2.362	6.899	0.0765619	0.0261205	50	94%	75	125	2%	
Selenium	A	mg/L	0.1014	0.1014		0.1	0.0007745	0.1036	0.0001357	0.001	1	101%	75	125	2%	
Silicon	A	mg/L	27.66	27.66		1	25.15	28.83	0.0422089	0.0053212	0.4		75	125	4%	A
Silver	A	mg/L	0.00999	0.00999		0.01	0.0005027	0.009718	4.281E-05	0.001	0.04	95%	75	125	3%	
Sodium	A	mg/L	77.65	77.65		5	76.02	80.8	0.1019461	0.7330269	50		75	125	4%	A
Strontium	A	mg/L	0.2074	0.2074		0.1	0.1072	0.2093	0.0002433	0.001	1	100%	75	125	1%	
Thallium	A	mg/L	0.1032	0.1032		0.1	0	0.1037	0.0001114	0.001	1	103%	75	125	0%	
Thorium	A	mg/L	0.1059	0.1059		0.1	0	0.1069	0.0003796	0.00415	1	106%	75	125	1%	
Tin	A	mg/L	0.1081	0.1081		0.1	0	0.1055	0.0018932	0.0011175	0.1	108%	75	125	2%	
Titanium	A	mg/L	0.08695	0.08695		0.1	0.006146	0.0864	0.0005733	0.001	1	81%	75	125	1%	
Uranium	A	mg/L	0.1106	0.1106		0.1	0.0003685	0.1094	1.699E-05	0.0003	1	110%	75	125	1%	
Vanadium	A	mg/L	0.1368	0.1368		0.1	0.03835	0.1371	0.0039127	0.0021085	1	98%	75	125	0%	
Zinc	A	mg/L	0.1244	0.1244		0.1	0.02829	0.124	0.0011617	0.0065544	1	96%	75	125	0%	
Silica	C	mg/L	59.170272	59.170272		0	0	61.673136	0.0902933	0.0113831	5	0%	0	0	4%	
Silicon as SiO2	C	mg/L	59.170272	59.170272		2.14	0	61.673136	0.0902933	0.0113831	5	2765%	75	125	4%	S

Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist					
14998151	Rinse	ICPMS-6020-W-	SAMP		1/22/2022 2:20:1	1	R373694		0	0						
Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
Aluminum	A	mg/L	-0.0003468	0		0	0	0	0.00086	0.001	1	0%	0	0	0%	
Antimony	A	mg/L	0.0001922	0		0	0	0	0.00042	0.001	0.1	0%	0	0	0%	
Arsenic	A	mg/L	0.00001218	0		0	0	0	0.00019	0.001	1	0%	0	0	0%	
Barium	A	mg/L	0.000003255	0		0	0	0	0.000042	0.001	1	0%	0	0	0%	
Cadmium	A	mg/L	0.00000605	0		0	0	0	0.000025	0.001	1	0%	0	0	0%	
Cerium	A	mg/L	8.932E-07	0		0	0	0	0.000012	0.001	0.1	0%	0	0	0%	
Chromium	A	mg/L	0.000008476	0		0	0	0	0.00018	0.001	1	0%	0	0	0%	
Cobalt	A	mg/L	0.000003191	0		0	0	0	0.000042	0.001	1	0%	0	0	0%	
Copper	A	mg/L	0.00001227	0		0	0	0	0.00027	0.001	1	0%	0	0	0%	
Lead	A	mg/L	0.000008725	0		0	0	0	0.000056	0.001	1	0%	0	0	0%	
Manganese	A	mg/L	0.0001397	0.0001397		0	0	0	0.000095	0.001	1	0%	0	0	0%	J
Mercury	A	mg/L	0.000005966	0		0	0	0	0.00016	0.001	0.002	0%	0	0	0%	
Molybdenum	A	mg/L	0.00001767	0		0	0	0	0.00005	0.001	0.1	0%	0	0	0%	
Nickel	A	mg/L	0.000004579	0		0	0	0	0.00063	0.001	1	0%	0	0	0%	
Selenium	A	mg/L	0.000009809	0		0	0	0	0.00033	0.001	1	0%	0	0	0%	
Silver	A	mg/L	-2.306E-06	0		0	0	0	0.00002	0.001	0.04	0%	0	0	0%	
Strontium	A	mg/L	-6.654E-06	0		0	0	0	0.00014	0.001	1	0%	0	0	0%	
Thallium	A	mg/L	0.0001647	0.0001647		0	0	0	0.000041	0.001	1	0%	0	0	0%	J
Thorium	A	mg/L	0.00001837	0		0	0	0	0.00061	0.001	1	0%	0	0	0%	
Titanium	A	mg/L	-6.672E-06	0		0	0	0	0.000094	0.001	1	0%	0	0	0%	
Uranium	A	mg/L	0.000002363	0		0	0	0	0.000052	0.0003	1	0%	0	0	0%	
Calcium	B	mg/L	-0.001333	0		0	0	0	0.02092	0.02092	50	0%	0	0	0%	L
Iron	B	mg/L	0.0001434	0		0	0	0	0.00119	0.00119	5	0%	0	0	0%	
Iron, Ferrous	B	mg/L	0.0001434	0		0	0	0	0.00119	0.00119	5	0%	0	0	0%	
Magnesium	B	mg/L	0.0006762	0		0	0	0	0.00564	0.00564	50	0%	0	0	0%	L
Tin	B	mg/L	0.00001382	0		0	0	0	0.00132	0.00132	0.1	0%	0	0	0%	
Zinc	B	mg/L	0.00005318	0		0	0	0	0.00273	0.00273	1	0%	0	0	0%	L

Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist					
14998152	B22011227-001	ICPMS-6020-W-	SAMP		1/22/2022 2:26:2	1	R373694		0	0						
Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
Aluminum	A	mg/L	0.0008109	0		0	0	0	0.00086	0.001	1	0%	0	0	0%	
Antimony	A	mg/L	0.0001138	0		0	0	0	0.00042	0.001	0.1	0%	0	0	0%	
Arsenic	A	mg/L	0.00007082	0		0	0	0	0.00019	0.001	1	0%	0	0	0%	

Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist					
14998152	B22011227-001	ICPMS-6020-W-	SAMP		1/22/2022 2:26:2	1	R373694		0	0						
Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
Barium	A	mg/L	0.01079	0.01079		0	0	0	0.000042	0.001	1	0%	0	0	0%	
Cadmium	A	mg/L	0.00003385	0.00003385		0	0	0	0.000025	0.001	1	0%	0	0	0%	J
Cerium	A	mg/L	0.000001812	0		0	0	0	0.000012	0.001	0.1	0%	0	0	0%	
Chromium	A	mg/L	0.002148	0.002148		0	0	0	0.00018	0.001	1	0%	0	0	0%	
Cobalt	A	mg/L	0.0001475	0.0001475		0	0	0	0.000042	0.001	1	0%	0	0	0%	J
Copper	A	mg/L	0.0003542	0.0003542		0	0	0	0.00027	0.001	1	0%	0	0	0%	J
Lead	A	mg/L	0.000008246	0		0	0	0	0.000056	0.001	1	0%	0	0	0%	U
Manganese	A	mg/L	0.00198	0.00198		0	0	0	0.000095	0.001	1	0%	0	0	0%	
Mercury	A	mg/L	0.000001588	0		0	0	0	0.00016	0.001	0.002	0%	0	0	0%	
Molybdenum	A	mg/L	0.0002896	0.0002896		0	0	0	0.00005	0.001	0.1	0%	0	0	0%	J
Nickel	A	mg/L	0.0005044	0		0	0	0	0.00063	0.001	1	0%	0	0	0%	
Selenium	A	mg/L	0.0002425	0		0	0	0	0.00033	0.001	1	0%	0	0	0%	
Silver	A	mg/L	-0.00006336	0		0	0	0	0.00002	0.001	0.04	0%	0	0	0%	
Strontium	A	mg/L	0.2629	0.2629		0	0	0	0.00014	0.001	1	0%	0	0	0%	
Thallium	A	mg/L	0.00005604	0.00005604		0	0	0	0.000041	0.001	1	0%	0	0	0%	J
Thorium	A	mg/L	-3.907E-06	0		0	0	0	0.00061	0.001	1	0%	0	0	0%	
Titanium	A	mg/L	0.002009	0.002009		0	0	0	0.000094	0.001	1	0%	0	0	0%	
Uranium	A	mg/L	0.00001442	0		0	0	0	0.000052	0.0003	1	0%	0	0	0%	
Calcium	B	mg/L	25.88	25.88		0	0	0	0.02092	0.02092	50	0%	0	0	0%	D
Iron	B	mg/L	0.01848	0.01848		0	0	0	0.00119	0.00119	5	0%	0	0	0%	
Iron, Ferrous	B	mg/L	0.01848	0.01848		0	0	0	0.00119	0.00119	5	0%	0	0	0%	
Magnesium	B	mg/L	44.48	44.48		0	0	0	0.00564	0.00564	50	0%	0	0	0%	D
Tin	B	mg/L	-0.0000747	0		0	0	0	0.00132	0.00132	0.1	0%	0	0	0%	
Zinc	B	mg/L	0.003921	0.003921		0	0	0	0.00273	0.00273	1	0%	0	0	0%	D

Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist					
14998153	CCV	ICPMS-6020-W-	CCV		1/22/2022 2:32:4	1	R373694		0	0						
Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
Aluminum	A	mg/L	0.05216	0.05216		0.05	0	0	0.00086	0.001	1	104%	90	110	0%	
Antimony	A	mg/L	0.05398	0.05398		0.05	0	0	0.00042	0.001	0.1	108%	90	110	0%	
Arsenic	A	mg/L	0.05022	0.05022		0.05	0	0	0.00019	0.001	1	100%	90	110	0%	
Barium	A	mg/L	0.05169	0.05169		0.05	0	0	0.000042	0.001	1	103%	90	110	0%	
Beryllium	A	mg/L	0.03762	0.03762		0.05	0	0	0.00012	0.001	1	75%	90	110	0%	S
Boron	A	mg/L	0.04081	0.04081		0.05	0	0	0.00561	0.00561	1	82%	90	110	0%	S

Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist					
14998153	CCV	ICPMS-6020-W-	CCV		1/22/2022 2:32:4	1	R373694		0	0						
Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
Cadmium	A	mg/L	0.05121	0.05121		0.05	0	0	0.000025	0.001	1	102%	90	110	0%	
Calcium	A	mg/L	12.05	12.05		12.5	0	0	0.02092	0.02092	50	96%	90	110	0%	
Cerium	A	mg/L	0.05149	0.05149		0.05	0	0	0.000012	0.001	0.1	103%	90	110	0%	
Chromium	A	mg/L	0.04822	0.04822		0.05	0	0	0.00018	0.001	1	96%	90	110	0%	
Cobalt	A	mg/L	0.04912	0.04912		0.05	0	0	0.000042	0.001	1	98%	90	110	0%	
Copper	A	mg/L	0.05006	0.05006		0.05	0	0	0.00027	0.001	1	100%	90	110	0%	
Iron	A	mg/L	1.338	1.338		1.3	0	0	0.00119	0.00119	5	103%	90	110	0%	
Lanthanum	A	mg/L	0.05192	0.05192		0.05	0	0	0.000011	0.001	0.1	104%	90	110	0%	
Lead	A	mg/L	0.05071	0.05071		0.05	0	0	0.000056	0.001	1	101%	90	110	0%	
Magnesium	A	mg/L	11.87	11.87		12.5	0	0	0.00564	0.00564	50	95%	90	110	0%	
Manganese	A	mg/L	0.04835	0.04835		0.05	0	0	0.000095	0.001	1	97%	90	110	0%	
Mercury	A	mg/L	0.0009954	0.0009954		0.001	0	0	0.00016	0.001	0.002	100%	90	110	0%	
Molybdenum	A	mg/L	0.05007	0.05007		0.05	0	0	0.00005	0.001	0.1	100%	90	110	0%	
Nickel	A	mg/L	0.04892	0.04892		0.05	0	0	0.00063	0.001	1	98%	90	110	0%	
Potassium	A	mg/L	11.33	11.33		12.5	0	0	0.08139	0.08139	50	91%	90	110	0%	
Selenium	A	mg/L	0.05215	0.05215		0.05	0	0	0.00033	0.001	1	104%	90	110	0%	
Silicon	A	mg/L	0.2641	0.2641		0.2	0	0	0.01223	0.1	0.4	132%	90	110	0%	S
Silver	A	mg/L	0.01986	0.01986		0.02	0	0	0.00002	0.001	0.04	99%	90	110	0%	
Sodium	A	mg/L	12.02	12.02		12.5	0	0	0.02171	0.02171	50	96%	90	110	0%	
Strontium	A	mg/L	0.05139	0.05139		0.05	0	0	0.00014	0.001	1	103%	90	110	0%	
Thallium	A	mg/L	0.05088	0.05088		0.05	0	0	0.000041	0.001	1	102%	90	110	0%	
Thorium	A	mg/L	0.04971	0.04971		0.05	0	0	0.00061	0.001	1	99%	90	110	0%	
Tin	A	mg/L	0.05287	0.05287		0.05	0	0	0.00132	0.00132	0.1	106%	90	110	0%	
Titanium	A	mg/L	0.04675	0.04675		0.05	0	0	0.000094	0.001	1	93%	90	110	0%	
Uranium	A	mg/L	0.05062	0.05062		0.05	0	0	0.000052	0.0003	1	101%	90	110	0%	
Vanadium	A	mg/L	0.04913	0.04913		0.05	0	0	0.0013	0.0013	1	98%	90	110	0%	
Zinc	A	mg/L	0.05072	0.05072		0.05	0	0	0.00273	0.00273	1	101%	90	110	0%	
Iron, Ferrous	C	mg/L	1.338	1.338		0	0	0	0.00119	0.00119	5	0%	0	0	0%	

Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist					
14998154	CCB	ICPMS-6020-W-	CCB		1/22/2022 2:38:5	1	R373694		0	0						
Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q

Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist					
14998154	CCB	ICPMS-6020-W-	CCB		1/22/2022 2:38:5	1	R373694		0	0						
Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
Aluminum	A	mg/L	-0.0003755	-0.0003755		0	0	0	0.00086	0.001	1	0%				0%
Antimony	A	mg/L	0.0001445	0.0001445		0	0	0	0.00042	0.001	0.1	0%				0%
Arsenic	A	mg/L	0.00002615	0.00002615		0	0	0	0.00019	0.001	1	0%				0%
Barium	A	mg/L	0.000001777	0.000001777		0	0	0	0.000042	0.001	1	0%				0%
Beryllium	A	mg/L	-0.00004722	-0.00004722		0	0	0	0.00012	0.001	1	0%				0%
Boron	A	mg/L	0.001259	0.001259		0	0	0	0.00561	0.00561	1	0%				0%
Cadmium	A	mg/L	0.000003153	0.000003153		0	0	0	0.000025	0.001	1	0%				0%
Calcium	A	mg/L	-0.00116	-0.00116		0	0	0	0.02092	0.02092	50	0%				0%
Cerium	A	mg/L	4.248E-07	4.248E-07		0	0	0	0.000012	0.001	0.1	0%	0	0		0%
Chromium	A	mg/L	0.00003214	0.00003214		0	0	0	0.00018	0.001	1	0%				0%
Cobalt	A	mg/L	-2.165E-06	-2.165E-06		0	0	0	0.000042	0.001	1	0%				0%
Copper	A	mg/L	0.000001047	0.000001047		0	0	0	0.00027	0.001	1	0%				0%
Iron	A	mg/L	0.00004967	0.00004967		0	0	0	0.00119	0.00119	5	0%				0%
Lanthanum	A	mg/L	-2.602E-07	-2.602E-07		0	0	0	0.000011	0.001	0.1	0%	0	0		0%
Lead	A	mg/L	0.000003168	0.000003168		0	0	0	0.000056	0.001	1	0%				0%
Magnesium	A	mg/L	-0.000329	-0.000329		0	0	0	0.00564	0.00564	50	0%				0%
Manganese	A	mg/L	0.0000108	0.0000108		0	0	0	0.000095	0.001	1	0%				0%
Mercury	A	mg/L	0.000004439	0.000004439		0	0	0	0.00016	0.001	0.002	0%				0%
Molybdenum	A	mg/L	0.00001987	0.00001987		0	0	0	0.00005	0.001	0.1	0%				0%
Nickel	A	mg/L	0.000002195	0.000002195		0	0	0	0.00063	0.001	1	0%				0%
Potassium	A	mg/L	-0.01901	-0.01901		0	0	0	0.08139	0.08139	50	0%				0%
Selenium	A	mg/L	0.000007988	0.000007988		0	0	0	0.00033	0.001	1	0%				0%
Silicon	A	mg/L	0.0368	0.0368		0	0	0	0.01223	0.1	0.4	0%	0	0		0%
Silver	A	mg/L	-1.378E-06	-1.378E-06		0	0	0	0.00002	0.001	0.04	0%				0%
Sodium	A	mg/L	0.03103	0.03103		0	0	0	0.02171	0.02171	50	0%				0%
Strontium	A	mg/L	-3.513E-06	-3.513E-06		0	0	0	0.00014	0.001	1	0%	0	0		0%
Thallium	A	mg/L	0.00008142	0.00008142		0	0	0	0.000041	0.001	1	0%	0	0		0%
Thorium	A	mg/L	0.00001564	0.00001564		0	0	0	0.00061	0.001	1	0%	0	0		0%
Tin	A	mg/L	0.00002158	0.00002158		0	0	0	0.00132	0.00132	0.1	0%	0	0		0%
Titanium	A	mg/L	0.00001569	0.00001569		0	0	0	0.000094	0.001	1	0%	0	0		0%
Uranium	A	mg/L	0.000002659	0.000002659		0	0	0	0.000052	0.0003	1	0%	0	0		0%
Vanadium	A	mg/L	0.002262	0.002262		0	0	0	0.0013	0.0013	1	0%	0	0		0%
Zinc	A	mg/L	-4.613E-06	-4.613E-06		0	0	0	0.00273	0.00273	1	0%	0	0		0%
Iron, Ferrous	C	mg/L	0.00004967	0.00004967		0	0	0	0.00119	0.00119	5	0%	0	0		0%

Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist					
14998155	B22011227-001	ICPMS-6020-W-	SAMP		1/22/2022 2:45:1	1	163116	1/20/2022 1:	0	0						
Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
Antimony	A	mg/L	0.0001883	0		0	0	0	0.0002799	0.001	0.1	0%	0	0	0%	U
Arsenic	A	mg/L	0.0005323	0.0005323		0	0	0	0.0003412	0.001	1	0%	0	0	0%	J
Barium	A	mg/L	0.01146	0.01146		0	0	0	0.0002682	0.001	1	0%	0	0	0%	
Cadmium	A	mg/L	0.000004236	0		0	0	0	1.821E-05	0.005	1	0%	0	0	0%	U
Cerium	A	mg/L	0.00007491	0.00007491		0	0	0	2.738E-05	0.001	0.1	0%	0	0	0%	J
Cobalt	A	mg/L	0.0003538	0.0003538		0	0	0	9.541E-05	0.001	1	0%	0	0	0%	J
Lanthanum	A	mg/L	0.000026	0		0	0	0	0.000055	0.001	0.1	0%	0	0	0%	U
Lead	A	mg/L	0.0001103	0.0001103		0	0	0	7.716E-05	0.001	1	0%	0	0	0%	J
Manganese	A	mg/L	0.002846	0.002846		0	0	0	0.0005399	0.001	1	0%	0	0	0%	
Molybdenum	A	mg/L	0.001222	0.001222		0	0	0	0.0001763	0.001	0.1	0%	0	0	0%	
Selenium	A	mg/L	0.0003169	0.0003169		0	0	0	0.0001357	0.001	1	0%	0	0	0%	J
Silver	A	mg/L	-0.00005358	0		0	0	0	4.281E-05	0.001	0.04	0%	0	0	0%	U
Strontium	A	mg/L	0.2512	0.2512		0	0	0	0.0002433	0.001	1	0%	0	0	0%	
Thallium	A	mg/L	0.00007376	0		0	0	0	0.0001114	0.001	1	0%	0	0	0%	U
Titanium	A	mg/L	0.006007	0.006007		0	0	0	0.0005733	0.001	1	0%	0	0	0%	
Uranium	A	mg/L	0.00001641	0		0	0	0	1.699E-05	0.0003	1	0%	0	0	0%	U
Aluminum	B	mg/L	0.05137	0.05137		0	0	0	0.0038747	0.0031975	1	0%	0	0	0%	D
Calcium	B	mg/L	25.95	25.95		0	0	0	0.0372936	0.1103481	50	0%	0	0	0%	D
Chromium	B	mg/L	0.01809	0.01809		0	0	0	0.0015375	0.0015375	1	0%	0	0	0%	D
Copper	B	mg/L	0.001186	0.001186		0	0	0	0.0008747	0.00198	1	0%	0	0	0%	JL
Iron	B	mg/L	0.1873	0.1873		0	0	0	0.007424	0.00513	5	0%	0	0	0%	D
Magnesium	B	mg/L	43.51	43.51		0	0	0	0.0104254	0.0081522	50	0%	0	0	0%	D
Nickel	B	mg/L	0.000848	0.000848		0	0	0	0.0002288	0.0024200	1	0%	0	0	0%	JL
Potassium	B	mg/L	1.847	1.847		0	0	0	0.0765619	0.0261205	50	0%	0	0	0%	D
Thorium	B	mg/L	0.00005184	0		0	0	0	0.0003796	0.00415	1	0%	0	0	0%	UL
Tin	B	mg/L	0.0004694	0		0	0	0	0.0018932	0.0011175	0.1	0%	0	0	0%	U
Vanadium	B	mg/L	0.02515	0.02515		0	0	0	0.0039127	0.0021085	1	0%	0	0	0%	D
Zinc	B	mg/L	0.01058	0.01058		0	0	0	0.0011617	0.0065544	1	0%	0	0	0%	D

Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist					
14998156	B22011228-001	ICPMS-6020-W-	SAMP		1/22/2022 2:51:2	1	R373694		0	0						
Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q

Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist					
14998156	B22011228-001	ICPMS-6020-W-	SAMP		1/22/2022 2:51:2	1	R373694		0	0						
Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
Aluminum	A	mg/L	0.001047	0.001047		0	0	0	0.00086	0.001	1	0%	0	0	0%	
Antimony	A	mg/L	0.00001284	0		0	0	0	0.00042	0.001	0.1	0%	0	0	0%	
Arsenic	A	mg/L	-0.00009281	0		0	0	0	0.00019	0.001	1	0%	0	0	0%	
Barium	A	mg/L	0.001877	0.001877		0	0	0	0.000042	0.001	1	0%	0	0	0%	
Cadmium	A	mg/L	0.00002679	0.00002679		0	0	0	0.000025	0.001	1	0%	0	0	0%	J
Cerium	A	mg/L	2.489E-07	0		0	0	0	0.000012	0.001	0.1	0%	0	0	0%	
Chromium	A	mg/L	0.003078	0.003078		0	0	0	0.00018	0.001	1	0%	0	0	0%	
Cobalt	A	mg/L	0.000004541	0		0	0	0	0.000042	0.001	1	0%	0	0	0%	
Copper	A	mg/L	0.0000654	0		0	0	0	0.00027	0.001	1	0%	0	0	0%	
Lead	A	mg/L	0.00002331	0		0	0	0	0.000056	0.001	1	0%	0	0	0%	U
Manganese	A	mg/L	0.00008939	0		0	0	0	0.000095	0.001	1	0%	0	0	0%	
Mercury	A	mg/L	0.00001303	0		0	0	0	0.00016	0.001	0.002	0%	0	0	0%	
Molybdenum	A	mg/L	0.0007896	0.0007896		0	0	0	0.00005	0.001	0.1	0%	0	0	0%	J
Nickel	A	mg/L	0.000127	0		0	0	0	0.00063	0.001	1	0%	0	0	0%	
Selenium	A	mg/L	0.0001504	0		0	0	0	0.00033	0.001	1	0%	0	0	0%	
Silver	A	mg/L	-0.00006378	0		0	0	0	0.00002	0.001	0.04	0%	0	0	0%	
Strontium	A	mg/L	0.05794	0.05794		0	0	0	0.00014	0.001	1	0%	0	0	0%	
Thallium	A	mg/L	0.00002099	0		0	0	0	0.000041	0.001	1	0%	0	0	0%	
Thorium	A	mg/L	-8.465E-06	0		0	0	0	0.00061	0.001	1	0%	0	0	0%	
Titanium	A	mg/L	0.00144	0.00144		0	0	0	0.000094	0.001	1	0%	0	0	0%	
Uranium	A	mg/L	0.000006436	0		0	0	0	0.000052	0.0003	1	0%	0	0	0%	
Calcium	B	mg/L	7.731	7.731		0	0	0	0.02092	0.02092	50	0%	0	0	0%	D
Iron	B	mg/L	0.009152	0.009152		0	0	0	0.00119	0.00119	5	0%	0	0	0%	
Iron, Ferrous	B	mg/L	0.009152	0.009152		0	0	0	0.00119	0.00119	5	0%	0	0	0%	
Magnesium	B	mg/L	8.483	8.483		0	0	0	0.00564	0.00564	50	0%	0	0	0%	D
Potassium	B	mg/L	1.653	1.653		0	0	0	0.08139	0.08139	50	0%	0	0	0%	D
Sodium	B	mg/L	36.07	36.07		0	0	0	0.02171	0.02171	50	0%	0	0	0%	D
Tin	B	mg/L	-0.00007642	0		0	0	0	0.00132	0.00132	0.1	0%	0	0	0%	
Zinc	B	mg/L	0.003346	0.003346		0	0	0	0.00273	0.00273	1	0%	0	0	0%	D

Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist					
14998157	B22011228-001	ICPMS-6020-W-	SAMP		1/22/2022 2:57:3	1	163116	1/20/2022 2:	0	0						
Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q

Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist					
14998157	B22011228-001	ICPMS-6020-W-	SAMP		1/22/2022 2:57:3	1	163116	1/20/2022 2:	0	0						
Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
Antimony	A	mg/L	0.00004344	0		0	0	0	0.0002799	0.001	0.1	0%	0	0	0%	U
Arsenic	A	mg/L	0.0001678	0		0	0	0	0.0003412	0.001	1	0%	0	0	0%	U
Barium	A	mg/L	0.001901	0.001901		0	0	0	0.0002682	0.001	1	0%	0	0	0%	
Cadmium	A	mg/L	6.332E-07	0		0	0	0	1.821E-05	0.005	1	0%	0	0	0%	U
Cerium	A	mg/L	0.000005228	0		0	0	0	2.738E-05	0.001	0.1	0%	0	0	0%	U
Cobalt	A	mg/L	0.0001264	0.0001264		0	0	0	9.541E-05	0.001	1	0%	0	0	0%	J
Lanthanum	A	mg/L	0.000002053	0		0	0	0	0.000055	0.001	0.1	0%	0	0	0%	U
Lead	A	mg/L	0.0001261	0.0001261		0	0	0	7.716E-05	0.001	1	0%	0	0	0%	J
Manganese	A	mg/L	0.001465	0.001465		0	0	0	0.0005399	0.001	1	0%	0	0	0%	
Molybdenum	A	mg/L	0.0009458	0.0009458		0	0	0	0.0001763	0.001	0.1	0%	0	0	0%	J
Selenium	A	mg/L	0.0001977	0.0001977		0	0	0	0.0001357	0.001	1	0%	0	0	0%	J
Silver	A	mg/L	-0.0000638	0		0	0	0	4.281E-05	0.001	0.04	0%	0	0	0%	U
Strontium	A	mg/L	0.06122	0.06122		0	0	0	0.0002433	0.001	1	0%	0	0	0%	
Thallium	A	mg/L	0.00004775	0		0	0	0	0.0001114	0.001	1	0%	0	0	0%	U
Titanium	A	mg/L	0.001761	0.001761		0	0	0	0.0005733	0.001	1	0%	0	0	0%	
Uranium	A	mg/L	0.000007103	0		0	0	0	1.699E-05	0.0003	1	0%	0	0	0%	U
Aluminum	B	mg/L	0.005089	0.005089		0	0	0	0.0038747	0.0031975	1	0%	0	0	0%	UD
Calcium	B	mg/L	7.718	7.718		0	0	0	0.0372936	0.1103481	50	0%	0	0	0%	D
Chromium	B	mg/L	0.003385	0.003385		0	0	0	0.0015375	0.0015375	1	0%	0	0	0%	UD
Copper	B	mg/L	0.0007498	0		0	0	0	0.0008747	0.00198	1	0%	0	0	0%	UL
Iron	B	mg/L	0.05558	0.05558		0	0	0	0.007424	0.00513	5	0%	0	0	0%	D
Magnesium	B	mg/L	8.757	8.757		0	0	0	0.0104254	0.0081522	50	0%	0	0	0%	D
Nickel	B	mg/L	0.0002484	0.0002484		0	0	0	0.0002288	0.0024200	1	0%	0	0	0%	JL
Potassium	B	mg/L	1.646	1.646		0	0	0	0.0765619	0.0261205	50	0%	0	0	0%	D
Sodium	B	mg/L	36.39	36.39		0	0	0	0.1019461	0.7330269	50	0%	0	0	0%	D
Thorium	B	mg/L	0.00001247	0		0	0	0	0.0003796	0.00415	1	0%	0	0	0%	UL
Tin	B	mg/L	0.0003975	0		0	0	0	0.0018932	0.0011175	0.1	0%	0	0	0%	U
Vanadium	B	mg/L	0.02244	0.02244		0	0	0	0.0039127	0.0021085	1	0%	0	0	0%	D
Zinc	B	mg/L	0.01192	0.01192		0	0	0	0.0011617	0.0065544	1	0%	0	0	0%	D

Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist					
14998158	Rinse	ICPMS-6020-W-	SAMP		1/22/2022 3:03:5	1	R373694		0	0						
Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q

Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist					
14998158	Rinse	ICPMS-6020-W-	SAMP		1/22/2022 3:03:5	1	R373694		0	0						
Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
Aluminum	A	mg/L	-0.000364	0		0	0	0	0.00086	0.001	1	0%	0	0	0%	
Antimony	A	mg/L	-1.775E-06	0		0	0	0	0.00042	0.001	0.1	0%	0	0	0%	
Arsenic	A	mg/L	-0.00003311	0		0	0	0	0.00019	0.001	1	0%	0	0	0%	
Barium	A	mg/L	0.000002236	0		0	0	0	0.000042	0.001	1	0%	0	0	0%	
Cadmium	A	mg/L	0.000001738	0		0	0	0	0.000025	0.001	1	0%	0	0	0%	
Cerium	A	mg/L	1.769E-07	0		0	0	0	0.000012	0.001	0.1	0%	0	0	0%	
Chromium	A	mg/L	0.00001439	0		0	0	0	0.00018	0.001	1	0%	0	0	0%	
Cobalt	A	mg/L	-2.268E-06	0		0	0	0	0.000042	0.001	1	0%	0	0	0%	
Copper	A	mg/L	0.000007546	0		0	0	0	0.00027	0.001	1	0%	0	0	0%	
Lead	A	mg/L	-3.093E-07	0		0	0	0	0.000056	0.001	1	0%	0	0	0%	
Manganese	A	mg/L	0.0001312	0.0001312		0	0	0	0.000095	0.001	1	0%	0	0	0%	J
Mercury	A	mg/L	0.000002007	0		0	0	0	0.00016	0.001	0.002	0%	0	0	0%	
Molybdenum	A	mg/L	0.000000148	0		0	0	0	0.00005	0.001	0.1	0%	0	0	0%	
Nickel	A	mg/L	0.000009848	0		0	0	0	0.00063	0.001	1	0%	0	0	0%	
Selenium	A	mg/L	-2.552E-06	0		0	0	0	0.00033	0.001	1	0%	0	0	0%	
Silver	A	mg/L	-2.133E-06	0		0	0	0	0.00002	0.001	0.04	0%	0	0	0%	
Strontium	A	mg/L	-8.735E-06	0		0	0	0	0.00014	0.001	1	0%	0	0	0%	
Thallium	A	mg/L	0.000002333	0		0	0	0	0.000041	0.001	1	0%	0	0	0%	
Thorium	A	mg/L	-7.219E-06	0		0	0	0	0.00061	0.001	1	0%	0	0	0%	
Titanium	A	mg/L	-0.0000138	0		0	0	0	0.000094	0.001	1	0%	0	0	0%	
Uranium	A	mg/L	8.409E-08	0		0	0	0	0.000052	0.0003	1	0%	0	0	0%	
Calcium	B	mg/L	-0.001458	0		0	0	0	0.02092	0.02092	50	0%	0	0	0%	L
Iron	B	mg/L	0.00009281	0		0	0	0	0.00119	0.00119	5	0%	0	0	0%	
Iron, Ferrous	B	mg/L	0.00009281	0		0	0	0	0.00119	0.00119	5	0%	0	0	0%	
Magnesium	B	mg/L	0.000002889	0		0	0	0	0.00564	0.00564	50	0%	0	0	0%	L
Potassium	B	mg/L	-0.03146	0		0	0	0	0.08139	0.08139	50	0%	0	0	0%	L
Tin	B	mg/L	0.000001709	0		0	0	0	0.00132	0.00132	0.1	0%	0	0	0%	
Vanadium	B	mg/L	0.0006369	0		0	0	0	0.0013	0.0013	1	0%	0	0	0%	
Zinc	B	mg/L	-2.564E-06	0		0	0	0	0.00273	0.00273	1	0%	0	0	0%	L

Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist					
14998159	CCV	ICPMS-6020-W-	CCV		1/22/2022 3:10:0	1	R373694		0	0						
Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q

Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist					
14998159	CCV	ICPMS-6020-W-	CCV		1/22/2022 3:10:0	1	R373694		0	0						
Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
Aluminum	A	mg/L	0.05336	0.05336		0.05	0	0	0.00086	0.001	1	107%	90	110	0%	
Antimony	A	mg/L	0.05444	0.05444		0.05	0	0	0.00042	0.001	0.1	109%	90	110	0%	
Arsenic	A	mg/L	0.05138	0.05138		0.05	0	0	0.00019	0.001	1	103%	90	110	0%	
Barium	A	mg/L	0.05157	0.05157		0.05	0	0	0.000042	0.001	1	103%	90	110	0%	
Beryllium	A	mg/L	0.03968	0.03968		0.05	0	0	0.00012	0.001	1	79%	90	110	0%	S
Boron	A	mg/L	0.04145	0.04145		0.05	0	0	0.00561	0.00561	1	83%	90	110	0%	S
Cadmium	A	mg/L	0.05212	0.05212		0.05	0	0	0.000025	0.001	1	104%	90	110	0%	
Calcium	A	mg/L	11.74	11.74		12.5	0	0	0.02092	0.02092	50	94%	90	110	0%	
Cerium	A	mg/L	0.05178	0.05178		0.05	0	0	0.000012	0.001	0.1	104%	90	110	0%	
Chromium	A	mg/L	0.04804	0.04804		0.05	0	0	0.00018	0.001	1	96%	90	110	0%	
Cobalt	A	mg/L	0.04723	0.04723		0.05	0	0	0.000042	0.001	1	94%	90	110	0%	
Copper	A	mg/L	0.05085	0.05085		0.05	0	0	0.00027	0.001	1	102%	90	110	0%	
Iron	A	mg/L	1.289	1.289		1.3	0	0	0.00119	0.00119	5	99%	90	110	0%	
Lanthanum	A	mg/L	0.05078	0.05078		0.05	0	0	0.000011	0.001	0.1	102%	90	110	0%	
Lead	A	mg/L	0.05079	0.05079		0.05	0	0	0.000056	0.001	1	102%	90	110	0%	
Magnesium	A	mg/L	12.24	12.24		12.5	0	0	0.00564	0.00564	50	98%	90	110	0%	
Manganese	A	mg/L	0.04849	0.04849		0.05	0	0	0.000095	0.001	1	97%	90	110	0%	
Mercury	A	mg/L	0.0009672	0.0009672		0.001	0	0	0.00016	0.001	0.002	97%	90	110	0%	
Molybdenum	A	mg/L	0.04994	0.04994		0.05	0	0	0.00005	0.001	0.1	100%	90	110	0%	
Nickel	A	mg/L	0.04966	0.04966		0.05	0	0	0.00063	0.001	1	99%	90	110	0%	
Potassium	A	mg/L	11.19	11.19		12.5	0	0	0.08139	0.08139	50	90%	90	110	0%	
Selenium	A	mg/L	0.05224	0.05224		0.05	0	0	0.00033	0.001	1	104%	90	110	0%	
Silicon	A	mg/L	0.285	0.285		0.2	0	0	0.01223	0.1	0.4	143%	90	110	0%	S
Silver	A	mg/L	0.01996	0.01996		0.02	0	0	0.00002	0.001	0.04	100%	90	110	0%	
Sodium	A	mg/L	12.07	12.07		12.5	0	0	0.02171	0.02171	50	97%	90	110	0%	
Strontium	A	mg/L	0.05177	0.05177		0.05	0	0	0.00014	0.001	1	104%	90	110	0%	
Thallium	A	mg/L	0.05198	0.05198		0.05	0	0	0.000041	0.001	1	104%	90	110	0%	
Thorium	A	mg/L	0.04951	0.04951		0.05	0	0	0.00061	0.001	1	99%	90	110	0%	
Tin	A	mg/L	0.05399	0.05399		0.05	0	0	0.00132	0.00132	0.1	108%	90	110	0%	
Titanium	A	mg/L	0.04543	0.04543		0.05	0	0	0.000094	0.001	1	91%	90	110	0%	
Uranium	A	mg/L	0.05163	0.05163		0.05	0	0	0.000052	0.0003	1	103%	90	110	0%	
Vanadium	A	mg/L	0.05	0.05		0.05	0	0	0.0013	0.0013	1	100%	90	110	0%	
Zinc	A	mg/L	0.0515	0.0515		0.05	0	0	0.00273	0.00273	1	103%	90	110	0%	
Iron, Ferrous	C	mg/L	1.289	1.289		0	0	0	0.00119	0.00119	5	0%	0	0	0%	

Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist					
14998160	CCB	ICPMS-6020-W-	CCB		1/22/2022 3:16:2	1	R373694		0	0						
Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
Aluminum	A	mg/L	-0.0003877	-0.0003877		0	0	0	0.00086	0.001	1	0%			0%	
Antimony	A	mg/L	0.0001307	0.0001307		0	0	0	0.00042	0.001	0.1	0%			0%	
Arsenic	A	mg/L	-3.995E-06	-3.995E-06		0	0	0	0.00019	0.001	1	0%			0%	
Barium	A	mg/L	-3.236E-07	-3.236E-07		0	0	0	0.000042	0.001	1	0%			0%	
Beryllium	A	mg/L	-0.00004211	-0.00004211		0	0	0	0.00012	0.001	1	0%			0%	
Boron	A	mg/L	0.0002933	0.0002933		0	0	0	0.00561	0.00561	1	0%			0%	
Cadmium	A	mg/L	-1.066E-06	-1.066E-06		0	0	0	0.000025	0.001	1	0%			0%	
Calcium	A	mg/L	-0.0009285	-0.0009285		0	0	0	0.02092	0.02092	50	0%			0%	
Cerium	A	mg/L	3.196E-07	3.196E-07		0	0	0	0.000012	0.001	0.1	0%	0	0	0%	
Chromium	A	mg/L	0.00001936	0.00001936		0	0	0	0.00018	0.001	1	0%			0%	
Cobalt	A	mg/L	-2.249E-06	-2.249E-06		0	0	0	0.000042	0.001	1	0%			0%	
Copper	A	mg/L	0.00001792	0.00001792		0	0	0	0.00027	0.001	1	0%			0%	
Iron	A	mg/L	0.00007129	0.00007129		0	0	0	0.00119	0.00119	5	0%			0%	
Lanthanum	A	mg/L	-2.97E-07	-2.97E-07		0	0	0	0.000011	0.001	0.1	0%	0	0	0%	
Lead	A	mg/L	0.00000716	0.00000716		0	0	0	0.000056	0.001	1	0%			0%	
Magnesium	A	mg/L	-0.0004074	-0.0004074		0	0	0	0.00564	0.00564	50	0%			0%	
Manganese	A	mg/L	0.000004062	0.000004062		0	0	0	0.000095	0.001	1	0%			0%	
Mercury	A	mg/L	0.000004741	0.000004741		0	0	0	0.00016	0.001	0.002	0%			0%	
Molybdenum	A	mg/L	0.00002068	0.00002068		0	0	0	0.00005	0.001	0.1	0%			0%	
Nickel	A	mg/L	0.00001174	0.00001174		0	0	0	0.00063	0.001	1	0%			0%	
Potassium	A	mg/L	-0.02766	-0.02766		0	0	0	0.08139	0.08139	50	0%			0%	
Selenium	A	mg/L	0.000005264	0.000005264		0	0	0	0.00033	0.001	1	0%			0%	
Silicon	A	mg/L	0.04684	0.04684		0	0	0	0.01223	0.1	0.4	0%	0	0	0%	
Silver	A	mg/L	-2.715E-06	-2.715E-06		0	0	0	0.00002	0.001	0.04	0%			0%	
Sodium	A	mg/L	0.05951	0.05951		0	0	0	0.02171	0.02171	50	0%			0%	
Strontium	A	mg/L	-0.00001419	-0.00001419		0	0	0	0.00014	0.001	1	0%	0	0	0%	
Thallium	A	mg/L	0.00007813	0.00007813		0	0	0	0.000041	0.001	1	0%	0	0	0%	
Thorium	A	mg/L	0.00001227	0.00001227		0	0	0	0.00061	0.001	1	0%	0	0	0%	
Tin	A	mg/L	0.00004221	0.00004221		0	0	0	0.00132	0.00132	0.1	0%	0	0	0%	
Titanium	A	mg/L	0.00001471	0.00001471		0	0	0	0.000094	0.001	1	0%	0	0	0%	
Uranium	A	mg/L	0.000002383	0.000002383		0	0	0	0.000052	0.0003	1	0%	0	0	0%	
Vanadium	A	mg/L	0.001295	0.001295		0	0	0	0.0013	0.0013	1	0%	0	0	0%	
Zinc	A	mg/L	0.00003569	0.00003569		0	0	0	0.00273	0.00273	1	0%	0	0	0%	
Iron, Ferrous	C	mg/L	0.00007129	0.00007129		0	0	0	0.00119	0.00119	5	0%	0	0	0%	

Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist					
14998161	Cal Blk	ICPMS-6020-W-	SAMP		1/22/2022 3:22:3	1	R373694		0	0						
Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
Aluminum	A	mg/L	0	0		0	0	0	0.00086	0.001	1	0%	0	0	0%	
Antimony	A	mg/L	0	0		0	0	0	0.00042	0.001	0.1	0%	0	0	0%	
Arsenic	A	mg/L	0	0		0	0	0	0.00019	0.001	1	0%	0	0	0%	
Barium	A	mg/L	0	0		0	0	0	0.000042	0.001	1	0%	0	0	0%	
Cadmium	A	mg/L	0	0		0	0	0	0.000025	0.001	1	0%	0	0	0%	
Cerium	A	mg/L	0	0		0	0	0	0.000012	0.001	0.1	0%	0	0	0%	
Chromium	A	mg/L	0	0		0	0	0	0.00018	0.001	1	0%	0	0	0%	
Cobalt	A	mg/L	0	0		0	0	0	0.000042	0.001	1	0%	0	0	0%	
Copper	A	mg/L	0	0		0	0	0	0.00027	0.001	1	0%	0	0	0%	
Lead	A	mg/L	0	0		0	0	0	0.000056	0.001	1	0%	0	0	0%	
Manganese	A	mg/L	0	0		0	0	0	0.000095	0.001	1	0%	0	0	0%	
Mercury	A	mg/L	0	0		0	0	0	0.00016	0.001	0.002	0%	0	0	0%	
Molybdenum	A	mg/L	0	0		0	0	0	0.00005	0.001	0.1	0%	0	0	0%	
Nickel	A	mg/L	0	0		0	0	0	0.00063	0.001	1	0%	0	0	0%	
Selenium	A	mg/L	0	0		0	0	0	0.00033	0.001	1	0%	0	0	0%	
Silver	A	mg/L	0	0		0	0	0	0.00002	0.001	0.04	0%	0	0	0%	
Strontium	A	mg/L	0	0		0	0	0	0.00014	0.001	1	0%	0	0	0%	
Thallium	A	mg/L	0	0		0	0	0	0.000041	0.001	1	0%	0	0	0%	
Thorium	A	mg/L	0	0		0	0	0	0.00061	0.001	1	0%	0	0	0%	
Titanium	A	mg/L	0	0		0	0	0	0.000094	0.001	1	0%	0	0	0%	
Uranium	A	mg/L	0	0		0	0	0	0.000052	0.0003	1	0%	0	0	0%	
Calcium	B	mg/L	0	0		0	0	0	0.02092	0.02092	50	0%	0	0	0%	L
Iron	B	mg/L	0	0		0	0	0	0.00119	0.00119	5	0%	0	0	0%	
Iron, Ferrous	B	mg/L	0	0		0	0	0	0.00119	0.00119	5	0%	0	0	0%	
Magnesium	B	mg/L	0	0		0	0	0	0.00564	0.00564	50	0%	0	0	0%	L
Potassium	B	mg/L	0	0		0	0	0	0.08139	0.08139	50	0%	0	0	0%	L
Tin	B	mg/L	0	0		0	0	0	0.00132	0.00132	0.1	0%	0	0	0%	
Zinc	B	mg/L	0	0		0	0	0	0.00273	0.00273	1	0%	0	0	0%	L

Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist					
14998162	0.025 ppb STD	ICPMS-6020B-C	Cal1		1/22/2022 3:28:5	1	R373694		0	0						
Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q

Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist					
14998162	0.025 ppb STD	ICPMS-6020B-C	Ca11		1/22/2022 3:28:5	1	R373694		0	0						
Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
Aluminum	A	mg/L	0.0001841	0.0001841		0	0	0		0.01		0%			0%	
Antimony	A	mg/L	0.000009384	0.000009384		0	0	0		0.001		0%			0%	
Arsenic	A	mg/L	0.00004059	0.00004059		0.000025	0	0		0.001		162%	80	120	0%	S
Barium	A	mg/L	0.00002539	0.00002539		0.000025	0	0		0.0003		102%	80	120	0%	
Beryllium	A	mg/L	0.00001622	0.00001622		0.000025	0	0		0.001		65%	80	120	0%	S
Boron	A	mg/L	-0.00007993	-0.00007993		0	0	0		0.1		0%			0%	
Cadmium	A	mg/L	0.00002117	0.00002117		0.000025	0	0		0.001		85%	80	120	0%	
Calcium	A	mg/L	0.007505	0.007505		0	0	0		1		0%			0%	
Cerium	A	mg/L	0.00003176	0.00003176		0.000025	0	0		0.001		127%	80	120	0%	S
Chromium	A	mg/L	0.00003016	0.00003016		0.000025	0	0		0.001		121%	80	120	0%	S
Cobalt	A	mg/L	0.00002416	0.00002416		0.000025	0	0		0.001		97%	80	120	0%	
Copper	A	mg/L	0.00004383	0.00004383		0	0	0		0.005		0%			0%	
Iron	A	mg/L	0.0008207	0.0008207		0	0	0		0.01		0%			0%	
Lanthanum	A	mg/L	0.00002277	0.00002277		0.000025	0	0		0.001		91%	80	120	0%	
Lead	A	mg/L	0.00002269	0.00002269		0.000025	0	0		0.001		91%	80	120	0%	
Lithium	A	mg/L	0.0001878	0.0001878		0.0003125	0	0		1		60%	80	120	0%	S
Magnesium	A	mg/L	0.007258	0.007258		0	0	0		1		0%			0%	
Manganese	A	mg/L	0.00002878	0.00002878		0	0	0		0.001		0%			0%	
Mercury	A	mg/L	9.381E-07	9.381E-07		0	0	0		0.001		0%			0%	
Molybdenum	A	mg/L	-0.00003204	-0.00003204		0	0	0		0.001		0%			0%	
Nickel	A	mg/L	0.00004404	0.00004404		0	0	0		0.005		0%			0%	
Potassium	A	mg/L	0.007833	0.007833		0.00625	0	0		1		125%	80	120	0%	S
Selenium	A	mg/L	0.00002211	0.00002211		0.000025	0	0		0.005		88%	80	120	0%	
Silicon	A	mg/L	-0.004791	-0.004791		0	0	0		0.1		0%			0%	
Silver	A	mg/L	0.00001468	0.00001468		0	0	0		0.001		0%			0%	
Sodium	A	mg/L	-0.0002355	-0.0002355		0.00625	0	0		1		-4%	80	120	0%	S
Strontium	A	mg/L	0.00002935	0.00002935		0	0	0		0.001		0%	80	120	0%	
Thallium	A	mg/L	0.000003315	0.000003315		0	0	0		0.001		0%			0%	
Thorium	A	mg/L	0.00001431	0.00001431		0	0	0		0.05		0%			0%	
Tin	A	mg/L	0.00006705	0.00006705		0	0	0		0.001		0%			0%	
Titanium	A	mg/L	0.00004574	0.00004574		0	0	0		0.001		0%			0%	
Uranium	A	mg/L	0.00002373	0.00002373		0.000025	0	0		0.001		95%	80	120	0%	
Vanadium	A	mg/L	0.0003297	0.0003297		0	0	0		0.005		0%			0%	
Zinc	A	mg/L	0.00000978	0.00000978		0	0	0		0.01		0%			0%	
Iron, Ferrous	C	mg/L	0.0008207	0.0008207		0.000025	0	0		0.01	5	3283%	80	120	0%	S

Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist					
14998162	0.025 ppb STD	ICPMS-6020B-C	Cal1		1/22/2022 3:28:5	1	R373694		0	0						
Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
Silicon as SiO2	C	mg/L	-0.01025274	-0.01025274		0.0000535	0	0		0.214	0.9	-19164%	80	120	0%	S

Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist					
14998163	0.05 ppb STD	ICPMS-6020B-C	Cal2		1/22/2022 3:35:1	1	R373694		0	0						
Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
Aluminum	A	mg/L	0.0001465	0.0001465		0	0	0		0.01		0%			0%	
Antimony	A	mg/L	0.00003174	0.00003174		0.00005	0	0		0.001		63%	80	120	0%	S
Arsenic	A	mg/L	0.00007904	0.00007904		0.00005	0	0		0.001		158%	80	120	0%	S
Barium	A	mg/L	0.00006552	0.00006552		0.00005	0	0		0.0003		131%	80	120	0%	S
Beryllium	A	mg/L	0.00005059	0.00005059		0.00005	0	0		0.001		101%	80	120	0%	
Boron	A	mg/L	-0.0002185	-0.0002185		0	0	0		0.1		0%			0%	
Cadmium	A	mg/L	0.00005655	0.00005655		0.00005	0	0		0.001		113%	80	120	0%	
Calcium	A	mg/L	0.0149	0.0149		0.0125	0	0		1		119%	80	120	0%	
Cerium	A	mg/L	0.00006061	0.00006061		0.00005	0	0		0.001		121%	80	120	0%	S
Chromium	A	mg/L	0.0000794	0.0000794		0.00005	0	0		0.001		159%	80	120	0%	S
Cobalt	A	mg/L	0.00007018	0.00007018		0	0	0		0.001		0%			0%	
Copper	A	mg/L	0.00005996	0.00005996		0.00005	0	0		0.005		120%	80	120	0%	
Iron	A	mg/L	0.001627	0.001627		0.00125	0	0		0.01		130%	80	120	0%	S
Lanthanum	A	mg/L	0.0000564	0.0000564		0.00005	0	0		0.001		113%	80	120	0%	
Lead	A	mg/L	0.00005444	0.00005444		0.00005	0	0		0.001		109%	80	120	0%	
Lithium	A	mg/L	0.0004559	0.0004559		0.000625	0	0		1		73%	80	120	0%	S
Magnesium	A	mg/L	0.01551	0.01551		0.0125	0	0		1		124%	80	120	0%	S
Manganese	A	mg/L	0.00006436	0.00006436		0.00005	0	0		0.001		129%	80	120	0%	S
Mercury	A	mg/L	4.444E-07	4.444E-07		0	0	0		0.001		0%			0%	
Molybdenum	A	mg/L	-2.56E-07	-2.56E-07		0.00005	0	0		0.001		-1%	80	120	0%	S
Nickel	A	mg/L	0.00008465	0.00008465		0	0	0		0.005		0%			0%	
Potassium	A	mg/L	0.02065	0.02065		0.0125	0	0		1		165%	80	120	0%	S
Selenium	A	mg/L	0.00005977	0.00005977		0.00005	0	0		0.005		120%	80	120	0%	
Silicon	A	mg/L	-0.009339	-0.009339		0	0	0		0.1		0%			0%	
Silver	A	mg/L	0.00003017	0.00003017		0.00002	0	0		0.001		151%	80	120	0%	S
Sodium	A	mg/L	-0.00008281	-0.00008281		0.0125	0	0		1		-1%	80	120	0%	S
Strontium	A	mg/L	0.00006731	0.00006731		0.00005	0	0		0.001		135%	80	120	0%	S
Thallium	A	mg/L	0.00003015	0.00003015		0	0	0		0.001		0%			0%	
Thorium	A	mg/L	0.00003743	0.00003743		0	0	0		0.05		0%			0%	

Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist					
14998163	0.05 ppb STD	ICPMS-6020B-C	Cal2		1/22/2022 3:35:1	1	R373694		0	0						
Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
Tin	A	mg/L	0.00006259	0.00006259		0	0	0		0.001		0%			0%	
Titanium	A	mg/L	0.00007592	0.00007592		0	0	0		0.001		0%			0%	
Uranium	A	mg/L	0.00005722	0.00005722		0.00005	0	0		0.001		114%	80	120	0%	
Vanadium	A	mg/L	0.0005074	0.0005074		0	0	0		0.005		0%			0%	
Zinc	A	mg/L	0.00001647	0.00001647		0	0	0		0.01		0%			0%	
Iron, Ferrous	C	mg/L	0.001627	0.001627		0.00005	0	0		0.01	5	3254%	80	120	0%	S
Silicon as SiO2	C	mg/L	-0.01998546	-0.01998546		0.00428	0	0		0.214	0.9	-467%	80	120	0%	S

Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist					
14998164	0.10 ppb STD	ICPMS-6020B-C	Cal3		1/22/2022 3:41:3	1	R373694		0	0						
Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
Aluminum	A	mg/L	0.0002222	0.0002222		0.0001	0	0		0.01		222%	80	120	0%	S
Antimony	A	mg/L	0.00007376	0.00007376		0.0001	0	0		0.001		74%	80	120	0%	S
Arsenic	A	mg/L	0.0001371	0.0001371		0.0001	0	0		0.001		137%	80	120	0%	S
Barium	A	mg/L	0.0001067	0.0001067		0.0001	0	0		0.0003		107%	80	120	0%	
Beryllium	A	mg/L	0.00009699	0.00009699		0.0001	0	0		0.001		97%	80	120	0%	
Boron	A	mg/L	-0.0002156	-0.0002156		0	0	0		0.1		0%			0%	
Cadmium	A	mg/L	0.0001077	0.0001077		0.0001	0	0		0.001		108%	80	120	0%	
Calcium	A	mg/L	0.02722	0.02722		0.025	0	0		1		109%	80	120	0%	
Cerium	A	mg/L	0.0001075	0.0001075		0.0001	0	0		0.001		107%	80	120	0%	
Chromium	A	mg/L	0.0001171	0.0001171		0.0001	0	0		0.001		117%	80	120	0%	
Cobalt	A	mg/L	0.0001117	0.0001117		0.0001	0	0		0.001		112%	80	120	0%	
Copper	A	mg/L	0.0001117	0.0001117		0.0001	0	0		0.005		112%	80	120	0%	
Iron	A	mg/L	0.002885	0.002885		0.0025	0	0		0.01		115%	80	120	0%	
Lanthanum	A	mg/L	0.0001068	0.0001068		0.0001	0	0		0.001		107%	80	120	0%	
Lead	A	mg/L	0.0001008	0.0001008		0.0001	0	0		0.001		101%	80	120	0%	
Lithium	A	mg/L	0.00109	0.00109		0.00125	0	0		1		87%	80	120	0%	
Magnesium	A	mg/L	0.02981	0.02981		0.025	0	0		1		119%	80	120	0%	
Manganese	A	mg/L	0.0001229	0.0001229		0.0001	0	0		0.001		123%	80	120	0%	S
Mercury	A	mg/L	3.431E-07	3.431E-07		0.000002	0	0		0.001		17%	80	120	0%	S
Molybdenum	A	mg/L	0.00003994	0.00003994		0.0001	0	0		0.001		40%	80	120	0%	S
Nickel	A	mg/L	0.000131	0.000131		0.0001	0	0		0.005		131%	80	120	0%	S
Potassium	A	mg/L	0.03124	0.03124		0.025	0	0		1		125%	80	120	0%	S
Selenium	A	mg/L	0.0001166	0.0001166		0.0001	0	0		0.005		117%	80	120	0%	

Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist					
14998164	0.10 ppb STD	ICPMS-6020B-C	Cal3		1/22/2022 3:41:3	1	R373694		0	0						
Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
Silicon	A	mg/L	-0.01253	-0.01253		0.0004	0	0		0.1		-3132%	80	120	0%	S
Silver	A	mg/L	0.00005162	0.00005162		0.00004	0	0		0.001		129%	80	120	0%	S
Sodium	A	mg/L	0.007658	0.007658		0.025	0	0		1		31%	80	120	0%	S
Strontium	A	mg/L	0.0001184	0.0001184		0.0001	0	0		0.001		118%	80	120	0%	
Thallium	A	mg/L	0.00006932	0.00006932		0.0001	0	0		0.001		69%	80	120	0%	S
Thorium	A	mg/L	0.00007503	0.00007503		0.0001	0	0		0.05		75%	80	120	0%	S
Tin	A	mg/L	0.0001133	0.0001133		0.0001	0	0		0.001		113%	80	120	0%	
Titanium	A	mg/L	0.0001187	0.0001187		0.0001	0	0		0.001		119%	80	120	0%	
Uranium	A	mg/L	0.0001033	0.0001033		0.0001	0	0		0.001		103%	80	120	0%	
Vanadium	A	mg/L	0.0005062	0.0005062		0.0001	0	0		0.005		506%	80	120	0%	S
Zinc	A	mg/L	0.00007219	0.00007219		0.0001	0	0		0.01		72%	80	120	0%	S
Iron, Ferrous	C	mg/L	0.002885	0.002885		0.0001	0	0		0.01	5	2885%	80	120	0%	S
Silicon as SiO2	C	mg/L	-0.0268142	-0.0268142		0.00856	0	0		0.214	0.9	-313%	80	120	0%	S

Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist					
14998165	0.5 ppb STD	ICPMS-6020B-C	Cal4		1/22/2022 3:48:0	1	R373694		0	0						
Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
Aluminum	A	mg/L	0.0006952	0.0006952		0.0005	0	0		0.01		139%	80	120	0%	S
Antimony	A	mg/L	0.0004443	0.0004443		0.0005	0	0		0.001		89%	80	120	0%	
Arsenic	A	mg/L	0.0005175	0.0005175		0.0005	0	0		0.001		103%	80	120	0%	
Barium	A	mg/L	0.0004695	0.0004695		0.0005	0	0		0.0003		94%	80	120	0%	
Beryllium	A	mg/L	0.0004801	0.0004801		0.0005	0	0		0.001		96%	80	120	0%	
Boron	A	mg/L	0.0000787	0.0000787		0.0005	0	0		0.1		16%	80	120	0%	S
Cadmium	A	mg/L	0.0004824	0.0004824		0.0005	0	0		0.001		96%	80	120	0%	
Calcium	A	mg/L	0.1264	0.1264		0.125	0	0		1		101%	80	120	0%	
Cerium	A	mg/L	0.0005022	0.0005022		0.0005	0	0		0.001		100%	80	120	0%	
Chromium	A	mg/L	0.0005223	0.0005223		0.0005	0	0		0.001		104%	80	120	0%	
Cobalt	A	mg/L	0.0005105	0.0005105		0.0005	0	0		0.001		102%	80	120	0%	
Copper	A	mg/L	0.0006682	0.0006682		0.0005	0	0		0.005		134%	80	120	0%	S
Iron	A	mg/L	0.01339	0.01339		0.0125	0	0		0.01		107%	80	120	0%	
Lanthanum	A	mg/L	0.0005043	0.0005043		0.0005	0	0		0.001		101%	80	120	0%	
Lead	A	mg/L	0.0004769	0.0004769		0.0005	0	0		0.001		95%	80	120	0%	
Lithium	A	mg/L	0.005721	0.005721		0.00625	0	0		1		92%	80	120	0%	
Magnesium	A	mg/L	0.1311	0.1311		0.125	0	0		1		105%	80	120	0%	

Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist					
14998165	0.5 ppb STD	ICPMS-6020B-C	CaI4		1/22/2022 3:48:0	1	R373694		0	0						
Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
Manganese	A	mg/L	0.0005236	0.0005236		0.0005	0	0		0.001		105%	80	120	0%	
Mercury	A	mg/L	0.00001056	0.00001056		0.00001	0	0		0.001		106%	80	120	0%	
Molybdenum	A	mg/L	0.0004162	0.0004162		0.0005	0	0		0.001		83%	80	120	0%	
Nickel	A	mg/L	0.0007181	0.0007181		0.0005	0	0		0.005		144%	80	120	0%	S
Potassium	A	mg/L	0.1185	0.1185		0.125	0	0		1		95%	80	120	0%	
Selenium	A	mg/L	0.0005307	0.0005307		0.0005	0	0		0.005		106%	80	120	0%	
Silicon	A	mg/L	-0.01367	-0.01367		0.002	0	0		0.1		-683%	80	120	0%	S
Silver	A	mg/L	0.0002068	0.0002068		0.0002	0	0		0.001		103%	80	120	0%	
Sodium	A	mg/L	0.1125	0.1125		0.125	0	0		1		90%	80	120	0%	
Strontium	A	mg/L	0.0005231	0.0005231		0.0005	0	0		0.001		105%	80	120	0%	
Thallium	A	mg/L	0.0004507	0.0004507		0.0005	0	0		0.001		90%	80	120	0%	
Thorium	A	mg/L	0.0004203	0.0004203		0.0005	0	0		0.05		84%	80	120	0%	
Tin	A	mg/L	0.0005304	0.0005304		0.0005	0	0		0.001		106%	80	120	0%	
Titanium	A	mg/L	0.0005124	0.0005124		0.0005	0	0		0.001		102%	80	120	0%	
Uranium	A	mg/L	0.0004915	0.0004915		0.0005	0	0		0.001		98%	80	120	0%	
Vanadium	A	mg/L	0.0003682	0.0003682		0.0005	0	0		0.005		74%	80	120	0%	S
Zinc	A	mg/L	0.0006661	0.0006661		0.0005	0	0		0.01		133%	80	120	0%	S
Iron, Ferrous	C	mg/L	0.01339	0.01339		0.0005	0	0		0.01	5	2678%	80	120	0%	S
Silicon as SiO2	C	mg/L	-0.0292538	-0.0292538		0.0428	0	0		0.214	0.9	-68%	80	120	0%	S

Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist					
14998166	1 ppb STD	ICPMS-6020B-C	CaI5		1/22/2022 3:54:2	1	R373694		0	0						
Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
Aluminum	A	mg/L	0.00113	0.00113		0.001	0	0		0.01		113%	80	120	0%	
Antimony	A	mg/L	0.0009731	0.0009731		0.001	0	0		0.001		97%	80	120	0%	
Arsenic	A	mg/L	0.001105	0.001105		0.001	0	0		0.001		110%	80	120	0%	
Barium	A	mg/L	0.001048	0.001048		0.001	0	0		0.0003		105%	80	120	0%	
Beryllium	A	mg/L	0.001006	0.001006		0.001	0	0		0.001		101%	80	120	0%	
Boron	A	mg/L	0.0004329	0.0004329		0.001	0	0		0.1		43%	80	120	0%	S
Cadmium	A	mg/L	0.001044	0.001044		0.001	0	0		0.001		104%	80	120	0%	
Calcium	A	mg/L	0.2716	0.2716		0.25	0	0		1		109%	80	120	0%	
Cerium	A	mg/L	0.001026	0.001026		0.001	0	0		0.001		103%	80	120	0%	
Chromium	A	mg/L	0.001137	0.001137		0.001	0	0		0.001		114%	80	120	0%	
Cobalt	A	mg/L	0.001074	0.001074		0.001	0	0		0.001		107%	80	120	0%	

Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist					
14998166	1 ppb STD	ICPMS-6020B-C	Cal5		1/22/2022 3:54:2	1	R373694		0	0						
Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
Copper	A	mg/L	0.001136	0.001136		0.001	0	0		0.005		114%	80	120	0%	
Iron	A	mg/L	0.02792	0.02792		0.025	0	0		0.01		112%	80	120	0%	
Lanthanum	A	mg/L	0.001039	0.001039		0.001	0	0		0.001		104%	80	120	0%	
Lead	A	mg/L	0.001017	0.001017		0.001	0	0		0.001		102%	80	120	0%	
Lithium	A	mg/L	0.01235	0.01235		0.0125	0	0		1		99%	80	120	0%	
Magnesium	A	mg/L	0.2878	0.2878		0.25	0	0		1		115%	80	120	0%	
Manganese	A	mg/L	0.001095	0.001095		0.001	0	0		0.001		109%	80	120	0%	
Mercury	A	mg/L	0.00002056	0.00002056		0.00002	0	0		0.001		103%	80	120	0%	
Molybdenum	A	mg/L	0.0009303	0.0009303		0.001	0	0		0.001		93%	80	120	0%	
Nickel	A	mg/L	0.001158	0.001158		0.001	0	0		0.005		116%	80	120	0%	
Potassium	A	mg/L	0.2671	0.2671		0.25	0	0		1		107%	80	120	0%	
Selenium	A	mg/L	0.001098	0.001098		0.001	0	0		0.005		110%	80	120	0%	
Silicon	A	mg/L	-0.01405	-0.01405		0.004	0	0		0.1		-351%	80	120	0%	S
Silver	A	mg/L	0.000431	0.000431		0.0004	0	0		0.001		108%	80	120	0%	
Sodium	A	mg/L	0.2581	0.2581		0.25	0	0		1		103%	80	120	0%	
Strontium	A	mg/L	0.001073	0.001073		0.001	0	0		0.001		107%	80	120	0%	
Thallium	A	mg/L	0.0009611	0.0009611		0.001	0	0		0.001		96%	80	120	0%	
Thorium	A	mg/L	0.0009289	0.0009289		0.001	0	0		0.05		93%	80	120	0%	
Tin	A	mg/L	0.0009932	0.0009932		0.001	0	0		0.001		99%	80	120	0%	
Titanium	A	mg/L	0.001002	0.001002		0.001	0	0		0.001		100%	80	120	0%	
Uranium	A	mg/L	0.001026	0.001026		0.001	0	0		0.001		103%	80	120	0%	
Vanadium	A	mg/L	0.001287	0.001287		0.001	0	0		0.005		129%	80	120	0%	S
Zinc	A	mg/L	0.001076	0.001076		0.001	0	0		0.01		108%	80	120	0%	
Iron, Ferrous	C	mg/L	0.02792	0.02792		0.001	0	0		0.01	5	2792%	80	120	0%	S
Silicon as SiO2	C	mg/L	-0.030067	-0.030067		0.0856	0	0		0.214	0.9	-35%	80	120	0%	S

Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist					
14998167	10 ppb STD	ICPMS-6020B-C	Cal6		1/22/2022 4:00:4	1	R373694		0	0						
Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
Aluminum	A	mg/L	0.01002	0.01002		0.01	0	0		0.01		100%	90	110	0%	
Antimony	A	mg/L	0.009633	0.009633		0.01	0	0		0.001		96%	90	110	0%	
Arsenic	A	mg/L	0.0102	0.0102		0.01	0	0		0.001		102%	90	110	0%	
Barium	A	mg/L	0.00982	0.00982		0.01	0	0		0.0003		98%	90	110	0%	
Beryllium	A	mg/L	0.01011	0.01011		0.01	0	0		0.001		101%	90	110	0%	

Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist					
14998167	10 ppb STD	ICPMS-6020B-C Cal6			1/22/2022 4:00:4	1	R373694		0	0						
Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
Boron	A	mg/L	0.00943	0.00943		0.01	0	0		0.1		94%	90	110	0%	
Cadmium	A	mg/L	0.009925	0.009925		0.01	0	0		0.001		99%	90	110	0%	
Calcium	A	mg/L	2.426	2.426		2.5	0	0		1		97%	90	110	0%	
Cerium	A	mg/L	0.009811	0.009811		0.01	0	0		0.001		98%	90	110	0%	
Chromium	A	mg/L	0.01042	0.01042		0.01	0	0		0.001		104%	90	110	0%	
Cobalt	A	mg/L	0.009957	0.009957		0.01	0	0		0.001		100%	90	110	0%	
Copper	A	mg/L	0.01085	0.01085		0.01	0	0		0.005		108%	90	110	0%	
Iron	A	mg/L	0.2632	0.2632		0.25	0	0		0.01		105%	90	110	0%	
Lanthanum	A	mg/L	0.009863	0.009863		0.01	0	0		0.001		99%	90	110	0%	
Lead	A	mg/L	0.009676	0.009676		0.01	0	0		0.001		97%	90	110	0%	
Lithium	A	mg/L	0.12	0.12		0.125	0	0		1		96%	90	110	0%	
Magnesium	A	mg/L	2.733	2.733		2.5	0	0		1		109%	90	110	0%	
Manganese	A	mg/L	0.0103	0.0103		0.01	0	0		0.001		103%	90	110	0%	
Mercury	A	mg/L	0.0001841	0.0001841		0.0002	0	0		0.001		92%	90	110	0%	
Molybdenum	A	mg/L	0.009523	0.009523		0.01	0	0		0.001		95%	90	110	0%	
Nickel	A	mg/L	0.01086	0.01086		0.01	0	0		0.005		109%	90	110	0%	
Potassium	A	mg/L	2.443	2.443		2.5	0	0		1		98%	90	110	0%	
Selenium	A	mg/L	0.01021	0.01021		0.01	0	0		0.005		102%	90	110	0%	
Silicon	A	mg/L	0.02723	0.02723		0.04	0	0		0.1		68%	90	110	0%	S
Silver	A	mg/L	0.004	0.004		0.004	0	0		0.001		100%	90	110	0%	
Sodium	A	mg/L	2.74	2.74		2.5	0	0		1		110%	90	110	0%	
Strontium	A	mg/L	0.01006	0.01006		0.01	0	0		0.001		101%	90	110	0%	
Thallium	A	mg/L	0.009848	0.009848		0.01	0	0		0.001		98%	90	110	0%	
Thorium	A	mg/L	0.009574	0.009574		0.01	0	0		0.05		96%	90	110	0%	
Tin	A	mg/L	0.009559	0.009559		0.01	0	0		0.001		96%	90	110	0%	
Titanium	A	mg/L	0.009987	0.009987		0.01	0	0		0.001		100%	90	110	0%	
Uranium	A	mg/L	0.009873	0.009873		0.01	0	0		0.001		99%	90	110	0%	
Vanadium	A	mg/L	0.009864	0.009864		0.01	0	0		0.005		99%	90	110	0%	
Zinc	A	mg/L	0.01058	0.01058		0.01	0	0		0.01		106%	90	110	0%	
Iron, Ferrous	C	mg/L	0.2632	0.2632		0.01	0	0		0.01	5	2632%	90	110	0%	S
Silicon as SiO2	C	mg/L	0.0582722	0.0582722		0.856	0	0		0.214	0.9	7%	90	110	0%	S

Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist					
14998168	50 ppb STD	ICPMS-6020B-C Cal7			1/22/2022 4:07:0	1	R373694		0	0						
Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
Aluminum	A	mg/L	0.06195	0.06195		0.05	0	0		0.01		124%	90	110	0%	S
Antimony	A	mg/L	0.05242	0.05242		0.05	0	0		0.001		105%	90	110	0%	
Arsenic	A	mg/L	0.05116	0.05116		0.05	0	0		0.001		102%	90	110	0%	
Barium	A	mg/L	0.05015	0.05015		0.05	0	0		0.0003		100%	90	110	0%	
Beryllium	A	mg/L	0.05051	0.05051		0.05	0	0		0.001		101%	90	110	0%	
Boron	A	mg/L	0.05042	0.05042		0.05	0	0		0.1		101%	90	110	0%	
Cadmium	A	mg/L	0.0506	0.0506		0.05	0	0		0.001		101%	90	110	0%	
Calcium	A	mg/L	11.84	11.84		12.5	0	0		1		95%	90	110	0%	
Cerium	A	mg/L	0.04998	0.04998		0.05	0	0		0.001		100%	90	110	0%	
Chromium	A	mg/L	0.05082	0.05082		0.05	0	0		0.001		102%	90	110	0%	
Cobalt	A	mg/L	0.05023	0.05023		0.05	0	0		0.001		100%	90	110	0%	
Copper	A	mg/L	0.05311	0.05311		0.05	0	0		0.005		106%	90	110	0%	
Iron	A	mg/L	1.261	1.261		1.25	0	0		0.01		101%	90	110	0%	
Lanthanum	A	mg/L	0.05001	0.05001		0.05	0	0		0.001		100%	90	110	0%	
Lead	A	mg/L	0.05029	0.05029		0.05	0	0		0.001		101%	90	110	0%	
Lithium	A	mg/L	0.5749	0.5749		0.625	0	0		1		92%	90	110	0%	
Magnesium	A	mg/L	12.58	12.58		12.5	0	0		1		101%	90	110	0%	
Manganese	A	mg/L	0.05116	0.05116		0.05	0	0		0.001		102%	90	110	0%	
Mercury	A	mg/L	0.0009839	0.0009839		0.001	0	0		0.001		98%	90	110	0%	
Molybdenum	A	mg/L	0.05143	0.05143		0.05	0	0		0.001		103%	90	110	0%	
Nickel	A	mg/L	0.05246	0.05246		0.05	0	0		0.005		105%	90	110	0%	
Potassium	A	mg/L	11.87	11.87		12.5	0	0		1		95%	90	110	0%	
Selenium	A	mg/L	0.05198	0.05198		0.05	0	0		0.005		104%	90	110	0%	
Silicon	A	mg/L	0.2109	0.2109		0.2	0	0		0.1		105%	90	110	0%	
Silver	A	mg/L	0.01995	0.01995		0.02	0	0		0.001		100%	90	110	0%	
Sodium	A	mg/L	12.75	12.75		12.5	0	0		1		102%	90	110	0%	
Strontium	A	mg/L	0.05011	0.05011		0.05	0	0		0.001		100%	90	110	0%	
Thallium	A	mg/L	0.05069	0.05069		0.05	0	0		0.001		101%	90	110	0%	
Thorium	A	mg/L	0.05035	0.05035		0.05	0	0		0.05		101%	90	110	0%	
Tin	A	mg/L	0.0523	0.0523		0.05	0	0		0.001		105%	90	110	0%	
Titanium	A	mg/L	0.05158	0.05158		0.05	0	0		0.001		103%	90	110	0%	
Uranium	A	mg/L	0.05132	0.05132		0.05	0	0		0.001		103%	90	110	0%	
Vanadium	A	mg/L	0.04778	0.04778		0.05	0	0		0.005		96%	90	110	0%	
Zinc	A	mg/L	0.05544	0.05544		0.05	0	0		0.01		111%	90	110	0%	S
Iron, Ferrous	C	mg/L	1.261	1.261		0.05	0	0		0.01	5	2522%	90	110	0%	S

Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist					
14998168	50 ppb STD	ICPMS-6020B-C Cal7			1/22/2022 4:07:0	1	R373694		0	0						
Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
Silicon as SiO2	C	mg/L	0.451326	0.451326		4.28	0	0		0.214	0.9	11%	90	110	0%	S

Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist					
14998169	100 ppb STD	ICPMS-6020B-C Cal8			1/22/2022 4:13:2	1	R373694		0	0						
Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
Aluminum	A	mg/L	0.1022	0.1022		0.1	0	0		0.01		102%	90	110	0%	
Antimony	A	mg/L	0.09883	0.09883		0.1	0	0		0.001		99%	90	110	0%	
Arsenic	A	mg/L	0.1015	0.1015		0.1	0	0		0.001		101%	90	110	0%	
Barium	A	mg/L	0.1003	0.1003		0.1	0	0		0.0003		100%	90	110	0%	
Beryllium	A	mg/L	0.1007	0.1007		0.1	0	0		0.001		101%	90	110	0%	
Boron	A	mg/L	0.09786	0.09786		0.1	0	0		0.1		98%	90	110	0%	
Cadmium	A	mg/L	0.1003	0.1003		0.1	0	0		0.001		100%	90	110	0%	
Calcium	A	mg/L	23.89	23.89		25	0	0		1		96%	90	110	0%	
Cerium	A	mg/L	0.1	0.1		0.1	0	0		0.001		100%	90	110	0%	
Chromium	A	mg/L	0.09897	0.09897		0.1	0	0		0.001		99%	90	110	0%	
Cobalt	A	mg/L	0.09787	0.09787		0.1	0	0		0.001		98%	90	110	0%	
Copper	A	mg/L	0.1015	0.1015		0.1	0	0		0.005		101%	90	110	0%	
Iron	A	mg/L	2.569	2.569		2.5	0	0		0.01		103%	90	110	0%	
Lanthanum	A	mg/L	0.1	0.1		0.1	0	0		0.001		100%	90	110	0%	
Lead	A	mg/L	0.09948	0.09948		0.1	0	0		0.001		99%	90	110	0%	
Lithium	A	mg/L	1.199	1.199		1.25	0	0		1		96%	90	110	0%	
Magnesium	A	mg/L	25.39	25.39		25	0	0		1		102%	90	110	0%	
Manganese	A	mg/L	0.1013	0.1013		0.1	0	0		0.001		101%	90	110	0%	
Mercury	A	mg/L	0.00201	0.00201		0.002	0	0		0.001		100%	90	110	0%	
Molybdenum	A	mg/L	0.09934	0.09934		0.1	0	0		0.001		99%	90	110	0%	
Nickel	A	mg/L	0.1017	0.1017		0.1	0	0		0.005		102%	90	110	0%	
Potassium	A	mg/L	24.07	24.07		25	0	0		1		96%	90	110	0%	
Selenium	A	mg/L	0.1031	0.1031		0.1	0	0		0.005		103%	90	110	0%	
Silicon	A	mg/L	0.3961	0.3961		0.4	0	0		0.1		99%	90	110	0%	
Silver	A	mg/L	0.04003	0.04003		0.04	0	0		0.001		100%	90	110	0%	
Sodium	A	mg/L	25.01	25.01		25	0	0		1		100%	90	110	0%	
Strontium	A	mg/L	0.1002	0.1002		0.1	0	0		0.001		100%	90	110	0%	
Thallium	A	mg/L	0.1009	0.1009		0.1	0	0		0.001		101%	90	110	0%	
Thorium	A	mg/L	0.1004	0.1004		0.1	0	0		0.05		100%	90	110	0%	

Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist					
14998169	100 ppb STD	ICPMS-6020B-C Cal8			1/22/2022 4:13:2	1	R373694		0	0						
Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
Tin	A	mg/L	0.0989	0.0989		0.1	0	0		0.001		99%	90	110	0%	
Titanium	A	mg/L	0.09921	0.09921		0.1	0	0		0.001		99%	90	110	0%	
Uranium	A	mg/L	0.1017	0.1017		0.1	0	0		0.001		102%	90	110	0%	
Vanadium	A	mg/L	0.09516	0.09516		0.1	0	0		0.005		95%	90	110	0%	
Zinc	A	mg/L	0.1055	0.1055		0.1	0	0		0.01		105%	90	110	0%	
Iron, Ferrous	C	mg/L	2.569	2.569		0.1	0	0		0.01	5	2569%	90	110	0%	S
Silicon as SiO2	C	mg/L	0.847654	0.847654		8.56	0	0		0.214	0.9	10%	90	110	0%	S

Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist					
14998170	1000 ppb STD	ICPMS-6020B-C Cal10			1/22/2022 4:19:4	1	R373694		0	0						
Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
Aluminum	A	mg/L	0.9992	0.9992		1	0	0		0.01		100%	90	110	0%	
Antimony	A	mg/L	0.000269	0.000269		0	0	0		0.001		0%			0%	
Arsenic	A	mg/L	0.9998	0.9998		1	0	0		0.001		100%	90	110	0%	
Barium	A	mg/L	1	1		1	0	0		0.0003		100%	90	110	0%	
Beryllium	A	mg/L	0.9999	0.9999		1	0	0		0.001		100%	90	110	0%	
Boron	A	mg/L	1	1		1	0	0		0.1		100%	90	110	0%	
Cadmium	A	mg/L	0.9999	0.9999		1	0	0		0.001		100%	90	110	0%	
Calcium	A	mg/L	50.73	50.73		50	0	0		1		101%	90	110	0%	
Cerium	A	mg/L	0.00002178	0.00002178		0	0	0		0.001		0%			0%	
Chromium	A	mg/L	1	1		1	0	0		0.001		100%	90	110	0%	
Cobalt	A	mg/L	1	1		1	0	0		0.001		100%	90	110	0%	
Copper	A	mg/L	0.9997	0.9997		1	0	0		0.005		100%	90	110	0%	
Iron	A	mg/L	6.022	6.022		6	0	0		0.01		100%	90	110	0%	
Lanthanum	A	mg/L	0.000008418	0.000008418		0	0	0		0.001		0%			0%	
Lead	A	mg/L	1	1		1	0	0		0.001		100%	90	110	0%	
Lithium	A	mg/L	2.538	2.538		2.5	0	0		1		102%	90	110	0%	
Magnesium	A	mg/L	49.77	49.77		50	0	0		1		100%	90	110	0%	
Manganese	A	mg/L	0.9998	0.9998		1	0	0		0.001		100%	90		0%	
Mercury	A	mg/L	0.00001221	0.00001221		0	0	0		0.001		0%			0%	
Molybdenum	A	mg/L	0.00003815	0.00003815		0	0	0		0.001		0%			0%	
Nickel	A	mg/L	0.9997	0.9997		1	0	0		0.005		100%	90	110	0%	
Potassium	A	mg/L	50.63	50.63		50	0	0		1		101%	90	110	0%	
Selenium	A	mg/L	0.9996	0.9996		1	0	0		0.005		100%	90	110	0%	

Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist					
14998170	1000 ppb STD	ICPMS-6020B-C	Cal10		1/22/2022 4:19:4	1	R373694		0	0						
Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
Silicon	A	mg/L	-0.02094	-0.02094		0	0	0		0.1		0%				0%
Silver	A	mg/L	0.2615	0.2615		0	0	0		0.001		0%				0%
Sodium	A	mg/L	49.92	49.92		50	0	0		1		100%	90	110		0%
Strontium	A	mg/L	1	1		1	0	0		0.001		100%	90	110		0%
Thallium	A	mg/L	0.9999	0.9999		1	0	0		0.001		100%	90	110		0%
Thorium	A	mg/L	0.9999	0.9999		1	0	0		0.05		100%	90	110		0%
Tin	A	mg/L	0.0002164	0.0002164		0	0	0		0.001		0%				0%
Titanium	A	mg/L	0.005655	0.005655		1	0	0		0.001		1%	90	110		0% S
Uranium	A	mg/L	0.9998	0.9998		1	0	0		0.001		100%	90	110		0%
Vanadium	A	mg/L	1.001	1.001		1	0	0		0.005		100%	90	110		0%
Zinc	A	mg/L	0.9992	0.9992		1	0	0		0.01		100%	90	110		0%
Iron, Ferrous	C	mg/L	6.022	6.022		0	0	0		0.01	5	0%				0%
Silicon as SiO2	C	mg/L	-0.0448116	-0.0448116		0	0	0		0.214	0.9	0%				0%

Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist					
14998171	100 ppb Br STD	ICPMS-6020-W-	SAMP		1/22/2022 4:26:0	1	R373694		0	0						
Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
Aluminum	A	mg/L	0.0001473	0		0	0	0	0.00086	0.001	1	0%	0	0		0%
Antimony	A	mg/L	0.00003468	0		0	0	0	0.00042	0.001	0.1	0%	0	0		0%
Arsenic	A	mg/L	0.0001123	0		0	0	0	0.00019	0.001	1	0%	0	0		0%
Barium	A	mg/L	0.00001014	0		0	0	0	0.000042	0.001	1	0%	0	0		0%
Cadmium	A	mg/L	0.00001722	0		0	0	0	0.000025	0.001	1	0%	0	0		0%
Cerium	A	mg/L	1.448E-07	0		0	0	0	0.000012	0.001	0.1	0%	0	0		0%
Chromium	A	mg/L	0.00002153	0		0	0	0	0.00018	0.001	1	0%	0	0		0%
Cobalt	A	mg/L	0.00001643	0		0	0	0	0.000042	0.001	1	0%	0	0		0%
Copper	A	mg/L	0.0001344	0		0	0	0	0.00027	0.001	1	0%	0	0		0%
Lead	A	mg/L	0.00006519	0.00006519		0	0	0	0.000056	0.001	1	0%	0	0		0% J
Manganese	A	mg/L	0.000007851	0		0	0	0	0.000095	0.001	1	0%	0	0		0%
Mercury	A	mg/L	0.000007074	0		0	0	0	0.00016	0.001	0.002	0%	0	0		0%
Molybdenum	A	mg/L	-0.00004406	0		0	0	0	0.00005	0.001	0.1	0%	0	0		0%
Nickel	A	mg/L	0.00001966	0		0	0	0	0.00063	0.001	1	0%	0	0		0%
Selenium	A	mg/L	0.0001333	0		0	0	0	0.00033	0.001	1	0%	0	0		0%
Silver	A	mg/L	0.0003263	0.0003263		0	0	0	0.00002	0.001	0.04	0%	0	0		0% J
Strontium	A	mg/L	0.000003859	0		0	0	0	0.00014	0.001	1	0%	0	0		0%

Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist					
14998171	100 ppb Br STD	ICPMS-6020-W-	SAMP		1/22/2022 4:26:0	1	R373694		0	0						
Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
Thallium	A	mg/L	0.0006262	0.0006262		0	0	0	0.000041	0.001	1	0%	0	0	0%	J
Thorium	A	mg/L	0.0001281	0		0	0	0	0.00061	0.001	1	0%	0	0	0%	
Titanium	A	mg/L	0.0002305	0.0002305		0	0	0	0.000094	0.001	1	0%	0	0	0%	J
Uranium	A	mg/L	0.00002966	0		0	0	0	0.000052	0.0003	1	0%	0	0	0%	
Calcium	B	mg/L	0.002291	0		0	0	0	0.02092	0.02092	50	0%	0	0	0%	L
Iron	B	mg/L	0.0001012	0		0	0	0	0.00119	0.00119	5	0%	0	0	0%	
Iron, Ferrous	B	mg/L	0.0001012	0		0	0	0	0.00119	0.00119	5	0%	0	0	0%	
Magnesium	B	mg/L	0.001547	0		0	0	0	0.00564	0.00564	50	0%	0	0	0%	L
Potassium	B	mg/L	0.6011	0.6011		0	0	0	0.08139	0.08139	50	0%	0	0	0%	D
Tin	B	mg/L	0.00007039	0		0	0	0	0.00132	0.00132	0.1	0%	0	0	0%	
Zinc	B	mg/L	-0.00001252	0		0	0	0	0.00273	0.00273	1	0%	0	0	0%	L

Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist					
14998172	Rinse	ICPMS-6020-W-	SAMP		1/22/2022 4:32:2	1	R373694		0	0						
Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
Aluminum	A	mg/L	0.00002062	0		0	0	0	0.00086	0.001	1	0%	0	0	0%	
Antimony	A	mg/L	-1.045E-06	0		0	0	0	0.00042	0.001	0.1	0%	0	0	0%	
Arsenic	A	mg/L	0.00001448	0		0	0	0	0.00019	0.001	1	0%	0	0	0%	
Barium	A	mg/L	0.000004231	0		0	0	0	0.000042	0.001	1	0%	0	0	0%	
Cadmium	A	mg/L	0.00000838	0		0	0	0	0.000025	0.001	1	0%	0	0	0%	
Cerium	A	mg/L	2.011E-07	0		0	0	0	0.000012	0.001	0.1	0%	0	0	0%	
Chromium	A	mg/L	-7.051E-06	0		0	0	0	0.00018	0.001	1	0%	0	0	0%	
Cobalt	A	mg/L	3.639E-07	0		0	0	0	0.000042	0.001	1	0%	0	0	0%	
Copper	A	mg/L	0.000002244	0		0	0	0	0.00027	0.001	1	0%	0	0	0%	
Lead	A	mg/L	0.00003225	0		0	0	0	0.000056	0.001	1	0%	0	0	0%	
Manganese	A	mg/L	0.0001341	0.0001341		0	0	0	0.000095	0.001	1	0%	0	0	0%	J
Mercury	A	mg/L	0.000003581	0		0	0	0	0.00016	0.001	0.002	0%	0	0	0%	
Molybdenum	A	mg/L	-0.00005416	0		0	0	0	0.00005	0.001	0.1	0%	0	0	0%	
Nickel	A	mg/L	0.000007009	0		0	0	0	0.00063	0.001	1	0%	0	0	0%	
Selenium	A	mg/L	0.00004454	0		0	0	0	0.00033	0.001	1	0%	0	0	0%	
Silver	A	mg/L	0.00002286	0.00002286		0	0	0	0.00002	0.001	0.04	0%	0	0	0%	J
Strontium	A	mg/L	0.00000349	0		0	0	0	0.00014	0.001	1	0%	0	0	0%	
Thallium	A	mg/L	0.0001758	0.0001758		0	0	0	0.000041	0.001	1	0%	0	0	0%	J
Thorium	A	mg/L	0.00002917	0		0	0	0	0.00061	0.001	1	0%	0	0	0%	

Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist					
14998172	Rinse	ICPMS-6020-W-	SAMP		1/22/2022 4:32:2	1	R373694		0	0						
Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
Titanium	A	mg/L	0.00005616	0		0	0	0	0.000094	0.001	1	0%	0	0	0%	
Uranium	A	mg/L	0.000005104	0		0	0	0	0.000052	0.0003	1	0%	0	0	0%	
Calcium	B	mg/L	0.00119	0		0	0	0	0.02092	0.02092	50	0%	0	0	0%	L
Iron	B	mg/L	0.00008053	0		0	0	0	0.00119	0.00119	5	0%	0	0	0%	
Iron, Ferrous	B	mg/L	0.00008053	0		0	0	0	0.00119	0.00119	5	0%	0	0	0%	
Magnesium	B	mg/L	0.001033	0		0	0	0	0.00564	0.00564	50	0%	0	0	0%	L
Potassium	B	mg/L	0.01423	0		0	0	0	0.08139	0.08139	50	0%	0	0	0%	L
Tin	B	mg/L	0.000006639	0		0	0	0	0.00132	0.00132	0.1	0%	0	0	0%	
Zinc	B	mg/L	-0.00001545	0		0	0	0	0.00273	0.00273	1	0%	0	0	0%	L

Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist					
14998173	QCS	ICPMS-6020-W-	ICV		1/22/2022 4:38:4	1	R373694		0	0						
Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
Aluminum	A	mg/L	0.2491	0.2491		0.25	0	0	0.00086	0.001	1	100%	90	110	0%	
Antimony	A	mg/L	0.04905	0.04905		0.05	0	0	0.00042	0.001	0.1	98%	90	110	0%	
Arsenic	A	mg/L	0.05054	0.05054		0.05	0	0	0.00019	0.001	1	101%	90	110	0%	
Barium	A	mg/L	0.05047	0.05047		0.05	0	0	0.000042	0.001	1	101%	90	110	0%	
Beryllium	A	mg/L	0.02475	0.02475		0.025	0	0	0.00012	0.001	1	99%	90	110	0%	
Boron	A	mg/L	0.05406	0.05406		0.05	0	0	0.00561	0.00561	1	108%	90	110	0%	
Cadmium	A	mg/L	0.02506	0.02506		0.025	0	0	0.000025	0.001	1	100%	90	110	0%	
Calcium	A	mg/L	2.521	2.521		2.5	0	0	0.02092	0.02092	50	101%	90	110	0%	
Cerium	A	mg/L	0.05227	0.05227		0.05	0	0	0.000012	0.001	0.1	105%	90	110	0%	
Chromium	A	mg/L	0.05075	0.05075		0.05	0	0	0.00018	0.001	1	101%	90	110	0%	
Cobalt	A	mg/L	0.05255	0.05255		0.05	0	0	0.000042	0.001	1	105%	90	110	0%	
Copper	A	mg/L	0.05304	0.05304		0.05	0	0	0.00027	0.001	1	106%	90	110	0%	
Iron	A	mg/L	0.2542	0.2542		0.25	0	0	0.00119	0.00119	5	102%	90	110	0%	
Lanthanum	A	mg/L	0.05116	0.05116		0.05	0	0	0.000011	0.001	0.1	102%	90	110	0%	
Lead	A	mg/L	0.04922	0.04922		0.05	0	0	0.000056	0.001	1	98%	90	110	0%	
Magnesium	A	mg/L	2.634	2.634		2.5	0	0	0.00564	0.00564	50	105%	90	110	0%	
Manganese	A	mg/L	0.2558	0.2558		0.25	0	0	0.000095	0.001	1	102%	90	110	0%	
Mercury	A	mg/L	0.0009827	0.0009827		0.001	0	0	0.00016	0.001	0.002	98%	90	110	0%	
Molybdenum	A	mg/L	0.05033	0.05033		0.05	0	0	0.00005	0.001	0.1	101%	90	110	0%	
Nickel	A	mg/L	0.05239	0.05239		0.05	0	0	0.00063	0.001	1	105%	90	110	0%	
Potassium	A	mg/L	2.47	2.47		2.5	0	0	0.08139	0.08139	50	99%	90	110	0%	

Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist					
14998173	QCS	ICPMS-6020-W- ICV			1/22/2022 4:38:4	1	R373694		0	0						
Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
Selenium	A	mg/L	0.05204	0.05204		0.05	0	0	0.00033	0.001	1	104%	90	110	0%	
Silicon	A	mg/L	0.5196	0.5196		0.5	0	0	0.01223	0.1	0.4	104%	90	110	0%	
Silver	A	mg/L	0.02516	0.02516		0.025	0	0	0.00002	0.001	0.04	101%	90	110	0%	
Sodium	A	mg/L	2.588	2.588		2.5	0	0	0.02171	0.02171	50	104%	90	110	0%	
Strontium	A	mg/L	0.0499	0.0499		0.05	0	0	0.00014	0.001	1	100%	90	110	0%	
Thallium	A	mg/L	0.04873	0.04873		0.05	0	0	0.000041	0.001	1	97%	90	110	0%	
Thorium	A	mg/L	0.04924	0.04924		0.05	0	0	0.00061	0.001	1	98%	90	110	0%	
Tin	A	mg/L	0.05018	0.05018		0.05	0	0	0.00132	0.00132	0.1	100%	90	110	0%	
Titanium	A	mg/L	0.05271	0.05271		0.05	0	0	0.000094	0.001	1	105%	90	110	0%	
Uranium	A	mg/L	0.05353	0.05353		0.05	0	0	0.000052	0.0003	1	107%	90	110	0%	
Vanadium	A	mg/L	0.04634	0.04634		0.05	0	0	0.0013	0.0013	1	93%	90	110	0%	
Zinc	A	mg/L	0.0539	0.0539		0.05	0	0	0.00273	0.00273	1	108%	90	110	0%	
Iron, Ferrous	C	mg/L	0.2542	0.2542		0	0	0	0.00119	0.00119	5	0%	0	0	0%	

Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist					
14998174	ICSA	ICPMS-6020-W- ICSA			1/22/2022 4:44:5	1	R373694		0	0						
Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
Aluminum	A	mg/L	41.64	41.64		40	0	0	0.00086	0.001	1	104%	80	120	0%	
Antimony	A	mg/L	0.0001866	0.0001866		0	0	0	0.00042	0.001	0.1	0%			0%	
Arsenic	A	mg/L	0.00008218	0.00008218		0	0	0	0.00019	0.001	1	0%			0%	
Barium	A	mg/L	0.00007171	0.00007171		0	0	0	0.000042	0.001	1	0%			0%	
Beryllium	A	mg/L	0.00002856	0.00002856		0	0	0	0.00012	0.001	1	0%			0%	
Boron	A	mg/L	0.003927	0.003927		0	0	0	0.00561	0.00561	1	0%			0%	
Cadmium	A	mg/L	0.00006883	0.00006883		0	0	0	0.000025	0.001	1	0%			0%	
Calcium	A	mg/L	123.7	123.7		120	0	0	0.02092	0.02092	50	103%	80	120	0%	
Cerium	A	mg/L	0.000003835	0.000003835		0	0	0	0.000012	0.001	0.1	0%			0%	
Chromium	A	mg/L	0.0009543	0.0009543		0	0	0	0.00018	0.001	1	0%			0%	
Cobalt	A	mg/L	0.0003424	0.0003424		0	0	0	0.000042	0.001	1	0%			0%	
Copper	A	mg/L	0.0001474	0.0001474		0	0	0	0.00027	0.001	1	0%			0%	
Iron	A	mg/L	102.2	102.2		100	0	0	0.00119	0.00119	5	102%	80	120	0%	
Lanthanum	A	mg/L	0.000008727	0.000008727		0	0	0	0.000011	0.001	0.1	0%			0%	
Lead	A	mg/L	0.00003616	0.00003616		0	0	0	0.000056	0.001	1	0%			0%	
Magnesium	A	mg/L	43.95	43.95		50	0	0	0.00564	0.00564	50	88%			0%	
Manganese	A	mg/L	0.0002013	0.0002013		0	0	0	0.000095	0.001	1	0%			0%	

Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist					
14998174	ICSA	ICPMS-6020-W-	ICSA		1/22/2022 4:44:5	1	R373694		0	0						
Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
Mercury	A	mg/L	0.00001008	0.00001008		0	0	0	0.00016	0.001	0.002	0%			0%	
Molybdenum	A	mg/L	0.8545	0.8545		0.8	0	0	0.00005	0.001	0.1	107%	80	120	0%	
Nickel	A	mg/L	0.0002219	0.0002219		0	0	0	0.00063	0.001	1	0%			0%	
Potassium	A	mg/L	42.01	42.01		50	0	0	0.08139	0.08139	50	84%			0%	
Selenium	A	mg/L	0.0001528	0.0001528		0	0	0	0.00033	0.001	1	0%			0%	
Silicon	A	mg/L	-0.02392	-0.02392		0	0	0	0.01223	0.1	0.4	0%			0%	
Silver	A	mg/L	0.00001398	0.00001398		0	0	0	0.00002	0.001	0.04	0%			0%	
Sodium	A	mg/L	109.2	109.2		100	0	0	0.02171	0.02171	50	109%			0%	
Strontium	A	mg/L	0.001222	0.001222		0	0	0	0.00014	0.001	1	0%			0%	
Thallium	A	mg/L	0.00005547	0.00005547		0	0	0	0.000041	0.001	1	0%			0%	
Thorium	A	mg/L	0.00003765	0.00003765		0	0	0	0.00061	0.001	1	0%			0%	
Tin	A	mg/L	0.00007795	0.00007795		0	0	0	0.00132	0.00132	0.1	0%			0%	
Titanium	A	mg/L	0.847	0.847		0.8	0	0	0.000094	0.001	1	106%			0%	
Uranium	A	mg/L	0.000004341	0.000004341		0	0	0	0.000052	0.0003	1	0%			0%	
Vanadium	A	mg/L	-0.003356	-0.003356		0	0	0	0.0013	0.0013	1	0%			0%	
Zinc	A	mg/L	0.0003431	0.0003431		0	0	0	0.00273	0.00273	1	0%			0%	
Iron, Ferrous	C	mg/L	102.2	102.2		0	0	0	0.00119	0.00119	5	0%			0%	

Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist					
14998175	ICSAB	ICPMS-6020-W-	ICSAB		1/22/2022 4:51:1	1	R373694		0	0						
Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
Aluminum	A	mg/L	40.91	40.91		40	0	0	0.00086	0.001	1	102%	80	120	0%	
Antimony	A	mg/L	0.00005116	0.00005116		0	0	0	0.00042	0.001	0.1	0%			0%	
Arsenic	A	mg/L	0.01037	0.01037		0.01	0	0	0.00019	0.001	1	104%	80	120	0%	
Barium	A	mg/L	0.00007249	0.00007249		0	0	0	0.000042	0.001	1	0%			0%	
Beryllium	A	mg/L	0.00001211	0.00001211		0	0	0	0.00012	0.001	1	0%			0%	
Boron	A	mg/L	0.001978	0.001978		0	0	0	0.00561	0.00561	1	0%			0%	
Cadmium	A	mg/L	0.009802	0.009802		0.01	0	0	0.000025	0.001	1	98%	80	120	0%	
Calcium	A	mg/L	123	123		120	0	0	0.02092	0.02092	50	102%	80	120	0%	
Cerium	A	mg/L	0.000002022	0.000002022		0	0	0	0.000012	0.001	0.1	0%			0%	
Chromium	A	mg/L	0.02133	0.02133		0.02	0	0	0.00018	0.001	1	107%	80	120	0%	
Cobalt	A	mg/L	0.01997	0.01997		0.02	0	0	0.000042	0.001	1	100%	80	120	0%	
Copper	A	mg/L	0.02029	0.02029		0.02	0	0	0.00027	0.001	1	101%	80	120	0%	
Iron	A	mg/L	103.8	103.8		100	0	0	0.00119	0.00119	5	104%	80	120	0%	

Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist					
14998175	ICSAB	ICPMS-6020-W- ICSAB			1/22/2022 4:51:1	1	R373694		0	0						
Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
Lanthanum	A	mg/L	0.000009493	0.000009493		0	0	0	0.000011	0.001	0.1	0%			0%	
Lead	A	mg/L	0.00002756	0.00002756		0	0	0	0.000056	0.001	1	0%			0%	
Magnesium	A	mg/L	42.48	42.48		40	0	0	0.00564	0.00564	50	106%	80	120	0%	
Manganese	A	mg/L	0.02067	0.02067		0.02	0	0	0.000095	0.001	1	103%	80	120	0%	
Mercury	A	mg/L	0.000003316	0.000003316		0	0	0	0.00016	0.001	0.002	0%			0%	
Molybdenum	A	mg/L	0.8527	0.8527		0.8	0	0	0.00005	0.001	0.1	107%	80	120	0%	
Nickel	A	mg/L	0.02084	0.02084		0.02	0	0	0.00063	0.001	1	104%	80	120	0%	
Potassium	A	mg/L	40.82	40.82		40	0	0	0.08139	0.08139	50	102%	80	120	0%	
Selenium	A	mg/L	0.0106	0.0106		0.01	0	0	0.00033	0.001	1	106%	80	120	0%	
Silicon	A	mg/L	-0.02546	-0.02546		0	0	0	0.01223	0.1	0.4	0%			0%	
Silver	A	mg/L	0.004938	0.004938		0.005	0	0	0.00002	0.001	0.04	99%	80	120	0%	
Sodium	A	mg/L	103.8	103.8		100	0	0	0.02171	0.02171	50	104%	80	120	0%	
Strontium	A	mg/L	0.001277	0.001277		0	0	0	0.00014	0.001	1	0%			0%	
Thallium	A	mg/L	0.00002382	0.00002382		0	0	0	0.000041	0.001	1	0%			0%	
Thorium	A	mg/L	0.00001206	0.00001206		0	0	0	0.00061	0.001	1	0%			0%	
Tin	A	mg/L	0.00004946	0.00004946		0	0	0	0.00132	0.00132	0.1	0%			0%	
Titanium	A	mg/L	0.8342	0.8342		0.8	0	0	0.000094	0.001	1	104%	80	120	0%	
Uranium	A	mg/L	0.000001302	0.000001302		0	0	0	0.000052	0.0003	1	0%			0%	
Vanadium	A	mg/L	0.01615	0.01615		0.02	0	0	0.0013	0.0013	1	81%	80	120	0%	
Zinc	A	mg/L	0.01072	0.01072		0.01	0	0	0.00273	0.00273	1	107%	80	120	0%	
Iron, Ferrous	C	mg/L	103.8	103.8		0	0	0	0.00119	0.00119	5	0%			0%	

Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist					
14998176	Rinse	ICPMS-6020-W- SAMP			1/22/2022 4:57:3	1	R373694		0	0						
Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
Antimony	A	mg/L	-0.00001205	0		0	0	0	0.00042	0.001	0.1	0%	0	0	0%	
Arsenic	A	mg/L	-0.00008641	0		0	0	0	0.00019	0.001	1	0%	0	0	0%	
Barium	A	mg/L	2.588E-07	0		0	0	0	0.000042	0.001	1	0%	0	0	0%	
Beryllium	A	mg/L	0.00001101	0		0	0	0	0.00012	0.001	1	0%	0	0	0%	
Cadmium	A	mg/L	-0.00000298	0		0	0	0	0.000025	0.001	1	0%	0	0	0%	
Cerium	A	mg/L	3.396E-07	0		0	0	0	0.000012	0.001	0.1	0%	0	0	0%	
Chromium	A	mg/L	-0.00002864	0		0	0	0	0.00018	0.001	1	0%	0	0	0%	
Cobalt	A	mg/L	-1.089E-06	0		0	0	0	0.000042	0.001	1	0%	0	0	0%	
Copper	A	mg/L	0.0001034	0		0	0	0	0.00027	0.001	1	0%	0	0	0%	

Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist					
14998176	Rinse	ICPMS-6020-W- SAMP			1/22/2022 4:57:3	1	R373694		0	0						
Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
Lead	A	mg/L	0.000007154	0		0	0	0	0.000056	0.001	1	0%	0	0	0%	
Manganese	A	mg/L	0.0001239	0.0001239		0	0	0	0.000095	0.001	1	0%	0	0	0%	J
Mercury	A	mg/L	0.000003238	0		0	0	0	0.00016	0.001	0.002	0%	0	0	0%	
Molybdenum	A	mg/L	0.0001794	0.0001794		0	0	0	0.00005	0.001	0.1	0%	0	0	0%	J
Nickel	A	mg/L	0.000005038	0		0	0	0	0.00063	0.001	1	0%	0	0	0%	
Selenium	A	mg/L	0.00000543	0		0	0	0	0.00033	0.001	1	0%	0	0	0%	
Silver	A	mg/L	8.068E-08	0		0	0	0	0.00002	0.001	0.04	0%	0	0	0%	
Strontium	A	mg/L	0.000008697	0		0	0	0	0.00014	0.001	1	0%	0	0	0%	
Thallium	A	mg/L	0.00001922	0		0	0	0	0.000041	0.001	1	0%	0	0	0%	
Thorium	A	mg/L	0.000001021	0		0	0	0	0.00061	0.001	1	0%	0	0	0%	
Titanium	A	mg/L	0.0001185	0.0001185		0	0	0	0.000094	0.001	1	0%	0	0	0%	J
Uranium	A	mg/L	4.554E-07	0		0	0	0	0.000052	0.0003	1	0%	0	0	0%	
Boron	B	mg/L	0.0008159	0		0	0	0	0.00561	0.00561	1	0%	0	0	0%	L
Calcium	B	mg/L	0.002021	0		0	0	0	0.02092	0.02092	50	0%	0	0	0%	L
Iron	B	mg/L	0.001206	0.001206		0	0	0	0.00119	0.00119	5	0%	0	0	0%	
Iron, Ferrous	B	mg/L	0.001206	0.001206		0	0	0	0.00119	0.00119	5	0%	0	0	0%	
Magnesium	B	mg/L	-0.001041	0		0	0	0	0.00564	0.00564	50	0%	0	0	0%	L
Potassium	B	mg/L	0.01466	0		0	0	0	0.08139	0.08139	50	0%	0	0	0%	L
Tin	B	mg/L	-0.00001014	0		0	0	0	0.00132	0.00132	0.1	0%	0	0	0%	
Zinc	B	mg/L	0.0000041	0		0	0	0	0.00273	0.00273	1	0%	0	0	0%	L

Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist					
14998177	CCV	ICPMS-6020-W- CCV			1/22/2022 5:03:4	1	R373694		0	0						
Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
Aluminum	A	mg/L	0.0647	0.0647		0.05	0	0	0.00086	0.001	1	129%	90	110	0%	S
Antimony	A	mg/L	0.05193	0.05193		0.05	0	0	0.00042	0.001	0.1	104%	90	110	0%	
Arsenic	A	mg/L	0.05156	0.05156		0.05	0	0	0.00019	0.001	1	103%	90	110	0%	
Barium	A	mg/L	0.04994	0.04994		0.05	0	0	0.000042	0.001	1	100%	90	110	0%	
Beryllium	A	mg/L	0.05267	0.05267		0.05	0	0	0.00012	0.001	1	105%	90	110	0%	
Boron	A	mg/L	0.05383	0.05383		0.05	0	0	0.00561	0.00561	1	108%	90	110	0%	
Cadmium	A	mg/L	0.04985	0.04985		0.05	0	0	0.000025	0.001	1	100%	90	110	0%	
Calcium	A	mg/L	12.34	12.34		12.5	0	0	0.02092	0.02092	50	99%	90	110	0%	
Cerium	A	mg/L	0.04894	0.04894		0.05	0	0	0.000012	0.001	0.1	98%	90	110	0%	
Chromium	A	mg/L	0.052	0.052		0.05	0	0	0.00018	0.001	1	104%	90	110	0%	

Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist					
14998177	CCV	ICPMS-6020-W-	CCV		1/22/2022 5:03:4	1	R373694		0	0						
Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
Cobalt	A	mg/L	0.05306	0.05306		0.05	0	0	0.000042	0.001	1	106%	90	110	0%	
Copper	A	mg/L	0.05303	0.05303		0.05	0	0	0.00027	0.001	1	106%	90	110	0%	
Iron	A	mg/L	1.288	1.288		1.3	0	0	0.00119	0.00119	5	99%	90	110	0%	
Lanthanum	A	mg/L	0.04863	0.04863		0.05	0	0	0.000011	0.001	0.1	97%	90	110	0%	
Lead	A	mg/L	0.0501	0.0501		0.05	0	0	0.000056	0.001	1	100%	90	110	0%	
Magnesium	A	mg/L	12.93	12.93		12.5	0	0	0.00564	0.00564	50	103%	90	110	0%	
Manganese	A	mg/L	0.05211	0.05211		0.05	0	0	0.000095	0.001	1	104%	90	110	0%	
Mercury	A	mg/L	0.0009666	0.0009666		0.001	0	0	0.00016	0.001	0.002	97%	90	110	0%	
Molybdenum	A	mg/L	0.05271	0.05271		0.05	0	0	0.00005	0.001	0.1	105%	90	110	0%	
Nickel	A	mg/L	0.05329	0.05329		0.05	0	0	0.00063	0.001	1	107%	90	110	0%	
Potassium	A	mg/L	12.3	12.3		12.5	0	0	0.08139	0.08139	50	98%	90	110	0%	
Selenium	A	mg/L	0.05157	0.05157		0.05	0	0	0.00033	0.001	1	103%	90	110	0%	
Silicon	A	mg/L	0.2071	0.2071		0.2	0	0	0.01223	0.1	0.4	104%	90	110	0%	
Silver	A	mg/L	0.02032	0.02032		0.02	0	0	0.00002	0.001	0.04	102%	90	110	0%	
Sodium	A	mg/L	12.93	12.93		12.5	0	0	0.02171	0.02171	50	103%	90	110	0%	
Strontium	A	mg/L	0.05006	0.05006		0.05	0	0	0.00014	0.001	1	100%	90	110	0%	
Thallium	A	mg/L	0.04987	0.04987		0.05	0	0	0.000041	0.001	1	100%	90	110	0%	
Thorium	A	mg/L	0.04922	0.04922		0.05	0	0	0.00061	0.001	1	98%	90	110	0%	
Tin	A	mg/L	0.05261	0.05261		0.05	0	0	0.00132	0.00132	0.1	105%	90	110	0%	
Titanium	A	mg/L	0.05508	0.05508		0.05	0	0	0.000094	0.001	1	110%	90	110	0%	
Uranium	A	mg/L	0.04954	0.04954		0.05	0	0	0.000052	0.0003	1	99%	90	110	0%	
Vanadium	A	mg/L	0.04717	0.04717		0.05	0	0	0.0013	0.0013	1	94%	90	110	0%	
Zinc	A	mg/L	0.05445	0.05445		0.05	0	0	0.00273	0.00273	1	109%	90	110	0%	
Iron, Ferrous	C	mg/L	1.288	1.288		0	0	0	0.00119	0.00119	5	0%	0	0	0%	

Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist					
14998178	CCB	ICPMS-6020-W-	CCB		1/22/2022 5:10:0	1	R373694		0	0						
Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
Aluminum	A	mg/L	0.0001288	0.0001288		0	0	0	0.00086	0.001	1	0%			0%	
Antimony	A	mg/L	0.0001141	0.0001141		0	0	0	0.00042	0.001	0.1	0%			0%	
Arsenic	A	mg/L	-0.00005167	-0.00005167		0	0	0	0.00019	0.001	1	0%			0%	
Barium	A	mg/L	0.000003575	0.000003575		0	0	0	0.000042	0.001	1	0%			0%	
Beryllium	A	mg/L	0.00003069	0.00003069		0	0	0	0.00012	0.001	1	0%			0%	
Boron	A	mg/L	0.001369	0.001369		0	0	0	0.00561	0.00561	1	0%			0%	

Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist					
14998178	CCB	ICPMS-6020-W-	CCB		1/22/2022 5:10:0	1	R373694		0	0						
Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
Cadmium	A	mg/L	0.000001038	0.000001038		0	0	0	0.000025	0.001	1	0%			0%	
Calcium	A	mg/L	0.001687	0.001687		0	0	0	0.02092	0.02092	50	0%			0%	
Cerium	A	mg/L	1.982E-08	1.982E-08		0	0	0	0.000012	0.001	0.1	0%	0	0	0%	
Chromium	A	mg/L	-0.00003879	-0.00003879		0	0	0	0.00018	0.001	1	0%			0%	
Cobalt	A	mg/L	0.000000568	0.000000568		0	0	0	0.000042	0.001	1	0%			0%	
Copper	A	mg/L	0.00004388	0.00004388		0	0	0	0.00027	0.001	1	0%			0%	
Iron	A	mg/L	0.0003901	0.0003901		0	0	0	0.00119	0.00119	5	0%			0%	
Lanthanum	A	mg/L	1.608E-07	1.608E-07		0	0	0	0.000011	0.001	0.1	0%	0	0	0%	
Lead	A	mg/L	0.000008418	0.000008418		0	0	0	0.000056	0.001	1	0%			0%	
Magnesium	A	mg/L	-0.0007128	-0.0007128		0	0	0	0.00564	0.00564	50	0%			0%	
Manganese	A	mg/L	-9.376E-06	-9.376E-06		0	0	0	0.000095	0.001	1	0%			0%	
Mercury	A	mg/L	0.000005159	0.000005159		0	0	0	0.00016	0.001	0.002	0%			0%	
Molybdenum	A	mg/L	-8.274E-06	-8.274E-06		0	0	0	0.00005	0.001	0.1	0%			0%	
Nickel	A	mg/L	-9.564E-07	-9.564E-07		0	0	0	0.00063	0.001	1	0%			0%	
Potassium	A	mg/L	0.01924	0.01924		0	0	0	0.08139	0.08139	50	0%			0%	
Selenium	A	mg/L	0.000008508	0.000008508		0	0	0	0.00033	0.001	1	0%			0%	
Silicon	A	mg/L	-0.02919	-0.02919		0	0	0	0.01223	0.1	0.4	0%	0	0	0%	
Silver	A	mg/L	0.000003602	0.000003602		0	0	0	0.00002	0.001	0.04	0%			0%	
Sodium	A	mg/L	-0.04317	-0.04317		0	0	0	0.02171	0.02171	50	0%			0%	
Strontium	A	mg/L	0.000006269	0.000006269		0	0	0	0.00014	0.001	1	0%	0	0	0%	
Thallium	A	mg/L	0.00007318	0.00007318		0	0	0	0.000041	0.001	1	0%	0	0	0%	
Thorium	A	mg/L	0.00001451	0.00001451		0	0	0	0.00061	0.001	1	0%	0	0	0%	
Tin	A	mg/L	0.00003691	0.00003691		0	0	0	0.00132	0.00132	0.1	0%	0	0	0%	
Titanium	A	mg/L	0.00004443	0.00004443		0	0	0	0.000094	0.001	1	0%	0	0	0%	
Uranium	A	mg/L	0.000002266	0.000002266		0	0	0	0.000052	0.0003	1	0%	0	0	0%	
Vanadium	A	mg/L	-0.002932	-0.002932		0	0	0	0.0013	0.0013	1	0%	0	0	0%	
Zinc	A	mg/L	-0.00007095	-0.00007095		0	0	0	0.00273	0.00273	1	0%	0	0	0%	
Iron, Ferrous	C	mg/L	0.0003901	0.0003901		0	0	0	0.00119	0.00119	5	0%	0	0	0%	

Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist					
14998179	Rinse	ICPMS-200.8-W	SAMP		1/22/2022 11:11:	1	R373694		0	0						
Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q

Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist					
14998179	Rinse	ICPMS-200.8-W	SAMP		1/22/2022 11:11:	1	R373694		0	0						
Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
Antimony	A	mg/L	-0.00003503	0		0	0	0	0.0002882	0.05	0.1	0%	0	0	0%	
Arsenic	A	mg/L	-0.00004934	0		0	0	0	0.0001626	0.005	1	0%	0	0	0%	
Barium	A	mg/L	4.632E-07	0		0	0	0	8.917E-05	0.1	1	0%	0	0	0%	
Beryllium	A	mg/L	-0.00001102	0		0	0	0	0.0001137	0.001	1	0%	0	0	0%	
Boron	A	mg/L	0.0002689	0		0	0	0	0.0036397	0.1	1	0%	0	0	0%	
Cadmium	A	mg/L	-0.00000673	0		0	0	0	2.969E-05	0.001	1	0%	0	0	0%	
Calcium	A	mg/L	0.004136	0		0	0	0	0.0254163	0.5	50	0%	0	0	0%	
Cerium	A	mg/L	2.011E-07	0		0	0	0	8.97E-06	0.001	0.1	0%	0	0	0%	
Chromium	A	mg/L	-0.00002243	0		0	0	0	0.0002078	0.01	1	0%	0	0	0%	
Cobalt	A	mg/L	-4.432E-06	0		0	0	0	2.037E-05	0.01	1	0%	0	0	0%	
Copper	A	mg/L	-6.069E-06	0		0	0	0	0.0001010	0.01	1	0%	0	0	0%	
Iron	A	mg/L	0.00008638	0		0	0	0	0.0021231	0.02	5	0%	0	0	0%	
Lead	A	mg/L	-5.078E-08	0		0	0	0	3.957E-05	0.01	1	0%	0	0	0%	
Magnesium	A	mg/L	-0.001364	0		0	0	0	0.0084694	0.5	50	0%	0	0	0%	
Manganese	A	mg/L	0.0001253	0.0001253		0	0	0	5.319E-05	0.01	1	0%	0	0	0%	J
Mercury	A	mg/L	-1.461E-06	0		0	0	0	7.78E-06	0.001	0.002	0%	0	0	0%	
Molybdenum	A	mg/L	-0.00005944	0		0	0	0	0.0000598	0.005	0.1	0%	0	0	0%	
Nickel	A	mg/L	-0.00001588	0		0	0	0	0.0001477	0.01	1	0%	0	0	0%	
Potassium	A	mg/L	0.01396	0		0	0	0	0.0951865	0.5	50	0%	0	0	0%	
Selenium	A	mg/L	-2.417E-06	0		0	0	0	6.961E-05	0.005	1	0%	0	0	0%	
Silver	A	mg/L	-2.283E-06	0		0	0	0	1.541E-05	0.005	0.04	0%	0	0	0%	
Sodium	A	mg/L	-0.06432	0		0	0	0	0.0321039	0.5	50	0%	0	0	0%	
Strontium	A	mg/L	0.00001732	0		0	0	0	9.136E-05	0.1	1	0%	0	0	0%	
Thallium	A	mg/L	-9.729E-07	0		0	0	0	0.0001262	0.1	1	0%	0	0	0%	
Thorium	A	mg/L	-4.947E-06	0		0	0	0	7.051E-05	0.001	1	0%	0	0	0%	
Thorium 232	A	mg/L	-4.947E-06	0		0	0	0	7.051E-05	0.01	1	0%	0	0	0%	
Tin	A	mg/L	-4.957E-06	0		0	0	0	0.0021596	0.1	0.1	0%	0	0	0%	
Titanium	A	mg/L	-0.00002141	0		0	0	0	0.0001844	0.01	1	0%	0	0	0%	
Uranium	A	mg/L	-4.388E-07	0		0	0	0	1.948E-05	0.0003	1	0%	0	0	0%	
Vanadium	A	mg/L	-0.003024	0		0	0	0	0.004194	0.1	1	0%	0	0	0%	
Zinc	A	mg/L	-0.00007194	0		0	0	0	0.0006119	0.01	1	0%	0	0	0%	
Lithium	B	mg/L	-0.001084	0		0	0	0	0.05	0.05	1	0%	0	0	0%	L

Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist					
14998180	CCV	ICPMS-6020-W-	CCV		1/22/2022 11:17:	1	R373694		0	0						
Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
Aluminum	A	mg/L	0.06187	0.06187		0.05	0	0	0.00086	0.001	1	124%	90	110	0%	S
Antimony	A	mg/L	0.05314	0.05314		0.05	0	0	0.00042	0.001	0.1	106%	90	110	0%	
Arsenic	A	mg/L	0.05123	0.05123		0.05	0	0	0.00019	0.001	1	102%	90	110	0%	
Barium	A	mg/L	0.05075	0.05075		0.05	0	0	0.000042	0.001	1	101%	90	110	0%	
Beryllium	A	mg/L	0.05298	0.05298		0.05	0	0	0.00012	0.001	1	106%	90	110	0%	
Boron	A	mg/L	0.0534	0.0534		0.05	0	0	0.00561	0.00561	1	107%	90	110	0%	
Cadmium	A	mg/L	0.05068	0.05068		0.05	0	0	0.000025	0.001	1	101%	90	110	0%	
Calcium	A	mg/L	12.2	12.2		12.5	0	0	0.02092	0.02092	50	98%	90	110	0%	
Cerium	A	mg/L	0.05039	0.05039		0.05	0	0	0.000012	0.001	0.1	101%	90	110	0%	
Chromium	A	mg/L	0.05286	0.05286		0.05	0	0	0.00018	0.001	1	106%	90	110	0%	
Cobalt	A	mg/L	0.05221	0.05221		0.05	0	0	0.000042	0.001	1	104%	90	110	0%	
Copper	A	mg/L	0.05374	0.05374		0.05	0	0	0.00027	0.001	1	107%	90	110	0%	
Iron	A	mg/L	1.27	1.27		1.3	0	0	0.00119	0.00119	5	98%	90	110	0%	
Lanthanum	A	mg/L	0.05085	0.05085		0.05	0	0	0.000011	0.001	0.1	102%	90	110	0%	
Lead	A	mg/L	0.04984	0.04984		0.05	0	0	0.000056	0.001	1	100%	90	110	0%	
Magnesium	A	mg/L	13.46	13.46		12.5	0	0	0.00564	0.00564	50	108%	90	110	0%	
Manganese	A	mg/L	0.05132	0.05132		0.05	0	0	0.000095	0.001	1	103%	90	110	0%	
Mercury	A	mg/L	0.0009665	0.0009665		0.001	0	0	0.00016	0.001	0.002	97%	90	110	0%	
Molybdenum	A	mg/L	0.05329	0.05329		0.05	0	0	0.00005	0.001	0.1	107%	90	110	0%	
Nickel	A	mg/L	0.05416	0.05416		0.05	0	0	0.00063	0.001	1	108%	90	110	0%	
Potassium	A	mg/L	12.46	12.46		12.5	0	0	0.08139	0.08139	50	100%	90	110	0%	
Selenium	A	mg/L	0.05042	0.05042		0.05	0	0	0.00033	0.001	1	101%	90	110	0%	
Silicon	A	mg/L	0.2076	0.2076		0.2	0	0	0.01223	0.1	0.4	104%	90	110	0%	
Silver	A	mg/L	0.02053	0.02053		0.02	0	0	0.00002	0.001	0.04	103%	90	110	0%	
Sodium	A	mg/L	13.07	13.07		12.5	0	0	0.02171	0.02171	50	105%	90	110	0%	
Strontium	A	mg/L	0.04952	0.04952		0.05	0	0	0.00014	0.001	1	99%	90	110	0%	
Thallium	A	mg/L	0.04994	0.04994		0.05	0	0	0.000041	0.001	1	100%	90	110	0%	
Thorium	A	mg/L	0.05092	0.05092		0.05	0	0	0.00061	0.001	1	102%	90	110	0%	
Tin	A	mg/L	0.05259	0.05259		0.05	0	0	0.00132	0.00132	0.1	105%	90	110	0%	
Titanium	A	mg/L	0.05494	0.05494		0.05	0	0	0.000094	0.001	1	110%	90	110	0%	
Uranium	A	mg/L	0.05054	0.05054		0.05	0	0	0.000052	0.0003	1	101%	90	110	0%	
Vanadium	A	mg/L	0.04668	0.04668		0.05	0	0	0.0013	0.0013	1	93%	90	110	0%	
Zinc	A	mg/L	0.05449	0.05449		0.05	0	0	0.00273	0.00273	1	109%	90	110	0%	
Iron, Ferrous	C	mg/L	1.27	1.27		0	0	0	0.00119	0.00119	5	0%	0	0	0%	

Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist					
14998181	CCB	ICPMS-6020-W-	CCB		1/22/2022 11:23:	1	R373694		0	0						
Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
Aluminum	A	mg/L	0.0001679	0.0001679		0	0	0	0.00086	0.001	1	0%				0%
Antimony	A	mg/L	0.00009838	0.00009838		0	0	0	0.00042	0.001	0.1	0%				0%
Arsenic	A	mg/L	-0.00004192	-0.00004192		0	0	0	0.00019	0.001	1	0%				0%
Barium	A	mg/L	0.000008355	0.000008355		0	0	0	0.000042	0.001	1	0%				0%
Beryllium	A	mg/L	0.000006301	0.000006301		0	0	0	0.00012	0.001	1	0%				0%
Boron	A	mg/L	0.0002068	0.0002068		0	0	0	0.00561	0.00561	1	0%				0%
Cadmium	A	mg/L	0.000001581	0.000001581		0	0	0	0.000025	0.001	1	0%				0%
Calcium	A	mg/L	0.002246	0.002246		0	0	0	0.02092	0.02092	50	0%				0%
Cerium	A	mg/L	7.481E-07	7.481E-07		0	0	0	0.000012	0.001	0.1	0%	0	0		0%
Chromium	A	mg/L	-0.00001429	-0.00001429		0	0	0	0.00018	0.001	1	0%				0%
Cobalt	A	mg/L	-2.288E-06	-2.288E-06		0	0	0	0.000042	0.001	1	0%				0%
Copper	A	mg/L	-0.00002018	-0.00002018		0	0	0	0.00027	0.001	1	0%				0%
Iron	A	mg/L	-0.00001929	-0.00001929		0	0	0	0.00119	0.00119	5	0%				0%
Lanthanum	A	mg/L	8.59E-09	8.59E-09		0	0	0	0.000011	0.001	0.1	0%	0	0		0%
Lead	A	mg/L	0.000003313	0.000003313		0	0	0	0.000056	0.001	1	0%				0%
Magnesium	A	mg/L	-0.0006734	-0.0006734		0	0	0	0.00564	0.00564	50	0%				0%
Manganese	A	mg/L	-9.928E-06	-9.928E-06		0	0	0	0.000095	0.001	1	0%				0%
Mercury	A	mg/L	0.000000776	0.000000776		0	0	0	0.00016	0.001	0.002	0%				0%
Molybdenum	A	mg/L	-0.00003553	-0.00003553		0	0	0	0.00005	0.001	0.1	0%				0%
Nickel	A	mg/L	-0.00001021	-0.00001021		0	0	0	0.00063	0.001	1	0%				0%
Potassium	A	mg/L	0.01881	0.01881		0	0	0	0.08139	0.08139	50	0%				0%
Selenium	A	mg/L	0.000007307	0.000007307		0	0	0	0.00033	0.001	1	0%				0%
Silicon	A	mg/L	-0.03438	-0.03438		0	0	0	0.01223	0.1	0.4	0%	0	0		0%
Silver	A	mg/L	0.000001662	0.000001662		0	0	0	0.00002	0.001	0.04	0%				0%
Sodium	A	mg/L	-0.07041	-0.07041		0	0	0	0.02171	0.02171	50	0%				0%
Strontium	A	mg/L	0.000008381	0.000008381		0	0	0	0.00014	0.001	1	0%	0	0		0%
Thallium	A	mg/L	0.00002626	0.00002626		0	0	0	0.000041	0.001	1	0%	0	0		0%
Thorium	A	mg/L	0.00001323	0.00001323		0	0	0	0.00061	0.001	1	0%	0	0		0%
Tin	A	mg/L	0.00002237	0.00002237		0	0	0	0.00132	0.00132	0.1	0%	0	0		0%
Titanium	A	mg/L	0.000003295	0.000003295		0	0	0	0.000094	0.001	1	0%	0	0		0%
Uranium	A	mg/L	0.000001813	0.000001813		0	0	0	0.000052	0.0003	1	0%	0	0		0%
Vanadium	A	mg/L	-0.002765	-0.002765		0	0	0	0.0013	0.0013	1	0%	0	0		0%
Zinc	A	mg/L	-0.00008752	-0.00008752		0	0	0	0.00273	0.00273	1	0%	0	0		0%
Iron, Ferrous	C	mg/L	-0.00001929	-0.00001929		0	0	0	0.00119	0.00119	5	0%	0	0		0%

Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist					
14998182	Rinse	ICPMS-6020-W-	SAMP		1/22/2022 11:29:	1	R373694		0	0						
Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
Antimony	A	mg/L	-7.784E-06	0		0	0	0	0.00042	0.001	0.1	0%	0	0	0%	
Arsenic	A	mg/L	-0.00005231	0		0	0	0	0.00019	0.001	1	0%	0	0	0%	
Barium	A	mg/L	0.000004549	0		0	0	0	0.000042	0.001	1	0%	0	0	0%	
Beryllium	A	mg/L	0.000003184	0		0	0	0	0.00012	0.001	1	0%	0	0	0%	
Cadmium	A	mg/L	0.000001587	0		0	0	0	0.000025	0.001	1	0%	0	0	0%	
Cerium	A	mg/L	5.414E-07	0		0	0	0	0.000012	0.001	0.1	0%	0	0	0%	
Chromium	A	mg/L	-0.00001035	0		0	0	0	0.00018	0.001	1	0%	0	0	0%	
Cobalt	A	mg/L	-3.073E-06	0		0	0	0	0.000042	0.001	1	0%	0	0	0%	
Copper	A	mg/L	-0.0000303	0		0	0	0	0.00027	0.001	1	0%	0	0	0%	
Lead	A	mg/L	0.000001057	0		0	0	0	0.000056	0.001	1	0%	0	0	0%	
Manganese	A	mg/L	-7.416E-06	0		0	0	0	0.000095	0.001	1	0%	0	0	0%	
Mercury	A	mg/L	9.358E-08	0		0	0	0	0.00016	0.001	0.002	0%	0	0	0%	
Molybdenum	A	mg/L	-0.00005492	0		0	0	0	0.00005	0.001	0.1	0%	0	0	0%	
Nickel	A	mg/L	0.000002711	0		0	0	0	0.00063	0.001	1	0%	0	0	0%	
Selenium	A	mg/L	-0.00001324	0		0	0	0	0.00033	0.001	1	0%	0	0	0%	
Silver	A	mg/L	0.000004522	0		0	0	0	0.00002	0.001	0.04	0%	0	0	0%	
Strontium	A	mg/L	0.00001244	0		0	0	0	0.00014	0.001	1	0%	0	0	0%	
Thallium	A	mg/L	-0.00001403	0		0	0	0	0.000041	0.001	1	0%	0	0	0%	
Thorium	A	mg/L	-4.137E-07	0		0	0	0	0.00061	0.001	1	0%	0	0	0%	
Uranium	A	mg/L	-1.158E-07	0		0	0	0	0.000052	0.0003	1	0%	0	0	0%	
Boron	B	mg/L	-0.0002276	0		0	0	0	0.00561	0.00561	1	0%	0	0	0%	L
Calcium	B	mg/L	0.00207	0		0	0	0	0.02092	0.02092	50	0%	0	0	0%	L
Iron	B	mg/L	-0.0000373	0		0	0	0	0.00119	0.00119	5	0%	0	0	0%	
Iron, Ferrous	B	mg/L	-0.0000373	0		0	0	0	0.00119	0.00119	5	0%	0	0	0%	
Magnesium	B	mg/L	-0.001016	0		0	0	0	0.00564	0.00564	50	0%	0	0	0%	L
Potassium	B	mg/L	0.01644	0		0	0	0	0.08139	0.08139	50	0%	0	0	0%	L
Tin	B	mg/L	8.163E-07	0		0	0	0	0.00132	0.00132	0.1	0%	0	0	0%	
Zinc	B	mg/L	-0.00005604	0		0	0	0	0.00273	0.00273	1	0%	0	0	0%	L

Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist					
14998183	B22011134-001	ICPMS-6020-W-	SD		1/22/2022 11:36:	5	163063	1/19/2022 3:	0	1E+07						
Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q

Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist					
14998183	B22011134-001	ICPMS-6020-W- SD			1/22/2022 11:36:	5	163063	1/19/2022 3:	0	1E+07						
Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
Aluminum	A	mg/L	0.00829	0.04145		0	0	0.02013	0.0193736	0.0159875	1	0%	0	0		N
Antimony	A	mg/L	0.00001376	0		0	0	0	0.0013997	0.0049	0.1	0%	0	0		
Arsenic	A	mg/L	0.0001848	0		0	0	0.001298	0.0017061	0.0013383	1	0%	0	0		
Barium	A	mg/L	0.0008762	0.004381		0	0	0.004069	0.0013411	0.0012039	1	0%	0	0		N
Beryllium	A	mg/L	-1.731E-06	0		0	0	0	0.0005353	0.01	1	0%	0	0		
Boron	A	mg/L	0.01375	0		0	0	0.06786	0.1019008	0.07335	1	0%	0	0		
Cadmium	A	mg/L	0.00001526	0		0	0	0	9.105E-05	0.005	1	0%	0	0		
Calcium	A	mg/L	2.011	10.055		0	0	10.28	0.1864681	0.5517403	50	0%	0	0	2%	
Cerium	A	mg/L	0.00001448	0		0	0	6.226E-05	0.0001369	0.001	0.1	0%	0	0		
Chromium	A	mg/L	0.00009372	0		0	0	0	0.0076875	0.0076875	1	0%	0	0		
Cobalt	A	mg/L	0.0001026	0.000513		0	0	0.00053	0.0004771	0.001	1	0%	0	0		N
Copper	A	mg/L	0.01879	0.09395		0	0	0	0.0043735	0.0099	1	0%	0	0		N
Iron	A	mg/L	0.08092	0.4046		0	0	0.4364	0.0371198	0.02565	5	0%	0	0	8%	
Lanthanum	A	mg/L	0.000003979	0		0	0	0	0.000275	0.001	0.1	0%	0	0		
Lead	A	mg/L	0.0007077	0.0035385		0	0	0	0.0003858	0.001	1	0%	0	0		N
Magnesium	A	mg/L	2.001	10.005		0	0	10.4	0.0521269	0.0407608	50	0%	0	0	4%	
Manganese	A	mg/L	0.09961	0.49805		0	0	0.5033	0.0026994	0.0010695	1	0%	0	0	1%	
Molybdenum	A	mg/L	0.00005928	0		0	0	0.000556	0.0008814	0.001	0.1	0%	0	0		
Nickel	A	mg/L	0.004605	0.023025		0	0	0.0009891	0.0011441	0.0121000	1	0%	0	0		N
Potassium	A	mg/L	0.4563	2.2815		0	0	2.03	0.3828097	0.1306027	50	0%	0	0		N
Selenium	A	mg/L	0.000001896	0		0	0	0	0.0006787	0.0029274	1	0%	0	0		
Silicon	A	mg/L	5.324	26.62		0	0	27.21	0.2110446	0.026606	0.4	0%	0	0	2%	
Silver	A	mg/L	-0.00005444	0		0	0	0	0.0002141	0.001	0.04	0%	0	0		
Sodium	A	mg/L	7.679	38.395		0	0	40.71	0.5097304	3.6651346	50	0%	0	0	6%	
Strontium	A	mg/L	0.01434	0.0717		0	0	0.07368	0.0012164	0.001	1	0%	0	0	3%	
Thallium	A	mg/L	-0.00001143	0		0	0	0	0.0005569	0.001	1	0%	0	0		
Thorium	A	mg/L	0.000003774	0		0	0	0	0.0018981	0.02075	1	0%	0	0		
Tin	A	mg/L	0.0001685	0		0	0	0	0.0094659	0.0055874	0.1	0%	0	0		
Titanium	A	mg/L	0.0009248	0.004624		0	0	0.003704	0.0028666	0.001	1	0%	0	0		N
Uranium	A	mg/L	0.000004012	0		0	0	1.766E-05	8.495E-05	0.0004224	1	0%	0	0		
Vanadium	A	mg/L	-0.00208	0		0	0	0.004989	0.0195637	0.0105423	1	0%	0	0		
Zinc	A	mg/L	0.02175	0.10875		0	0	0.001219	0.0058087	0.0327721	1	0%	0	0		N
Silica	C	mg/L	11.3891008	56.945504		0	0	0	0.4514666	0.0569155	5	0%	0	0		N
Silicon as SiO2	C	mg/L	11.3891008	56.945504		0	0	0	0.4514666	0.0569155	5	0%	0	0		N

Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist					
14998184	B22011124-001	ICPMS-6020-W- SD			1/22/2022 11:42:	5	163063	1/19/2022 2:	0	1E+07						
Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
Aluminum	A	mg/L	0.001963	0		0	0	0.005018	0.0193736	0.0159875	1	0%	0	0		
Antimony	A	mg/L	-0.00002632	0		0	0	0	0.0013997	0.0049	0.1	0%	0	0		
Arsenic	A	mg/L	0.00001094	0		0	0	0	0.0017061	0.0013383	1	0%	0	0		
Barium	A	mg/L	0.0007141	0.0035705		0	0	0.00359	0.0013411	0.0012039	1	0%	0	0		N
Beryllium	A	mg/L	-0.0000046	0		0	0	0	0.0005353	0.01	1	0%	0	0		
Boron	A	mg/L	0.01166	0		0	0	0.05482	0.1019008	0.07335	1	0%	0	0		
Cadmium	A	mg/L	-3.866E-06	0		0	0	0	9.105E-05	0.005	1	0%	0	0		
Calcium	A	mg/L	1.816	9.08		0	0	9.449	0.1864681	0.5517403	50	0%	0	0	4%	
Cerium	A	mg/L	0.00000142	0		0	0	0	0.0001369	0.001	0.1	0%	0	0		
Chromium	A	mg/L	0.0004586	0		0	0	0.00223	0.0076875	0.0076875	1	0%	0	0		
Cobalt	A	mg/L	0.00002198	0		0	0	0.0001341	0.0004771	0.001	1	0%	0	0		
Copper	A	mg/L	0.0002956	0		0	0	0	0.0043735	0.0099	1	0%	0	0		
Iron	A	mg/L	0.003708	0		0	0	0.01605	0.0371198	0.02565	5	0%	0	0		
Lanthanum	A	mg/L	2.311E-07	0		0	0	0	0.000275	0.001	0.1	0%	0	0		
Lead	A	mg/L	0.00002126	0		0	0	0	0.0003858	0.001	1	0%	0	0		
Magnesium	A	mg/L	2.181	10.905		0	0	10.49	0.0521269	0.0407608	50	0%	0	0	4%	
Manganese	A	mg/L	0.0002862	0		0	0	0.001292	0.0026994	0.0010695	1	0%	0	0		
Molybdenum	A	mg/L	0.0003102	0.001551		0	0	0.001922	0.0008814	0.001	0.1	0%	0	0		N
Nickel	A	mg/L	0.0004553	0.0022765		0	0	0.001935	0.0011441	0.0121000	1	0%	0	0		N
Potassium	A	mg/L	0.3853	1.9265		0	0	1.709	0.3828097	0.1306027	50	0%	0	0		N
Selenium	A	mg/L	0.00003069	0		0	0	0.0002152	0.0006787	0.0029274	1	0%	0	0		
Silicon	A	mg/L	5.014	25.07		0	0	23.63	0.2110446	0.026606	0.4	0%	0	0	6%	
Silver	A	mg/L	-0.00006236	0		0	0	0	0.0002141	0.001	0.04	0%	0	0		
Sodium	A	mg/L	7.526	37.63		0	0	37.99	0.5097304	3.6651346	50	0%	0	0	1%	
Strontium	A	mg/L	0.01317	0.06585		0	0	0.06807	0.0012164	0.001	1	0%	0	0	3%	
Thallium	A	mg/L	-0.00001659	0		0	0	0	0.0005569	0.001	1	0%	0	0		
Thorium	A	mg/L	-0.00000112	0		0	0	0	0.0018981	0.02075	1	0%	0	0		
Tin	A	mg/L	0.00008879	0		0	0	0	0.0094659	0.0055874	0.1	0%	0	0		
Titanium	A	mg/L	0.0004289	0		0	0	0.001994	0.0028666	0.001	1	0%	0	0		
Uranium	A	mg/L	0.000001627	0		0	0	0	8.495E-05	0.0004224	1	0%	0	0		
Vanadium	A	mg/L	0.001985	0		0	0	0.02148	0.0195637	0.0105423	1	0%	0	0		
Zinc	A	mg/L	0.001858	0.00929		0	0	0.005856	0.0058087	0.0327721	1	0%	0	0		N
Silica	C	mg/L	10.7259488	53.629744		0	0	0	0.4514666	0.0569155	5	0%	0	0		N
Silicon as SiO2	C	mg/L	10.7259488	53.629744		0	0	0	0.4514666	0.0569155	5	0%	0	0		N

Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist					
14998185	CCV	ICPMS-6020-W-	CCV		1/22/2022 11:48:	1	R373694		0	0						
Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
Aluminum	A	mg/L	0.06467	0.06467		0.05	0	0	0.00086	0.001	1	129%	90	110	0%	S
Antimony	A	mg/L	0.05387	0.05387		0.05	0	0	0.00042	0.001	0.1	108%	90	110	0%	
Arsenic	A	mg/L	0.05153	0.05153		0.05	0	0	0.00019	0.001	1	103%	90	110	0%	
Barium	A	mg/L	0.05193	0.05193		0.05	0	0	0.000042	0.001	1	104%	90	110	0%	
Beryllium	A	mg/L	0.05462	0.05462		0.05	0	0	0.00012	0.001	1	109%	90	110	0%	
Boron	A	mg/L	0.05507	0.05507		0.05	0	0	0.00561	0.00561	1	110%	90	110	0%	
Cadmium	A	mg/L	0.0515	0.0515		0.05	0	0	0.000025	0.001	1	103%	90	110	0%	
Calcium	A	mg/L	11.89	11.89		12.5	0	0	0.02092	0.02092	50	95%	90	110	0%	
Cerium	A	mg/L	0.05022	0.05022		0.05	0	0	0.000012	0.001	0.1	100%	90	110	0%	
Chromium	A	mg/L	0.05184	0.05184		0.05	0	0	0.00018	0.001	1	104%	90	110	0%	
Cobalt	A	mg/L	0.05435	0.05435		0.05	0	0	0.000042	0.001	1	109%	90	110	0%	
Copper	A	mg/L	0.0542	0.0542		0.05	0	0	0.00027	0.001	1	108%	90	110	0%	
Iron	A	mg/L	1.269	1.269		1.3	0	0	0.00119	0.00119	5	98%	90	110	0%	
Lanthanum	A	mg/L	0.0509	0.0509		0.05	0	0	0.000011	0.001	0.1	102%	90	110	0%	
Lead	A	mg/L	0.0509	0.0509		0.05	0	0	0.000056	0.001	1	102%	90	110	0%	
Magnesium	A	mg/L	13.29	13.29		12.5	0	0	0.00564	0.00564	50	106%	90	110	0%	
Manganese	A	mg/L	0.05196	0.05196		0.05	0	0	0.000095	0.001	1	104%	90	110	0%	
Mercury	A	mg/L	0.0009767	0.0009767		0.001	0	0	0.00016	0.001	0.002	98%	90	110	0%	
Molybdenum	A	mg/L	0.05405	0.05405		0.05	0	0	0.00005	0.001	0.1	108%	90	110	0%	
Nickel	A	mg/L	0.05407	0.05407		0.05	0	0	0.00063	0.001	1	108%	90	110	0%	
Potassium	A	mg/L	12.31	12.31		12.5	0	0	0.08139	0.08139	50	98%	90	110	0%	
Selenium	A	mg/L	0.05141	0.05141		0.05	0	0	0.00033	0.001	1	103%	90	110	0%	
Silicon	A	mg/L	0.2091	0.2091		0.2	0	0	0.01223	0.1	0.4	105%	90	110	0%	
Silver	A	mg/L	0.02095	0.02095		0.02	0	0	0.00002	0.001	0.04	105%	90	110	0%	
Sodium	A	mg/L	13.16	13.16		12.5	0	0	0.02171	0.02171	50	105%	90	110	0%	
Strontium	A	mg/L	0.04919	0.04919		0.05	0	0	0.00014	0.001	1	98%	90	110	0%	
Thallium	A	mg/L	0.04972	0.04972		0.05	0	0	0.000041	0.001	1	99%	90	110	0%	
Thorium	A	mg/L	0.05013	0.05013		0.05	0	0	0.00061	0.001	1	100%	90	110	0%	
Tin	A	mg/L	0.0524	0.0524		0.05	0	0	0.00132	0.00132	0.1	105%	90	110	0%	
Titanium	A	mg/L	0.05608	0.05608		0.05	0	0	0.000094	0.001	1	112%	90	110	0%	S
Uranium	A	mg/L	0.05103	0.05103		0.05	0	0	0.000052	0.0003	1	102%	90	110	0%	
Vanadium	A	mg/L	0.04788	0.04788		0.05	0	0	0.0013	0.0013	1	96%	90	110	0%	
Zinc	A	mg/L	0.05512	0.05512		0.05	0	0	0.00273	0.00273	1	110%	90	110	0%	
Iron, Ferrous	C	mg/L	1.269	1.269		0	0	0	0.00119	0.00119	5	0%	0	0	0%	

Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist					
14998186	CCB	ICPMS-6020-W-	CCB		1/22/2022 11:54:	1	R373694		0	0						
Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
Aluminum	A	mg/L	0.0001636	0.0001636		0	0	0	0.00086	0.001	1	0%			0%	
Antimony	A	mg/L	0.0001026	0.0001026		0	0	0	0.00042	0.001	0.1	0%			0%	
Arsenic	A	mg/L	-0.00003636	-0.00003636		0	0	0	0.00019	0.001	1	0%			0%	
Barium	A	mg/L	1.281E-07	1.281E-07		0	0	0	0.000042	0.001	1	0%			0%	
Beryllium	A	mg/L	0.00001033	0.00001033		0	0	0	0.00012	0.001	1	0%			0%	
Boron	A	mg/L	-0.00004675	-0.00004675		0	0	0	0.00561	0.00561	1	0%			0%	
Cadmium	A	mg/L	-2.101E-06	-2.101E-06		0	0	0	0.000025	0.001	1	0%			0%	
Calcium	A	mg/L	0.001829	0.001829		0	0	0	0.02092	0.02092	50	0%			0%	
Cerium	A	mg/L	-6.66E-08	-6.66E-08		0	0	0	0.000012	0.001	0.1	0%	0	0	0%	
Chromium	A	mg/L	-0.00001648	-0.00001648		0	0	0	0.00018	0.001	1	0%			0%	
Cobalt	A	mg/L	6.197E-07	6.197E-07		0	0	0	0.000042	0.001	1	0%			0%	
Copper	A	mg/L	-0.00002517	-0.00002517		0	0	0	0.00027	0.001	1	0%			0%	
Iron	A	mg/L	-0.00002698	-0.00002698		0	0	0	0.00119	0.00119	5	0%			0%	
Lanthanum	A	mg/L	-3.496E-08	-3.496E-08		0	0	0	0.000011	0.001	0.1	0%	0	0	0%	
Lead	A	mg/L	0.00002923	0.00002923		0	0	0	0.000056	0.001	1	0%			0%	
Magnesium	A	mg/L	-0.0005987	-0.0005987		0	0	0	0.00564	0.00564	50	0%			0%	
Manganese	A	mg/L	-7.719E-06	-7.719E-06		0	0	0	0.000095	0.001	1	0%			0%	
Mercury	A	mg/L	0.000003112	0.000003112		0	0	0	0.00016	0.001	0.002	0%			0%	
Molybdenum	A	mg/L	-0.00003602	-0.00003602		0	0	0	0.00005	0.001	0.1	0%			0%	
Nickel	A	mg/L	-7.108E-06	-7.108E-06		0	0	0	0.00063	0.001	1	0%			0%	
Potassium	A	mg/L	0.01599	0.01599		0	0	0	0.08139	0.08139	50	0%			0%	
Selenium	A	mg/L	-3.943E-06	-3.943E-06		0	0	0	0.00033	0.001	1	0%			0%	
Silicon	A	mg/L	-0.03086	-0.03086		0	0	0	0.01223	0.1	0.4	0%	0	0	0%	
Silver	A	mg/L	0.000004178	0.000004178		0	0	0	0.00002	0.001	0.04	0%			0%	
Sodium	A	mg/L	-0.06747	-0.06747		0	0	0	0.02171	0.02171	50	0%			0%	
Strontium	A	mg/L	0.0000107	0.0000107		0	0	0	0.00014	0.001	1	0%	0	0	0%	
Thallium	A	mg/L	0.00003486	0.00003486		0	0	0	0.000041	0.001	1	0%	0	0	0%	
Thorium	A	mg/L	0.00001453	0.00001453		0	0	0	0.00061	0.001	1	0%	0	0	0%	
Tin	A	mg/L	0.00003146	0.00003146		0	0	0	0.00132	0.00132	0.1	0%	0	0	0%	
Titanium	A	mg/L	0.000003878	0.000003878		0	0	0	0.000094	0.001	1	0%	0	0	0%	
Uranium	A	mg/L	0.000002179	0.000002179		0	0	0	0.000052	0.0003	1	0%	0	0	0%	
Vanadium	A	mg/L	-0.002361	-0.002361		0	0	0	0.0013	0.0013	1	0%	0	0	0%	
Zinc	A	mg/L	-0.00004441	-0.00004441		0	0	0	0.00273	0.00273	1	0%	0	0	0%	
Iron, Ferrous	C	mg/L	-0.00002698	-0.00002698		0	0	0	0.00119	0.00119	5	0%	0	0	0%	

Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist					
14998187	B22011124-001	ICPMS-6020-W-	SAMP		1/22/2022 12:01:	1	163063	1/19/2022 2:	0	0						
Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
Antimony	A	mg/L	0.00003305	0		0	0	0	0.0002799	0.001	0.1	0%	0	0	0%	U
Arsenic	A	mg/L	0.0002479	0		0	0	0	0.0003412	0.001	1	0%	0	0	0%	U
Barium	A	mg/L	0.003428	0.003428		0	0	0	0.0002682	0.001	1	0%	0	0	0%	
Beryllium	A	mg/L	9.293E-07	0		0	0	0	0.0001071	0.01	1	0%	0	0	0%	U
Cadmium	A	mg/L	-0.00000353	0		0	0	0	1.821E-05	0.005	1	0%	0	0	0%	U
Cerium	A	mg/L	0.000003304	0		0	0	0	2.738E-05	0.001	0.1	0%	0	0	0%	U
Cobalt	A	mg/L	0.000112	0.000112		0	0	0	9.541E-05	0.001	1	0%	0	0	0%	J
Lanthanum	A	mg/L	0.000001156	0		0	0	0	0.000055	0.001	0.1	0%	0	0	0%	U
Lead	A	mg/L	0.00007319	0		0	0	0	7.716E-05	0.001	1	0%	0	0	0%	U
Manganese	A	mg/L	0.001339	0.001339		0	0	0	0.0005399	0.001	1	0%	0	0	0%	
Molybdenum	A	mg/L	0.001824	0.001824		0	0	0	0.0001763	0.001	0.1	0%	0	0	0%	
Selenium	A	mg/L	0.0002189	0.0002189		0	0	0	0.0001357	0.001	1	0%	0	0	0%	J
Silver	A	mg/L	-0.00005737	0		0	0	0	4.281E-05	0.001	0.04	0%	0	0	0%	U
Strontium	A	mg/L	0.06546	0.06546		0	0	0	0.0002433	0.001	1	0%	0	0	0%	
Thallium	A	mg/L	0.00007288	0		0	0	0	0.0001114	0.001	1	0%	0	0	0%	U
Uranium	A	mg/L	0.0000106	0		0	0	0	1.699E-05	0.0003	1	0%	0	0	0%	U
Boron	B	mg/L	0.06701	0.06701		0	0	0	0.0203802	0.01467	1	0%	0	0	0%	D
Calcium	B	mg/L	9.356	9.356		0	0	0	0.0372936	0.1103481	50	0%	0	0	0%	D
Chromium	B	mg/L	0.002371	0.002371		0	0	0	0.0015375	0.0015375	1	0%	0	0	0%	UD
Copper	B	mg/L	0.0003883	0		0	0	0	0.0008747	0.00198	1	0%	0	0	0%	UL
Iron	B	mg/L	0.01515	0.01515		0	0	0	0.007424	0.00513	5	0%	0	0	0%	UD
Magnesium	B	mg/L	11.56	11.56		0	0	0	0.0104254	0.0081522	50	0%	0	0	0%	D
Nickel	B	mg/L	0.002082	0.002082		0	0	0	0.0002288	0.0024200	1	0%	0	0	0%	JL
Potassium	B	mg/L	1.885	1.885		0	0	0	0.0765619	0.0261205	50	0%	0	0	0%	D
Sodium	B	mg/L	38.72	38.72		0	0	0	0.1019461	0.7330269	50	0%	0	0	0%	D
Thorium	B	mg/L	0.00004653	0		0	0	0	0.0003796	0.00415	1	0%	0	0	0%	UL
Tin	B	mg/L	0.0004321	0		0	0	0	0.0018932	0.0011175	0.1	0%	0	0	0%	U
Vanadium	B	mg/L	0.01988	0.01988		0	0	0	0.0039127	0.0021085	1	0%	0	0	0%	D
Zinc	B	mg/L	0.006534	0.006534		0	0	0	0.0011617	0.0065544	1	0%	0	0	0%	JL

Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist					
14998188	B22011134-001	ICPMS-6020-W-	SAMP		1/22/2022 12:07:	1	163063	1/19/2022 3:	0	0						
Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q

Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist					
14998188	B22011134-001	ICPMS-6020-W-	SAMP		1/22/2022 12:07:	1	163063	1/19/2022 3:	0	0						
Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
Antimony	A	mg/L	0.0001278	0		0	0	0	0.0002799	0.001	0.1	0%	0	0	0%	U
Arsenic	A	mg/L	0.001157	0.001157		0	0	0	0.0003412	0.001	1	0%	0	0	0%	
Barium	A	mg/L	0.004228	0.004228		0	0	0	0.0002682	0.001	1	0%	0	0	0%	
Beryllium	A	mg/L	-1.728E-06	0		0	0	0	0.0001071	0.01	1	0%	0	0	0%	U
Cadmium	A	mg/L	-1.091E-06	0		0	0	0	1.821E-05	0.005	1	0%	0	0	0%	U
Cerium	A	mg/L	0.00006245	0.00006245		0	0	0	2.738E-05	0.001	0.1	0%	0	0	0%	J
Cobalt	A	mg/L	0.0005432	0.0005432		0	0	0	9.541E-05	0.001	1	0%	0	0	0%	J
Lanthanum	A	mg/L	0.00001473	0		0	0	0	0.000055	0.001	0.1	0%	0	0	0%	U
Lead	A	mg/L	0.00006409	0		0	0	0	7.716E-05	0.001	1	0%	0	0	0%	U
Manganese	A	mg/L	0.5162	0.5162		0	0	0	0.0005399	0.001	1	0%	0	0	0%	
Molybdenum	A	mg/L	0.0005146	0.0005146		0	0	0	0.0001763	0.001	0.1	0%	0	0	0%	J
Selenium	A	mg/L	0.00003522	0		0	0	0	0.0001357	0.001	1	0%	0	0	0%	U
Silver	A	mg/L	-0.00004646	0		0	0	0	4.281E-05	0.001	0.04	0%	0	0	0%	U
Strontium	A	mg/L	0.07379	0.07379		0	0	0	0.0002433	0.001	1	0%	0	0	0%	
Thallium	A	mg/L	0.0000364	0		0	0	0	0.0001114	0.001	1	0%	0	0	0%	U
Uranium	A	mg/L	0.00001733	0.00001733		0	0	0	1.699E-05	0.0003	1	0%	0	0	0%	J
Boron	B	mg/L	0.06868	0.06868		0	0	0	0.0203802	0.01467	1	0%	0	0	0%	D
Calcium	B	mg/L	10.05	10.05		0	0	0	0.0372936	0.1103481	50	0%	0	0	0%	D
Chromium	B	mg/L	0.0001915	0		0	0	0	0.0015375	0.0015375	1	0%	0	0	0%	UL
Copper	B	mg/L	0.0008274	0		0	0	0	0.0008747	0.00198	1	0%	0	0	0%	UL
Iron	B	mg/L	0.405	0.405		0	0	0	0.007424	0.00513	5	0%	0	0	0%	D
Magnesium	B	mg/L	10.39	10.39		0	0	0	0.0104254	0.0081522	50	0%	0	0	0%	D
Nickel	B	mg/L	0.001057	0.001057		0	0	0	0.0002288	0.0024200	1	0%	0	0	0%	JL
Potassium	B	mg/L	2.067	2.067		0	0	0	0.0765619	0.0261205	50	0%	0	0	0%	D
Sodium	B	mg/L	40.34	40.34		0	0	0	0.1019461	0.7330269	50	0%	0	0	0%	D
Thorium	B	mg/L	0.00001609	0		0	0	0	0.0003796	0.00415	1	0%	0	0	0%	UL
Tin	B	mg/L	0.0004745	0		0	0	0	0.0018932	0.0011175	0.1	0%	0	0	0%	U
Vanadium	B	mg/L	0.00112	0		0	0	0	0.0039127	0.0021085	1	0%	0	0	0%	UL
Zinc	B	mg/L	0.001422	0.001422		0	0	0	0.0011617	0.0065544	1	0%	0	0	0%	JL

Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist					
14998189	CCV	ICPMS-6020-W-	CCV		1/22/2022 12:13:	1	R373694		0	0						
Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q

Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist					
14998189	CCV	ICPMS-6020-W-	CCV		1/22/2022 12:13:	1	R373694		0	0						
Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
Aluminum	A	mg/L	0.06135	0.06135		0.05	0	0	0.00086	0.001	1	123%	90	110	0%	S
Antimony	A	mg/L	0.05307	0.05307		0.05	0	0	0.00042	0.001	0.1	106%	90	110	0%	
Arsenic	A	mg/L	0.05128	0.05128		0.05	0	0	0.00019	0.001	1	103%	90	110	0%	
Barium	A	mg/L	0.05106	0.05106		0.05	0	0	0.000042	0.001	1	102%	90	110	0%	
Beryllium	A	mg/L	0.04992	0.04992		0.05	0	0	0.00012	0.001	1	100%	90	110	0%	
Boron	A	mg/L	0.05103	0.05103		0.05	0	0	0.00561	0.00561	1	102%	90	110	0%	
Cadmium	A	mg/L	0.05063	0.05063		0.05	0	0	0.000025	0.001	1	101%	90	110	0%	
Calcium	A	mg/L	12.06	12.06		12.5	0	0	0.02092	0.02092	50	96%	90	110	0%	
Cerium	A	mg/L	0.04968	0.04968		0.05	0	0	0.000012	0.001	0.1	99%	90	110	0%	
Chromium	A	mg/L	0.05172	0.05172		0.05	0	0	0.00018	0.001	1	103%	90	110	0%	
Cobalt	A	mg/L	0.05193	0.05193		0.05	0	0	0.000042	0.001	1	104%	90	110	0%	
Copper	A	mg/L	0.0531	0.0531		0.05	0	0	0.00027	0.001	1	106%	90	110	0%	
Iron	A	mg/L	1.267	1.267		1.3	0	0	0.00119	0.00119	5	97%	90	110	0%	
Lanthanum	A	mg/L	0.04991	0.04991		0.05	0	0	0.000011	0.001	0.1	100%	90	110	0%	
Lead	A	mg/L	0.05031	0.05031		0.05	0	0	0.000056	0.001	1	101%	90	110	0%	
Magnesium	A	mg/L	12.67	12.67		12.5	0	0	0.00564	0.00564	50	101%	90	110	0%	
Manganese	A	mg/L	0.05106	0.05106		0.05	0	0	0.000095	0.001	1	102%	90	110	0%	
Mercury	A	mg/L	0.0009847	0.0009847		0.001	0	0	0.00016	0.001	0.002	98%	90	110	0%	
Molybdenum	A	mg/L	0.0532	0.0532		0.05	0	0	0.00005	0.001	0.1	106%	90	110	0%	
Nickel	A	mg/L	0.05377	0.05377		0.05	0	0	0.00063	0.001	1	108%	90	110	0%	
Potassium	A	mg/L	11.95	11.95		12.5	0	0	0.08139	0.08139	50	96%	90	110	0%	
Selenium	A	mg/L	0.05193	0.05193		0.05	0	0	0.00033	0.001	1	104%	90	110	0%	
Silicon	A	mg/L	0.2488	0.2488		0.2	0	0	0.01223	0.1	0.4	124%	90	110	0%	S
Silver	A	mg/L	0.02057	0.02057		0.02	0	0	0.00002	0.001	0.04	103%	90	110	0%	
Sodium	A	mg/L	12.76	12.76		12.5	0	0	0.02171	0.02171	50	102%	90	110	0%	
Strontium	A	mg/L	0.05029	0.05029		0.05	0	0	0.00014	0.001	1	101%	90	110	0%	
Thallium	A	mg/L	0.05028	0.05028		0.05	0	0	0.000041	0.001	1	101%	90	110	0%	
Thorium	A	mg/L	0.05077	0.05077		0.05	0	0	0.00061	0.001	1	102%	90	110	0%	
Tin	A	mg/L	0.05263	0.05263		0.05	0	0	0.00132	0.00132	0.1	105%	90	110	0%	
Titanium	A	mg/L	0.05481	0.05481		0.05	0	0	0.000094	0.001	1	110%	90	110	0%	
Uranium	A	mg/L	0.05059	0.05059		0.05	0	0	0.000052	0.0003	1	101%	90	110	0%	
Vanadium	A	mg/L	0.04812	0.04812		0.05	0	0	0.0013	0.0013	1	96%	90	110	0%	
Zinc	A	mg/L	0.05452	0.05452		0.05	0	0	0.00273	0.00273	1	109%	90	110	0%	
Iron, Ferrous	C	mg/L	1.267	1.267		0	0	0	0.00119	0.00119	5	0%	0	0	0%	

Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist					
14998190	CCB	ICPMS-6020-W-	CCB		1/22/2022 12:19:	1	R373694		0	0						
Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
Aluminum	A	mg/L	0.0001175	0.0001175		0	0	0	0.00086	0.001	1	0%			0%	
Antimony	A	mg/L	0.0001093	0.0001093		0	0	0	0.00042	0.001	0.1	0%			0%	
Arsenic	A	mg/L	-0.00002836	-0.00002836		0	0	0	0.00019	0.001	1	0%			0%	
Barium	A	mg/L	0.000003581	0.000003581		0	0	0	0.000042	0.001	1	0%			0%	
Beryllium	A	mg/L	-1.192E-06	-1.192E-06		0	0	0	0.00012	0.001	1	0%			0%	
Boron	A	mg/L	-0.00001112	-0.00001112		0	0	0	0.00561	0.00561	1	0%			0%	
Cadmium	A	mg/L	0.000004876	0.000004876		0	0	0	0.000025	0.001	1	0%			0%	
Calcium	A	mg/L	0.001222	0.001222		0	0	0	0.02092	0.02092	50	0%			0%	
Cerium	A	mg/L	4.144E-07	4.144E-07		0	0	0	0.000012	0.001	0.1	0%	0	0	0%	
Chromium	A	mg/L	-0.00001402	-0.00001402		0	0	0	0.00018	0.001	1	0%			0%	
Cobalt	A	mg/L	-2.215E-06	-2.215E-06		0	0	0	0.000042	0.001	1	0%			0%	
Copper	A	mg/L	-0.0000191	-0.0000191		0	0	0	0.00027	0.001	1	0%			0%	
Iron	A	mg/L	-0.00003237	-0.00003237		0	0	0	0.00119	0.00119	5	0%			0%	
Lanthanum	A	mg/L	0.00000023	0.00000023		0	0	0	0.000011	0.001	0.1	0%	0	0	0%	
Lead	A	mg/L	0.000007524	0.000007524		0	0	0	0.000056	0.001	1	0%			0%	
Magnesium	A	mg/L	-0.0002421	-0.0002421		0	0	0	0.00564	0.00564	50	0%			0%	
Manganese	A	mg/L	0.000003546	0.000003546		0	0	0	0.000095	0.001	1	0%			0%	
Mercury	A	mg/L	0.000003758	0.000003758		0	0	0	0.00016	0.001	0.002	0%			0%	
Molybdenum	A	mg/L	-0.00003272	-0.00003272		0	0	0	0.00005	0.001	0.1	0%			0%	
Nickel	A	mg/L	0.000001484	0.000001484		0	0	0	0.00063	0.001	1	0%			0%	
Potassium	A	mg/L	0.008998	0.008998		0	0	0	0.08139	0.08139	50	0%			0%	
Selenium	A	mg/L	0.00001062	0.00001062		0	0	0	0.00033	0.001	1	0%			0%	
Silicon	A	mg/L	-0.0126	-0.0126		0	0	0	0.01223	0.1	0.4	0%	0	0	0%	
Silver	A	mg/L	0.000003964	0.000003964		0	0	0	0.00002	0.001	0.04	0%			0%	
Sodium	A	mg/L	-0.05567	-0.05567		0	0	0	0.02171	0.02171	50	0%			0%	
Strontium	A	mg/L	0.00001031	0.00001031		0	0	0	0.00014	0.001	1	0%	0	0	0%	
Thallium	A	mg/L	0.00003925	0.00003925		0	0	0	0.000041	0.001	1	0%	0	0	0%	
Thorium	A	mg/L	0.00001515	0.00001515		0	0	0	0.00061	0.001	1	0%	0	0	0%	
Tin	A	mg/L	0.00004689	0.00004689		0	0	0	0.00132	0.00132	0.1	0%	0	0	0%	
Titanium	A	mg/L	0.00002609	0.00002609		0	0	0	0.000094	0.001	1	0%	0	0	0%	
Uranium	A	mg/L	0.000002044	0.000002044		0	0	0	0.000052	0.0003	1	0%	0	0	0%	
Vanadium	A	mg/L	-0.001756	-0.001756		0	0	0	0.0013	0.0013	1	0%	0	0	0%	
Zinc	A	mg/L	0.00003426	0.00003426		0	0	0	0.00273	0.00273	1	0%	0	0	0%	
Iron, Ferrous	C	mg/L	-0.00003237	-0.00003237		0	0	0	0.00119	0.00119	5	0%	0	0	0%	

Batch Summary Report

Batch Folder: D:\Agilent\ICPMH1\DATA\220121ADoD.b\
 Analysis File: 220121ADoD.batch.bin
 Tune Step: #1 No Gas
 #2 H2
 #3 He

	Rjct	Acq. Date-Time	Data File	Sample Name	Type	Level	Dilution
1		2022-01-21 14:08:28	001BLKV.d	Rinse	BlkVrfy		1.0000
2		2022-01-21 14:14:42	002BLKV.d	Rinse	BlkVrfy		1.0000
3		2022-01-21 14:20:56	003BLKV.d	Rinse	BlkVrfy		1.0000
4		2022-01-21 14:27:10	004CALB.d	Cal Blk	CalBlk	1	1.0000
5		2022-01-21 14:34:36	005CAL.S.d	0.025 ppb STD	CalStd	2	1.0000
6		2022-01-21 14:41:15	006CAL.S.d	0.05 ppb STD	CalStd	3	1.0000
7		2022-01-21 14:47:54	007CAL.S.d	0.10 ppb STD	CalStd	4	1.0000
8		2022-01-21 14:54:32	008CAL.S.d	0.5 ppb STD	CalStd	5	1.0000
9		2022-01-21 15:01:11	009CAL.S.d	1 ppb STD	CalStd	6	1.0000
10		2022-01-21 16:59:11	011BLKV.d	Rinse	BlkVrfy		1.0000
11		2022-01-21 17:05:30	012CAL.S.d	10 ppb STD	CalStd	7	1.0000
12		2022-01-21 17:13:20	013BLKV.d	Rinse	BlkVrfy		1.0000
13		2022-01-21 17:19:33	014CALB.d	Cal Blk	CalBlk	1	1.0000
14		2022-01-21 17:26:12	015CAL.S.d	0.025 ppb STD	CalStd	2	1.0000
15		2022-01-21 17:32:50	016CAL.S.d	0.05 ppb STD	CalStd	3	1.0000
16		2022-01-21 17:39:27	017CAL.S.d	0.10 ppb STD	CalStd	4	1.0000
17		2022-01-21 17:46:06	018CAL.S.d	0.5 ppb STD	CalStd	5	1.0000
18		2022-01-21 17:52:44	019CAL.S.d	1 ppb STD	CalStd	6	1.0000
19		2022-01-21 17:59:22	020CAL.S.d	10 ppb STD	CalStd	7	1.0000
20		2022-01-21 18:06:00	021CAL.S.d	50 ppb STD	CalStd	8	1.0000
21		2022-01-21 18:12:35	022CAL.S.d	100 ppb STD	CalStd	9	1.0000
22	On	2022-01-21 18:19:05	023CAL.S.d	1000 ppb STD	CalStd	10	1.0000
23		2022-01-21 18:25:33	024CAL.S.d	100 ppb Br STD	CalStd	11	1.0000
24		2022-01-21 18:31:55	025BLKV.d	Rinse	BlkVrfy		1.0000
25		2022-01-21 18:38:09	026_QC1.d	QCS	QC1		1.0000

Batch Summary Report

	Rjct	Acq. Date-Time	Data File	Sample Name	Type	Level	Dilution
26		2022-01-21 18:44:23	027_CCV.d	CCV	CCV		1.0000
27		2022-01-21 18:50:38	028_CCB.d	CCB	CCB		1.0000
28		2022-01-21 18:56:53	029BLKV.d	Rinse	BlkVrfy		1.0000
29		2022-01-21 19:03:09	030MBLK.d	LRB	MBLK		1.0000
30		2022-01-21 19:09:24	031_LFB.d	LFB	LFB		1.0300
31		2022-01-21 19:15:40	032ICSA.d	ICSA	ICSA		1.0000
32		2022-01-21 19:21:57	033ICSB.d	ICSAB	ICSAB		1.0000
33		2022-01-21 19:28:14	034BLKV.d	Rinse	BlkVrfy		1.0000
34		2022-01-21 19:34:27	035BLKV.d	Rinse	BlkVrfy		1.0000
35		2022-01-21 19:40:40	036_CCV.d	CCV	CCV		1.0000
36		2022-01-21 19:46:55	037_CCB.d	CCB	CCB		1.0000
37		2022-01-21 19:53:09	038BLKV.d	Rinse	BlkVrfy		1.0000
38		2022-01-21 19:59:24	039ARef.d	MB-163063	AllRef		1.0000
39		2022-01-21 20:05:39	040ARef.d	MB-163116	AllRef		1.0000
40		2022-01-21 20:11:53	041LCS4.d	LCS4-163063	LCS4		1.0000
41		2022-01-21 20:18:08	042LCS4.d	LCS4-163116	LCS4		1.0000
42		2022-01-21 20:24:22	043BLKV.d	Rinse	BlkVrfy		1.0000
43		2022-01-21 20:30:36	044SMPL.d	B22011124-001A	Sample		1.0000
44		2022-01-21 20:36:50	045ARef.d	B22011124-001ADIL	AllRef		5.0000
45		2022-01-21 20:43:05	046MS.d	B22011124-001AMS	MS		1.0300
46		2022-01-21 20:49:19	047MSD.d	B22011124-001AMSD	MSD		1.0300
47		2022-01-21 20:55:33	048BLKV.d	Rinse	BlkVrfy		1.0000
48		2022-01-21 21:01:46	049SMPL.d	B22011124-001B	Sample		1.0000
49		2022-01-21 21:08:00	050ARef.d	B22011124-001BDIL	AllRef		5.0000
50		2022-01-21 21:14:14	051_CCV.d	CCV	CCV		1.0000
51		2022-01-21 21:20:28	052_CCB.d	CCB	CCB		1.0000
52		2022-01-21 21:26:42	053SMPL.d	B22011124-001BPDS1	Sample		1.0300
53		2022-01-21 21:32:56	054MS4.d	B22011124-001BMS4	MS4		1.0000
54		2022-01-21 21:39:10	055MSD4.d	B22011124-001BMSD4	MSD4		1.0000
55		2022-01-21 21:45:24	056BLKV.d	Rinse	BlkVrfy		1.0000
56		2022-01-21 21:51:37	057SMPL.d	B22011125-001A	Sample		1.0000
57		2022-01-21 21:57:52	058SMPL.d	B22011125-001B	Sample		1.0000

Batch Summary Report

	Rjct	Acq. Date-Time	Data File	Sample Name	Type	Level	Dilution
58		2022-01-21 22:04:07	059SMPL.d	B22011126-001A	Sample		1.0000
59		2022-01-21 22:10:23	060SMPL.d	B22011126-001B	Sample		1.0000
60		2022-01-21 22:16:39	061SMPL.d	B22011127-001A	Sample		1.0000
61		2022-01-21 22:22:54	062SMPL.d	B22011127-001B	Sample		1.0000
62		2022-01-21 22:29:09	063SMPL.d	B22011128-001A	Sample		1.0000
63		2022-01-21 22:35:25	064_CCV.d	CCV	CCV		1.0000
64		2022-01-21 22:41:39	065_CCB.d	CCB	CCB		1.0000
65		2022-01-21 22:47:53	066SMPL.d	B22011128-001B	Sample		1.0000
66		2022-01-21 22:54:08	067SMPL.d	B22011129-001A	Sample		1.0000
67		2022-01-21 23:00:24	068SMPL.d	B22011129-001B	Sample		1.0000
68		2022-01-21 23:06:38	069SMPL.d	B22011130-001A	Sample		1.0000
69		2022-01-21 23:12:53	070SMPL.d	B22011130-001B	Sample		1.0000
70		2022-01-21 23:19:07	071SMPL.d	B22011131-001A	Sample		1.0000
71		2022-01-21 23:25:21	072SMPL.d	B22011131-001B	Sample		1.0000
72		2022-01-21 23:31:35	073SMPL.d	B22011132-001A	Sample		1.0000
73		2022-01-21 23:37:50	074SMPL.d	B22011132-001B	Sample		1.0000
74		2022-01-21 23:44:04	075SMPL.d	B22011133-001A	Sample		1.0000
75		2022-01-21 23:50:18	076_CCV.d	CCV	CCV		1.0000
76		2022-01-21 23:56:33	077_CCB.d	CCB	CCB		1.0000
77		2022-01-22 00:02:48	078SMPL.d	B22011133-001B	Sample		1.0000
78		2022-01-22 00:09:03	079SMPL.d	B22011134-001A	Sample		1.0000
79		2022-01-22 00:15:19	080SMPL.d	B22011134-001B	Sample		1.0000
80		2022-01-22 00:21:34	081ARef.d	B22011134-001BDIL	AllRef		5.0000
81		2022-01-22 00:27:49	082SMPL.d	B22011134-001BPDS1	Sample		1.0300
82		2022-01-22 00:34:03	083MS4.d	B22011134-001BMS4	MS4		1.0000
83		2022-01-22 00:40:17	084MSD4.d	B22011134-001BMSD4	MSD4		1.0000
84		2022-01-22 00:46:31	085BLKV.d	Rinse	BlkVrfy		1.0000
85		2022-01-22 00:52:45	086SMPL.d	B22011135-001A	Sample		1.0000
86		2022-01-22 00:59:00	087SMPL.d	B22011135-001B	Sample		1.0000
87		2022-01-22 01:05:15	088SMPL.d	B22011136-001A	Sample		1.0000
88		2022-01-22 01:11:29	089_CCV.d	CCV	CCV		1.0000
89		2022-01-22 01:17:44	090_CCB.d	CCB	CCB		1.0000

Batch Summary Report

	Rjct	Acq. Date-Time	Data File	Sample Name	Type	Level	Dilution
90		2022-01-22 01:23:59	091SMPL.d	B22011136-001B	Sample		1.0000
91		2022-01-22 01:30:13	092SMPL.d	B22011137-001A	Sample		1.0000
92		2022-01-22 01:36:28	093SMPL.d	B22011137-001B	Sample		1.0000
93		2022-01-22 01:42:42	094SMPL.d	B22011214-001A	Sample		1.0000
94		2022-01-22 01:48:57	095SMPL.d	B22011214-001B	Sample		1.0000
95		2022-01-22 01:55:13	096SMPL.d	B22011214-001BDIL	Sample		5.0000
96		2022-01-22 02:01:28	097ARef.d	B22011214-001BPDS1	AllRef		1.0300
97		2022-01-22 02:07:43	098MS4.d	B22011214-001BMS4	MS4		1.0000
98		2022-01-22 02:13:58	099MSD4.d	B22011214-001BMSD4	MSD4		1.0000
99		2022-01-22 02:20:12	100BLKV.d	Rinse	BlkVrfy		1.0000
100		2022-01-22 02:26:26	101SMPL.d	B22011227-001A	Sample		1.0000
101		2022-01-22 02:32:41	102_CCV.d	CCV	CCV		1.0000
102		2022-01-22 02:38:55	103_CCB.d	CCB	CCB		1.0000
103		2022-01-22 02:45:10	104SMPL.d	B22011227-001B	Sample		1.0000
104		2022-01-22 02:51:25	105SMPL.d	B22011228-001A	Sample		1.0000
105		2022-01-22 02:57:39	106SMPL.d	B22011228-001B	Sample		1.0000
106		2022-01-22 03:03:53	107BLKV.d	Rinse	BlkVrfy		1.0000
107		2022-01-22 03:10:06	108_CCV.d	CCV	CCV		1.0000
108		2022-01-22 03:16:21	109_CCB.d	CCB	CCB		1.0000
109		2022-01-22 03:22:35	110CALB.d	Cal Blk	CalBlk	1	1.0000
110		2022-01-22 03:28:57	111CAL.S.d	0.025 ppb STD	CalStd	2	1.0000
111		2022-01-22 03:35:18	112CAL.S.d	0.05 ppb STD	CalStd	3	1.0000
112		2022-01-22 03:41:39	113CAL.S.d	0.10 ppb STD	CalStd	4	1.0000
113		2022-01-22 03:48:00	114CAL.S.d	0.5 ppb STD	CalStd	5	1.0000
114		2022-01-22 03:54:21	115CAL.S.d	1 ppb STD	CalStd	6	1.0000
115		2022-01-22 04:00:43	116CAL.S.d	10 ppb STD	CalStd	7	1.0000
116		2022-01-22 04:07:04	117CAL.S.d	50 ppb STD	CalStd	8	1.0000
117		2022-01-22 04:13:24	118CAL.S.d	100 ppb STD	CalStd	9	1.0000
118		2022-01-22 04:19:46	119CAL.S.d	1000 ppb STD	CalStd	10	1.0000
119		2022-01-22 04:26:09	120CAL.S.d	100 ppb Br STD	CalStd	11	1.0000
120		2022-01-22 04:32:29	121BLKV.d	Rinse	BlkVrfy		1.0000
121		2022-01-22 04:38:44	122_QC1.d	QCS	QC1		1.0000

Batch Summary Report

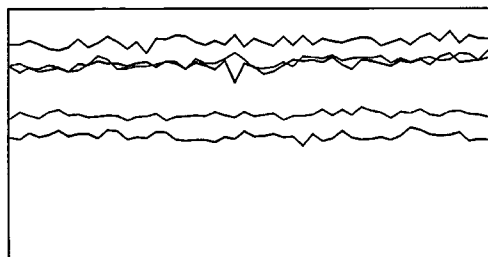
	Rjct	Acq. Date-Time	Data File	Sample Name	Type	Level	Dilution
122		2022-01-22 04:44:59	123ICSA.d	ICSA	ICSA		1.0000
123		2022-01-22 04:51:16	124ICSB.d	ICSAB	ICSAB		1.0000
124		2022-01-22 04:57:33	125BLKV.d	Rinse	BlkVrfy		1.0000
125		2022-01-22 05:03:46	126_CCV.d	CCV	CCV		1.0000
126		2022-01-22 05:10:00	127_CCB.d	CCB	CCB		1.0000
127		2022-01-22 11:11:16	128BLKV.d	Rinse	BlkVrfy		1.0000
128		2022-01-22 11:17:29	129_CCV.d	CCV	CCV		1.0000
129		2022-01-22 11:23:44	130_CCB.d	CCB	CCB		1.0000
130		2022-01-22 11:29:58	131BLKV.d	Rinse	BlkVrfy		1.0000
131		2022-01-22 11:36:13	132ARef.d	B22011134-001BDIL	AllRef		5.0000
132		2022-01-22 11:42:26	133ARef.d	B22011124-001BDIL	AllRef		5.0000
133		2022-01-22 11:48:40	134_CCV.d	CCV	CCV		1.0000
134		2022-01-22 11:54:55	135_CCB.d	CCB	CCB		1.0000
135		2022-01-22 12:01:10	136SMPL.d	B22011124-001B	Sample		1.0000
136		2022-01-22 12:07:24	137SMPL.d	B22011134-001B	Sample		1.0000
137		2022-01-22 12:13:39	138_CCV.d	CCV	CCV		1.0000
138		2022-01-22 12:19:53	139_CCB.d	CCB	CCB		1.0000

Tune Report

Operator Name elim
 Acq/Data Batch D:\Agilent\ICPMH\1\DATA\220121ADoD.b
 Acq. Date-Time 2022-01-21 13:25:53
 Report Comment ICPMS207-B CAR
 Instrument Name G8403A JP17281923

[No Gas]

Sensitivity



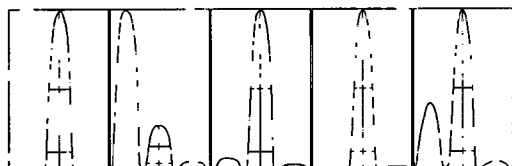
Mass	Range	Count	RSD%	Background
9	500000	246429	2.966	3.600
24	100000	57816	2.007	2.300
59	100000	87288	2.139	1.300
115	100000	78993	2.454	1.700
208	50000	39039	2.763	4.900

Sampling Period [sec] 0.514
 Integration Time [sec] 0.1

Oxide/Doubly Charged Ratio

Oxide 156 / 140 1.045 %
 Doubly Charged 70 / 140 0.887 %

Resolution/Axis



Mass	Peak Height	Axis	W-50%	W-10%
9	252062.32	9.05	0.63	0.769
24	58445.68	24.00	0.65	0.769
59	88215.78	59.00	0.62	0.761
115	80812.66	115.05	0.56	0.742
208	39740.16	208.00	0.58	0.759

Integration Time [sec] 0.1
 Acquisition Time [sec] 37.4
 Y Axis Linear

Tune Parameters

Plasma Parameters

Plasma Mode	—	Nebulizer Gas	0.89 L/min	Dilution Gas	0.14 L/min
RF Power	1600 W	Option Gas	—	Auxiliary Gas	0.90 L/min
RF Matching	1.00 V	Nebulizer Pump	0.10 rps	Plasma Gas	15.0 L/min
Sample Depth	8.0 mm	S/C Temp	2 °C		

Lens Parameters

Extract 1	0.0 V	Omega Lens	10.3 V	Deflect	15.0 V
Extract 2	-250.0 V	Cell Entrance	-30 V	Plate Bias	-35 V

Tune Report

Omega Bias -75 V Cell Exit -50 V

Cell Parameters

Use Gas No 3rd Gas Flow — Energy Discrimination 5.0 V
 He Flow 0.0 mL/min OctP Bias -8.0 V
 H2 Flow 0.0 mL/min OctP RF 180 V

QP Parameters

Mass Gain 125 Axis Gain 0.9988 QP Bias -3.0 V
 Mass Offset 126 Axis Offset 0.14

Hardware Settings

Torch

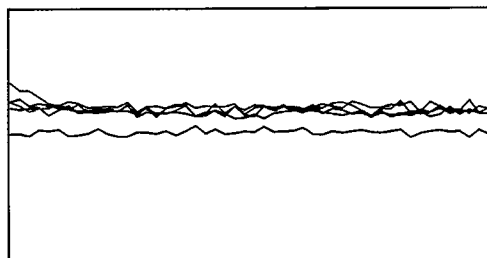
Torch H -0.9 mm Torch V 0.0 mm

EM

Discriminator 5.7 mV Analog HV 2278 V Pulse HV 1674 V

[H2]

Sensitivity



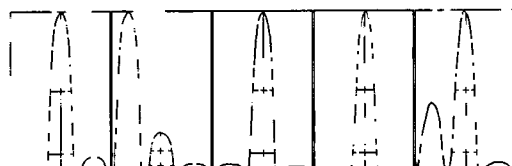
Mass	Range	Count	RSD%	Background
9	50000	29829	2.838	0.200
24	20000	12413	3.673	0.400
59	50000	29653	2.533	0.000
115	100000	60594	2.420	0.100
208	50000	25551	2.005	0.400

Sampling Period [sec] 0.514
 Integration Time [sec] 0.1

Oxide/Doubly Charged Ratio

Oxide —
 Doubly Charged 70 / 140 0.889 %

Resolution/Axis



Mass	Peak Height	Axis	W-50%	W-10%
9	29645.16	9.05	0.62	0.760
24	12139.82	24.00	0.64	0.737
59	29575.08	59.05	0.61	0.755
115	60502.98	115.05	0.55	0.733
208	25039.88	208.05	0.59	0.767

Integration Time [sec] 0.1
 Acquisition Time [sec] 37.4
 Y Axis Linear

Tune Parameters

Plasma Parameters

Tune Report

Plasma Mode	—	Nebulizer Gas	0.89 L/min	Dilution Gas	0.14 L/min
RF Power	1600 W	Option Gas	—	Auxiliary Gas	0.90 L/min
RF Matching	1.00 V	Nebulizer Pump	0.10 rps	Plasma Gas	15.0 L/min
Sample Depth	8.0 mm	S/C Temp	2 °C		

Lens Parameters

Extract 1	0.0 V	Omega Lens	10.0 V	Deflect	2.6 V
Extract 2	-225.0 V	Cell Entrance	-30 V	Plate Bias	-80 V
Omega Bias	-85 V	Cell Exit	-50 V		

Cell Parameters

Use Gas	Yes	3rd Gas Flow	—	Energy Discrimination	5.0 V
He Flow	0.0 mL/min	OctP Bias	-18.0 V		
H2 Flow	3.8 mL/min	OctP RF	180 V		

QP Parameters

Mass Gain	125	Axis Gain	0.9988	QP Bias	-13.0 V
Mass Offset	126	Axis Offset	0.14		

Hardware Settings

Torch

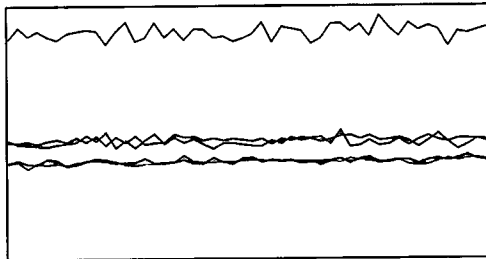
Torch H	-0.9 mm	Torch V	0.0 mm
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EM

Discriminator	5.7 mV	Analog HV	2278 V	Pulse HV	1674 V
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[He]

Sensitivity



Mass	Range	Count	RSD%	Background
9	5000	2307	3.614	1.000
24	2000	1801	2.982	0.400
59	50000	23509	2.429	0.400
115	50000	19116	2.412	0.400
208	50000	19273	2.190	0.600

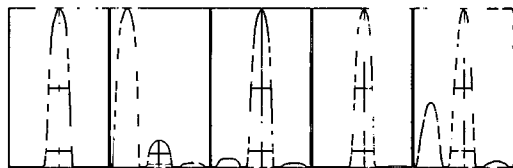
Sampling Period [sec]	0.514
Integration Time [sec]	0.1

Oxide/Doubly Charged Ratio

Oxide	—
Doubly Charged	70 / 140 0.917 %

Resolution/Axis

Tune Report



Mass	Peak Height	Axis	W-50%	W-10%
9	2272.26	9.05	0.62	0.771
24	1807.65	24.00	0.64	0.734
59	23794.26	59.05	0.60	0.748
115	19984.86	115.10	0.54	0.687
208	19709.34	208.05	0.55	0.740

Integration Time [sec] 0.1
 Acquisition Time [sec] 37.4
 Y Axis Linear

Tune Parameters

Plasma Parameters

Plasma Mode	---	Nebulizer Gas	0.89 L/min	Dilution Gas	0.14 L/min
RF Power	1600 W	Option Gas	---	Auxiliary Gas	0.90 L/min
RF Matching	1.00 V	Nebulizer Pump	0.10 rps	Plasma Gas	15.0 L/min
Sample Depth	8.0 mm	S/C Temp	2 °C		

Lens Parameters

Extract 1	0.0 V	Omega Lens	10.6 V	Deflect	1.0 V
Extract 2	-235.0 V	Cell Entrance	-30 V	Plate Bias	-80 V
Omega Bias	-75 V	Cell Exit	-50 V		

Cell Parameters

Use Gas	Yes	3rd Gas Flow	---	Energy Discrimination	5.0 V
He Flow	4.0 mL/min	OctP Bias	-18.0 V		
H2 Flow	0.0 mL/min	OctP RF	200 V		

QP Parameters

Mass Gain	125	Axis Gain	0.9988	QP Bias	-13.0 V
Mass Offset	126	Axis Offset	0.14		

Hardware Settings

Torch

Torch H	-0.9 mm	Torch V	0.0 mm
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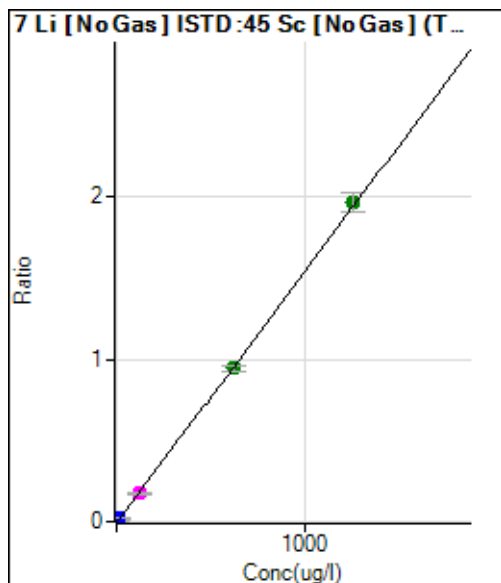
EM

Discriminator	5.7 mV	Analog HV	2278 V	Pulse HV	1674 V
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Calibration for 026_QC1.d

Batch Folder: D:\Agilent\ICPMH\1\DATA\220121ADoD.b\
 Analysis File: 220121ADoD.batch.bin
 DA Date-Time: 2022-01-21 20:51:24
 Calibration Title:
 Calibration Method: External Calibration
 VIS Interpolation Fit:

Level	Standard Data File	Sample Name	Acq. Date-Time
1	014CALB.d	Cal Blk	2022-01-21 17:19:33
2	015CALS.d	0.025 ppb STD	2022-01-21 17:26:12
3	016CALS.d	0.05 ppb STD	2022-01-21 17:32:50
4	017CALS.d	0.10 ppb STD	2022-01-21 17:39:27
5	018CALS.d	0.5 ppb STD	2022-01-21 17:46:06
6	019CALS.d	1 ppb STD	2022-01-21 17:52:44
7	020CALS.d	10 ppb STD	2022-01-21 17:59:22
8	021CALS.d	50 ppb STD	2022-01-21 18:06:00
9	022CALS.d	100 ppb STD	2022-01-21 18:12:35
10			
11	024CALS.d	100 ppb Br STD	2022-01-21 18:25:33



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	De t	RSD	%RE
1	<input type="checkbox"/>	0.000	0.000	16116.96	0.0029	P	2.7	
2	<input type="checkbox"/>	0.313	0.345	19118.97	0.0034	P	2.4	10.4
3	<input type="checkbox"/>	0.625	0.629	21318.78	0.0038	P	2.3	0.7
4	<input type="checkbox"/>	1.250	1.105	25853.56	0.0046	P	3.9	-11.6
5	<input type="checkbox"/>	6.250	5.768	65558.83	0.0118	P	4.0	-7.7
6	<input type="checkbox"/>	12.500	13.286	129713.18	0.0235	P	2.5	6.3
7	<input type="checkbox"/>	125.000	109.072	954440.26	0.1724	M	2.3	-12.7
8	<input type="checkbox"/>	625.000	603.657	5083198.54	0.9413	A	3.4	-3.4
9	<input type="checkbox"/>	1250.000	1262.259	11213868.46	1.9652	A	6.5	1.0
10	<input type="checkbox"/>	2500.000						
11	<input type="checkbox"/>			38892.52	0.0066	P	4.2	

$$y = 0.0016 * x + 0.0029$$

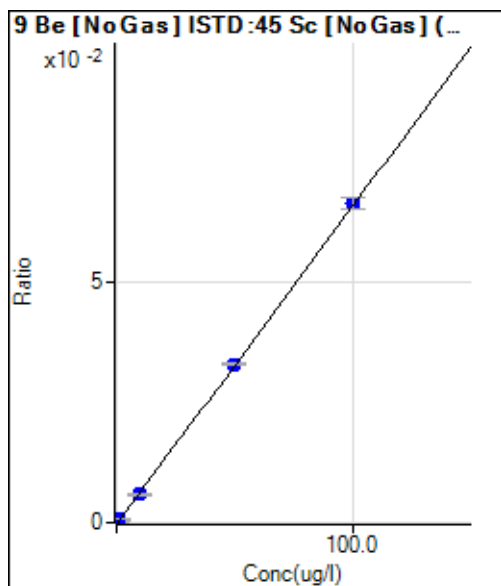
$$R = 0.9997$$

$$DL = 0.151 \text{ ug/l}$$

$$BEC = 1.839 \text{ ug/l}$$

$$\text{Weight: } 1/y$$

$$\text{Min Conc: } <\text{None}>$$



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	De t	RSD	%RE
1	<input type="checkbox"/>	0.000	0.000	240.73	0.0000	P	94.8	
2	<input type="checkbox"/>	0.025	-0.009	204.96	0.0000	P	7.9	-136.5
3	<input type="checkbox"/>	0.050	0.018	302.61	0.0001	P	7.9	-63.4
4	<input type="checkbox"/>	0.100	0.054	442.92	0.0001	P	3.8	-45.5
5	<input type="checkbox"/>	0.500	0.407	1724.42	0.0003	P	2.7	-18.7
6	<input type="checkbox"/>	1.000	0.994	3854.06	0.0007	P	4.1	-0.6
7	<input type="checkbox"/>	10.000	8.746	32208.77	0.0058	P	1.7	-12.5
8	<input type="checkbox"/>	50.000	49.640	177275.45	0.0328	P	1.4	-0.7
9	<input type="checkbox"/>	100.000	100.306	378236.08	0.0663	P	3.7	0.3
10	<input type="checkbox"/>	1000.000						
11	<input type="checkbox"/>			303.61	0.0001	P	6.1	

$$y = 6.6049E-004 * x + 4.2425E-005$$

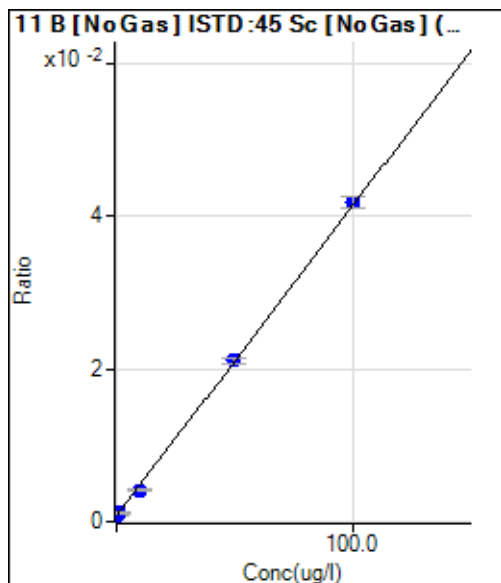
$$R = 0.9999$$

$$DL = 0.1827 \text{ ug/l}$$

$$BEC = 0.06423 \text{ ug/l}$$

$$\text{Weight: } 1/y$$

$$\text{Min Conc: } <\text{None}>$$



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	De t	RSD	%RE
1	<input type="checkbox"/>	0.000	0.000	5588.62	0.0010	P	3.8	
2	<input type="checkbox"/>			5148.95	0.0009	P	1.1	
3	<input type="checkbox"/>	0.050	-0.293	4848.73	0.0009	P	4.4	-685.1
4	<input type="checkbox"/>	0.100	-0.419	4644.59	0.0008	P	1.2	-518.5
5	<input type="checkbox"/>	0.500	-0.101	5267.71	0.0010	P	6.6	-120.2
6	<input type="checkbox"/>	1.000	0.407	6379.26	0.0012	P	5.4	-59.3
7	<input type="checkbox"/>	10.000	7.750	22889.18	0.0041	P	2.2	-22.5
8	<input type="checkbox"/>	50.000	49.390	113558.46	0.0210	P	3.0	-1.2
9	<input type="checkbox"/>	100.000	100.540	238418.00	0.0418	P	3.5	0.5
10	<input type="checkbox"/>	1000.000						
11	<input type="checkbox"/>			32406.30	0.0055	P	7.3	

$y = 4.0570E-004 * x + 9.9166E-004$

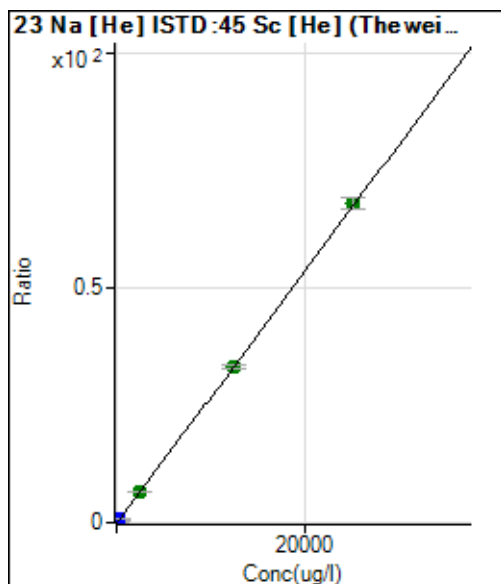
R = 0.9998

DL = 0.277 ug/l

BEC = 2.444 ug/l

Weight: 1/y

Min Conc: <None>



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	De t	RSD	%RE
1	<input type="checkbox"/>	0.000	0.000	48645.13	0.1527	P	1.2	
2	<input type="checkbox"/>	6.250	5.041	51969.38	0.1664	P	0.6	-19.3
3	<input type="checkbox"/>	12.500	14.595	60081.46	0.1922	P	0.5	16.8
4	<input type="checkbox"/>	25.000	27.394	70518.55	0.2268	P	0.9	9.6
5	<input type="checkbox"/>	125.000	127.748	155215.46	0.4981	P	2.8	2.2
6	<input type="checkbox"/>	250.000	263.302	272015.80	0.8646	P	1.3	5.3
7	<input type="checkbox"/>	2500.000	2422.088	2129850.77	6.7006	A	1.2	-3.1
8	<input type="checkbox"/>	12500.00	12277.52	10758078.73	33.3438	A	2.1	-1.8
9	<input type="checkbox"/>	25000.00	25118.88	22220267.17	68.0591	A	3.2	0.5
10	<input type="checkbox"/>	50000.00						
11	<input type="checkbox"/>			46375.68	0.1404	P	2.8	

$y = 0.0027 * x + 0.1527$

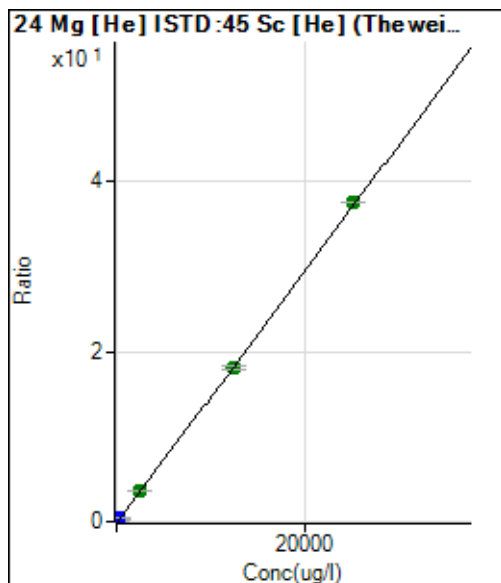
R = 0.9999

DL = 2.001 ug/l

BEC = 56.5 ug/l

Weight: 1/y

Min Conc: <None>



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	De t	RSD	%RE
1	<input type="checkbox"/>	0.000	0.000	1869.75	0.0059	P	5.8	
2	<input type="checkbox"/>	6.250	6.719	4964.34	0.0159	P	3.3	7.5
3	<input type="checkbox"/>	12.500	15.626	9121.40	0.0292	P	2.4	25.0
4	<input type="checkbox"/>	25.000	27.225	14448.34	0.0465	P	3.4	8.9
5	<input type="checkbox"/>	125.000	130.234	62348.75	0.2001	P	3.5	4.2
6	<input type="checkbox"/>	250.000	264.571	125981.67	0.4005	P	2.5	5.8
7	<input type="checkbox"/>	2500.000	2448.863	1162787.91	3.6584	A	3.2	-2.0
8	<input type="checkbox"/>	12500.00	12116.46	5832547.09	18.0776	A	1.7	-3.1
9	<input type="checkbox"/>	25000.00	25196.70	12274170.52	37.5869	A	0.3	0.8
10	<input type="checkbox"/>	50000.00						
11	<input type="checkbox"/>			1843.13	0.0056	P	10.5	

$y = 0.0015 * x + 0.0059$

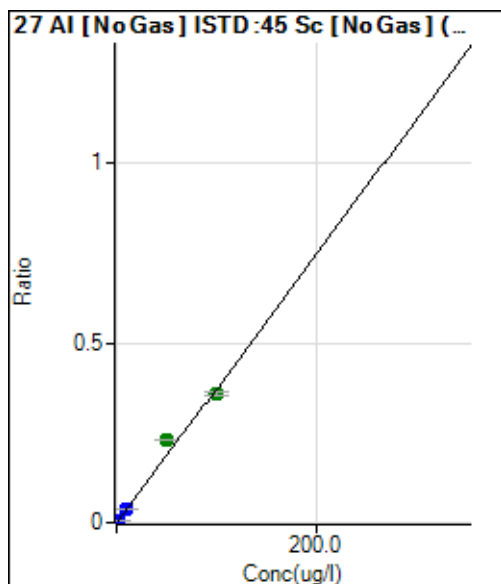
R = 0.9999

DL = 0.689 ug/l

BEC = 3.936 ug/l

Weight: 1/y

Min Conc: <None>



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	De t	RSD	%RE
1	<input type="checkbox"/>	0.000	0.000	16763.86	0.0030	P	2.4	
2	<input type="checkbox"/>			19714.17	0.0035	P	1.6	
3	<input type="checkbox"/>	0.050	0.134	19308.04	0.0035	P	3.0	167.5
4	<input type="checkbox"/>	0.100	0.167	20342.72	0.0036	P	3.0	67.1
5	<input type="checkbox"/>	0.500	0.597	28917.90	0.0052	P	3.5	19.5
6	<input type="checkbox"/>	1.000	1.108	39356.03	0.0071	P	1.2	10.8
7	<input type="checkbox"/>	10.000	9.450	212780.04	0.0384	P	2.0	-5.5
8	<input type="checkbox"/>	50.000	60.112	1234429.12	0.2286	A	0.1	20.2
9	<input type="checkbox"/>	100.000	94.997	2051325.70	0.3595	A	3.3	-5.0
10	<input type="checkbox"/>	1000.000						
11	<input type="checkbox"/>			18287.85	0.0031	P	1.0	

$y = 0.0038 * x + 0.0030$

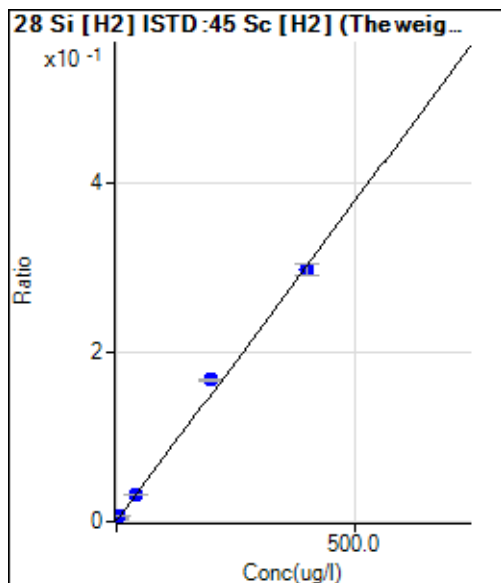
R = 0.9933

DL = 0.05744 ug/l

BEC = 0.7924 ug/l

Weight: 1/y

Min Conc: <None>



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	De t	RSD	%RE
1	<input type="checkbox"/>	0.000	0.000	7382.79	0.0027	P	0.1	
2	<input type="checkbox"/>			8128.14	0.0030	P	1.5	
3	<input type="checkbox"/>	0.200	0.822	8842.24	0.0033	P	14.5	311.1
4	<input type="checkbox"/>	0.400	0.878	9092.46	0.0034	P	18.5	119.5
5	<input type="checkbox"/>	2.000	2.053	11668.57	0.0042	P	2.1	2.7
6	<input type="checkbox"/>	4.000	4.072	15438.82	0.0058	P	0.6	1.8
7	<input type="checkbox"/>	40.000	39.115	88095.19	0.0322	P	1.7	-2.2
8	<input type="checkbox"/>	200.000	218.338	462870.95	0.1677	P	0.9	9.2
9	<input type="checkbox"/>	400.000	390.918	833031.10	0.2981	P	4.3	-2.3
10	<input type="checkbox"/>							
11	<input type="checkbox"/>			8694.03	0.0032	P	1.2	

$$y = 7.5573E-004 * x + 0.0027$$

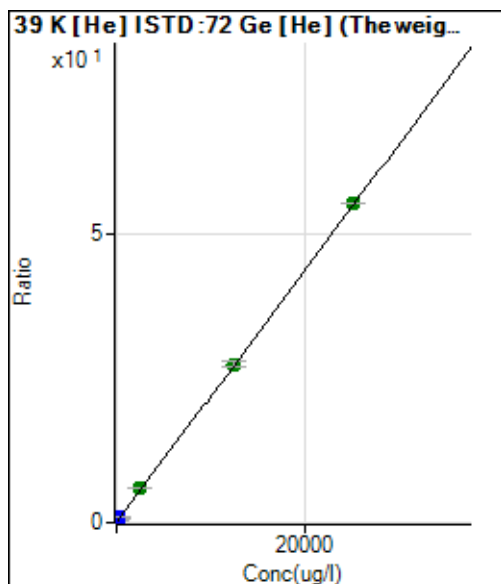
R = 0.9986

DL = 0.0149 ug/l

BEC = 3.559 ug/l

Weight: 1/y

Min Conc: <None>



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	De t	RSD	%RE
1	<input type="checkbox"/>	0.000	0.000	83413.54	0.3748	P	3.7	
2	<input type="checkbox"/>	6.250	8.572	86393.88	0.3936	P	2.5	37.2
3	<input type="checkbox"/>	12.500	14.353	89586.69	0.4062	P	1.7	14.8
4	<input type="checkbox"/>	25.000	20.284	92327.48	0.4192	P	0.8	-18.9
5	<input type="checkbox"/>	125.000	124.642	142339.78	0.6478	P	1.0	-0.3
6	<input type="checkbox"/>	250.000	274.464	210233.68	0.9760	P	1.7	9.8
7	<input type="checkbox"/>	2500.000	2525.286	1313936.00	5.9066	A	1.5	1.0
8	<input type="checkbox"/>	12500.00	12352.23	6190792.48	27.4330	A	3.4	-1.2
9	<input type="checkbox"/>	25000.00	25071.11	12541365.64	55.2944	A	0.1	0.3
10	<input type="checkbox"/>	50000.00						
11	<input type="checkbox"/>			386692.30	1.7026	P	2.1	

$$y = 0.0022 * x + 0.3748$$

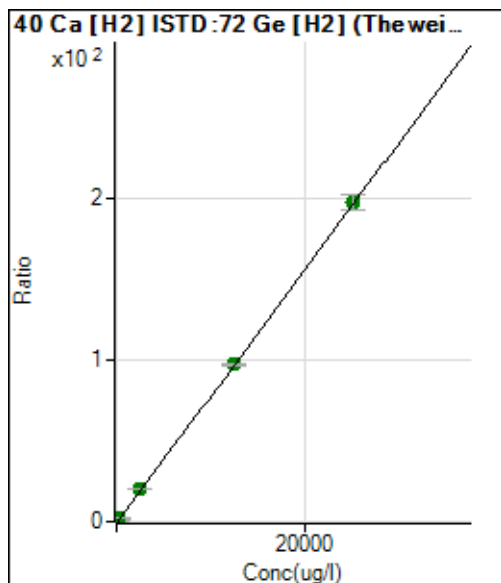
R = 1.0000

DL = 19.21 ug/l

BEC = 171.1 ug/l

Weight: 1/y

Min Conc: <None>



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	De t	RSD	%RE
1	<input type="checkbox"/>	0.000	0.000	101282.00	0.1021	P	1.1	
2	<input type="checkbox"/>	6.250	7.100	156675.14	0.1580	P	2.6	13.6
3	<input type="checkbox"/>	12.500	15.069	220696.82	0.2208	P	4.0	20.6
4	<input type="checkbox"/>	25.000	28.253	323953.66	0.3248	P	4.6	13.0
5	<input type="checkbox"/>	125.000	132.950	1155430.23	1.1500	P	1.7	6.4
6	<input type="checkbox"/>	250.000	275.073	2234754.15	2.2702	A	1.8	10.0
7	<input type="checkbox"/>	2500.000	2589.312	21100067.45	20.5113	A	2.5	3.6
8	<input type="checkbox"/>	12500.00	12346.86	101122993.6	97.4212	A	1.2	-1.2
9	<input type="checkbox"/>	25000.00	25067.33	201215236.4	197.685	A	5.2	0.3
10	<input type="checkbox"/>	50000.00						
11	<input type="checkbox"/>			107652.48	0.1083	P	1.9	

$y = 0.0079 * x + 0.1021$

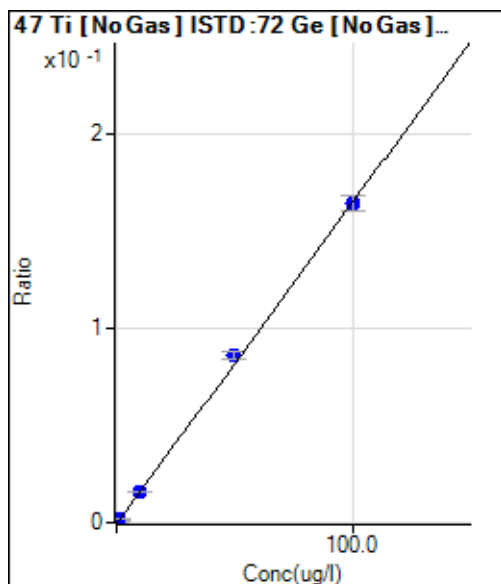
R = 1.0000

DL = 0.4415 ug/l

BEC = 12.95 ug/l

Weight: 1/y

Min Conc: <None>



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	De t	RSD	%RE
1	<input type="checkbox"/>	0.000	0.000	220.23	0.0001	P	24.9	
2	<input type="checkbox"/>	0.025	0.043	323.66	0.0002	P	11.5	72.9
3	<input type="checkbox"/>	0.050	0.064	375.38	0.0003	P	7.4	27.5
4	<input type="checkbox"/>	0.100	0.111	497.18	0.0003	P	9.0	11.0
5	<input type="checkbox"/>	0.500	0.442	1374.79	0.0009	P	9.0	-11.5
6	<input type="checkbox"/>	1.000	0.992	2672.95	0.0018	P	1.9	-0.8
7	<input type="checkbox"/>	10.000	9.497	23589.23	0.0159	P	2.6	-5.0
8	<input type="checkbox"/>	50.000	51.900	128006.19	0.0861	P	4.9	3.8
9	<input type="checkbox"/>	100.000	99.101	244490.65	0.1642	P	4.5	-0.9
10	<input type="checkbox"/>							
11	<input type="checkbox"/>			398.74	0.0003	P	9.1	

$y = 0.0017 * x + 1.4594E-004$

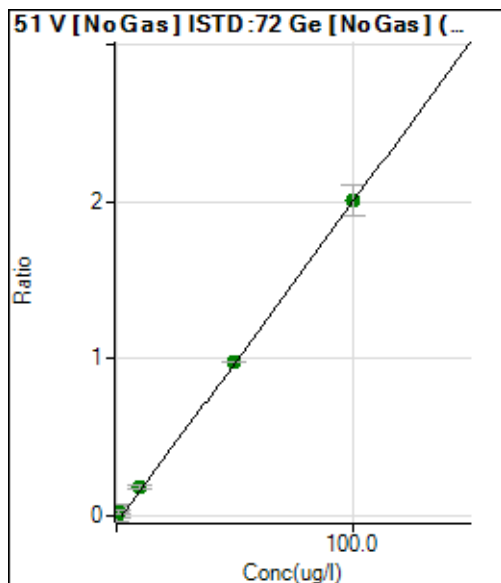
R = 0.9998

DL = 0.06596 ug/l

BEC = 0.08814 ug/l

Weight: 1/y

Min Conc: <None>



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	De t	RSD	%RE
1	<input type="checkbox"/>	0.000	0.000	-58154.82	-0.0390	A	-128.4	
2	<input type="checkbox"/>	0.025	1.595	-10013.51	-0.0064	A	-867.9	6280.0
3	<input type="checkbox"/>	0.050	3.579	50611.23	0.0343	A	123.7	7057.9
4	<input type="checkbox"/>	0.100	2.815	28028.24	0.0186	A	137.5	2715.5
5	<input type="checkbox"/>	0.500	3.188	42458.22	0.0263	A	331.6	537.6
6	<input type="checkbox"/>	1.000	2.977	32961.32	0.0219	A	160.5	197.7
7	<input type="checkbox"/>	10.000	10.729	268491.88	0.1807	A	14.1	7.3
8	<input type="checkbox"/>	50.000	49.745	1457839.94	0.9798	A	0.8	-0.5
9	<input type="checkbox"/>	100.000	100.017	2988230.72	2.0094	A	9.9	0.0
10	<input type="checkbox"/>	1000.000						
11	<input type="checkbox"/>			33580.12	0.0223	A	97.8	

$y = 0.0205 * x - 0.0390$

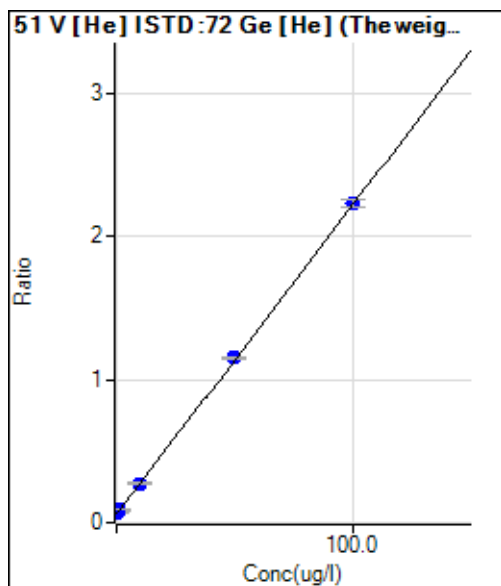
R = 0.9995

DL = 7.344 ug/l

BEC = -1.906 ug/l

Weight: 1/y

Min Conc: <None>



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	De t	RSD	%RE
1	<input type="checkbox"/>	0.000	0.000	15693.98	0.0705	P	4.0	
2	<input type="checkbox"/>	0.025	0.275	16784.10	0.0765	P	1.1	999.0
3	<input type="checkbox"/>	0.050	0.067	15873.06	0.0720	P	1.4	34.8
4	<input type="checkbox"/>	0.100	0.004	15547.16	0.0706	P	1.8	-96.4
5	<input type="checkbox"/>	0.500	0.570	18204.63	0.0828	P	0.7	14.0
6	<input type="checkbox"/>	1.000	1.239	20964.97	0.0973	P	1.2	23.9
7	<input type="checkbox"/>	10.000	9.369	60778.41	0.2732	P	2.2	-6.3
8	<input type="checkbox"/>	50.000	50.140	260780.95	1.1553	P	1.1	0.3
9	<input type="checkbox"/>	100.000	99.990	506666.54	2.2337	P	2.6	0.0
10	<input type="checkbox"/>	1000.000						
11	<input type="checkbox"/>			9229.61	0.0406	P	1.8	

$y = 0.0216 * x + 0.0705$

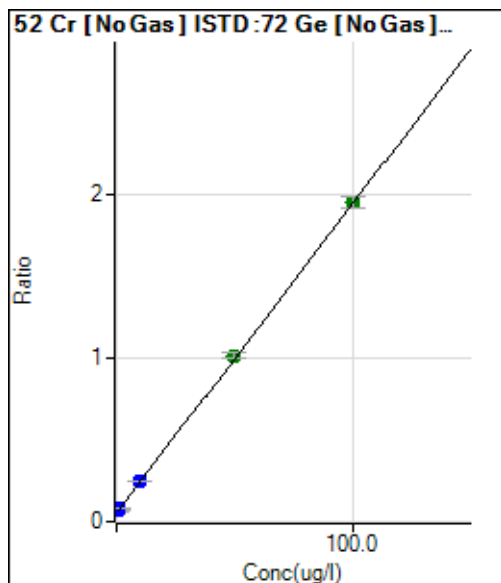
R = 1.0000

DL = 0.3893 ug/l

BEC = 3.259 ug/l

Weight: 1/y

Min Conc: <None>



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	De t	RSD	%RE
1	<input type="checkbox"/>	0.000	0.000	98256.00	0.0650	P	1.8	
2	<input type="checkbox"/>	0.025	0.143	100571.06	0.0677	P	1.1	470.3
3	<input type="checkbox"/>	0.050	0.067	98992.88	0.0663	P	1.0	34.3
4	<input type="checkbox"/>	0.100	0.054	99518.77	0.0660	P	1.3	-46.4
5	<input type="checkbox"/>	0.500	0.340	111788.14	0.0714	P	3.2	-32.0
6	<input type="checkbox"/>	1.000	1.156	129847.02	0.0869	P	2.3	15.6
7	<input type="checkbox"/>	10.000	9.683	369110.88	0.2483	P	1.4	-3.2
8	<input type="checkbox"/>	50.000	50.259	1511692.16	1.0164	A	3.1	0.5
9	<input type="checkbox"/>	100.000	99.901	2912079.56	1.9561	A	4.0	-0.1
10	<input type="checkbox"/>	1000.000						
11	<input type="checkbox"/>			81406.78	0.0536	P	2.2	

$$y = 0.0189 * x + 0.0650$$

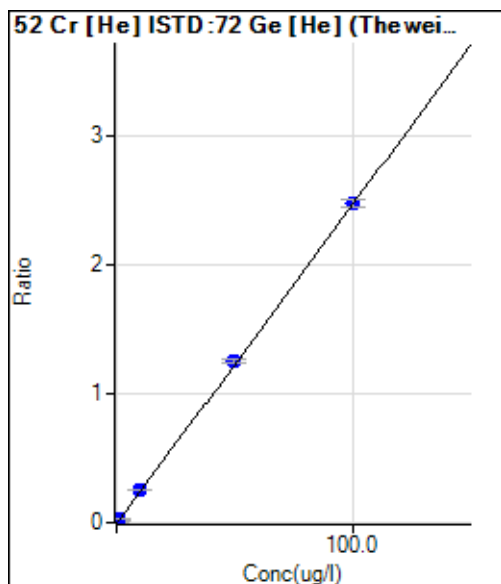
$$R = 1.0000$$

$$DL = 0.1836 \text{ ug/l}$$

$$BEC = 3.434 \text{ ug/l}$$

$$\text{Weight: } 1/y$$

$$\text{Min Conc: } <\text{None}>$$



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	De t	RSD	%RE
1	<input type="checkbox"/>	0.000	0.000	877.81	0.0039	P	2.7	
2	<input type="checkbox"/>	0.025	0.049	1131.16	0.0052	P	3.7	95.4
3	<input type="checkbox"/>	0.050	0.078	1293.40	0.0059	P	2.7	55.2
4	<input type="checkbox"/>	0.100	0.131	1583.43	0.0072	P	4.4	31.1
5	<input type="checkbox"/>	0.500	0.511	3646.03	0.0166	P	2.1	2.2
6	<input type="checkbox"/>	1.000	1.061	6508.14	0.0302	P	0.2	6.1
7	<input type="checkbox"/>	10.000	10.047	56229.69	0.2528	P	1.8	0.5
8	<input type="checkbox"/>	50.000	50.288	281965.36	1.2493	P	2.7	0.6
9	<input type="checkbox"/>	100.000	99.851	561729.90	2.4768	P	1.9	-0.1
10	<input type="checkbox"/>	1000.000						
11	<input type="checkbox"/>			977.82	0.0043	P	3.1	

$$y = 0.0248 * x + 0.0039$$

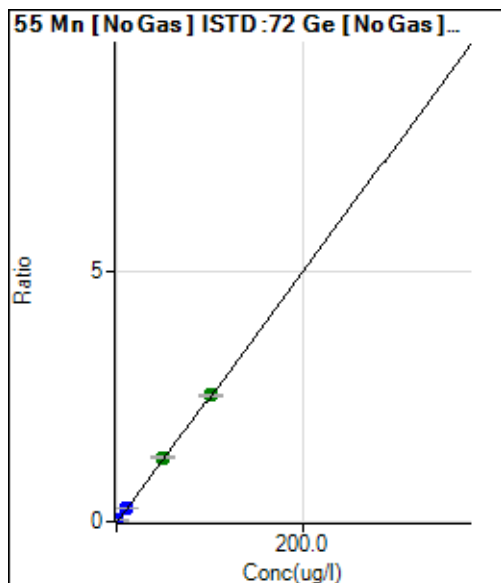
$$R = 1.0000$$

$$DL = 0.01286 \text{ ug/l}$$

$$BEC = 0.1592 \text{ ug/l}$$

$$\text{Weight: } 1/y$$

$$\text{Min Conc: } <\text{None}>$$



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	De t	RSD	%RE
1	<input type="checkbox"/>	0.000	0.000	10988.97	0.0073	P	0.3	
2	<input type="checkbox"/>	0.025	0.029	11881.25	0.0080	P	1.8	15.1
3	<input type="checkbox"/>	0.050	0.056	12966.67	0.0087	P	5.1	12.0
4	<input type="checkbox"/>	0.100	0.092	14468.51	0.0096	P	1.0	-8.1
5	<input type="checkbox"/>	0.500	0.445	28994.32	0.0185	P	4.7	-11.1
6	<input type="checkbox"/>	1.000	1.022	49552.10	0.0332	P	4.9	2.2
7	<input type="checkbox"/>	10.000	10.118	392037.43	0.2637	P	2.0	1.2
8	<input type="checkbox"/>	50.000	50.634	1920391.71	1.2907	A	1.0	1.3
9	<input type="checkbox"/>	100.000	99.671	3773602.89	2.5337	A	1.7	-0.3
10	<input type="checkbox"/>	1000.000						
11	<input type="checkbox"/>			15943.75	0.0105	P	3.3	

$$y = 0.0253 * x + 0.0073$$

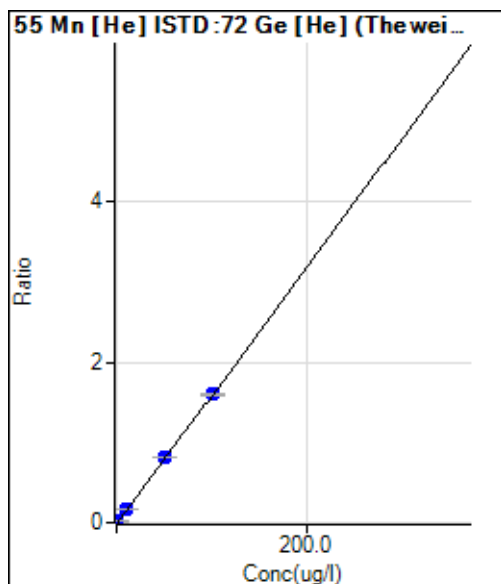
$$R = 1.0000$$

$$DL = 0.002459 \text{ ug/l}$$

$$BEC = 0.2867 \text{ ug/l}$$

$$\text{Weight: } 1/y$$

$$\text{Min Conc: } <\text{None}>$$



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	De t	RSD	%RE
1	<input type="checkbox"/>	0.000	0.000	157.31	0.0007	P	14.6	
2	<input type="checkbox"/>	0.025	0.033	270.62	0.0012	P	6.0	31.1
3	<input type="checkbox"/>	0.050	0.065	387.26	0.0018	P	1.6	30.7
4	<input type="checkbox"/>	0.100	0.116	566.23	0.0026	P	2.0	16.0
5	<input type="checkbox"/>	0.500	0.519	1988.07	0.0090	P	3.5	3.8
6	<input type="checkbox"/>	1.000	1.071	3860.41	0.0179	P	1.6	7.1
7	<input type="checkbox"/>	10.000	10.309	37022.29	0.1664	P	1.3	3.1
8	<input type="checkbox"/>	50.000	50.852	184678.91	0.8181	P	1.3	1.7
9	<input type="checkbox"/>	100.000	99.542	363072.59	1.6008	P	1.0	-0.5
10	<input type="checkbox"/>	1000.000						
11	<input type="checkbox"/>			190.96	0.0008	P	7.3	

$$y = 0.0161 * x + 7.0574E-004$$

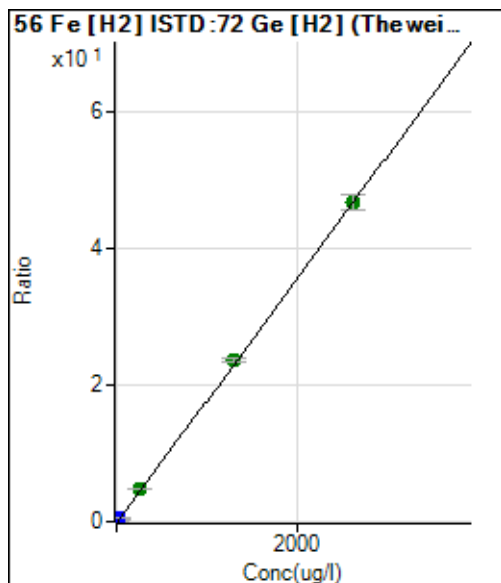
$$R = 1.0000$$

$$DL = 0.01922 \text{ ug/l}$$

$$BEC = 0.0439 \text{ ug/l}$$

$$\text{Weight: } 1/y$$

$$\text{Min Conc: } <\text{None}>$$



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	De t	RSD	%RE
1	<input type="checkbox"/>	0.000	0.000	10265.62	0.0103	P	0.2	
2	<input type="checkbox"/>	0.650	0.767	23997.01	0.0242	P	0.8	18.1
3	<input type="checkbox"/>	1.300	1.609	39403.99	0.0394	P	2.2	23.8
4	<input type="checkbox"/>	2.600	2.963	63704.80	0.0639	P	3.9	14.0
5	<input type="checkbox"/>	13.000	13.711	259156.06	0.2579	P	0.1	5.5
6	<input type="checkbox"/>	26.000	28.259	512499.72	0.5206	P	0.8	8.7
7	<input type="checkbox"/>	260.000	269.148	5009844.72	4.8704	A	1.9	3.5
8	<input type="checkbox"/>	1300.000	1315.539	24664788.71	23.7652	A	2.0	1.2
9	<input type="checkbox"/>	2600.000	2591.289	47645535.53	46.8016	A	4.5	-0.3
10	<input type="checkbox"/>	6000.000						
11	<input type="checkbox"/>			11704.78	0.0118	P	1.9	

$y = 0.0181 * x + 0.0103$

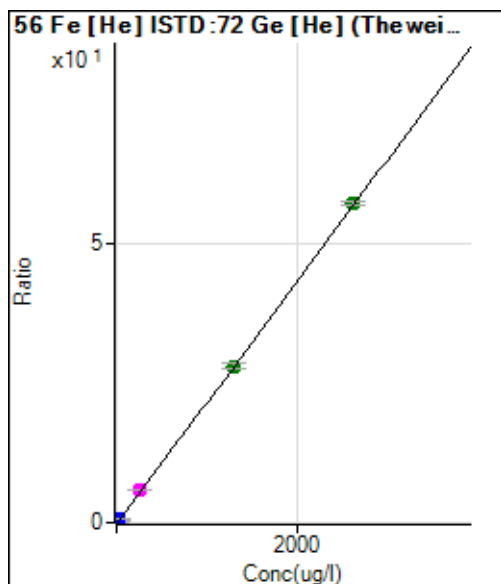
$R = 1.0000$

DL = 0.002706 ug/l

BEC = 0.5729 ug/l

Weight: 1/y

Min Conc: <None>



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	De t	RSD	%RE
1	<input type="checkbox"/>	0.000	0.000	5867.09	0.0264	P	4.6	
2	<input type="checkbox"/>	0.650	0.724	9275.61	0.0423	P	2.6	11.4
3	<input type="checkbox"/>	1.300	1.512	13135.77	0.0596	P	2.5	16.3
4	<input type="checkbox"/>	2.600	2.739	19046.55	0.0865	P	3.4	5.4
5	<input type="checkbox"/>	13.000	13.662	71684.26	0.3263	P	2.6	5.1
6	<input type="checkbox"/>	26.000	28.064	138392.51	0.6424	P	1.6	7.9
7	<input type="checkbox"/>	260.000	261.927	1284878.30	5.7760	M	2.0	0.7
8	<input type="checkbox"/>	1300.000	1278.815	6340773.78	28.0982	A	3.5	-1.6
9	<input type="checkbox"/>	2600.000	2610.375	13001928.76	57.3278	A	1.4	0.4
10	<input type="checkbox"/>	6000.000						
11	<input type="checkbox"/>			6591.46	0.0290	P	6.1	

$y = 0.0220 * x + 0.0264$

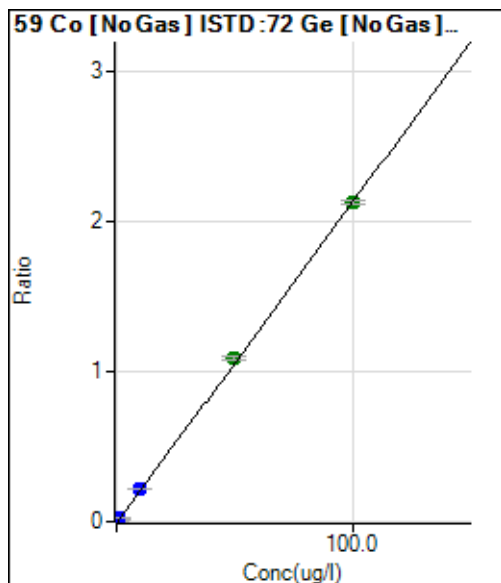
$R = 1.0000$

DL = 0.165 ug/l

BEC = 1.201 ug/l

Weight: 1/y

Min Conc: <None>



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	De t	RSD	%RE
1	<input type="checkbox"/>	0.000	0.000	565.56	0.0004	P	3.6	
2	<input type="checkbox"/>	0.025	0.185	6556.94	0.0043	P	136.4	639.8
3	<input type="checkbox"/>	0.050	0.063	2561.82	0.0017	P	5.0	25.2
4	<input type="checkbox"/>	0.100	0.110	4102.45	0.0027	P	3.1	9.5
5	<input type="checkbox"/>	0.500	0.483	16803.12	0.0107	P	3.7	-3.3
6	<input type="checkbox"/>	1.000	1.069	34818.95	0.0233	P	1.4	6.9
7	<input type="checkbox"/>	10.000	10.136	323538.33	0.2176	P	3.3	1.4
8	<input type="checkbox"/>	50.000	51.170	1632206.35	1.0973	A	2.3	2.3
9	<input type="checkbox"/>	100.000	99.401	3174232.22	2.1312	A	1.6	-0.6
10	<input type="checkbox"/>	1000.000						
11	<input type="checkbox"/>			785.13	0.0005	P	9.6	

$$y = 0.0214 * x + 3.7425E-004$$

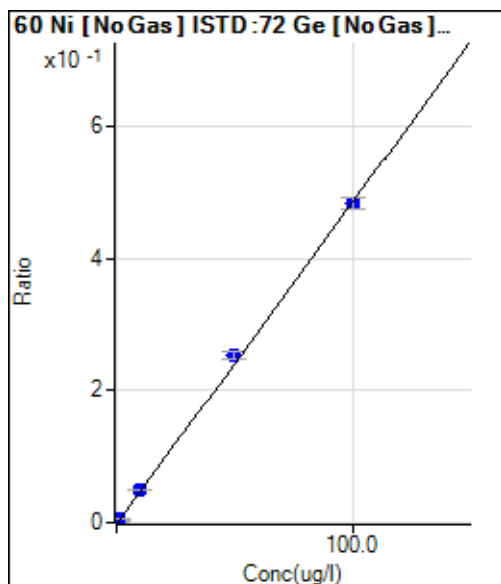
$$R = 0.9999$$

$$DL = 0.001901 \text{ ug/l}$$

$$BEC = 0.01746 \text{ ug/l}$$

$$\text{Weight: } 1/y$$

$$\text{Min Conc: } <\text{None}>$$



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	De t	RSD	%RE
1	<input type="checkbox"/>	0.000	0.000	502.35	0.0003	P	18.8	
2	<input type="checkbox"/>	0.025	0.033	731.90	0.0005	P	7.1	31.7
3	<input type="checkbox"/>	0.050	0.078	1061.27	0.0007	P	18.2	56.1
4	<input type="checkbox"/>	0.100	0.121	1390.65	0.0009	P	4.7	21.1
5	<input type="checkbox"/>	0.500	0.687	5759.75	0.0037	P	3.1	37.3
6	<input type="checkbox"/>	1.000	1.088	8429.06	0.0056	P	8.0	8.8
7	<input type="checkbox"/>	10.000	9.954	72706.22	0.0489	P	1.5	-0.5
8	<input type="checkbox"/>	50.000	51.858	376894.03	0.2534	P	3.9	3.7
9	<input type="checkbox"/>	100.000	99.074	720464.35	0.4839	P	3.1	-0.9
10	<input type="checkbox"/>	1000.000						
11	<input type="checkbox"/>			715.27	0.0005	P	24.4	

$$y = 0.0049 * x + 3.3147E-004$$

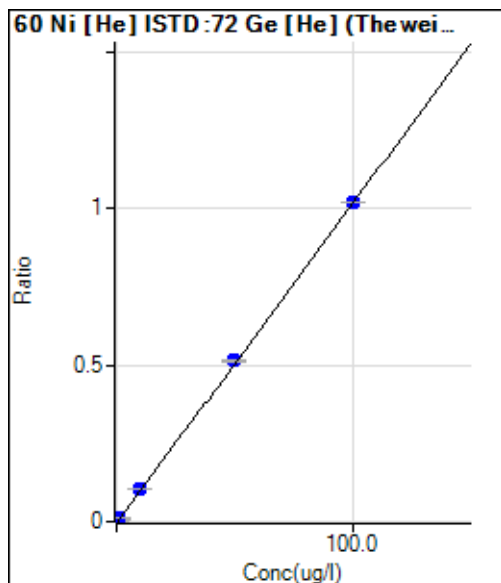
$$R = 0.9998$$

$$DL = 0.0384 \text{ ug/l}$$

$$BEC = 0.06792 \text{ ug/l}$$

$$\text{Weight: } 1/y$$

$$\text{Min Conc: } <\text{None}>$$



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	De t	RSD	%RE
1	<input type="checkbox"/>	0.000	0.000	98.89	0.0004	P	9.6	
2	<input type="checkbox"/>	0.025	0.036	177.78	0.0008	P	17.4	43.7
3	<input type="checkbox"/>	0.050	0.087	294.45	0.0013	P	11.2	75.0
4	<input type="checkbox"/>	0.100	0.117	360.01	0.0016	P	12.2	16.8
5	<input type="checkbox"/>	0.500	0.659	1574.54	0.0072	P	7.5	31.7
6	<input type="checkbox"/>	1.000	1.084	2476.89	0.0115	P	9.1	8.4
7	<input type="checkbox"/>	10.000	10.136	23102.78	0.1039	P	1.5	1.4
8	<input type="checkbox"/>	50.000	50.291	115926.44	0.5135	P	1.0	0.6
9	<input type="checkbox"/>	100.000	99.839	231139.90	1.0191	P	0.3	-0.2
10	<input type="checkbox"/>	1000.000						
11	<input type="checkbox"/>			115.55	0.0005	P	18.9	

$$y = 0.0102 * x + 4.4379E-004$$

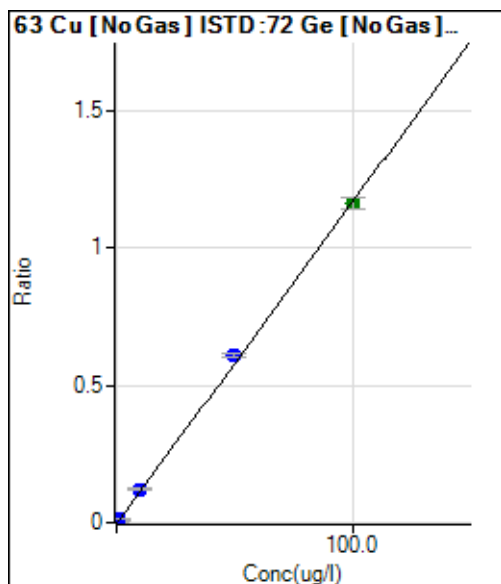
R = 1.0000

DL = 0.01257 ug/l

BEC = 0.0435 ug/l

Weight: 1/y

Min Conc: <None>



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	De t	RSD	%RE
1	<input type="checkbox"/>	0.000	0.000	2056.31	0.0014	P	8.0	
2	<input type="checkbox"/>	0.025	0.037	2670.65	0.0018	P	3.5	48.7
3	<input type="checkbox"/>	0.050	0.065	3176.29	0.0021	P	5.2	30.0
4	<input type="checkbox"/>	0.100	0.107	3947.46	0.0026	P	1.3	7.0
5	<input type="checkbox"/>	0.500	0.631	13716.60	0.0088	P	3.5	26.1
6	<input type="checkbox"/>	1.000	1.054	20537.99	0.0137	P	2.5	5.4
7	<input type="checkbox"/>	10.000	10.312	182146.62	0.1225	P	2.0	3.1
8	<input type="checkbox"/>	50.000	51.991	910727.45	0.6122	P	2.1	4.0
9	<input type="checkbox"/>	100.000	98.972	1733555.00	1.1642	A	3.3	-1.0
10	<input type="checkbox"/>	1000.000						
11	<input type="checkbox"/>			3859.40	0.0025	P	0.6	

$$y = 0.0117 * x + 0.0014$$

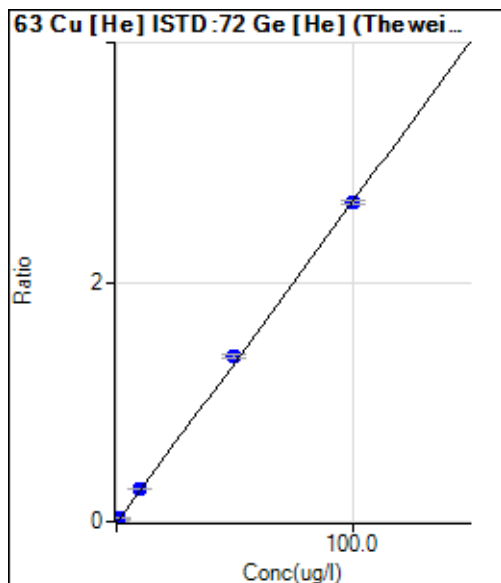
R = 0.9998

DL = 0.02792 ug/l

BEC = 0.1159 ug/l

Weight: 1/y

Min Conc: <None>



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	De t	RSD	%RE
1	<input type="checkbox"/>	0.000	0.000	683.55	0.0031	P	3.4	
2	<input type="checkbox"/>	0.025	0.042	920.51	0.0042	P	3.6	67.2
3	<input type="checkbox"/>	0.050	0.072	1104.49	0.0050	P	4.9	44.3
4	<input type="checkbox"/>	0.100	0.106	1301.13	0.0059	P	2.6	5.7
5	<input type="checkbox"/>	0.500	0.679	4679.15	0.0213	P	1.9	35.8
6	<input type="checkbox"/>	1.000	1.101	7029.62	0.0326	P	1.5	10.1
7	<input type="checkbox"/>	10.000	10.327	62344.35	0.2803	P	0.3	3.3
8	<input type="checkbox"/>	50.000	51.447	312373.02	1.3839	P	1.9	2.9
9	<input type="checkbox"/>	100.000	99.242	604824.42	2.6668	P	1.3	-0.8
10	<input type="checkbox"/>	1000.000						
11	<input type="checkbox"/>			1166.15	0.0051	P	4.3	

$y = 0.0268 * x + 0.0031$

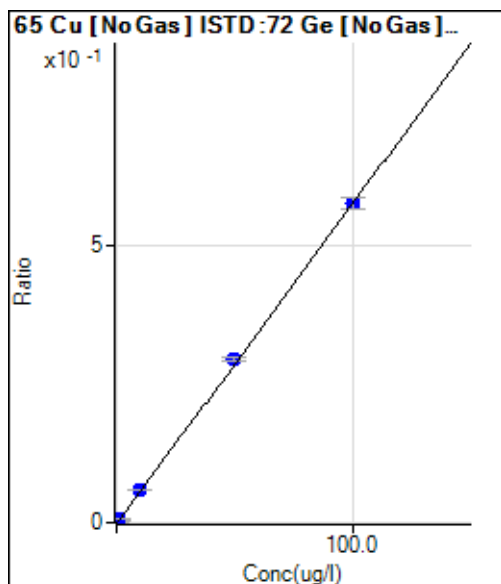
$R = 0.9999$

DL = 0.01167 ug/l

BEC = 0.1144 ug/l

Weight: 1/y

Min Conc: <None>



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	De t	RSD	%RE
1	<input type="checkbox"/>	0.000	0.000	975.09	0.0006	P	8.1	
2	<input type="checkbox"/>	0.025	0.034	1251.89	0.0008	P	4.0	36.6
3	<input type="checkbox"/>	0.050	0.056	1451.32	0.0010	P	1.8	12.7
4	<input type="checkbox"/>	0.100	0.091	1770.16	0.0012	P	9.1	-8.6
5	<input type="checkbox"/>	0.500	0.605	6489.39	0.0041	P	2.2	21.1
6	<input type="checkbox"/>	1.000	1.046	10004.79	0.0067	P	4.1	4.6
7	<input type="checkbox"/>	10.000	10.131	88114.20	0.0593	P	2.0	1.3
8	<input type="checkbox"/>	50.000	50.949	439484.03	0.2955	P	3.2	1.9
9	<input type="checkbox"/>	100.000	99.511	858285.56	0.5765	P	3.8	-0.5
10	<input type="checkbox"/>	1000.000						
11	<input type="checkbox"/>			1764.82	0.0012	P	4.8	

$y = 0.0058 * x + 6.4566E-004$

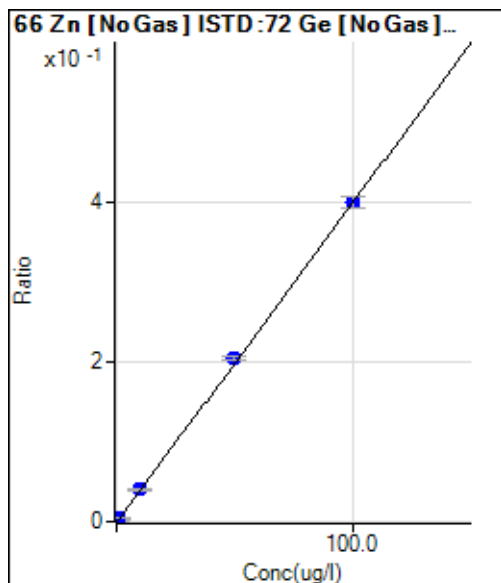
$R = 0.9999$

DL = 0.02703 ug/l

BEC = 0.1116 ug/l

Weight: 1/y

Min Conc: <None>



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	De t	RSD	%RE
1	<input type="checkbox"/>	0.000	0.000	1036.01	0.0007	P	7.7	
2	<input type="checkbox"/>			1375.27	0.0009	P	1.9	
3	<input type="checkbox"/>	0.050	0.095	1598.14	0.0011	P	29.5	90.5
4	<input type="checkbox"/>	0.100	0.111	1704.56	0.0011	P	8.0	11.2
5	<input type="checkbox"/>	0.500	0.511	4272.92	0.0027	P	5.2	2.1
6	<input type="checkbox"/>	1.000	1.039	7231.05	0.0048	P	3.8	3.9
7	<input type="checkbox"/>	10.000	9.845	59558.01	0.0401	P	2.6	-1.5
8	<input type="checkbox"/>	50.000	50.760	302999.73	0.2037	P	2.8	1.5
9	<input type="checkbox"/>	100.000	99.635	594398.26	0.3992	P	3.2	-0.4
10	<input type="checkbox"/>	1000.000						
11	<input type="checkbox"/>			1309.85	0.0009	P	5.2	

$y = 0.0040 * x + 6.8588E-004$

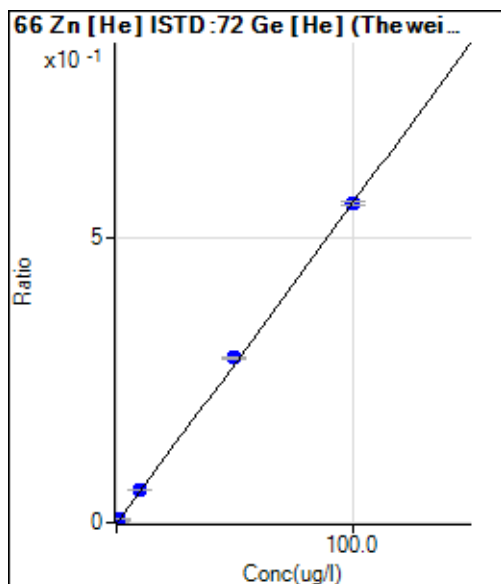
R = 1.0000

DL = 0.03948 ug/l

BEC = 0.1715 ug/l

Weight: 1/y

Min Conc: <None>



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	De t	RSD	%RE
1	<input type="checkbox"/>	0.000	0.000	226.67	0.0010	P	26.2	
2	<input type="checkbox"/>			274.45	0.0013	P	8.0	
3	<input type="checkbox"/>	0.050	0.080	325.56	0.0015	P	22.3	60.8
4	<input type="checkbox"/>	0.100	0.090	336.67	0.0015	P	9.2	-9.9
5	<input type="checkbox"/>	0.500	0.609	977.82	0.0045	P	2.4	21.8
6	<input type="checkbox"/>	1.000	1.085	1534.53	0.0071	P	10.1	8.5
7	<input type="checkbox"/>	10.000	10.007	12758.97	0.0574	P	0.9	0.1
8	<input type="checkbox"/>	50.000	51.194	65285.54	0.2892	P	1.4	2.4
9	<input type="checkbox"/>	100.000	99.401	127150.42	0.5606	P	0.9	-0.6
10	<input type="checkbox"/>	1000.000						
11	<input type="checkbox"/>			288.89	0.0013	P	1.4	

$y = 0.0056 * x + 0.0010$

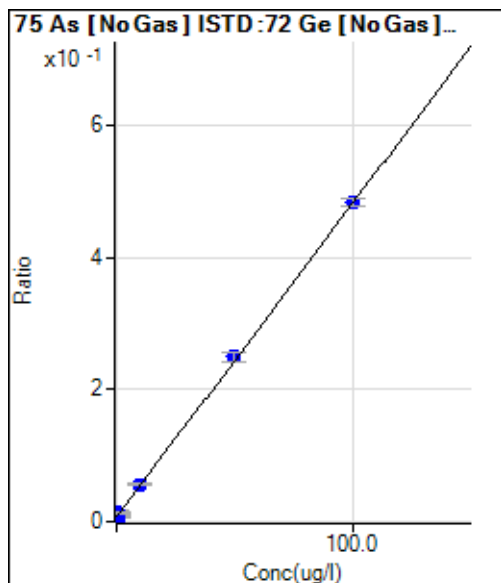
R = 0.9999

DL = 0.1424 ug/l

BEC = 0.1814 ug/l

Weight: 1/y

Min Conc: <None>



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	De t	RSD	%RE
1	<input type="checkbox"/>	0.000	0.000	14311.92	0.0095	P	51.4	
2	<input type="checkbox"/>	0.025	1.232	22754.83	0.0154	P	27.7	4828.7
3	<input type="checkbox"/>	0.050	0.086	14791.24	0.0099	P	33.9	71.9
4	<input type="checkbox"/>	0.100	-0.210	12862.45	0.0085	P	30.8	-309.7
5	<input type="checkbox"/>	0.500	-0.476	11276.81	0.0073	P	55.0	-195.2
6	<input type="checkbox"/>	1.000	0.604	18454.02	0.0124	P	20.5	-39.6
7	<input type="checkbox"/>	10.000	9.837	83715.93	0.0563	P	6.1	-1.6
8	<input type="checkbox"/>	50.000	50.539	371429.59	0.2498	P	5.2	1.1
9	<input type="checkbox"/>	100.000	99.756	720504.90	0.4839	P	2.7	-0.2
10	<input type="checkbox"/>	1000.000						
11	<input type="checkbox"/>			15554.34	0.0102	P	33.6	

$y = 0.0048 * x + 0.0095$

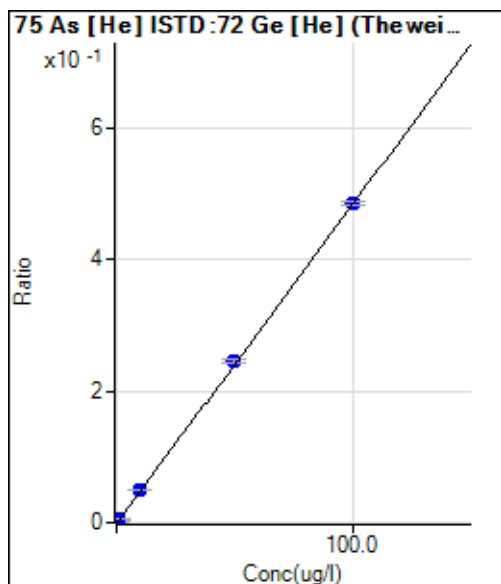
$R = 0.9998$

DL = 3.086 ug/l

BEC = 2.003 ug/l

Weight: 1/y

Min Conc: <None>



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	De t	RSD	%RE
1	<input type="checkbox"/>	0.000	0.000	282.93	0.0013	P	2.8	
2	<input type="checkbox"/>	0.025	0.047	329.00	0.0015	P	1.1	87.3
3	<input type="checkbox"/>	0.050	0.061	345.73	0.0016	P	1.8	21.9
4	<input type="checkbox"/>	0.100	0.112	399.47	0.0018	P	1.5	11.6
5	<input type="checkbox"/>	0.500	0.522	836.68	0.0038	P	2.9	4.4
6	<input type="checkbox"/>	1.000	1.076	1400.77	0.0065	P	1.5	7.6
7	<input type="checkbox"/>	10.000	10.131	11240.03	0.0505	P	0.6	1.3
8	<input type="checkbox"/>	50.000	50.448	55645.99	0.2465	P	1.9	0.9
9	<input type="checkbox"/>	100.000	99.762	110292.34	0.4863	P	0.9	-0.2
10	<input type="checkbox"/>	1000.000						
11	<input type="checkbox"/>			356.07	0.0016	P	5.4	

$y = 0.0049 * x + 0.0013$

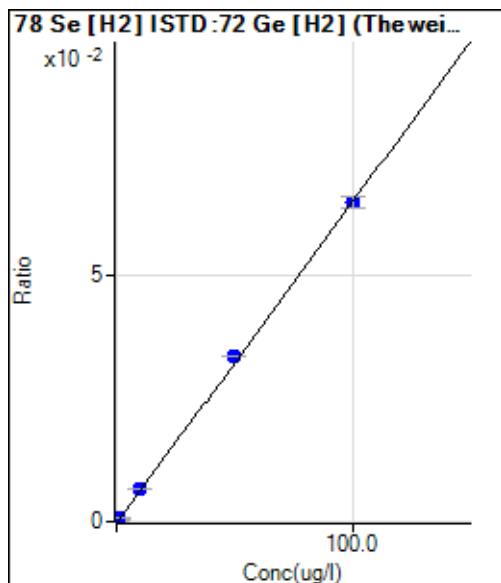
$R = 1.0000$

DL = 0.02213 ug/l

BEC = 0.2614 ug/l

Weight: 1/y

Min Conc: <None>



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	De t	RSD	%RE
1	<input type="checkbox"/>	0.000	0.000	34.11	0.0000	P	5.3	
2	<input type="checkbox"/>	0.025	0.023	48.89	0.0000	P	1.9	-8.2
3	<input type="checkbox"/>	0.050	0.051	67.56	0.0001	P	4.8	1.7
4	<input type="checkbox"/>	0.100	0.098	98.00	0.0001	P	10.5	-1.9
5	<input type="checkbox"/>	0.500	0.508	367.34	0.0004	P	4.4	1.7
6	<input type="checkbox"/>	1.000	1.047	705.35	0.0007	P	1.8	4.7
7	<input type="checkbox"/>	10.000	10.096	6802.59	0.0066	P	1.3	1.0
8	<input type="checkbox"/>	50.000	51.442	34825.00	0.0336	P	0.9	2.9
9	<input type="checkbox"/>	100.000	99.269	65895.58	0.0647	P	3.9	-0.7
10	<input type="checkbox"/>	1000.000						
11	<input type="checkbox"/>			101.33	0.0001	P	5.2	

$$y = 6.5157E-004 * x + 3.4360E-005$$

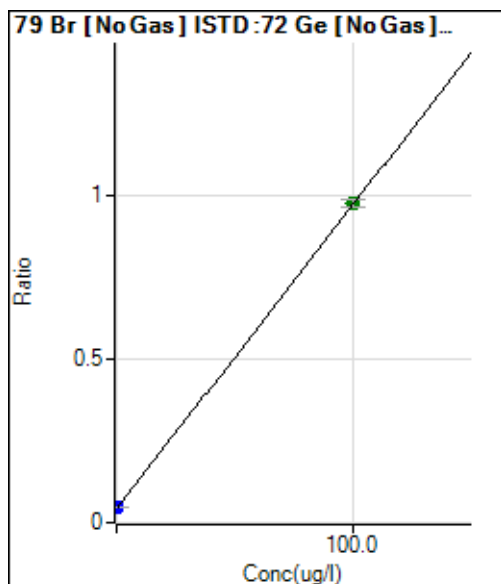
$$R = 0.9999$$

$$DL = 0.008357 \text{ ug/l}$$

$$BEC = 0.05273 \text{ ug/l}$$

$$\text{Weight: } 1/y$$

$$\text{Min Conc: } <\text{None}>$$



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	De t	RSD	%RE
1	<input type="checkbox"/>	0.000	0.000	72020.13	0.0476	P	6.9	
2	<input type="checkbox"/>			231093.09	0.1557	P	4.3	
3	<input type="checkbox"/>			192753.32	0.1291	P	3.3	
4	<input type="checkbox"/>			205883.64	0.1366	P	2.6	
5	<input type="checkbox"/>			227555.00	0.1455	P	3.3	
6	<input type="checkbox"/>			192783.51	0.1291	P	5.1	
7	<input type="checkbox"/>			213955.46	0.1439	P	1.8	
8	<input type="checkbox"/>			257834.03	0.1733	P	2.7	
9	<input type="checkbox"/>			239931.99	0.1611	P	2.8	
10	<input type="checkbox"/>							
11	<input type="checkbox"/>	100.000	100.000	1484320.77	0.9767	A	2.2	0.0

$$y = 0.0093 * x + 0.0476$$

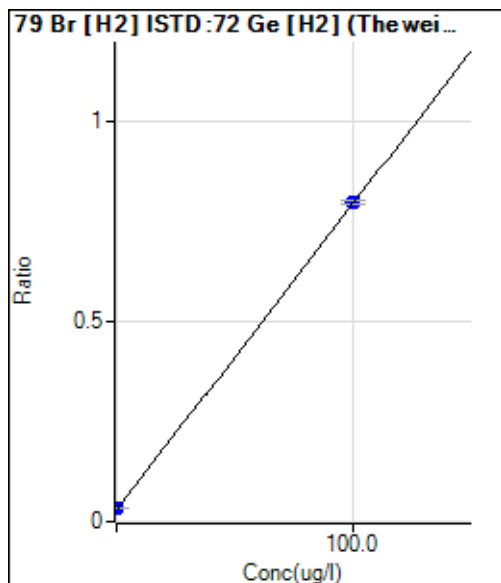
$$R = 1.0000$$

$$DL = 1.056 \text{ ug/l}$$

$$BEC = 5.123 \text{ ug/l}$$

$$\text{Weight: } 1/y$$

$$\text{Min Conc: } <\text{None}>$$



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	De t	RSD	%RE
1	<input type="checkbox"/>	0.000	0.000	33679.13	0.0339	P	2.7	
2	<input type="checkbox"/>			121136.04	0.1222	P	2.2	
3	<input type="checkbox"/>			102042.16	0.1022	P	5.5	
4	<input type="checkbox"/>			106090.59	0.1064	P	5.8	
5	<input type="checkbox"/>			119143.43	0.1186	P	0.9	
6	<input type="checkbox"/>			98256.86	0.0998	P	1.8	
7	<input type="checkbox"/>			109732.49	0.1067	P	1.8	
8	<input type="checkbox"/>			139268.44	0.1342	P	1.8	
9	<input type="checkbox"/>			122783.70	0.1206	P	3.2	
10	<input type="checkbox"/>							
11	<input type="checkbox"/>	100.000	100.000	791803.56	0.7962	P	1.1	0.0

$y = 0.0076 * x + 0.0339$

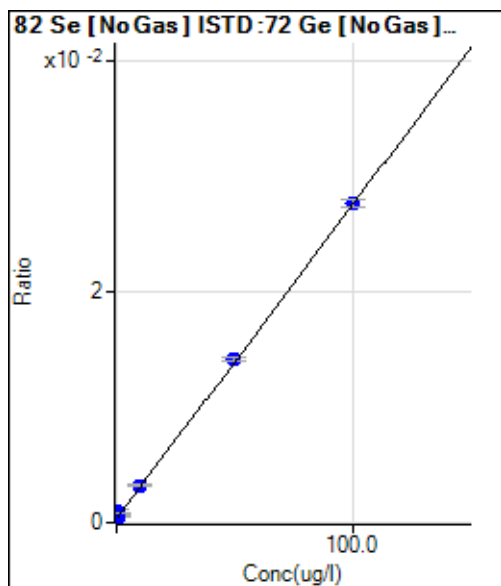
R = 1.0000

DL = 0.3617 ug/l

BEC = 4.452 ug/l

Weight: 1/y

Min Conc: <None>



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	De t	RSD	%RE
1	<input type="checkbox"/>	0.000	0.000	752.88	0.0005	P	16.2	
2	<input type="checkbox"/>	0.025	1.924	1509.97	0.0010	P	20.8	7594.4
3	<input type="checkbox"/>	0.050	0.041	758.35	0.0005	P	2.7	-18.0
4	<input type="checkbox"/>	0.100	-0.038	733.28	0.0005	P	2.7	-138.0
5	<input type="checkbox"/>	0.500	0.170	848.36	0.0005	P	19.1	-66.0
6	<input type="checkbox"/>	1.000	1.261	1254.67	0.0008	P	17.9	26.1
7	<input type="checkbox"/>	10.000	10.119	4831.79	0.0033	P	3.7	1.2
8	<input type="checkbox"/>	50.000	50.227	21064.25	0.0142	P	3.3	0.5
9	<input type="checkbox"/>	100.000	99.873	41206.27	0.0277	P	2.4	-0.1
10	<input type="checkbox"/>	1000.000						
11	<input type="checkbox"/>			1603.66	0.0011	P	2.1	

$y = 2.7208E-004 * x + 4.9681E-004$

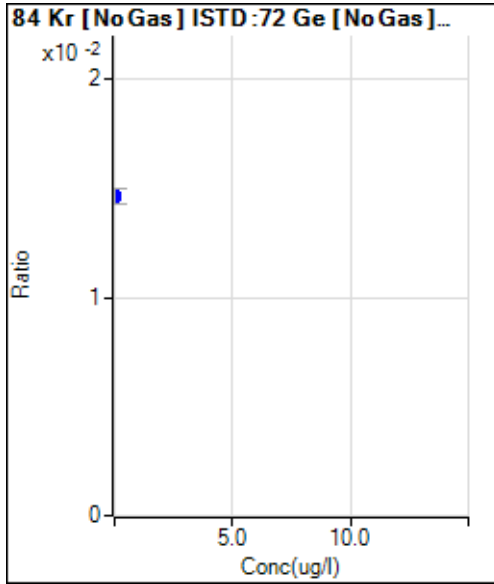
R = 0.9998

DL = 0.8863 ug/l

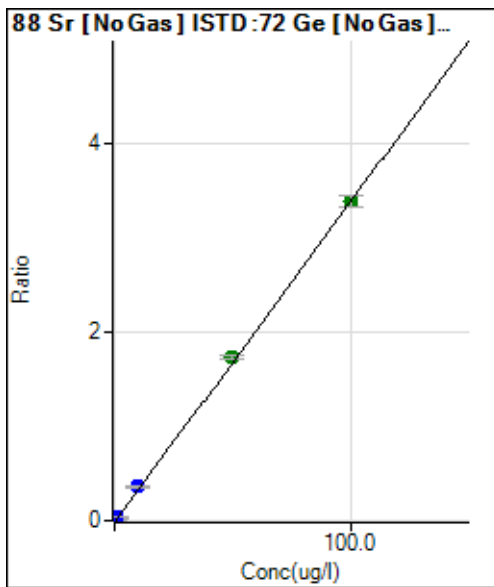
BEC = 1.826 ug/l

Weight: 1/y

Min Conc: <None>



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	De t	RSD	%RE
1	<input type="checkbox"/>	0.000		22139.70	0.0147	P	4.2	
2	<input type="checkbox"/>			34199.78	0.0230	P	4.3	
3	<input type="checkbox"/>			20364.12	0.0137	P	11.0	
4	<input type="checkbox"/>			18208.78	0.0121	P	1.3	
5	<input type="checkbox"/>			22106.43	0.0141	P	2.6	
6	<input type="checkbox"/>			22616.20	0.0151	P	2.9	
7	<input type="checkbox"/>			25638.52	0.0172	P	1.4	
8	<input type="checkbox"/>			39015.42	0.0262	P	2.0	
9	<input type="checkbox"/>			54330.93	0.0365	P	2.9	
10	<input type="checkbox"/>							
11	<input type="checkbox"/>			22332.95	0.0147	P	4.8	



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	De t	RSD	%RE
1	<input type="checkbox"/>	0.000	0.000	808.43	0.0005	P	7.5	
2	<input type="checkbox"/>	0.025	0.026	2096.00	0.0014	P	1.0	2.8
3	<input type="checkbox"/>	0.050	0.060	3829.60	0.0026	P	5.7	19.2
4	<input type="checkbox"/>	0.100	0.112	6555.17	0.0043	P	2.2	11.9
5	<input type="checkbox"/>	0.500	0.494	27205.23	0.0174	P	1.9	-1.1
6	<input type="checkbox"/>	1.000	1.064	54976.46	0.0368	P	4.4	6.4
7	<input type="checkbox"/>	10.000	10.536	534700.84	0.3597	P	2.1	5.4
8	<input type="checkbox"/>	50.000	50.827	2578193.26	1.7331	A	1.9	1.7
9	<input type="checkbox"/>	100.000	99.532	5052564.12	3.3934	A	3.2	-0.5
10	<input type="checkbox"/>	1000.000						
11	<input type="checkbox"/>			931.52	0.0006	P	6.0	

$y = 0.0341 * x + 5.3504E-004$

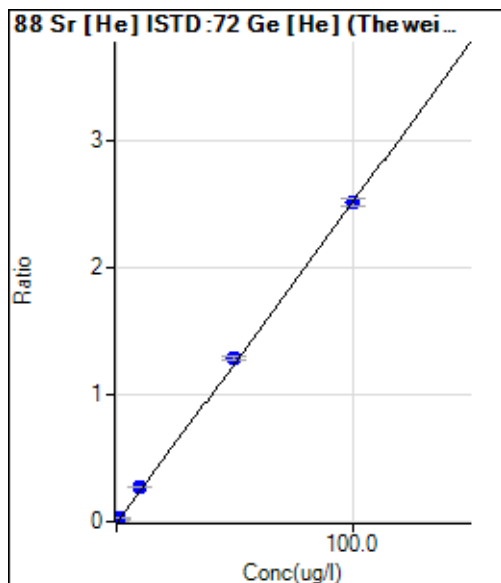
R = 0.9999

DL = 0.003542 ug/l

BEC = 0.0157 ug/l

Weight: 1/y

Min Conc: <None>



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	De t	RSD	%RE
1	<input type="checkbox"/>	0.000	0.000	295.56	0.0013	P	9.0	
2	<input type="checkbox"/>	0.025	0.021	407.79	0.0019	P	7.9	-16.0
3	<input type="checkbox"/>	0.050	0.056	606.68	0.0027	P	11.0	12.6
4	<input type="checkbox"/>	0.100	0.117	940.04	0.0043	P	3.1	16.6
5	<input type="checkbox"/>	0.500	0.518	3165.93	0.0144	P	5.8	3.7
6	<input type="checkbox"/>	1.000	1.080	6155.81	0.0286	P	2.9	8.0
7	<input type="checkbox"/>	10.000	10.586	59719.25	0.2685	P	0.8	5.9
8	<input type="checkbox"/>	50.000	50.995	290720.88	1.2881	P	2.8	2.0
9	<input type="checkbox"/>	100.000	99.443	569391.56	2.5106	P	1.9	-0.6
10	<input type="checkbox"/>	1000.000						
11	<input type="checkbox"/>			294.45	0.0013	P	11.7	

$y = 0.0252 * x + 0.0013$

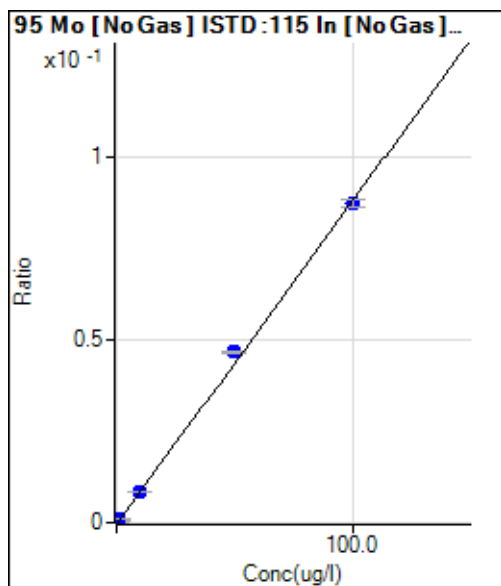
$R = 0.9999$

DL = 0.01427 ug/l

BEC = 0.0526 ug/l

Weight: 1/y

Min Conc: <None>



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	De t	RSD	%RE
1	<input type="checkbox"/>	0.000	0.000	61.11	0.0000	P	10.0	
2	<input type="checkbox"/>	0.025	0.024	311.12	0.0000	P	16.7	-4.7
3	<input type="checkbox"/>	0.050	0.052	625.57	0.0001	P	7.3	4.5
4	<input type="checkbox"/>	0.100	0.107	1242.29	0.0001	P	3.9	7.4
5	<input type="checkbox"/>	0.500	0.478	5174.31	0.0004	P	2.7	-4.4
6	<input type="checkbox"/>	1.000	0.948	10279.32	0.0008	P	3.5	-5.2
7	<input type="checkbox"/>	10.000	9.444	101415.49	0.0084	P	1.4	-5.6
8	<input type="checkbox"/>	50.000	52.697	547189.31	0.0467	P	0.4	5.4
9	<input type="checkbox"/>	100.000	98.708	1028871.51	0.0874	P	2.4	-1.3
10	<input type="checkbox"/>							
11	<input type="checkbox"/>			214.45	0.0000	P	15.8	

$y = 8.8522E-004 * x + 5.0155E-006$

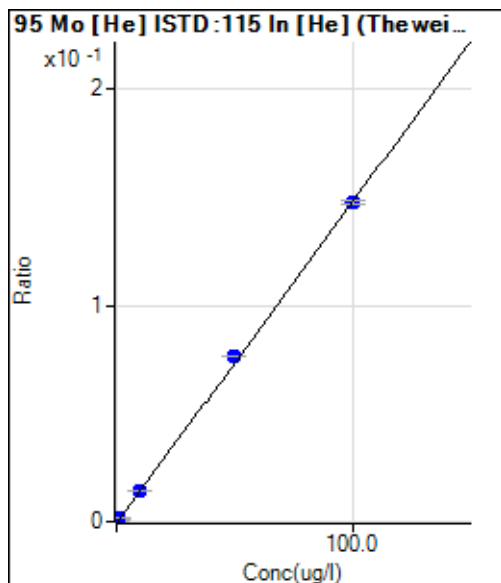
$R = 0.9995$

DL = 0.001702 ug/l

BEC = 0.005666 ug/l

Weight: 1/y

Min Conc: <None>



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	De t	RSD	%RE
1	<input type="checkbox"/>	0.000	0.000	22.22	0.0000	P	48.5	
2	<input type="checkbox"/>	0.025	0.024	114.44	0.0000	P	12.4	-4.1
3	<input type="checkbox"/>	0.050	0.047	205.56	0.0001	P	15.4	-5.5
4	<input type="checkbox"/>	0.100	0.094	390.01	0.0001	P	7.4	-6.2
5	<input type="checkbox"/>	0.500	0.447	1765.68	0.0007	P	5.2	-10.6
6	<input type="checkbox"/>	1.000	0.968	3773.86	0.0014	P	5.4	-3.2
7	<input type="checkbox"/>	10.000	9.619	37609.59	0.0143	P	1.8	-3.8
8	<input type="checkbox"/>	50.000	51.512	196018.83	0.0766	P	0.8	3.0
9	<input type="checkbox"/>	100.000	99.283	371607.82	0.1477	P	1.3	-0.7
10	<input type="checkbox"/>							
11	<input type="checkbox"/>			62.22	0.0000	P	8.6	

$$y = 0.0015 * x + 8.4456E-006$$

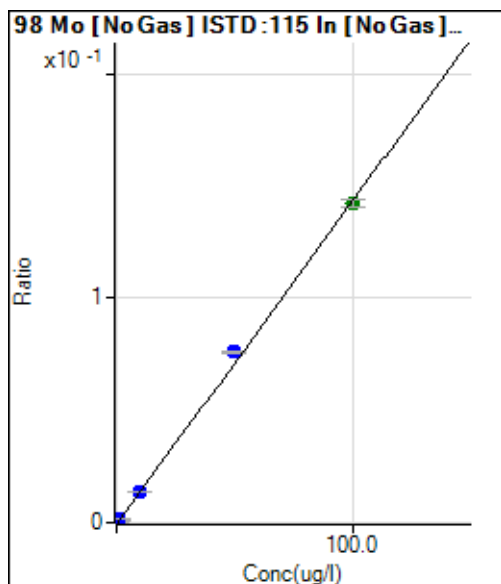
$$R = 0.9998$$

$$DL = 0.008256 \text{ ug/l}$$

$$BEC = 0.005678 \text{ ug/l}$$

$$\text{Weight: } 1/y$$

$$\text{Min Conc: } <\text{None}>$$



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	De t	RSD	%RE
1	<input type="checkbox"/>	0.000	0.000	95.21	0.0000	P	18.4	
2	<input type="checkbox"/>	0.025	0.024	500.50	0.0000	P	11.0	-5.1
3	<input type="checkbox"/>	0.050	0.056	1076.72	0.0001	P	8.5	11.7
4	<input type="checkbox"/>	0.100	0.100	1891.60	0.0002	P	3.9	0.3
5	<input type="checkbox"/>	0.500	0.488	8597.39	0.0007	P	3.6	-2.3
6	<input type="checkbox"/>	1.000	0.961	16961.80	0.0014	P	1.8	-3.9
7	<input type="checkbox"/>	10.000	9.520	166472.98	0.0137	P	1.9	-4.8
8	<input type="checkbox"/>	50.000	52.691	890665.03	0.0760	P	1.9	5.4
9	<input type="checkbox"/>	100.000	98.703	1675290.66	0.1423	A	2.4	-1.3
10	<input type="checkbox"/>							
11	<input type="checkbox"/>			284.32	0.0000	P	12.6	

$$y = 0.0014 * x + 7.8122E-006$$

$$R = 0.9995$$

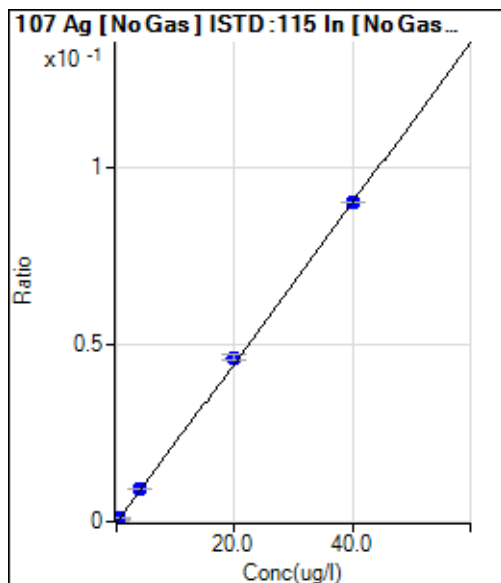
$$DL = 0.002995 \text{ ug/l}$$

$$BEC = 0.00542 \text{ ug/l}$$

$$\text{Weight: } 1/y$$

$$\text{Min Conc: } <\text{None}>$$

Calibration for 026_QC1.d



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	De t	RSD	%RE
1	<input type="checkbox"/>	0.000	0.000	1866.21	0.0002	P	2.9	
2	<input type="checkbox"/>	0.010	0.014	2207.07	0.0002	P	5.1	40.5
3	<input type="checkbox"/>	0.020	0.026	2581.95	0.0002	P	6.8	28.6
4	<input type="checkbox"/>	0.040	0.045	3169.63	0.0003	P	0.4	12.5
5	<input type="checkbox"/>	0.200	0.206	7485.67	0.0006	P	6.0	2.9
6	<input type="checkbox"/>	0.400	0.413	13271.54	0.0011	P	1.0	3.3
7	<input type="checkbox"/>	4.000	3.956	110599.31	0.0091	P	1.5	-1.1
8	<input type="checkbox"/>	20.000	20.432	544954.70	0.0465	P	2.9	2.2
9	<input type="checkbox"/>	40.000	39.788	1064111.98	0.0904	P	0.6	-0.5
10	<input type="checkbox"/>							
11	<input type="checkbox"/>			17938.64	0.0015	P	11.2	

$$y = 0.0023 * x + 1.5335E-004$$

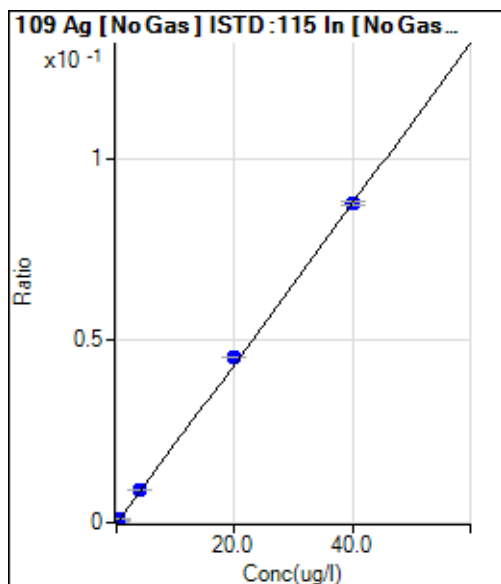
$$R = 0.9999$$

$$DL = 0.005917 \text{ ug/l}$$

$$BEC = 0.06763 \text{ ug/l}$$

Weight: 1/y

Min Conc: <None>



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	De t	RSD	%RE
1	<input type="checkbox"/>	0.000	0.000	1756.15	0.0001	P	4.4	
2	<input type="checkbox"/>	0.010	0.017	2162.37	0.0002	P	3.2	68.9
3	<input type="checkbox"/>	0.020	0.030	2562.60	0.0002	P	5.6	49.3
4	<input type="checkbox"/>	0.040	0.047	3075.58	0.0002	P	4.3	17.5
5	<input type="checkbox"/>	0.200	0.211	7365.56	0.0006	P	3.5	5.7
6	<input type="checkbox"/>	0.400	0.416	12905.74	0.0011	P	2.2	4.0
7	<input type="checkbox"/>	4.000	3.932	106660.22	0.0088	P	1.9	-1.7
8	<input type="checkbox"/>	20.000	20.518	531324.28	0.0453	P	0.3	2.6
9	<input type="checkbox"/>	40.000	39.748	1031798.03	0.0876	P	1.0	-0.6
10	<input type="checkbox"/>							
11	<input type="checkbox"/>			17552.71	0.0014	P	13.0	

$$y = 0.0022 * x + 1.4433E-004$$

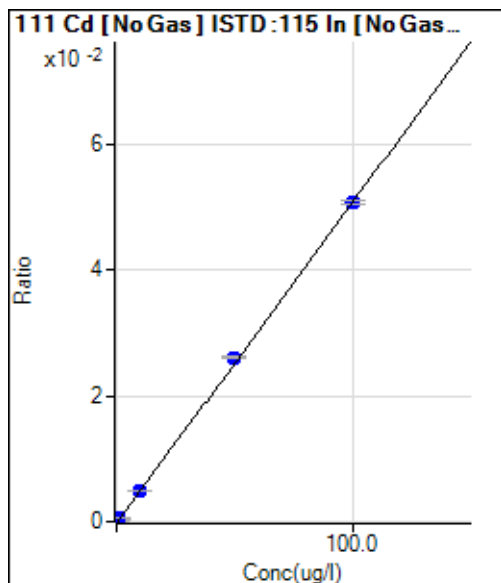
$$R = 0.9999$$

$$DL = 0.00868 \text{ ug/l}$$

$$BEC = 0.06558 \text{ ug/l}$$

Weight: 1/y

Min Conc: <None>



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	De t	RSD	%RE
1	<input type="checkbox"/>	0.000	0.000	-3.64	0.0000	P	-1477.	
2	<input type="checkbox"/>	0.025	0.017	98.41	0.0000	P	69.3	-32.9
3	<input type="checkbox"/>	0.050	0.055	338.07	0.0000	P	18.5	9.2
4	<input type="checkbox"/>	0.100	0.105	662.13	0.0001	P	5.9	4.9
5	<input type="checkbox"/>	0.500	0.482	2973.27	0.0002	P	2.2	-3.6
6	<input type="checkbox"/>	1.000	0.992	6169.39	0.0005	P	1.8	-0.8
7	<input type="checkbox"/>	10.000	9.796	60723.69	0.0050	P	1.1	-2.0
8	<input type="checkbox"/>	50.000	51.174	306778.73	0.0262	P	2.0	2.3
9	<input type="checkbox"/>	100.000	99.434	598644.24	0.0508	P	0.7	-0.6
10	<input type="checkbox"/>	1000.000						
11	<input type="checkbox"/>			90.24	0.0000	P	47.7	

$$y = 5.1130E-004 * x - 2.9580E-007$$

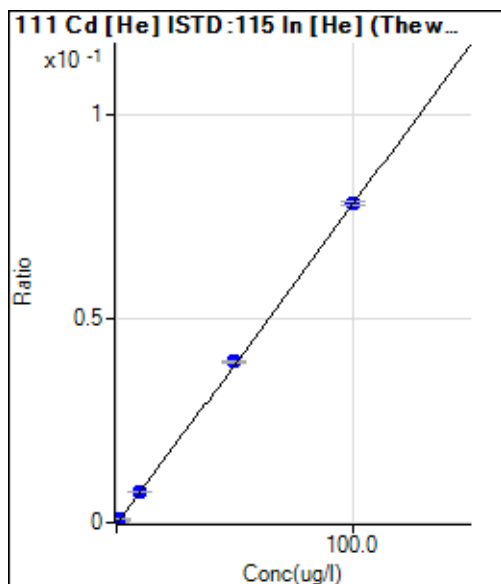
R = 0.9999

DL = 0.02564 ug/l

BEC = -0.0005785 ug/l

Weight: 1/y

Min Conc: <None>



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	De t	RSD	%RE
1	<input type="checkbox"/>	0.000	0.000	6.45	0.0000	P	20.6	
2	<input type="checkbox"/>	0.025	0.025	56.78	0.0000	P	8.8	-1.0
3	<input type="checkbox"/>	0.050	0.054	116.34	0.0000	P	3.8	7.3
4	<input type="checkbox"/>	0.100	0.108	230.00	0.0001	P	1.2	8.1
5	<input type="checkbox"/>	0.500	0.482	999.93	0.0004	P	1.7	-3.5
6	<input type="checkbox"/>	1.000	0.993	2037.93	0.0008	P	1.0	-0.7
7	<input type="checkbox"/>	10.000	9.794	20200.08	0.0077	P	2.0	-2.1
8	<input type="checkbox"/>	50.000	50.434	101287.63	0.0396	P	1.2	0.9
9	<input type="checkbox"/>	100.000	99.804	197153.20	0.0784	P	1.1	-0.2
10	<input type="checkbox"/>	1000.000						
11	<input type="checkbox"/>			41.44	0.0000	P	8.7	

$$y = 7.8510E-004 * x + 2.4451E-006$$

R = 1.0000

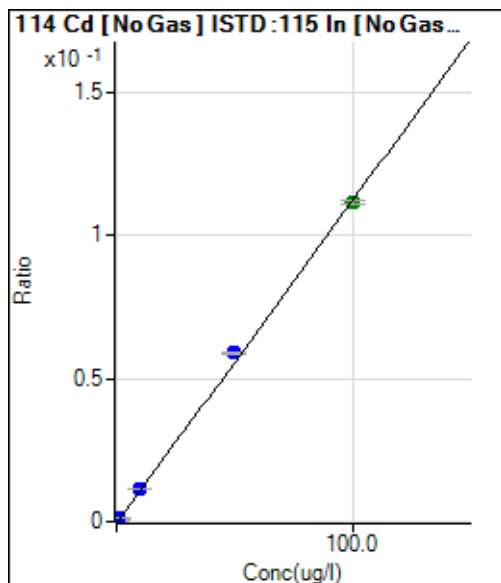
DL = 0.001928 ug/l

BEC = 0.003114 ug/l

Weight: 1/y

Min Conc: <None>

Calibration for 026_QC1.d



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	De t	RSD	%RE
1	<input type="checkbox"/>	0.000	0.000	-173.12	0.0000	P	-67.0	
2	<input type="checkbox"/>	0.025	0.022	121.76	0.0000	P	75.4	-13.4
3	<input type="checkbox"/>	0.050	0.051	535.56	0.0000	P	8.6	2.7
4	<input type="checkbox"/>	0.100	0.103	1272.25	0.0001	P	7.7	3.2
5	<input type="checkbox"/>	0.500	0.494	6577.73	0.0005	P	2.1	-1.2
6	<input type="checkbox"/>	1.000	1.029	13997.52	0.0011	P	1.2	2.9
7	<input type="checkbox"/>	10.000	10.007	137018.81	0.0113	P	1.1	0.1
8	<input type="checkbox"/>	50.000	52.289	693175.18	0.0591	P	1.4	4.6
9	<input type="checkbox"/>	100.000	98.855	1316093.25	0.1118	A	1.2	-1.1
10	<input type="checkbox"/>	1000.000						
11	<input type="checkbox"/>			27.04	0.0000	P	105.3	

$$y = 0.0011 * x - 1.4241E-005$$

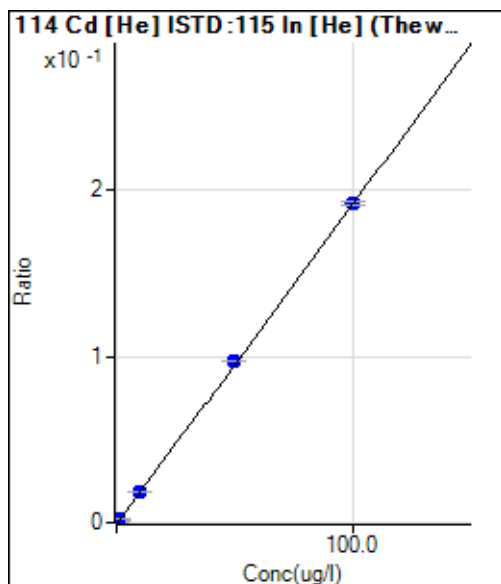
$$R = 0.9997$$

$$DL = 0.02533 \text{ ug/l}$$

$$BEC = -0.01259 \text{ ug/l}$$

$$\text{Weight: } 1/y$$

$$\text{Min Conc: } <\text{None}>$$



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	De t	RSD	%RE
1	<input type="checkbox"/>	0.000	0.000	13.69	0.0000	P	46.5	
2	<input type="checkbox"/>	0.025	0.023	130.11	0.0001	P	3.1	-6.8
3	<input type="checkbox"/>	0.050	0.055	288.98	0.0001	P	3.8	9.4
4	<input type="checkbox"/>	0.100	0.106	551.54	0.0002	P	2.7	5.9
5	<input type="checkbox"/>	0.500	0.487	2478.17	0.0009	P	1.6	-2.5
6	<input type="checkbox"/>	1.000	0.997	5017.06	0.0019	P	1.4	-0.3
7	<input type="checkbox"/>	10.000	9.794	49591.74	0.0189	P	1.6	-2.1
8	<input type="checkbox"/>	50.000	50.481	248902.27	0.0973	P	1.1	1.0
9	<input type="checkbox"/>	100.000	99.780	483911.74	0.1923	P	1.2	-0.2
10	<input type="checkbox"/>	1000.000						
11	<input type="checkbox"/>			85.78	0.0000	P	9.6	

$$y = 0.0019 * x + 5.2001E-006$$

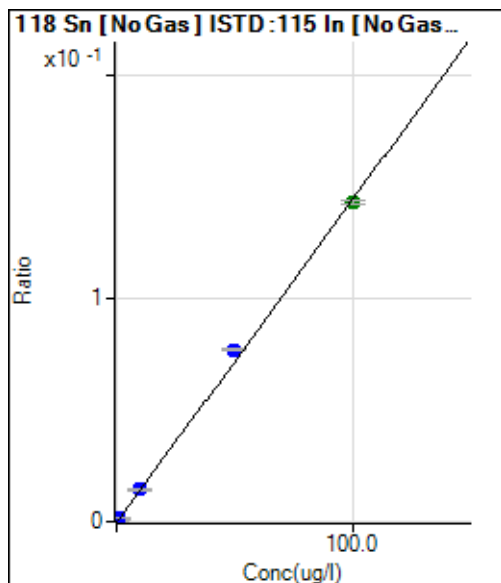
$$R = 1.0000$$

$$DL = 0.003763 \text{ ug/l}$$

$$BEC = 0.002698 \text{ ug/l}$$

$$\text{Weight: } 1/y$$

$$\text{Min Conc: } <\text{None}>$$



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	De t	RSD	%RE
1	<input type="checkbox"/>	0.000	0.000	3194.03	0.0003	P	4.4	
2	<input type="checkbox"/>	0.025	0.050	3999.30	0.0003	P	3.0	102.0
3	<input type="checkbox"/>	0.050	0.055	4179.02	0.0003	P	3.9	10.1
4	<input type="checkbox"/>	0.100	0.098	5017.63	0.0004	P	2.5	-2.2
5	<input type="checkbox"/>	0.500	0.505	12004.68	0.0010	P	5.4	0.9
6	<input type="checkbox"/>	1.000	0.978	20450.99	0.0017	P	5.4	-2.2
7	<input type="checkbox"/>	10.000	9.707	173720.39	0.0143	P	2.2	-2.9
8	<input type="checkbox"/>	50.000	52.929	902672.03	0.0770	P	1.2	5.9
9	<input type="checkbox"/>	100.000	98.565	1685122.27	0.1431	A	0.8	-1.4
10	<input type="checkbox"/>							
11	<input type="checkbox"/>			3959.40	0.0003	P	2.5	

$y = 0.0014 * x + 2.6250E-004$

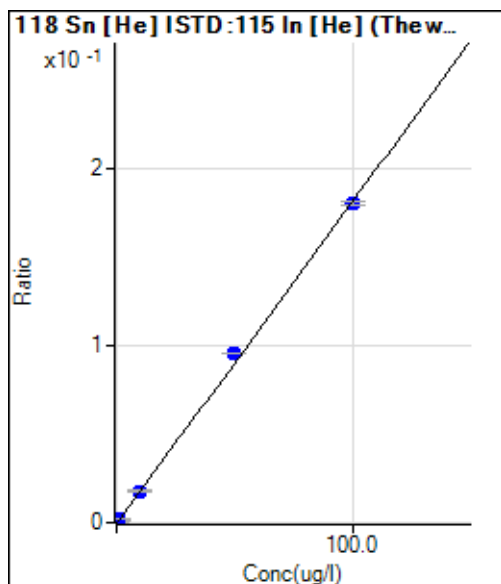
R = 0.9995

DL = 0.02393 ug/l

BEC = 0.1811 ug/l

Weight: 1/y

Min Conc: <None>



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	De t	RSD	%RE
1	<input type="checkbox"/>	0.000	0.000	892.25	0.0003	P	5.3	
2	<input type="checkbox"/>	0.025	0.061	1168.95	0.0005	P	4.9	145.5
3	<input type="checkbox"/>	0.050	0.038	1066.71	0.0004	P	4.9	-23.2
4	<input type="checkbox"/>	0.100	0.089	1317.85	0.0005	P	2.7	-11.2
5	<input type="checkbox"/>	0.500	0.511	3331.53	0.0013	P	3.8	2.3
6	<input type="checkbox"/>	1.000	0.975	5510.00	0.0021	P	4.3	-2.5
7	<input type="checkbox"/>	10.000	9.523	46437.60	0.0177	P	3.3	-4.8
8	<input type="checkbox"/>	50.000	52.371	244902.88	0.0957	P	0.2	4.7
9	<input type="checkbox"/>	100.000	98.863	453985.24	0.1804	P	1.5	-1.1
10	<input type="checkbox"/>							
11	<input type="checkbox"/>			1123.39	0.0004	P	1.4	

$y = 0.0018 * x + 3.3848E-004$

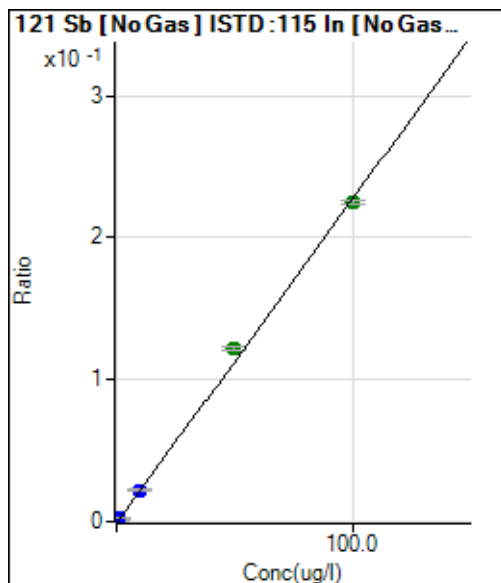
R = 0.9996

DL = 0.02954 ug/l

BEC = 0.1858 ug/l

Weight: 1/y

Min Conc: <None>



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	De t	RSD	%RE
1	<input type="checkbox"/>	0.000	0.000	914.12	0.0001	P	1.2	
2	<input type="checkbox"/>	0.025	0.019	1405.21	0.0001	P	2.4	-25.0
3	<input type="checkbox"/>	0.050	0.045	2169.06	0.0002	P	2.2	-10.2
4	<input type="checkbox"/>	0.100	0.090	3473.45	0.0003	P	1.5	-10.5
5	<input type="checkbox"/>	0.500	0.471	13928.94	0.0012	P	2.2	-5.7
6	<input type="checkbox"/>	1.000	0.971	27937.74	0.0023	P	2.1	-2.9
7	<input type="checkbox"/>	10.000	9.745	271110.76	0.0224	P	1.7	-2.5
8	<input type="checkbox"/>	50.000	53.338	1431064.47	0.1220	A	1.5	6.7
9	<input type="checkbox"/>	100.000	98.357	2649289.10	0.2250	A	0.9	-1.6
10	<input type="checkbox"/>							
11	<input type="checkbox"/>			1778.30	0.0001	P	7.5	

$y = 0.0023 * x + 7.5103E-005$

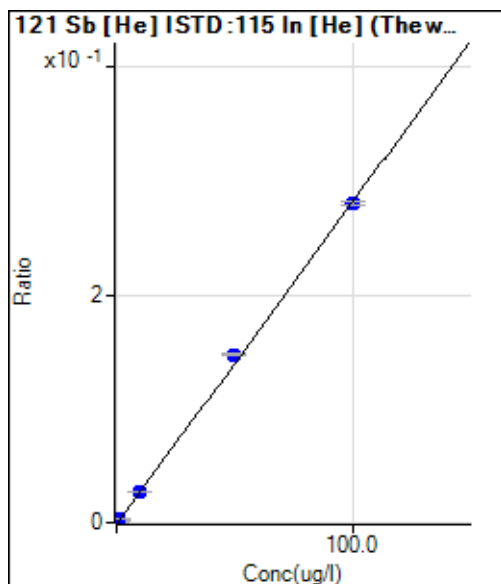
R = 0.9993

DL = 0.001201 ug/l

BEC = 0.03284 ug/l

Weight: 1/y

Min Conc: <None>



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	De t	RSD	%RE
1	<input type="checkbox"/>	0.000	0.000	211.69	0.0001	P	6.8	
2	<input type="checkbox"/>	0.025	0.021	365.71	0.0001	P	4.2	-14.6
3	<input type="checkbox"/>	0.050	0.047	557.07	0.0002	P	3.4	-6.2
4	<input type="checkbox"/>	0.100	0.089	876.12	0.0003	P	4.4	-11.0
5	<input type="checkbox"/>	0.500	0.473	3724.54	0.0014	P	1.2	-5.5
6	<input type="checkbox"/>	1.000	0.958	7279.95	0.0028	P	1.1	-4.2
7	<input type="checkbox"/>	10.000	9.540	71226.42	0.0271	P	1.8	-4.6
8	<input type="checkbox"/>	50.000	52.099	377950.41	0.1478	P	0.8	4.2
9	<input type="checkbox"/>	100.000	98.997	706216.82	0.2807	P	1.4	-1.0
10	<input type="checkbox"/>							
11	<input type="checkbox"/>			408.38	0.0002	P	3.9	

$y = 0.0028 * x + 8.0339E-005$

R = 0.9997

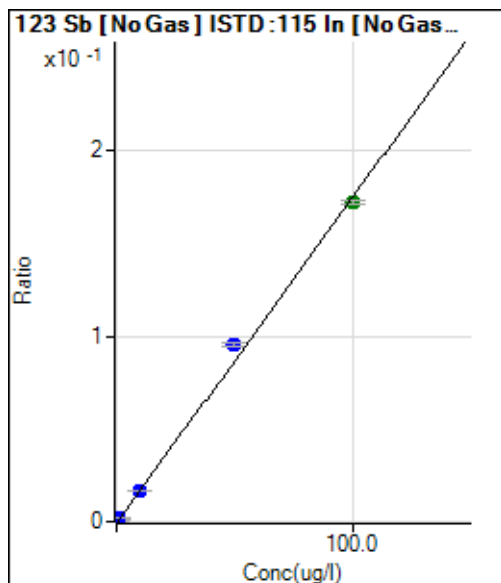
DL = 0.005746 ug/l

BEC = 0.02834 ug/l

Weight: 1/y

Min Conc: <None>

Calibration for 026_QC1.d



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	De t	RSD	%RE
1	<input type="checkbox"/>	0.000	0.000	684.09	0.0001	P	2.7	
2	<input type="checkbox"/>	0.025	0.020	1090.82	0.0001	P	2.9	-19.6
3	<input type="checkbox"/>	0.050	0.042	1592.92	0.0001	P	2.5	-15.6
4	<input type="checkbox"/>	0.100	0.089	2640.85	0.0002	P	0.1	-11.0
5	<input type="checkbox"/>	0.500	0.474	10747.19	0.0009	P	3.5	-5.3
6	<input type="checkbox"/>	1.000	0.957	21173.01	0.0017	P	1.6	-4.3
7	<input type="checkbox"/>	10.000	9.623	205965.58	0.0170	P	1.4	-3.8
8	<input type="checkbox"/>	50.000	54.233	1119623.67	0.0955	P	1.4	8.5
9	<input type="checkbox"/>	100.000	97.922	2029514.94	0.1724	A	0.8	-2.1
10	<input type="checkbox"/>							
11	<input type="checkbox"/>			1352.87	0.0001	P	10.7	

$$y = 0.0018 * x + 5.6203E-005$$

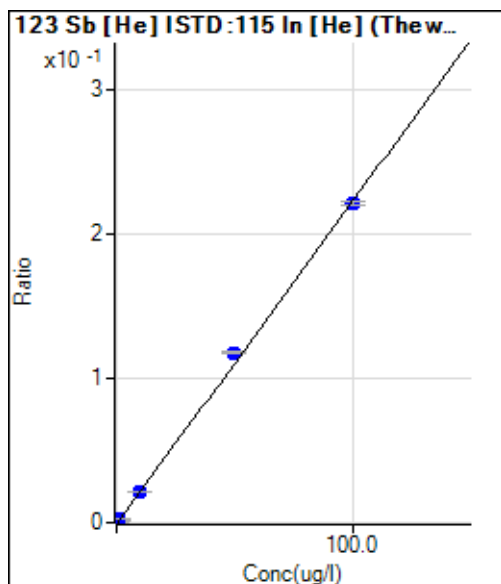
$$R = 0.9989$$

$$DL = 0.002547 \text{ ug/l}$$

$$BEC = 0.03194 \text{ ug/l}$$

$$\text{Weight: } 1/y$$

$$\text{Min Conc: } <\text{None}>$$



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	De t	RSD	%RE
1	<input type="checkbox"/>	0.000	0.000	163.69	0.0001	P	7.9	
2	<input type="checkbox"/>	0.025	0.022	291.36	0.0001	P	3.1	-10.5
3	<input type="checkbox"/>	0.050	0.046	433.05	0.0002	P	3.7	-7.5
4	<input type="checkbox"/>	0.100	0.100	752.43	0.0003	P	2.2	-0.2
5	<input type="checkbox"/>	0.500	0.462	2876.25	0.0011	P	3.7	-7.6
6	<input type="checkbox"/>	1.000	0.948	5692.06	0.0022	P	0.4	-5.2
7	<input type="checkbox"/>	10.000	9.594	56604.97	0.0216	P	1.2	-4.1
8	<input type="checkbox"/>	50.000	52.493	300932.29	0.1176	P	1.6	5.0
9	<input type="checkbox"/>	100.000	98.795	556977.50	0.2214	P	1.0	-1.2
10	<input type="checkbox"/>							
11	<input type="checkbox"/>			325.70	0.0001	P	5.0	

$$y = 0.0022 * x + 6.2125E-005$$

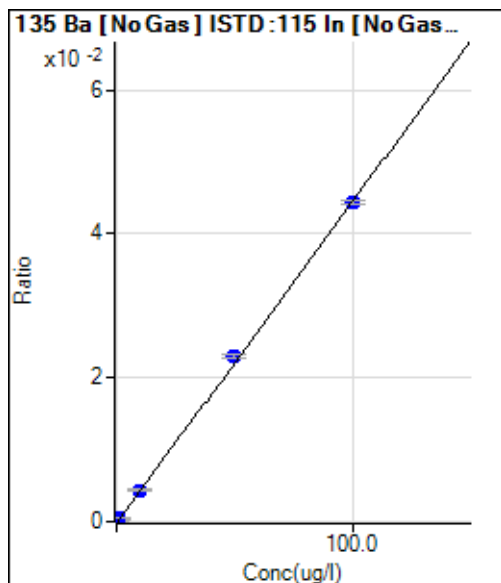
$$R = 0.9996$$

$$DL = 0.006614 \text{ ug/l}$$

$$BEC = 0.02773 \text{ ug/l}$$

$$\text{Weight: } 1/y$$

$$\text{Min Conc: } <\text{None}>$$



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	De t	RSD	%RE
1	<input type="checkbox"/>	0.000	0.000	66.53	0.0000	P	37.3	
2	<input type="checkbox"/>	0.025	0.031	229.55	0.0000	P	11.1	23.3
3	<input type="checkbox"/>	0.050	0.048	329.35	0.0000	P	23.5	-3.9
4	<input type="checkbox"/>	0.100	0.100	625.44	0.0001	P	16.2	0.4
5	<input type="checkbox"/>	0.500	0.495	2741.51	0.0002	P	3.6	-1.1
6	<input type="checkbox"/>	1.000	0.982	5420.35	0.0004	P	4.4	-1.8
7	<input type="checkbox"/>	10.000	9.801	53256.23	0.0044	P	2.0	-2.0
8	<input type="checkbox"/>	50.000	51.673	271270.65	0.0231	P	2.3	3.3
9	<input type="checkbox"/>	100.000	99.183	522871.44	0.0444	P	1.3	-0.8
10	<input type="checkbox"/>	1000.000						
11	<input type="checkbox"/>			83.17	0.0000	P	32.6	

$$y = 4.4766E-004 * x + 5.4636E-006$$

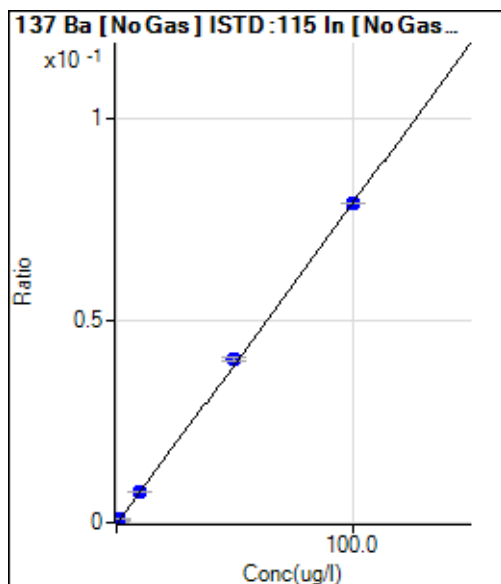
R = 0.9998

DL = 0.01366 ug/l

BEC = 0.0122 ug/l

Weight: 1/y

Min Conc: <None>



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	De t	RSD	%RE
1	<input type="checkbox"/>	0.000	0.000	99.80	0.0000	P	9.7	
2	<input type="checkbox"/>	0.025	0.026	345.99	0.0000	P	38.4	4.8
3	<input type="checkbox"/>	0.050	0.050	582.19	0.0000	P	7.2	-0.7
4	<input type="checkbox"/>	0.100	0.100	1091.22	0.0001	P	14.9	0.2
5	<input type="checkbox"/>	0.500	0.482	4738.10	0.0004	P	3.3	-3.5
6	<input type="checkbox"/>	1.000	0.982	9614.26	0.0008	P	1.3	-1.8
7	<input type="checkbox"/>	10.000	9.554	92342.76	0.0076	P	3.9	-4.5
8	<input type="checkbox"/>	50.000	51.137	477360.92	0.0407	P	2.1	2.3
9	<input type="checkbox"/>	100.000	99.476	932539.26	0.0792	P	0.2	-0.5
10	<input type="checkbox"/>	1000.000						
11	<input type="checkbox"/>			146.38	0.0000	P	33.1	

$$y = 7.9602E-004 * x + 8.1977E-006$$

R = 0.9999

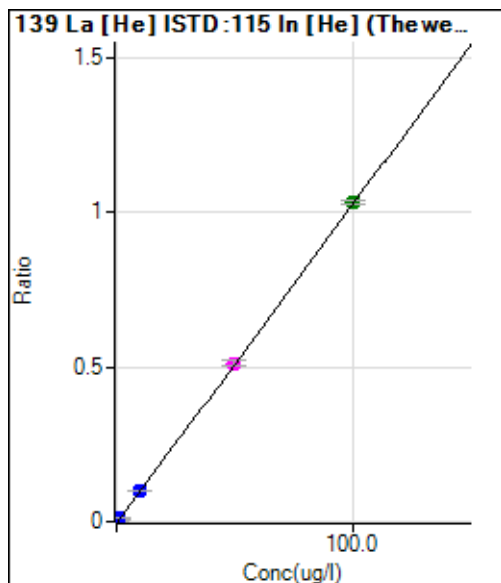
DL = 0.002982 ug/l

BEC = 0.0103 ug/l

Weight: 1/y

Min Conc: <None>

Calibration for 026_QC1.d



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	De t	RSD	%RE
1	<input type="checkbox"/>	0.000	0.000	24.44	0.0000	P	21.0	
2	<input type="checkbox"/>	0.025	0.023	640.02	0.0002	P	9.0	-7.9
3	<input type="checkbox"/>	0.050	0.056	1536.76	0.0006	P	3.7	12.4
4	<input type="checkbox"/>	0.100	0.106	2911.44	0.0011	P	2.1	6.3
5	<input type="checkbox"/>	0.500	0.496	13446.55	0.0051	P	0.7	-0.7
6	<input type="checkbox"/>	1.000	1.010	27150.99	0.0104	P	2.7	1.0
7	<input type="checkbox"/>	10.000	9.873	267307.64	0.1018	P	1.2	-1.3
8	<input type="checkbox"/>	50.000	49.756	1311652.08	0.5129	M	3.3	-0.5
9	<input type="checkbox"/>	100.000	100.135	2597054.39	1.0322	A	0.6	0.1
10	<input type="checkbox"/>							
11	<input type="checkbox"/>			20.00	0.0000	P	33.2	

$$y = 0.0103 * x + 9.2774E-006$$

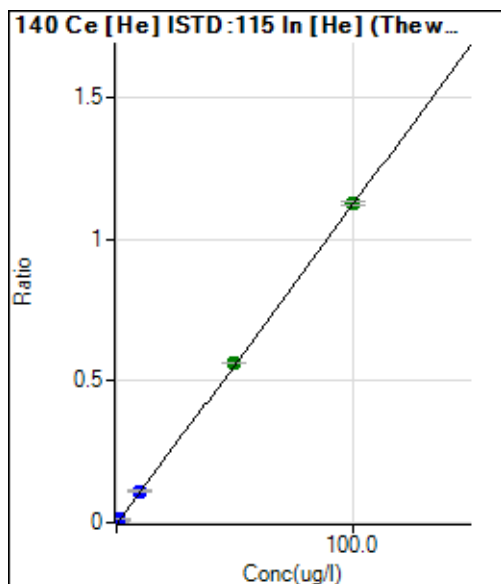
$$R = 1.0000$$

$$DL = 0.0005676 \text{ ug/l}$$

$$BEC = 0.0009 \text{ ug/l}$$

$$\text{Weight: } 1/y$$

$$\text{Min Conc: } <\text{None}>$$



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	De t	RSD	%RE
1	<input type="checkbox"/>	0.000	0.000	33.33	0.0000	P	40.4	
2	<input type="checkbox"/>	0.025	0.024	733.36	0.0003	P	5.6	-4.3
3	<input type="checkbox"/>	0.050	0.059	1780.13	0.0007	P	3.5	18.6
4	<input type="checkbox"/>	0.100	0.111	3318.19	0.0013	P	1.1	10.6
5	<input type="checkbox"/>	0.500	0.484	14335.23	0.0055	P	1.2	-3.3
6	<input type="checkbox"/>	1.000	1.024	30115.99	0.0116	P	1.7	2.4
7	<input type="checkbox"/>	10.000	9.931	294150.95	0.1120	P	0.7	-0.7
8	<input type="checkbox"/>	50.000	50.142	1446387.62	0.5654	A	0.2	0.3
9	<input type="checkbox"/>	100.000	99.936	2835350.62	1.1269	A	1.1	-0.1
10	<input type="checkbox"/>							
11	<input type="checkbox"/>			47.78	0.0000	P	40.2	

$$y = 0.0113 * x + 1.2657E-005$$

$$R = 1.0000$$

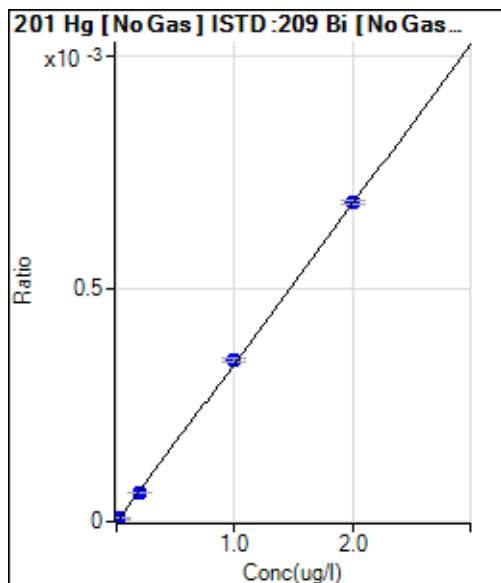
$$DL = 0.00136 \text{ ug/l}$$

$$BEC = 0.001122 \text{ ug/l}$$

$$\text{Weight: } 1/y$$

$$\text{Min Conc: } <\text{None}>$$

Calibration for 026_QC1.d



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	De t	RSD	%RE
1	<input type="checkbox"/>	0.000	0.000	28.99	0.0000	P	25.0	
2	<input type="checkbox"/>			22.33	0.0000	P	43.6	
3	<input type="checkbox"/>	0.001	-0.001	24.33	0.0000	P	6.7	-211.3
4	<input type="checkbox"/>	0.002	0.001	32.33	0.0000	P	23.5	-55.4
5	<input type="checkbox"/>	0.010	0.007	57.32	0.0000	P	7.8	-27.3
6	<input type="checkbox"/>	0.020	0.015	88.65	0.0000	P	4.7	-23.6
7	<input type="checkbox"/>	0.200	0.174	703.21	0.0001	P	3.8	-13.0
8	<input type="checkbox"/>	1.000	1.010	3679.11	0.0003	P	1.9	1.0
9	<input type="checkbox"/>	2.000	1.998	7281.53	0.0007	P	1.2	-0.1
10	<input type="checkbox"/>							
11	<input type="checkbox"/>			42.99	0.0000	P	14.1	

$$y = 3.4242E-004 * x + 2.5563E-006$$

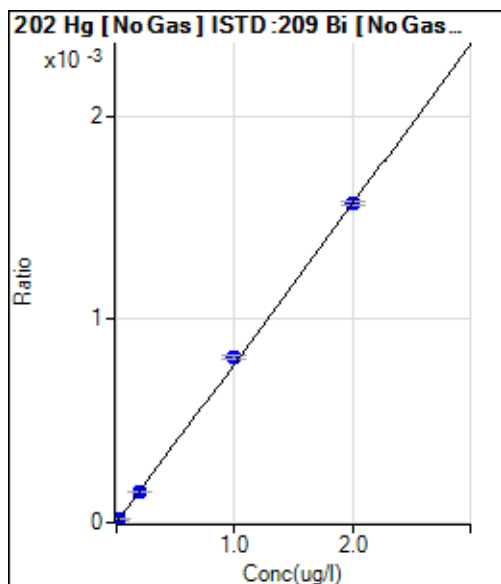
R = 0.9999

DL = 0.005605 ug/l

BEC = 0.007465 ug/l

Weight: 1/y

Min Conc: <None>



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	De t	RSD	%RE
1	<input type="checkbox"/>	0.000	0.000	94.98	0.0000	P	4.8	
2	<input type="checkbox"/>			93.65	0.0000	P	1.6	
3	<input type="checkbox"/>	0.001	0.000	90.65	0.0000	P	13.2	-136.2
4	<input type="checkbox"/>	0.002	0.002	110.65	0.0000	P	12.9	-11.2
5	<input type="checkbox"/>	0.010	0.008	165.64	0.0000	P	4.4	-21.4
6	<input type="checkbox"/>	0.020	0.018	255.62	0.0000	P	1.0	-10.3
7	<input type="checkbox"/>	0.200	0.179	1680.77	0.0001	P	1.8	-10.7
8	<input type="checkbox"/>	1.000	1.024	8573.37	0.0008	P	1.7	2.4
9	<input type="checkbox"/>	2.000	1.990	16653.69	0.0016	P	0.8	-0.5
10	<input type="checkbox"/>							
11	<input type="checkbox"/>			141.64	0.0000	P	5.2	

$$y = 7.8482E-004 * x + 8.3860E-006$$

R = 0.9999

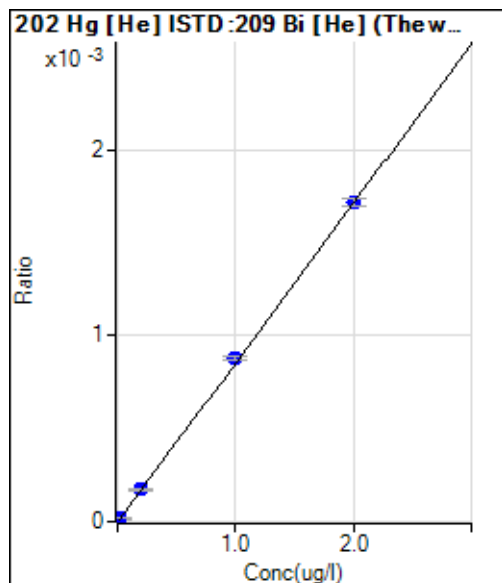
DL = 0.001555 ug/l

BEC = 0.01069 ug/l

Weight: 1/y

Min Conc: <None>

Calibration for 026_QC1.d



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	De t	RSD	%RE
1	<input type="checkbox"/>	0.000	0.000	32.33	0.0000	P	24.2	
2	<input type="checkbox"/>			32.66	0.0000	P	29.3	
3	<input type="checkbox"/>	0.001	0.002	42.32	0.0000	P	5.3	114.8
4	<input type="checkbox"/>	0.002	0.002	42.99	0.0000	P	7.7	11.4
5	<input type="checkbox"/>	0.010	0.008	67.99	0.0000	P	3.0	-21.7
6	<input type="checkbox"/>	0.020	0.019	115.65	0.0000	P	11.0	-6.1
7	<input type="checkbox"/>	0.200	0.192	858.19	0.0002	P	1.7	-4.0
8	<input type="checkbox"/>	1.000	1.015	4184.83	0.0009	P	2.0	1.5
9	<input type="checkbox"/>	2.000	1.993	8233.22	0.0017	P	2.8	-0.3
10	<input type="checkbox"/>							
11	<input type="checkbox"/>			59.99	0.0000	P	24.2	

$y = 8.5966E-004 * x + 6.4404E-006$

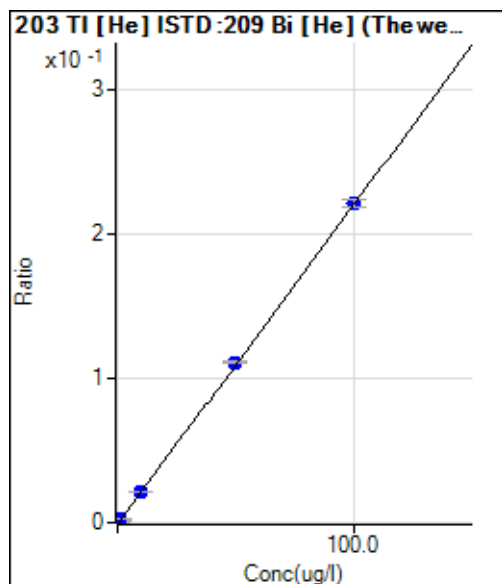
R = 1.0000

DL = 0.005436 ug/l

BEC = 0.007492 ug/l

Weight: 1/y

Min Conc: <None>



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	De t	RSD	%RE
1	<input type="checkbox"/>	0.000	0.000	599.59	0.0001	P	5.7	
2	<input type="checkbox"/>	0.025	0.012	746.99	0.0001	P	2.6	-52.0
3	<input type="checkbox"/>	0.050	0.037	1022.45	0.0002	P	2.9	-27.0
4	<input type="checkbox"/>	0.100	0.077	1489.35	0.0003	P	2.9	-23.1
5	<input type="checkbox"/>	0.500	0.442	5654.15	0.0011	P	2.7	-11.7
6	<input type="checkbox"/>	1.000	0.955	11442.82	0.0022	P	3.8	-4.5
7	<input type="checkbox"/>	10.000	9.481	105448.42	0.0211	P	1.4	-5.2
8	<input type="checkbox"/>	50.000	50.236	529004.64	0.1111	P	0.9	0.5
9	<input type="checkbox"/>	100.000	99.935	1057872.44	0.2210	P	2.1	-0.1
10	<input type="checkbox"/>	1000.000						
11	<input type="checkbox"/>			10392.91	0.0020	P	6.7	

$y = 0.0022 * x + 1.1961E-004$

R = 1.0000

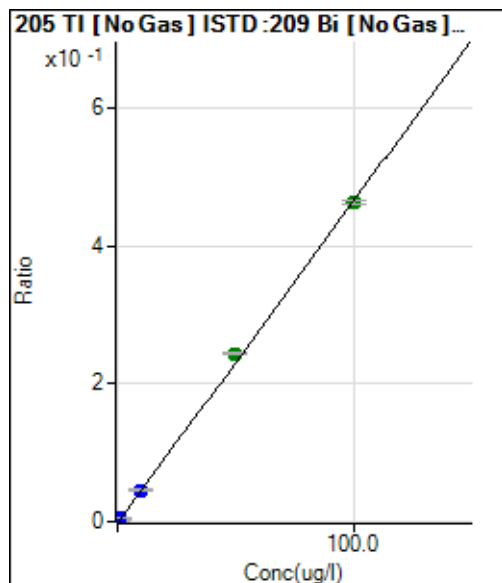
DL = 0.009196 ug/l

BEC = 0.05412 ug/l

Weight: 1/y

Min Conc: <None>

Calibration for 026_QC1.d



	R _{ct}	Conc.	Calc Conc.	CPS	Ratio	De _t	RSD	%RE
1	<input type="checkbox"/>	0.000	0.000	2612.50	0.0002	P	7.4	
2	<input type="checkbox"/>	0.025	0.015	3333.77	0.0003	P	8.5	-38.5
3	<input type="checkbox"/>	0.050	0.040	4689.75	0.0004	P	4.1	-19.6
4	<input type="checkbox"/>	0.100	0.087	7229.77	0.0006	P	3.0	-13.0
5	<input type="checkbox"/>	0.500	0.470	27696.69	0.0024	P	1.6	-5.9
6	<input type="checkbox"/>	1.000	1.007	56307.46	0.0049	P	1.2	0.7
7	<input type="checkbox"/>	10.000	9.758	519560.93	0.0459	P	1.2	-2.4
8	<input type="checkbox"/>	50.000	52.005	2574860.93	0.2439	A	1.4	4.0
9	<input type="checkbox"/>	100.000	99.022	4921815.31	0.4641	A	1.4	-1.0
10	<input type="checkbox"/>	1000.000						
11	<input type="checkbox"/>			50774.46	0.0046	P	18.1	

$$y = 0.0047 * x + 2.3086E-004$$

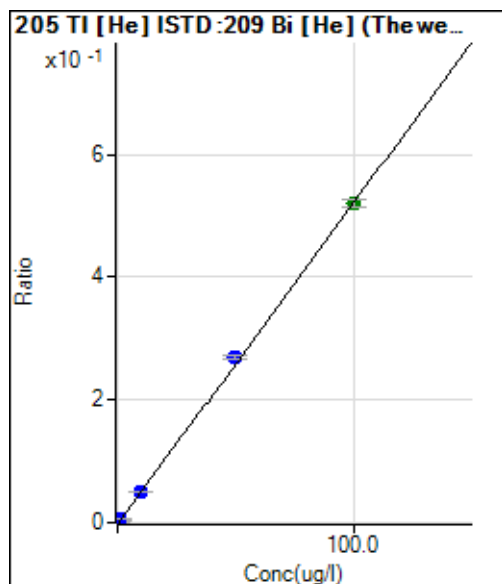
$$R = 0.9997$$

$$DL = 0.011 \text{ ug/l}$$

$$BEC = 0.04928 \text{ ug/l}$$

$$\text{Weight: } 1/y$$

$$\text{Min Conc: } <\text{None}>$$



	R _{ct}	Conc.	Calc Conc.	CPS	Ratio	De _t	RSD	%RE
1	<input type="checkbox"/>	0.000	0.000	1482.01	0.0003	P	2.7	
2	<input type="checkbox"/>	0.025	0.009	1754.16	0.0003	P	5.7	-63.8
3	<input type="checkbox"/>	0.050	0.033	2385.18	0.0005	P	2.7	-34.6
4	<input type="checkbox"/>	0.100	0.077	3588.60	0.0007	P	1.1	-23.2
5	<input type="checkbox"/>	0.500	0.445	13548.99	0.0026	P	2.8	-11.0
6	<input type="checkbox"/>	1.000	0.956	27177.18	0.0053	P	5.0	-4.4
7	<input type="checkbox"/>	10.000	9.739	256685.17	0.0513	P	1.4	-2.6
8	<input type="checkbox"/>	50.000	51.497	1284992.71	0.2700	P	1.8	3.0
9	<input type="checkbox"/>	100.000	99.278	2489936.56	0.5202	A	2.7	-0.7
10	<input type="checkbox"/>	1000.000						
11	<input type="checkbox"/>			25177.25	0.0049	P	7.6	

$$y = 0.0052 * x + 2.9573E-004$$

$$R = 0.9999$$

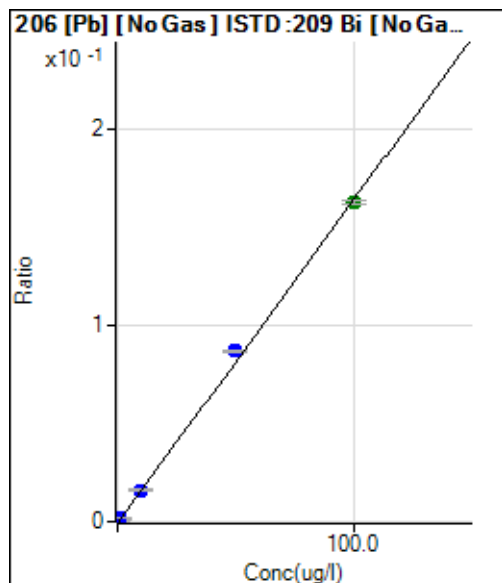
$$DL = 0.00455 \text{ ug/l}$$

$$BEC = 0.05648 \text{ ug/l}$$

$$\text{Weight: } 1/y$$

$$\text{Min Conc: } <\text{None}>$$

Calibration for 026_QC1.d



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	De t	RSD	%RE
1	<input type="checkbox"/>	0.000	0.000	586.69	0.0001	P	4.3	
2	<input type="checkbox"/>	0.025	0.026	1038.94	0.0001	P	3.8	3.6
3	<input type="checkbox"/>	0.050	0.054	1579.00	0.0001	P	3.7	8.5
4	<input type="checkbox"/>	0.100	0.104	2532.48	0.0002	P	1.6	4.4
5	<input type="checkbox"/>	0.500	0.483	9634.66	0.0008	P	0.7	-3.4
6	<input type="checkbox"/>	1.000	1.009	19478.78	0.0017	P	1.8	0.9
7	<input type="checkbox"/>	10.000	9.728	181630.72	0.0161	P	1.6	-2.7
8	<input type="checkbox"/>	50.000	52.669	915929.00	0.0867	P	1.9	5.3
9	<input type="checkbox"/>	100.000	98.693	1723391.61	0.1625	A	1.2	-1.3
10	<input type="checkbox"/>	1000.000						
11	<input type="checkbox"/>			1832.36	0.0002	P	6.1	

$$y = 0.0016 * x + 5.1827E-005$$

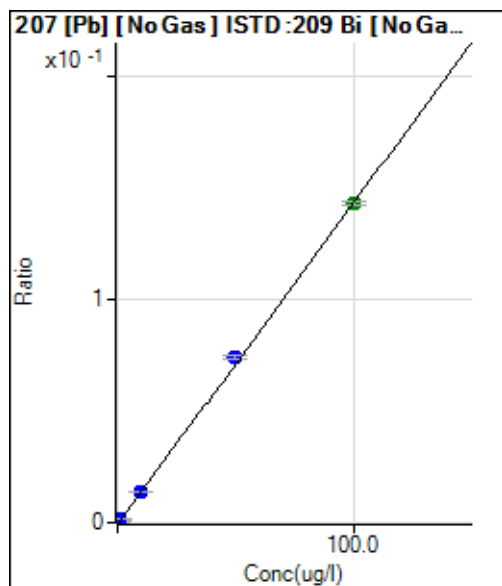
$$R = 0.9995$$

$$DL = 0.004055 \text{ ug/l}$$

$$BEC = 0.03149 \text{ ug/l}$$

$$\text{Weight: } 1/y$$

$$\text{Min Conc: } <\text{None}>$$



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	De t	RSD	%RE
1	<input type="checkbox"/>	0.000	0.000	504.46	0.0000	P	2.0	
2	<input type="checkbox"/>	0.025	0.026	896.70	0.0001	P	3.6	2.8
3	<input type="checkbox"/>	0.050	0.055	1390.08	0.0001	P	4.9	10.8
4	<input type="checkbox"/>	0.100	0.101	2152.42	0.0002	P	0.9	1.2
5	<input type="checkbox"/>	0.500	0.482	8400.48	0.0007	P	4.0	-3.5
6	<input type="checkbox"/>	1.000	1.017	17155.58	0.0015	P	2.4	1.7
7	<input type="checkbox"/>	10.000	9.581	156330.20	0.0138	P	2.3	-4.2
8	<input type="checkbox"/>	50.000	51.501	782840.39	0.0741	P	2.0	3.0
9	<input type="checkbox"/>	100.000	99.291	1515535.76	0.1429	A	1.3	-0.7
10	<input type="checkbox"/>	1000.000						
11	<input type="checkbox"/>			1631.22	0.0001	P	8.5	

$$y = 0.0014 * x + 4.4551E-005$$

$$R = 0.9998$$

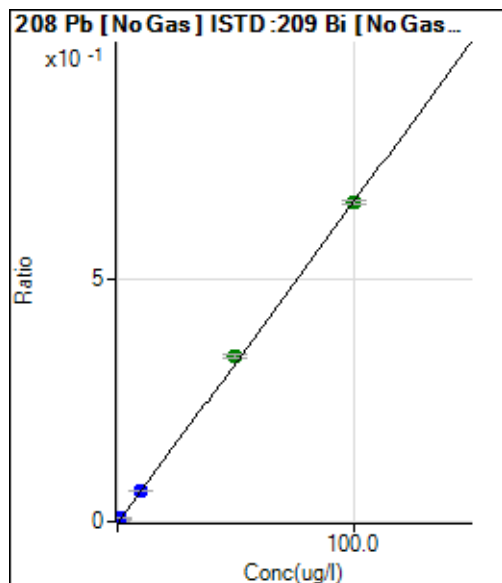
$$DL = 0.001836 \text{ ug/l}$$

$$BEC = 0.03096 \text{ ug/l}$$

$$\text{Weight: } 1/y$$

$$\text{Min Conc: } <\text{None}>$$

Calibration for 026_QC1.d



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	De t	RSD	%RE
1	<input type="checkbox"/>	0.000	0.000	2421.22	0.0002	P	3.1	
2	<input type="checkbox"/>	0.025	0.025	4195.84	0.0004	P	2.0	0.9
3	<input type="checkbox"/>	0.050	0.053	6357.31	0.0006	P	1.9	6.7
4	<input type="checkbox"/>	0.100	0.100	9969.31	0.0009	P	2.0	0.4
5	<input type="checkbox"/>	0.500	0.482	38900.47	0.0034	P	1.9	-3.5
6	<input type="checkbox"/>	1.000	0.996	77759.00	0.0068	P	0.9	-0.4
7	<input type="checkbox"/>	10.000	9.602	723868.64	0.0640	P	0.4	-4.0
8	<input type="checkbox"/>	50.000	51.442	3611162.75	0.3420	A	2.0	2.9
9	<input type="checkbox"/>	100.000	99.319	7000960.81	0.6601	A	1.0	-0.7
10	<input type="checkbox"/>	1000.000						
11	<input type="checkbox"/>			7269.71	0.0007	P	5.2	

$$y = 0.0066 * x + 2.1380E-004$$

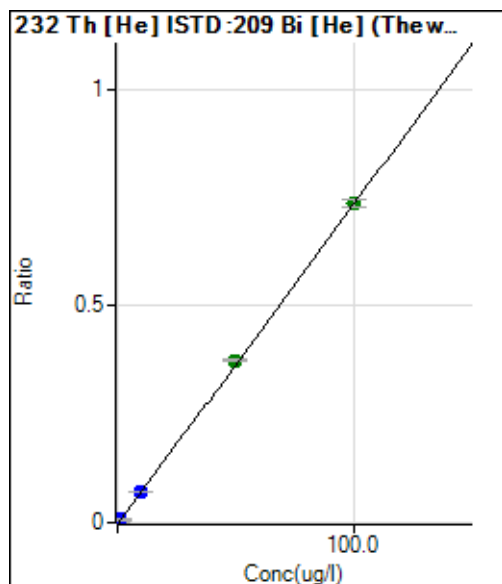
$$R = 0.9999$$

$$DL = 0.003016 \text{ ug/l}$$

$$BEC = 0.03218 \text{ ug/l}$$

$$\text{Weight: } 1/y$$

$$\text{Min Conc: } <\text{None}>$$



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	De t	RSD	%RE
1	<input type="checkbox"/>	0.000	0.000	565.57	0.0001	P	5.3	
2	<input type="checkbox"/>	0.025	0.013	1053.80	0.0002	P	1.0	-49.5
3	<input type="checkbox"/>	0.050	0.033	1812.19	0.0004	P	2.8	-34.4
4	<input type="checkbox"/>	0.100	0.070	3231.70	0.0006	P	6.8	-30.1
5	<input type="checkbox"/>	0.500	0.402	15888.00	0.0031	P	2.5	-19.6
6	<input type="checkbox"/>	1.000	0.898	34561.23	0.0067	P	4.8	-10.2
7	<input type="checkbox"/>	10.000	9.418	348383.87	0.0696	P	1.2	-5.8
8	<input type="checkbox"/>	50.000	50.554	1776459.96	0.3732	A	1.0	1.1
9	<input type="checkbox"/>	100.000	99.783	3525711.41	0.7365	A	2.4	-0.2
10	<input type="checkbox"/>	1000.000						
11	<input type="checkbox"/>			5151.10	0.0010	P	5.0	

$$y = 0.0074 * x + 1.1288E-004$$

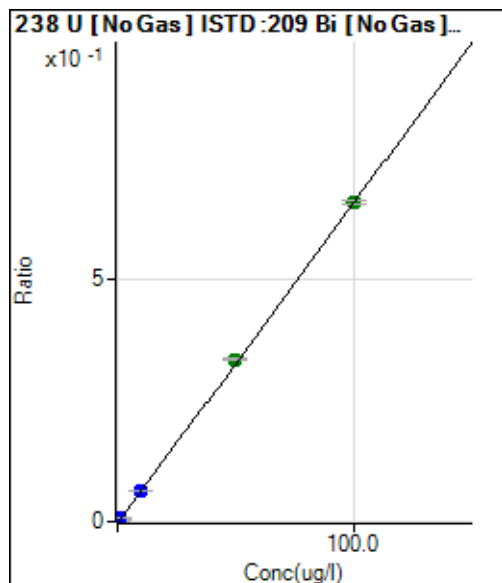
$$R = 1.0000$$

$$DL = 0.002411 \text{ ug/l}$$

$$BEC = 0.0153 \text{ ug/l}$$

$$\text{Weight: } 1/y$$

$$\text{Min Conc: } <\text{None}>$$



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	De t	RSD	%RE
1	<input type="checkbox"/>	0.000	0.000	92.65	0.0000	P	7.9	
2	<input type="checkbox"/>	0.025	0.024	1825.77	0.0002	P	2.1	-4.6
3	<input type="checkbox"/>	0.050	0.056	4237.51	0.0004	P	1.0	12.1
4	<input type="checkbox"/>	0.100	0.102	7706.07	0.0007	P	1.8	1.7
5	<input type="checkbox"/>	0.500	0.475	35860.40	0.0032	P	3.0	-4.9
6	<input type="checkbox"/>	1.000	0.990	74586.71	0.0066	P	1.9	-1.0
7	<input type="checkbox"/>	10.000	9.553	714491.83	0.0632	P	0.8	-4.5
8	<input type="checkbox"/>	50.000	50.733	3542999.45	0.3356	A	1.7	1.5
9	<input type="checkbox"/>	100.000	99.678	6991687.27	0.6593	A	1.4	-0.3
10	<input type="checkbox"/>	1000.000						
11	<input type="checkbox"/>			2119.09	0.0002	P	15.2	

$$y = 0.0066 * x + 8.1872E-006$$

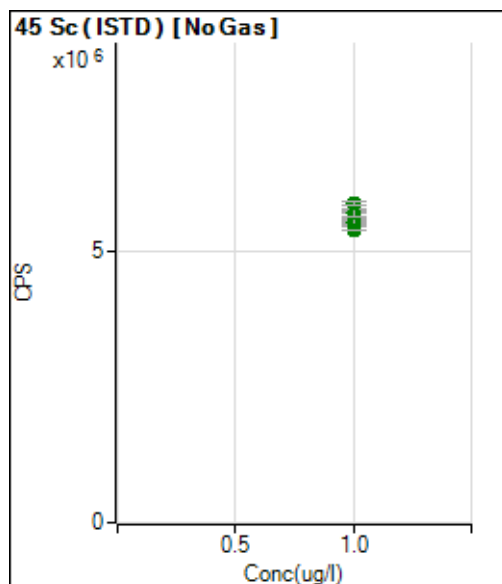
$$R = 1.0000$$

$$DL = 0.0002948 \text{ ug/l}$$

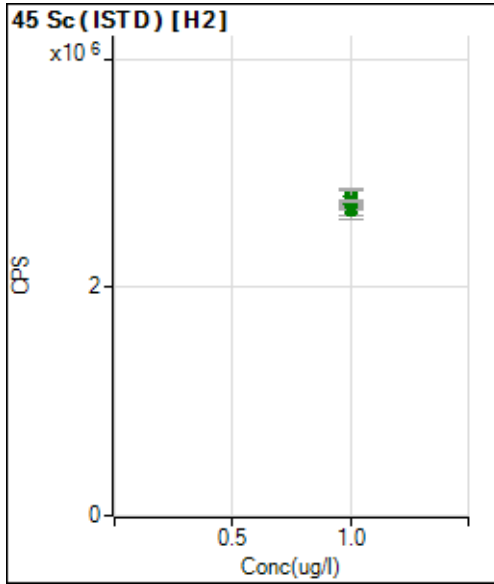
$$BEC = 0.001238 \text{ ug/l}$$

Weight: 1/y

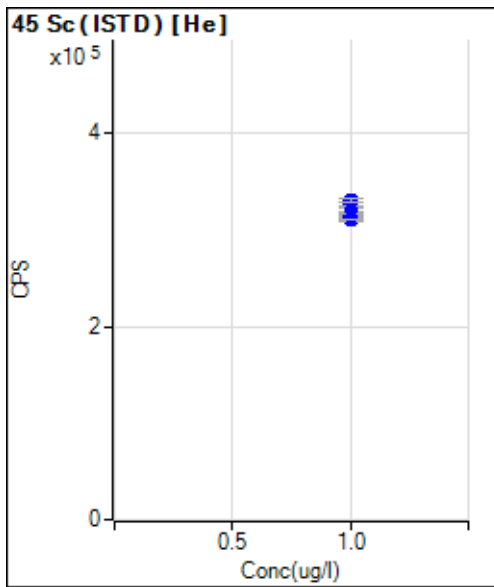
Min Conc: <None>



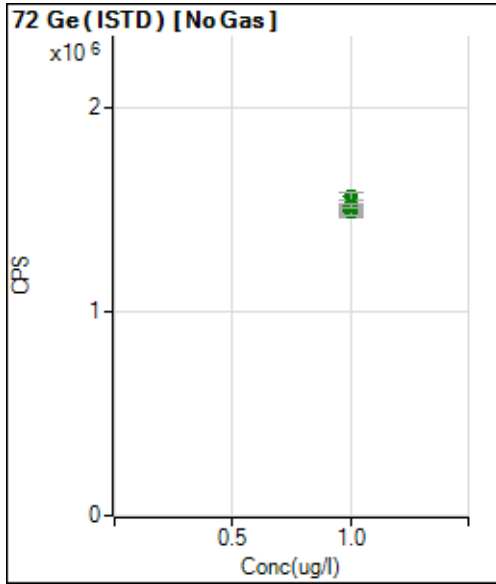
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	De t	RSD	%RE
1	<input type="checkbox"/>	1.000		5638644.78		A	2.4	
2	<input type="checkbox"/>	1.000		5631996.31		A	2.5	
3	<input type="checkbox"/>	1.000		5555588.03		A	1.1	
4	<input type="checkbox"/>	1.000		5652099.96		A	2.8	
5	<input type="checkbox"/>	1.000		5546595.75		A	2.1	
6	<input type="checkbox"/>	1.000		5517795.02		A	1.9	
7	<input type="checkbox"/>	1.000		5537101.10		A	3.1	
8	<input type="checkbox"/>	1.000		5399876.84		A	0.3	
9	<input type="checkbox"/>	1.000		5708684.91		A	2.9	
10	<input type="checkbox"/>	1.000						
11	<input type="checkbox"/>	1.000		5886079.97		A	1.3	



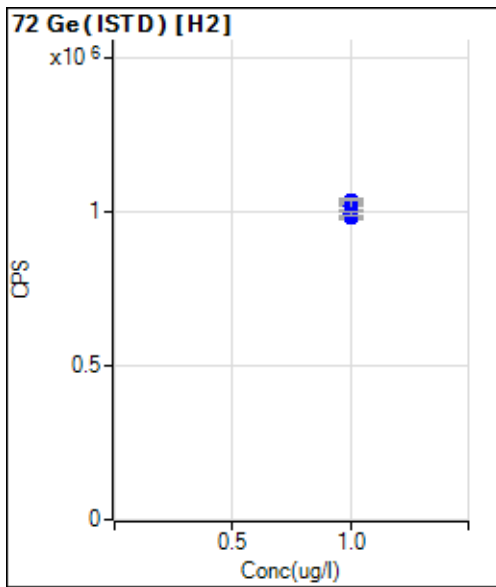
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	De t	RSD	%RE
1	<input type="checkbox"/>	1.000		2744931.22		A	0.8	
2	<input type="checkbox"/>	1.000		2706114.19		A	0.4	
3	<input type="checkbox"/>	1.000		2685460.83		A	6.4	
4	<input type="checkbox"/>	1.000		2740071.92		A	8.6	
5	<input type="checkbox"/>	1.000		2751471.65		A	0.7	
6	<input type="checkbox"/>	1.000		2677227.29		A	0.4	
7	<input type="checkbox"/>	1.000		2731764.39		A	0.8	
8	<input type="checkbox"/>	1.000		2760303.14		A	0.6	
9	<input type="checkbox"/>	1.000		2796904.82		A	3.6	
10	<input type="checkbox"/>	1.000						
11	<input type="checkbox"/>	1.000		2752933.53		A	0.4	



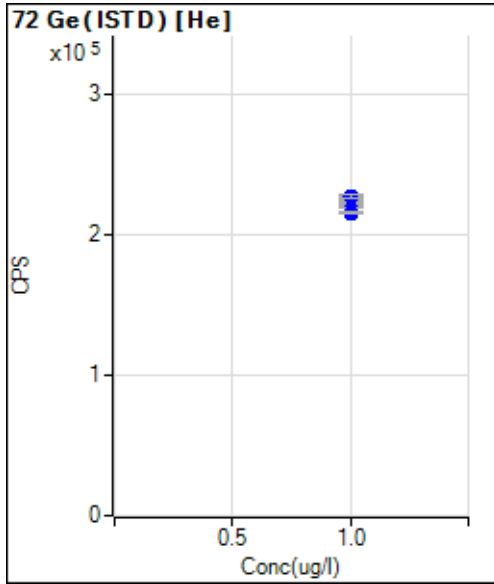
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	De t	RSD	%RE
1	<input type="checkbox"/>	1.000		318486.02		P	0.4	
2	<input type="checkbox"/>	1.000		312375.98		P	0.2	
3	<input type="checkbox"/>	1.000		312609.49		P	0.5	
4	<input type="checkbox"/>	1.000		310955.40		P	1.2	
5	<input type="checkbox"/>	1.000		311724.02		P	2.2	
6	<input type="checkbox"/>	1.000		314681.71		P	2.0	
7	<input type="checkbox"/>	1.000		317875.15		P	0.6	
8	<input type="checkbox"/>	1.000		322635.07		P	0.1	
9	<input type="checkbox"/>	1.000		326546.98		P	1.0	
10	<input type="checkbox"/>	1.000						
11	<input type="checkbox"/>	1.000		330484.92		P	1.1	



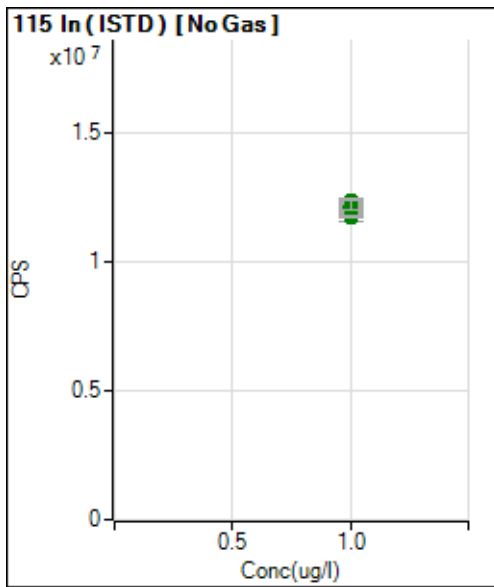
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	De t	RSD	%RE
1	<input type="checkbox"/>	1.000		1511868.37		A	2.2	
2	<input type="checkbox"/>	1.000		1485586.22		A	2.7	
3	<input type="checkbox"/>	1.000		1493542.20		A	2.3	
4	<input type="checkbox"/>	1.000		1507384.21		A	0.3	
5	<input type="checkbox"/>	1.000		1564810.60		A	2.4	
6	<input type="checkbox"/>	1.000		1494995.66		A	3.4	
7	<input type="checkbox"/>	1.000		1486523.67		A	0.7	
8	<input type="checkbox"/>	1.000		1488082.95		A	2.7	
9	<input type="checkbox"/>	1.000		1489812.12		A	2.8	
10	<input type="checkbox"/>	1.000						
11	<input type="checkbox"/>	1.000		1519997.39		A	1.4	



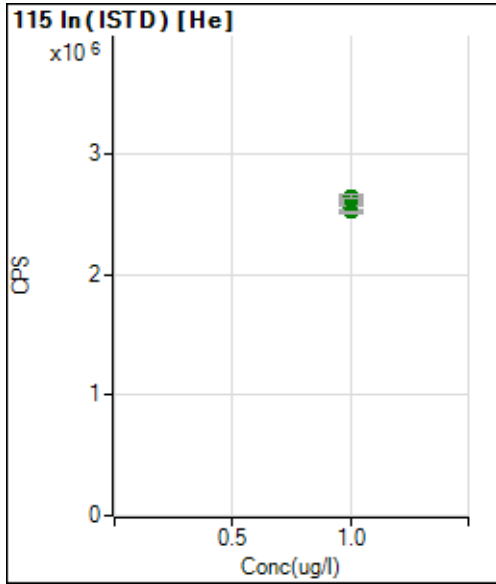
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	De t	RSD	%RE
1	<input type="checkbox"/>	1.000		992372.26		P	1.3	
2	<input type="checkbox"/>	1.000		991600.12		P	1.2	
3	<input type="checkbox"/>	1.000		1000439.60		P	4.1	
4	<input type="checkbox"/>	1.000		998823.38		P	4.5	
5	<input type="checkbox"/>	1.000		1004774.58		P	0.4	
6	<input type="checkbox"/>	1.000		984450.25		P	0.9	
7	<input type="checkbox"/>	1.000		1028721.48		P	0.7	
8	<input type="checkbox"/>	1.000		1037996.12		P	1.1	
9	<input type="checkbox"/>	1.000		1019155.22		P	3.7	
10	<input type="checkbox"/>	1.000						
11	<input type="checkbox"/>	1.000		994483.30		P	0.8	



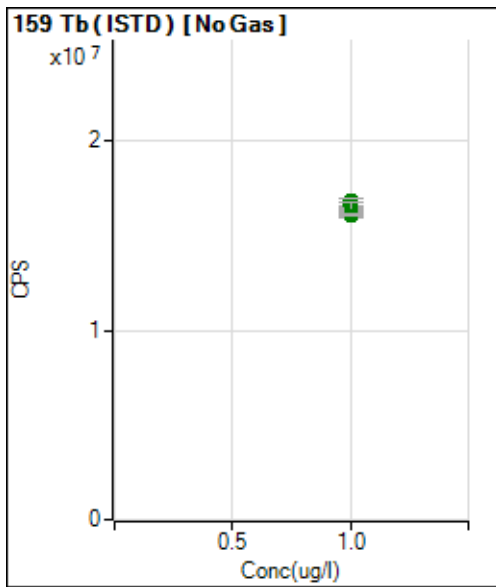
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	De t	RSD	%RE
1	<input type="checkbox"/>	1.000		222666.97		P	1.9	
2	<input type="checkbox"/>	1.000		219524.83		P	0.4	
3	<input type="checkbox"/>	1.000		220563.80		P	1.5	
4	<input type="checkbox"/>	1.000		220239.87		P	0.5	
5	<input type="checkbox"/>	1.000		219728.85		P	0.7	
6	<input type="checkbox"/>	1.000		215413.54		P	0.7	
7	<input type="checkbox"/>	1.000		222455.77		P	0.2	
8	<input type="checkbox"/>	1.000		225764.96		P	1.9	
9	<input type="checkbox"/>	1.000		226811.94		P	0.6	
10	<input type="checkbox"/>	1.000						
11	<input type="checkbox"/>	1.000		227166.41		P	1.4	



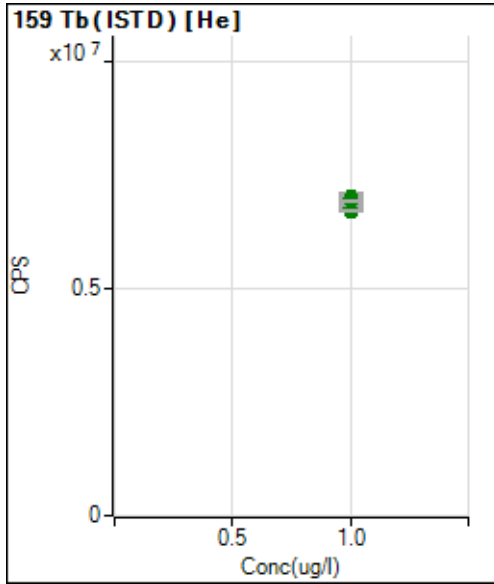
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	De t	RSD	%RE
1	<input type="checkbox"/>	1.000		12172784.06		A	1.4	
2	<input type="checkbox"/>	1.000		11914295.42		A	0.6	
3	<input type="checkbox"/>	1.000		12207745.33		A	1.8	
4	<input type="checkbox"/>	1.000		12413445.17		A	1.3	
5	<input type="checkbox"/>	1.000		12085111.48		A	1.6	
6	<input type="checkbox"/>	1.000		12173458.75		A	0.8	
7	<input type="checkbox"/>	1.000		12125528.76		A	1.9	
8	<input type="checkbox"/>	1.000		11728113.17		A	2.2	
9	<input type="checkbox"/>	1.000		11775393.42		A	0.6	
10	<input type="checkbox"/>	1.000						
11	<input type="checkbox"/>	1.000		12214239.82		A	2.7	



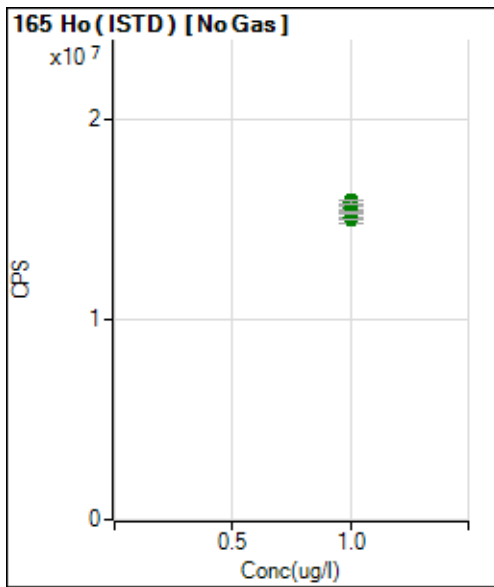
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	De t	RSD	%RE
1	<input type="checkbox"/>	1.000		2635629.81		A	0.6	
2	<input type="checkbox"/>	1.000		2596057.80		A	0.6	
3	<input type="checkbox"/>	1.000		2612175.57		A	1.0	
4	<input type="checkbox"/>	1.000		2634589.52		A	1.0	
5	<input type="checkbox"/>	1.000		2622950.10		A	0.5	
6	<input type="checkbox"/>	1.000		2604976.80		A	0.7	
7	<input type="checkbox"/>	1.000		2626617.14		A	1.4	
8	<input type="checkbox"/>	1.000		2558121.09		A	1.3	
9	<input type="checkbox"/>	1.000		2516107.30		A	0.4	
10	<input type="checkbox"/>	1.000						
11	<input type="checkbox"/>	1.000		2647919.16		A	0.7	



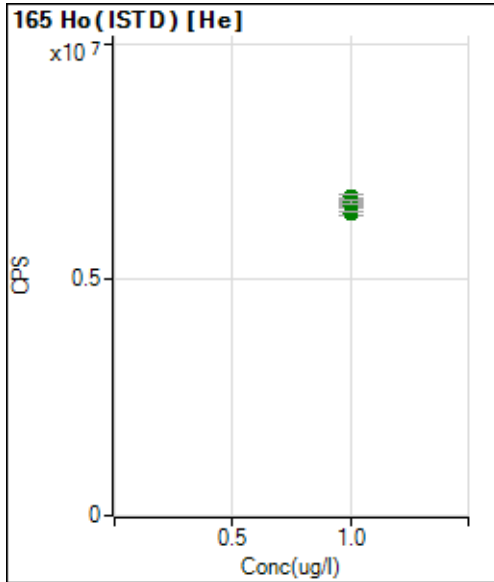
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	De t	RSD	%RE
1	<input type="checkbox"/>	1.000		16341854.82		A	2.2	
2	<input type="checkbox"/>	1.000		16197737.79		A	0.7	
3	<input type="checkbox"/>	1.000		16305229.34		A	3.3	
4	<input type="checkbox"/>	1.000		16641309.68		A	1.6	
5	<input type="checkbox"/>	1.000		16893818.01		A	1.3	
6	<input type="checkbox"/>	1.000		16314957.51		A	0.9	
7	<input type="checkbox"/>	1.000		16558203.45		A	3.0	
8	<input type="checkbox"/>	1.000		16084609.67		A	0.4	
9	<input type="checkbox"/>	1.000		16072808.49		A	0.7	
10	<input type="checkbox"/>	1.000						
11	<input type="checkbox"/>	1.000		16109613.53		A	0.5	



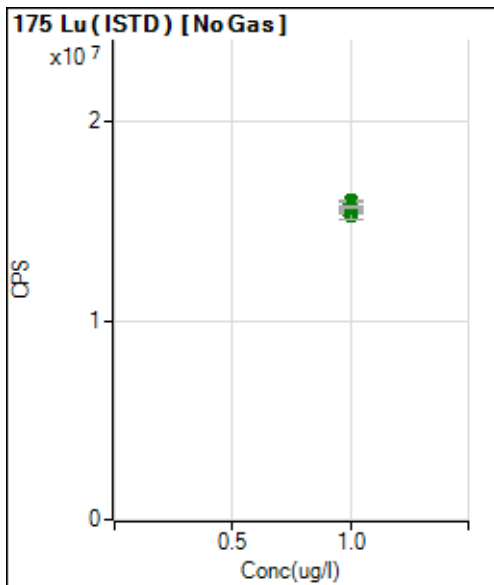
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	De t	RSD	%RE
1	<input type="checkbox"/>	1.000		6833358.64		A	1.0	
2	<input type="checkbox"/>	1.000		6855261.27		A	0.9	
3	<input type="checkbox"/>	1.000		6889694.87		A	1.0	
4	<input type="checkbox"/>	1.000		7030053.97		A	1.5	
5	<input type="checkbox"/>	1.000		7005815.88		A	3.5	
6	<input type="checkbox"/>	1.000		6809750.81		A	1.5	
7	<input type="checkbox"/>	1.000		6979246.35		A	1.9	
8	<input type="checkbox"/>	1.000		6756590.89		A	1.8	
9	<input type="checkbox"/>	1.000		6710745.14		A	0.6	
10	<input type="checkbox"/>	1.000						
11	<input type="checkbox"/>	1.000		6928950.16		A	0.8	



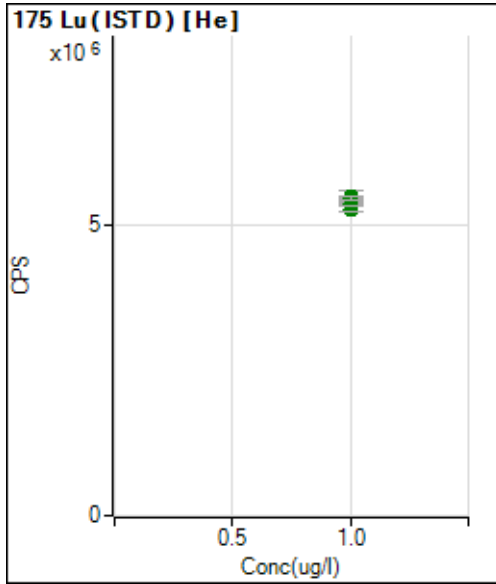
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	De t	RSD	%RE
1	<input type="checkbox"/>	1.000		15250385.89		A	2.5	
2	<input type="checkbox"/>	1.000		15351100.87		A	1.6	
3	<input type="checkbox"/>	1.000		15474570.59		A	2.5	
4	<input type="checkbox"/>	1.000		15542503.83		A	1.7	
5	<input type="checkbox"/>	1.000		15943145.71		A	0.2	
6	<input type="checkbox"/>	1.000		15327361.82		A	1.3	
7	<input type="checkbox"/>	1.000		15861605.42		A	1.4	
8	<input type="checkbox"/>	1.000		14938497.24		A	1.5	
9	<input type="checkbox"/>	1.000		15107791.43		A	1.6	
10	<input type="checkbox"/>	1.000						
11	<input type="checkbox"/>	1.000		15339520.13		A	0.9	



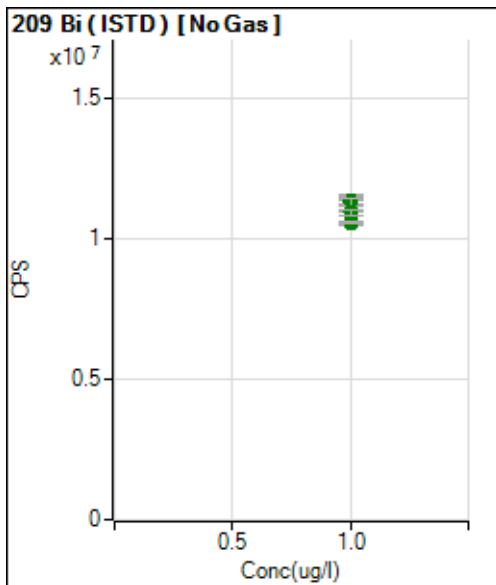
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	De t	RSD	%RE
1	<input type="checkbox"/>	1.000		6614264.50		A	0.7	
2	<input type="checkbox"/>	1.000		6600398.97		A	1.6	
3	<input type="checkbox"/>	1.000		6669689.66		A	1.1	
4	<input type="checkbox"/>	1.000		6775461.47		A	1.4	
5	<input type="checkbox"/>	1.000		6631336.67		A	1.2	
6	<input type="checkbox"/>	1.000		6421536.20		A	1.2	
7	<input type="checkbox"/>	1.000		6673398.16		A	0.4	
8	<input type="checkbox"/>	1.000		6580338.65		A	1.9	
9	<input type="checkbox"/>	1.000		6438531.53		A	0.3	
10	<input type="checkbox"/>	1.000						
11	<input type="checkbox"/>	1.000		6657251.86		A	1.1	



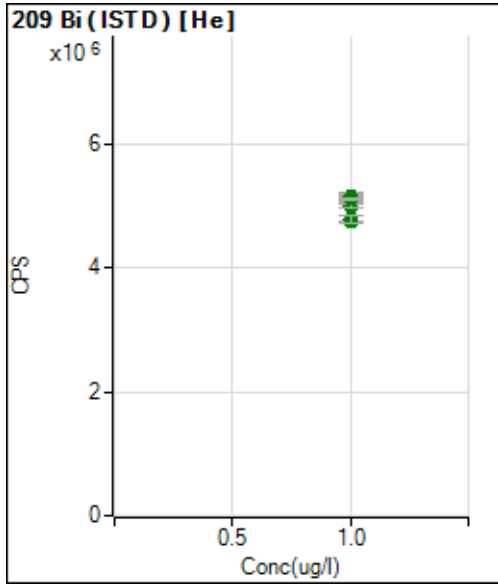
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	De t	RSD	%RE
1	<input type="checkbox"/>	1.000		15563578.03		A	1.9	
2	<input type="checkbox"/>	1.000		15482550.23		A	1.3	
3	<input type="checkbox"/>	1.000		15854267.14		A	2.5	
4	<input type="checkbox"/>	1.000		15794246.40		A	1.9	
5	<input type="checkbox"/>	1.000		16071831.89		A	0.2	
6	<input type="checkbox"/>	1.000		15809281.02		A	1.5	
7	<input type="checkbox"/>	1.000		15718428.19		A	0.5	
8	<input type="checkbox"/>	1.000		15294135.37		A	2.1	
9	<input type="checkbox"/>	1.000		15303475.33		A	2.7	
10	<input type="checkbox"/>	1.000						
11	<input type="checkbox"/>	1.000		15724056.42		A	0.6	



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	De t	RSD	%RE
1	<input type="checkbox"/>	1.000		5355399.64		A	0.2	
2	<input type="checkbox"/>	1.000		5430565.43		A	2.0	
3	<input type="checkbox"/>	1.000		5430791.64		A	1.6	
4	<input type="checkbox"/>	1.000		5505648.48		A	3.0	
5	<input type="checkbox"/>	1.000		5495291.92		A	0.4	
6	<input type="checkbox"/>	1.000		5286760.74		A	1.5	
7	<input type="checkbox"/>	1.000		5442731.45		A	0.2	
8	<input type="checkbox"/>	1.000		5416757.56		A	1.1	
9	<input type="checkbox"/>	1.000		5372375.36		A	1.1	
10	<input type="checkbox"/>	1.000						
11	<input type="checkbox"/>	1.000		5464931.51		A	1.3	



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	De t	RSD	%RE
1	<input type="checkbox"/>	1.000		11322328.97		A	1.1	
2	<input type="checkbox"/>	1.000		11001879.67		A	1.1	
3	<input type="checkbox"/>	1.000		11187979.17		A	0.6	
4	<input type="checkbox"/>	1.000		11321206.36		A	1.9	
5	<input type="checkbox"/>	1.000		11381925.48		A	3.4	
6	<input type="checkbox"/>	1.000		11378384.03		A	2.3	
7	<input type="checkbox"/>	1.000		11307798.45		A	2.4	
8	<input type="checkbox"/>	1.000		10560657.59		A	1.9	
9	<input type="checkbox"/>	1.000		10605391.31		A	0.4	
10	<input type="checkbox"/>	1.000						
11	<input type="checkbox"/>	1.000		10945525.92		A	1.6	



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	De t	RSD	%RE
1	<input type="checkbox"/>	1.000		5012354.02		A	1.2	
2	<input type="checkbox"/>	1.000		5113187.99		A	0.8	
3	<input type="checkbox"/>	1.000		5106148.47		A	1.3	
4	<input type="checkbox"/>	1.000		5143004.54		A	1.2	
5	<input type="checkbox"/>	1.000		5161221.21		A	1.6	
6	<input type="checkbox"/>	1.000		5133629.39		A	3.8	
7	<input type="checkbox"/>	1.000		5004847.59		A	1.0	
8	<input type="checkbox"/>	1.000		4760195.28		A	0.4	
9	<input type="checkbox"/>	1.000		4789272.06		A	2.7	
10	<input type="checkbox"/>	1.000						
11	<input type="checkbox"/>	1.000		5124189.60		A	0.7	

ICPMS207-B Analytical Data

Sample Name Rinse
File Name 001BLKV.d
Data Path Name D:\Agilent\ICPMH\1\DATA\220121ADoD.b
Acq Time 2022-01-21 14:08:28
Sample Type BlkVrfy
Total Dilution 1.0000
Comment ICPMS-6020-W-D
Operator CAR/SRH/JPV/AEM
Method SW6020/ SW6020B

Name	Mass	ISTD	Tune Step	Tune Mode	Conc.	Units	CPS
Li	7	45	1	No Gas		ug/l	16141.00
Be	9	45	1	No Gas		ug/l	317.94
B	11	45	1	No Gas		ug/l	6238.47
Na	23	45	3	He		ug/l	61113.53
Mg	24	45	3	He		ug/l	2265.69
Al	27	45	1	No Gas		ug/l	18807.43
Si	28	45	2	H2		ug/l	8489.83
K	39	72	3	He		ug/l	91084.73
Ca	40	72	2	H2		ug/l	123072.91
Ti	47	72	1	No Gas		ug/l	268.61
V	51	72	1	No Gas		ug/l	-83485.34
V	51	72	3	He		ug/l	18728.64
Cr	52	72	1	No Gas		ug/l	107491.39
Cr	52	72	3	He		ug/l	1073.38
Mn	55	72	1	No Gas		ug/l	15014.55
Mn	55	72	3	He		ug/l	830.86
Fe	56	72	2	H2		ug/l	14291.34
Fe	56	72	3	He		ug/l	7671.43
Co	59	72	1	No Gas		ug/l	818.40
Ni	60	72	1	No Gas		ug/l	835.04
Ni	60	72	3	He		ug/l	122.22
Cu	63	72	1	No Gas		ug/l	2324.46
Cu	63	72	3	He		ug/l	745.21
Cu	65	72	1	No Gas		ug/l	989.10
Zn	66	72	1	No Gas		ug/l	1930.94
Zn	66	72	3	He		ug/l	443.34
As	75	72	1	No Gas		ug/l	20636.03
As	75	72	3	He		ug/l	354.13
Se	78	72	2	H2		ug/l	40.89
Br	79	72	1	No Gas		ug/l	215622.31
Br	79	72	2	H2		ug/l	110546.72
Se	82	72	1	No Gas		ug/l	1132.26
Kr	84	72	1	No Gas		ug/l	32405.67
Sr	88	72	1	No Gas		ug/l	1287.52
Sr	88	72	3	He		ug/l	516.68
Mo	95	115	1	No Gas		ug/l	77.78
Mo	95	115	3	He		ug/l	15.56
Mo	98	115	1	No Gas		ug/l	76.12
Ag	107	115	1	No Gas		ug/l	1932.92
Ag	109	115	1	No Gas		ug/l	1806.18
Cd	111	115	1	No Gas		ug/l	-11.99

ICPMS207-B Analytical Data

Name	Mass	ISTD	Tune Step	Tune Mode	Conc.	Units	CPS
Cd	111	115	3	He		ug/l	8.67
Cd	114	115	1	No Gas		ug/l	-162.45
Cd	114	115	3	He		ug/l	14.48
Sn	118	115	1	No Gas		ug/l	3007.71
Sn	118	115	3	He		ug/l	858.92
Sb	121	115	1	No Gas		ug/l	268.70
Sb	121	115	3	He		ug/l	80.34
Sb	123	115	1	No Gas		ug/l	203.36
Sb	123	115	3	He		ug/l	51.34
Ba	135	115	1	No Gas		ug/l	83.17
Ba	137	115	1	No Gas		ug/l	123.09
La	139	115	3	He		ug/l	18.89
Ce	140	115	3	He		ug/l	34.44
Hg	201	209	1	No Gas		ug/l	15.00
Hg	202	209	1	No Gas		ug/l	80.32
Hg	202	209	3	He		ug/l	18.00
Tl	203	209	3	He		ug/l	382.16
Tl	205	209	1	No Gas		ug/l	1994.61
Tl	205	209	3	He		ug/l	942.41
[Pb]	206	209	1	No Gas		ug/l	997.82
[Pb]	207	209	1	No Gas		ug/l	828.92
Pb	208	209	1	No Gas		ug/l	3942.48
Th	232	209	3	He		ug/l	280.78
U	238	209	1	No Gas		ug/l	96.65

Name	Mass	Tune Step	Tune Mode	CPS	ISTD Recovery %
Sc	45	1	No Gas	6398092.94	
Sc	45	2	H2	3189918.23	
Sc	45	3	He	366072.66	
Ge	72	1	No Gas	1796562.39	
Ge	72	2	H2	1089797.97	
Ge	72	3	He	243221.89	
In	115	1	No Gas	13447430.81	
In	115	3	He	2936569.79	
Tb	159	1	No Gas	16002379.31	
Tb	159	3	He	7145065.96	
Ho	165	1	No Gas	15208806.61	
Ho	165	3	He	6777604.60	
Lu	175	1	No Gas	15602316.35	
Lu	175	3	He	5697237.97	
Bi	209	1	No Gas	12090212.91	
Bi	209	3	He	5150318.23	

ICPMS207-B Analytical Data

Sample Name Rinse
File Name 002BLKV.d
Data Path Name D:\Agilent\ICPMH\1\DATA\220121ADoD.b
Acq Time 2022-01-21 14:14:42
Sample Type BlkVrfy
Total Dilution 1.0000
Comment ICPMS-6020-W-D
Operator CAR/SRH/JPV/AEM
Method SW6020/ SW6020B

Name	Mass	ISTD	Tune Step	Tune Mode	Conc.	Units	CPS
Li	7	45	1	No Gas		ug/l	15634.95
Be	9	45	1	No Gas		ug/l	318.61
B	11	45	1	No Gas		ug/l	5978.92
Na	23	45	3	He		ug/l	59204.80
Mg	24	45	3	He		ug/l	2395.44
Al	27	45	1	No Gas		ug/l	18494.83
Si	28	45	2	H2		ug/l	8148.17
K	39	72	3	He		ug/l	90958.29
Ca	40	72	2	H2		ug/l	121352.22
Ti	47	72	1	No Gas		ug/l	313.65
V	51	72	1	No Gas		ug/l	-55858.68
V	51	72	3	He		ug/l	19098.03
Cr	52	72	1	No Gas		ug/l	110227.82
Cr	52	72	3	He		ug/l	1093.38
Mn	55	72	1	No Gas		ug/l	16609.81
Mn	55	72	3	He		ug/l	888.85
Fe	56	72	2	H2		ug/l	14087.63
Fe	56	72	3	He		ug/l	7577.94
Co	59	72	1	No Gas		ug/l	1001.39
Ni	60	72	1	No Gas		ug/l	864.98
Ni	60	72	3	He		ug/l	146.67
Cu	63	72	1	No Gas		ug/l	2348.47
Cu	63	72	3	He		ug/l	713.21
Cu	65	72	1	No Gas		ug/l	993.10
Zn	66	72	1	No Gas		ug/l	1911.09
Zn	66	72	3	He		ug/l	448.90
As	75	72	1	No Gas		ug/l	20471.88
As	75	72	3	He		ug/l	367.87
Se	78	72	2	H2		ug/l	37.89
Br	79	72	1	No Gas		ug/l	264480.74
Br	79	72	2	H2		ug/l	136441.27
Se	82	72	1	No Gas		ug/l	1212.02
Kr	84	72	1	No Gas		ug/l	27455.34
Sr	88	72	1	No Gas		ug/l	1240.95
Sr	88	72	3	He		ug/l	570.08
Mo	95	115	1	No Gas		ug/l	74.45
Mo	95	115	3	He		ug/l	13.33
Mo	98	115	1	No Gas		ug/l	86.53
Ag	107	115	1	No Gas		ug/l	1814.85
Ag	109	115	1	No Gas		ug/l	1772.16
Cd	111	115	1	No Gas		ug/l	18.71

ICPMS207-B Analytical Data

Name	Mass	ISTD	Tune Step	Tune Mode	Conc.	Units	CPS
Cd	111	115	3	He		ug/l	7.56
Cd	114	115	1	No Gas		ug/l	-143.40
Cd	114	115	3	He		ug/l	17.38
Sn	118	115	1	No Gas		ug/l	3476.89
Sn	118	115	3	He		ug/l	866.70
Sb	121	115	1	No Gas		ug/l	302.03
Sb	121	115	3	He		ug/l	74.01
Sb	123	115	1	No Gas		ug/l	223.36
Sb	123	115	3	He		ug/l	57.01
Ba	135	115	1	No Gas		ug/l	79.84
Ba	137	115	1	No Gas		ug/l	126.42
La	139	115	3	He		ug/l	26.67
Ce	140	115	3	He		ug/l	47.78
Hg	201	209	1	No Gas		ug/l	10.67
Hg	202	209	1	No Gas		ug/l	66.66
Hg	202	209	3	He		ug/l	19.33
Tl	203	209	3	He		ug/l	360.82
Tl	205	209	1	No Gas		ug/l	1899.04
Tl	205	209	3	He		ug/l	852.37
[Pb]	206	209	1	No Gas		ug/l	827.81
[Pb]	207	209	1	No Gas		ug/l	783.36
Pb	208	209	1	No Gas		ug/l	3432.42
Th	232	209	3	He		ug/l	271.45
U	238	209	1	No Gas		ug/l	91.31

Name	Mass	Tune Step	Tune Mode	CPS	ISTD Recovery %
Sc	45	1	No Gas	6551947.11	
Sc	45	2	H2	3155478.39	
Sc	45	3	He	368676.46	
Ge	72	1	No Gas	1816656.15	
Ge	72	2	H2	1099337.46	
Ge	72	3	He	247726.00	
In	115	1	No Gas	13812389.94	
In	115	3	He	2943385.24	
Tb	159	1	No Gas	16537779.49	
Tb	159	3	He	7336713.54	
Ho	165	1	No Gas	15249418.78	
Ho	165	3	He	6891463.20	
Lu	175	1	No Gas	15259597.60	
Lu	175	3	He	5770909.35	
Bi	209	1	No Gas	12013442.71	
Bi	209	3	He	5171331.08	

ICPMS207-B Analytical Data

Sample Name Rinse
File Name 003BLKV.d
Data Path Name D:\Agilent\ICPMH1\DATA\220121ADoD.b
Acq Time 2022-01-21 14:20:56
Sample Type BlkVrfy
Total Dilution 1.0000
Comment ICPMS-6020-W-D
Operator CAR/SRH/JPV/AEM
Method SW6020/ SW6020B

Name	Mass	ISTD	Tune Step	Tune Mode	Conc.	Units	CPS
Li	7	45	1	No Gas		ug/l	15357.22
Be	9	45	1	No Gas		ug/l	290.95
B	11	45	1	No Gas		ug/l	5690.70
Na	23	45	3	He		ug/l	55758.52
Mg	24	45	3	He		ug/l	2179.18
Al	27	45	1	No Gas		ug/l	18186.20
Si	28	45	2	H2		ug/l	8435.09
K	39	72	3	He		ug/l	91023.05
Ca	40	72	2	H2		ug/l	116745.26
Ti	47	72	1	No Gas		ug/l	315.32
V	51	72	1	No Gas		ug/l	-121698.39
V	51	72	3	He		ug/l	19504.08
Cr	52	72	1	No Gas		ug/l	113243.23
Cr	52	72	3	He		ug/l	1046.71
Mn	55	72	1	No Gas		ug/l	10359.81
Mn	55	72	3	He		ug/l	307.27
Fe	56	72	2	H2		ug/l	11253.98
Fe	56	72	3	He		ug/l	6719.97
Co	59	72	1	No Gas		ug/l	974.77
Ni	60	72	1	No Gas		ug/l	888.27
Ni	60	72	3	He		ug/l	144.45
Cu	63	72	1	No Gas		ug/l	2256.42
Cu	63	72	3	He		ug/l	743.54
Cu	65	72	1	No Gas		ug/l	1003.11
Zn	66	72	1	No Gas		ug/l	1428.55
Zn	66	72	3	He		ug/l	452.23
As	75	72	1	No Gas		ug/l	11582.68
As	75	72	3	He		ug/l	370.40
Se	78	72	2	H2		ug/l	35.00
Br	79	72	1	No Gas		ug/l	69111.84
Br	79	72	2	H2		ug/l	30525.04
Se	82	72	1	No Gas		ug/l	939.17
Kr	84	72	1	No Gas		ug/l	27375.57
Sr	88	72	1	No Gas		ug/l	1004.72
Sr	88	72	3	He		ug/l	425.57
Mo	95	115	1	No Gas		ug/l	34.45
Mo	95	115	3	He		ug/l	8.89
Mo	98	115	1	No Gas		ug/l	67.92
Ag	107	115	1	No Gas		ug/l	1811.51
Ag	109	115	1	No Gas		ug/l	1723.47
Cd	111	115	1	No Gas		ug/l	46.74

ICPMS207-B Analytical Data

Name	Mass	ISTD	Tune Step	Tune Mode	Conc.	Units	CPS
Cd	111	115	3	He		ug/l	7.67
Cd	114	115	1	No Gas		ug/l	-115.03
Cd	114	115	3	He		ug/l	10.40
Sn	118	115	1	No Gas		ug/l	3433.62
Sn	118	115	3	He		ug/l	981.16
Sb	121	115	1	No Gas		ug/l	215.02
Sb	121	115	3	He		ug/l	61.68
Sb	123	115	1	No Gas		ug/l	158.35
Sb	123	115	3	He		ug/l	52.01
Ba	135	115	1	No Gas		ug/l	63.21
Ba	137	115	1	No Gas		ug/l	109.78
La	139	115	3	He		ug/l	28.89
Ce	140	115	3	He		ug/l	46.67
Hg	201	209	1	No Gas		ug/l	11.67
Hg	202	209	1	No Gas		ug/l	46.66
Hg	202	209	3	He		ug/l	18.00
Tl	203	209	3	He		ug/l	236.76
Tl	205	209	1	No Gas		ug/l	1304.52
Tl	205	209	3	He		ug/l	622.93
[Pb]	206	209	1	No Gas		ug/l	770.03
[Pb]	207	209	1	No Gas		ug/l	754.47
Pb	208	209	1	No Gas		ug/l	3196.84
Th	232	209	3	He		ug/l	232.76
U	238	209	1	No Gas		ug/l	84.65

Name	Mass	Tune Step	Tune Mode	CPS	ISTD Recovery %
Sc	45	1	No Gas	6440804.49	
Sc	45	2	H2	3142060.13	
Sc	45	3	He	370315.58	
Ge	72	1	No Gas	1799854.79	
Ge	72	2	H2	1086082.43	
Ge	72	3	He	246968.36	
In	115	1	No Gas	13692134.26	
In	115	3	He	2990610.26	
Tb	159	1	No Gas	16077032.82	
Tb	159	3	He	7240368.60	
Ho	165	1	No Gas	15154740.35	
Ho	165	3	He	6912623.16	
Lu	175	1	No Gas	15189396.15	
Lu	175	3	He	5775200.88	
Bi	209	1	No Gas	11885591.41	
Bi	209	3	He	5286819.70	

ICPMS207-B Analytical Data

Sample Name Cal Blk
File Name 004CALB.d
Data Path Name D:\Agilent\ICPMH\1\DATA\220121ADoD.b
Acq Time 2022-01-21 14:27:10
Sample Type CalBlk
Total Dilution 1.0000
Comment ICPMS-6020-W-D
Operator CAR/SRH/JPV/AEM
Method SW6020/ SW6020B

Name	Mass	ISTD	Tune Step	Tune Mode	Conc.	Units	CPS
Li	7	45	1	No Gas	0.000	ug/l	15231.05
Be	9	45	1	No Gas	0.000	ug/l	272.95
B	11	45	1	No Gas	0.000	ug/l	5425.82
Na	23	45	3	He	0.000	ug/l	56063.93
Mg	24	45	3	He	0.000	ug/l	2182.50
Al	27	45	1	No Gas	0.000	ug/l	18291.20
Si	28	45	2	H2	0.000	ug/l	8104.99
K	39	72	3	He	0.000	ug/l	92235.74
Ca	40	72	2	H2	0.000	ug/l	119055.05
Ti	47	72	1	No Gas	0.000	ug/l	343.69
V	51	72	1	No Gas	0.000	ug/l	-56766.26
V	51	72	3	He	0.000	ug/l	19962.49
Cr	52	72	1	No Gas	0.000	ug/l	112238.02
Cr	52	72	3	He	0.000	ug/l	1114.49
Mn	55	72	1	No Gas	0.000	ug/l	9733.96
Mn	55	72	3	He	0.000	ug/l	264.95
Fe	56	72	2	H2	0.000	ug/l	11150.45
Fe	56	72	3	He	0.000	ug/l	7037.13
Co	59	72	1	No Gas	0.000	ug/l	981.43
Ni	60	72	1	No Gas	0.000	ug/l	811.75
Ni	60	72	3	He	0.000	ug/l	141.12
Cu	63	72	1	No Gas	0.000	ug/l	2380.49
Cu	63	72	3	He	0.000	ug/l	735.21
Cu	65	72	1	No Gas	0.000	ug/l	1099.82
Zn	66	72	1	No Gas	0.000	ug/l	1714.61
Zn	66	72	3	He	0.000	ug/l	347.78
As	75	72	1	No Gas	0.000	ug/l	24307.43
As	75	72	3	He	0.000	ug/l	382.20
Se	78	72	2	H2	0.000	ug/l	43.33
Br	79	72	1	No Gas		ug/l	59373.92
Br	79	72	2	H2		ug/l	27871.55
Se	82	72	1	No Gas	0.000	ug/l	1331.67
Kr	84	72	1	No Gas		ug/l	34577.86
Sr	88	72	1	No Gas	0.000	ug/l	974.77
Sr	88	72	3	He	0.000	ug/l	386.67
Mo	95	115	1	No Gas	0.000	ug/l	38.89
Mo	95	115	3	He	0.000	ug/l	13.33
Mo	98	115	1	No Gas	0.000	ug/l	45.70
Ag	107	115	1	No Gas	0.000	ug/l	1910.23
Ag	109	115	1	No Gas	0.000	ug/l	1843.53
Cd	111	115	1	No Gas	0.000	ug/l	-22.10

ICPMS207-B Analytical Data

Name	Mass	ISTD	Tune Step	Tune Mode	Conc.	Units	CPS
Cd	111	115	3	He	0.000	ug/l	6.44
Cd	114	115	1	No Gas	0.000	ug/l	-191.12
Cd	114	115	3	He	0.000	ug/l	13.43
Sn	118	115	1	No Gas	0.000	ug/l	3496.86
Sn	118	115	3	He	0.000	ug/l	951.15
Sb	121	115	1	No Gas	0.000	ug/l	206.69
Sb	121	115	3	He	0.000	ug/l	54.67
Sb	123	115	1	No Gas	0.000	ug/l	185.35
Sb	123	115	3	He	0.000	ug/l	41.67
Ba	135	115	1	No Gas	0.000	ug/l	63.21
Ba	137	115	1	No Gas	0.000	ug/l	133.07
La	139	115	3	He	0.000	ug/l	25.56
Ce	140	115	3	He	0.000	ug/l	48.89
Hg	201	209	1	No Gas	0.000	ug/l	13.67
Hg	202	209	1	No Gas	0.000	ug/l	62.32
Hg	202	209	3	He	0.000	ug/l	20.67
Tl	203	209	3	He	0.000	ug/l	250.11
Tl	205	209	1	No Gas	0.000	ug/l	1112.27
Tl	205	209	3	He	0.000	ug/l	593.59
[Pb]	206	209	1	No Gas	0.000	ug/l	791.14
[Pb]	207	209	1	No Gas	0.000	ug/l	657.80
Pb	208	209	1	No Gas	0.000	ug/l	3049.04
Th	232	209	3	He	0.000	ug/l	248.77
U	238	209	1	No Gas	0.000	ug/l	66.32

Name	Mass	Tune Step	Tune Mode	CPS	ISTD Recovery %
Sc	45	1	No Gas	6304423.55	100.0
Sc	45	2	H2	3033001.51	100.0
Sc	45	3	He	377791.54	100.0
Ge	72	1	No Gas	1646757.23	100.0
Ge	72	2	H2	1109642.34	100.0
Ge	72	3	He	254147.31	100.0
In	115	1	No Gas	12463234.14	100.0
In	115	3	He	2810287.07	100.0
Tb	159	1	No Gas	15850419.76	100.0
Tb	159	3	He	7043637.71	100.0
Ho	165	1	No Gas	14976641.11	100.0
Ho	165	3	He	6620587.44	100.0
Lu	175	1	No Gas	15070144.41	100.0
Lu	175	3	He	5376465.75	100.0
Bi	209	1	No Gas	10425691.68	100.0
Bi	209	3	He	4875234.66	100.0

ICPMS207-B Analytical Data

Sample Name 0.025 ppb STD
File Name 005CAL.S.d
Data Path Name D:\Agilent\ICPMH\1\DATA\220121ADoD.b
Acq Time 2022-01-21 14:34:36
Sample Type CalStd
Total Dilution 1.0000
Comment ICPMS-6020B-Cal
Operator CAR/SRH/JPV/AEM
Method SW6020/ SW6020B

Name	Mass	ISTD	Tune Step	Tune Mode	Conc.	Units	CPS
Li	7	45	1	No Gas	0.262	ug/l	18025.19
Be	9	45	1	No Gas	0.024	ug/l	374.93
B	11	45	1	No Gas	-0.371	ug/l	5144.97
Na	23	45	3	He	5.683	ug/l	60489.73
Mg	24	45	3	He	5.972	ug/l	5543.38
Al	27	45	1	No Gas	0.116	ug/l	21298.49
Si	28	45	2	H2	-0.068	ug/l	7946.65
K	39	72	3	He	8.966	ug/l	95661.80
Ca	40	72	2	H2	6.919	ug/l	181863.98
Ti	47	72	1	No Gas	0.044	ug/l	458.80
V	51	72	1	No Gas	-0.065	ug/l	-61678.76
V	51	72	3	He	0.092	ug/l	20134.93
Cr	52	72	1	No Gas	0.192	ug/l	119463.45
Cr	52	72	3	He	0.036	ug/l	1314.51
Mn	55	72	1	No Gas	0.030	ug/l	10859.17
Mn	55	72	3	He	0.027	ug/l	370.93
Fe	56	72	2	H2	0.751	ug/l	26475.44
Fe	56	72	3	He	0.716	ug/l	11040.31
Co	59	72	1	No Gas	0.023	ug/l	1786.57
Ni	60	72	1	No Gas	0.037	ug/l	1117.83
Ni	60	72	3	He	0.042	ug/l	255.56
Cu	63	72	1	No Gas	0.028	ug/l	2911.47
Cu	63	72	3	He	0.029	ug/l	931.18
Cu	65	72	1	No Gas	0.025	ug/l	1321.26
Zn	66	72	1	No Gas	0.010	ug/l	1747.73
Zn	66	72	3	He	0.053	ug/l	418.90
As	75	72	1	No Gas	1.766	ug/l	15022.47
As	75	72	3	He	0.048	ug/l	434.33
Se	78	72	2	H2	0.018	ug/l	54.44
Br	79	72	1	No Gas		ug/l	203627.94
Br	79	72	2	H2		ug/l	105684.15
Se	82	72	1	No Gas	-10.086	ug/l	833.56
Kr	84	72	1	No Gas		ug/l	21979.99
Sr	88	72	1	No Gas	0.026	ug/l	2392.14
Sr	88	72	3	He	0.017	ug/l	491.12
Mo	95	115	1	No Gas	0.026	ug/l	306.67
Mo	95	115	3	He	0.030	ug/l	131.11
Mo	98	115	1	No Gas	0.026	ug/l	485.58
Ag	107	115	1	No Gas	0.015	ug/l	2329.80
Ag	109	115	1	No Gas	0.011	ug/l	2131.02
Cd	111	115	1	No Gas	0.027	ug/l	139.89

ICPMS207-B Analytical Data

Name	Mass	ISTD	Tune Step	Tune Mode	Conc.	Units	CPS
Cd	111	115	3	He	0.024	ug/l	58.00
Cd	114	115	1	No Gas	0.023	ug/l	122.97
Cd	114	115	3	He	0.024	ug/l	135.70
Sn	118	115	1	No Gas	0.108	ug/l	5359.70
Sn	118	115	3	He	0.041	ug/l	1151.16
Sb	121	115	1	No Gas	0.029	ug/l	965.46
Sb	121	115	3	He	0.027	ug/l	254.69
Sb	123	115	1	No Gas	0.027	ug/l	715.43
Sb	123	115	3	He	0.027	ug/l	202.35
Ba	135	115	1	No Gas	0.030	ug/l	222.90
Ba	137	115	1	No Gas	0.031	ug/l	425.83
La	139	115	3	He	0.024	ug/l	681.13
Ce	140	115	3	He	0.024	ug/l	785.59
Hg	201	209	1	No Gas	0.000	ug/l	13.67
Hg	202	209	1	No Gas	0.001	ug/l	71.99
Hg	202	209	3	He	-0.001	ug/l	18.33
Tl	203	209	3	He	0.025	ug/l	504.22
Tl	205	209	1	No Gas	0.026	ug/l	2252.43
Tl	205	209	3	He	0.022	ug/l	1135.17
[Pb]	206	209	1	No Gas	0.017	ug/l	1048.94
[Pb]	207	209	1	No Gas	0.025	ug/l	987.82
Pb	208	209	1	No Gas	0.021	ug/l	4333.64
Th	232	209	3	He	0.017	ug/l	745.66
U	238	209	1	No Gas	0.025	ug/l	1622.11

Name	Mass	Tune Step	Tune Mode	CPS	ISTD Recovery %
Sc	45	1	No Gas	6278881.72	99.6
Sc	45	2	H2	3026906.15	99.8
Sc	45	3	He	369704.41	97.9
Ge	72	1	No Gas	1620192.17	98.4
Ge	72	2	H2	1077855.62	97.1
Ge	72	3	He	247992.64	97.6
In	115	1	No Gas	12421470.82	99.7
In	115	3	He	2822301.39	100.4
Tb	159	1	No Gas	15644119.40	98.7
Tb	159	3	He	7084855.65	100.6
Ho	165	1	No Gas	14743770.96	98.4
Ho	165	3	He	6590848.48	99.6
Lu	175	1	No Gas	15029539.84	99.7
Lu	175	3	He	5402800.42	100.5
Bi	209	1	No Gas	10235855.56	98.2
Bi	209	3	He	4867819.43	99.8

ICPMS207-B Analytical Data

Sample Name 0.05 ppb STD
File Name 006CAL5.d
Data Path Name D:\Agilent\ICPMH\1\DATA\220121ADoD.b
Acq Time 2022-01-21 14:41:15
Sample Type CalStd
Total Dilution 1.0000
Comment ICPMS-6020B-Cal
Operator CAR/SRH/JPV/AEM
Method SW6020/ SW6020B

Name	Mass	ISTD	Tune Step	Tune Mode	Conc.	Units	CPS
Li	7	45	1	No Gas	0.617	ug/l	22304.59
Be	9	45	1	No Gas	0.050	ug/l	494.91
B	11	45	1	No Gas	-1.090	ug/l	4722.64
Na	23	45	3	He	13.855	ug/l	68447.17
Mg	24	45	3	He	14.563	ug/l	10426.26
Al	27	45	1	No Gas	0.108	ug/l	21449.80
Si	28	45	2	H2	-0.022	ug/l	8100.82
K	39	72	3	He	19.941	ug/l	100601.85
Ca	40	72	2	H2	14.843	ug/l	256163.63
Ti	47	72	1	No Gas	0.061	ug/l	510.52
V	51	72	1	No Gas	0.050	ug/l	-49763.50
V	51	72	3	He	0.147	ug/l	20124.93
Cr	52	72	1	No Gas	0.196	ug/l	120359.24
Cr	52	72	3	He	0.062	ug/l	1454.53
Mn	55	72	1	No Gas	0.063	ug/l	12347.37
Mn	55	72	3	He	0.054	ug/l	475.58
Fe	56	72	2	H2	1.561	ug/l	43086.09
Fe	56	72	3	He	1.486	ug/l	15229.91
Co	59	72	1	No Gas	0.061	ug/l	3197.36
Ni	60	72	1	No Gas	0.055	ug/l	1284.19
Ni	60	72	3	He	0.075	ug/l	342.23
Cu	63	72	1	No Gas	0.050	ug/l	3368.41
Cu	63	72	3	He	0.057	ug/l	1112.49
Cu	65	72	1	No Gas	0.047	ug/l	1547.38
Zn	66	72	1	No Gas	0.000	ug/l	1697.77
Zn	66	72	3	He	0.044	ug/l	397.79
As	75	72	1	No Gas	1.826	ug/l	14683.19
As	75	72	3	He	0.069	ug/l	452.47
Se	78	72	2	H2	0.052	ug/l	78.56
Br	79	72	1	No Gas		ug/l	178539.89
Br	79	72	2	H2		ug/l	92614.72
Se	82	72	1	No Gas	-11.363	ug/l	778.74
Kr	84	72	1	No Gas		ug/l	17912.28
Sr	88	72	1	No Gas	0.055	ug/l	4019.27
Sr	88	72	3	He	0.045	ug/l	657.80
Mo	95	115	1	No Gas	0.063	ug/l	697.80
Mo	95	115	3	He	0.062	ug/l	248.89
Mo	98	115	1	No Gas	0.057	ug/l	1020.05
Ag	107	115	1	No Gas	0.022	ug/l	2558.60
Ag	109	115	1	No Gas	0.025	ug/l	2533.25
Cd	111	115	1	No Gas	0.070	ug/l	408.54

ICPMS207-B Analytical Data

Name	Mass	ISTD	Tune Step	Tune Mode	Conc.	Units	CPS
Cd	111	115	3	He	0.056	ug/l	123.67
Cd	114	115	1	No Gas	0.060	ug/l	630.13
Cd	114	115	3	He	0.057	ug/l	298.43
Sn	118	115	1	No Gas	0.049	ug/l	4375.36
Sn	118	115	3	He	0.055	ug/l	1190.06
Sb	121	115	1	No Gas	0.056	ug/l	1700.61
Sb	121	115	3	He	0.056	ug/l	454.72
Sb	123	115	1	No Gas	0.058	ug/l	1350.20
Sb	123	115	3	He	0.057	ug/l	365.71
Ba	135	115	1	No Gas	0.052	ug/l	349.31
Ba	137	115	1	No Gas	0.045	ug/l	565.56
La	139	115	3	He	0.055	ug/l	1521.21
Ce	140	115	3	He	0.057	ug/l	1760.12
Hg	201	209	1	No Gas	0.001	ug/l	16.33
Hg	202	209	1	No Gas	0.000	ug/l	64.32
Hg	202	209	3	He	-0.001	ug/l	18.33
Tl	203	209	3	He	0.054	ug/l	786.34
Tl	205	209	1	No Gas	0.057	ug/l	3633.85
Tl	205	209	3	He	0.056	ug/l	1909.57
[Pb]	206	209	1	No Gas	0.048	ug/l	1545.66
[Pb]	207	209	1	No Gas	0.052	ug/l	1374.53
Pb	208	209	1	No Gas	0.050	ug/l	6243.96
Th	232	209	3	He	0.043	ug/l	1486.69
U	238	209	1	No Gas	0.058	ug/l	3691.79

Name	Mass	Tune Step	Tune Mode	CPS	ISTD Recovery %
Sc	45	1	No Gas	6386767.98	101.3
Sc	45	2	H2	3047537.95	100.5
Sc	45	3	He	368927.55	97.7
Ge	72	1	No Gas	1630302.35	99.0
Ge	72	2	H2	1071394.40	96.6
Ge	72	3	He	243285.93	95.7
In	115	1	No Gas	12576857.50	100.9
In	115	3	He	2761112.21	98.3
Tb	159	1	No Gas	15763171.26	99.4
Tb	159	3	He	6874488.67	97.6
Ho	165	1	No Gas	14866578.03	99.3
Ho	165	3	He	6453875.16	97.5
Lu	175	1	No Gas	14735835.84	97.8
Lu	175	3	He	5375413.09	100.0
Bi	209	1	No Gas	10276247.96	98.6
Bi	209	3	He	4771237.99	97.9

ICPMS207-B Analytical Data

Sample Name 0.10 ppb STD
File Name 007CAL5.d
Data Path Name D:\Agilent\ICPMH\1\DATA\220121ADoD.b
Acq Time 2022-01-21 14:47:54
Sample Type CalStd
Total Dilution 1.0000
Comment ICPMS-6020B-Cal
Operator CAR/SRH/JPV/AEM
Method SW6020/ SW6020B

Name	Mass	ISTD	Tune Step	Tune Mode	Conc.	Units	CPS
Li	7	45	1	No Gas	1.203	ug/l	28416.50
Be	9	45	1	No Gas	0.103	ug/l	712.21
B	11	45	1	No Gas	-1.098	ug/l	4647.92
Na	23	45	3	He	24.392	ug/l	78823.95
Mg	24	45	3	He	26.121	ug/l	16999.31
Al	27	45	1	No Gas	0.146	ug/l	22159.72
Si	28	45	2	H2	0.311	ug/l	8727.77
K	39	72	3	He	26.592	ug/l	106595.21
Ca	40	72	2	H2	26.547	ug/l	365135.84
Ti	47	72	1	No Gas	0.102	ug/l	602.29
V	51	72	1	No Gas	0.672	ug/l	3440.35
V	51	72	3	He	0.115	ug/l	20260.67
Cr	52	72	1	No Gas	0.278	ug/l	120100.28
Cr	52	72	3	He	0.081	ug/l	1597.87
Mn	55	72	1	No Gas	0.105	ug/l	13675.88
Mn	55	72	3	He	0.101	ug/l	677.55
Fe	56	72	2	H2	2.747	ug/l	67220.50
Fe	56	72	3	He	2.699	ug/l	22565.04
Co	59	72	1	No Gas	0.101	ug/l	4475.15
Ni	60	72	1	No Gas	0.102	ug/l	1636.86
Ni	60	72	3	He	0.096	ug/l	407.79
Cu	63	72	1	No Gas	0.101	ug/l	4259.68
Cu	63	72	3	He	0.100	ug/l	1442.79
Cu	65	72	1	No Gas	0.103	ug/l	2030.29
Zn	66	72	1	No Gas	0.065	ug/l	2030.32
Zn	66	72	3	He	0.073	ug/l	447.79
As	75	72	1	No Gas	1.529	ug/l	15807.33
As	75	72	3	He	0.127	ug/l	533.67
Se	78	72	2	H2	0.103	ug/l	113.33
Br	79	72	1	No Gas		ug/l	183566.43
Br	79	72	2	H2		ug/l	94777.23
Se	82	72	1	No Gas	-6.103	ug/l	995.58
Kr	84	72	1	No Gas		ug/l	23585.81
Sr	88	72	1	No Gas	0.106	ug/l	6555.19
Sr	88	72	3	He	0.091	ug/l	970.04
Mo	95	115	1	No Gas	0.113	ug/l	1170.05
Mo	95	115	3	He	0.101	ug/l	404.45
Mo	98	115	1	No Gas	0.110	ug/l	1847.57
Ag	107	115	1	No Gas	0.046	ug/l	3134.94
Ag	109	115	1	No Gas	0.044	ug/l	2954.17
Cd	111	115	1	No Gas	0.104	ug/l	597.80

ICPMS207-B Analytical Data

Name	Mass	ISTD	Tune Step	Tune Mode	Conc.	Units	CPS
Cd	111	115	3	He	0.103	ug/l	225.12
Cd	114	115	1	No Gas	0.105	ug/l	1201.05
Cd	114	115	3	He	0.105	ug/l	548.19
Sn	118	115	1	No Gas	0.097	ug/l	4991.01
Sn	118	115	3	He	0.095	ug/l	1396.75
Sb	121	115	1	No Gas	0.108	ug/l	2975.62
Sb	121	115	3	He	0.106	ug/l	830.11
Sb	123	115	1	No Gas	0.108	ug/l	2263.08
Sb	123	115	3	He	0.099	ug/l	614.74
Ba	135	115	1	No Gas	0.098	ug/l	572.21
Ba	137	115	1	No Gas	0.106	ug/l	1101.21
La	139	115	3	He	0.103	ug/l	2863.65
Ce	140	115	3	He	0.103	ug/l	3149.27
Hg	201	209	1	No Gas	0.000	ug/l	14.67
Hg	202	209	1	No Gas	0.003	ug/l	84.98
Hg	202	209	3	He	0.001	ug/l	22.33
Tl	203	209	3	He	0.099	ug/l	1226.55
Tl	205	209	1	No Gas	0.106	ug/l	5837.99
Tl	205	209	3	He	0.105	ug/l	3066.93
[Pb]	206	209	1	No Gas	0.095	ug/l	2304.66
[Pb]	207	209	1	No Gas	0.099	ug/l	2015.72
Pb	208	209	1	No Gas	0.096	ug/l	9154.62
Th	232	209	3	He	0.089	ug/l	2792.09
U	238	209	1	No Gas	0.105	ug/l	6680.71

Name	Mass	Tune Step	Tune Mode	CPS	ISTD Recovery %
Sc	45	1	No Gas	6293735.77	99.8
Sc	45	2	H2	3027428.63	99.8
Sc	45	3	He	368704.19	97.6
Ge	72	1	No Gas	1575569.06	95.7
Ge	72	2	H2	1064659.21	95.9
Ge	72	3	He	247600.14	97.4
In	115	1	No Gas	12081944.01	96.9
In	115	3	He	2798101.03	99.6
Tb	159	1	No Gas	15683938.49	98.9
Tb	159	3	He	6724446.03	95.5
Ho	165	1	No Gas	14519774.78	96.9
Ho	165	3	He	6357015.90	96.0
Lu	175	1	No Gas	14452403.25	95.9
Lu	175	3	He	5402388.66	100.5
Bi	209	1	No Gas	10262710.90	98.4
Bi	209	3	He	4732670.29	97.1

ICPMS207-B Analytical Data

Sample Name 0.5 ppb STD
File Name 008CAL.S.d
Data Path Name D:\Agilent\ICPMH\1\DATA\220121ADoD.b
Acq Time 2022-01-21 14:54:32
Sample Type CalStd
Total Dilution 1.0000
Comment ICPMS-6020B-Cal
Operator CAR/SRH/JPV/AEM
Method SW6020/ SW6020B

Name	Mass	ISTD	Tune Step	Tune Mode	Conc.	Units	CPS
Li	7	45	1	No Gas	5.937	ug/l	80085.57
Be	9	45	1	No Gas	0.480	ug/l	2312.72
B	11	45	1	No Gas	-0.191	ug/l	5262.37
Na	23	45	3	He	120.356	ug/l	173515.13
Mg	24	45	3	He	120.455	ug/l	70632.30
Al	27	45	1	No Gas	0.549	ug/l	32739.01
Si	28	45	2	H2	1.795	ug/l	11705.34
K	39	72	3	He	121.190	ug/l	163555.36
Ca	40	72	2	H2	120.084	ug/l	1254650.05
Ti	47	72	1	No Gas	0.447	ug/l	1590.02
V	51	72	1	No Gas	0.666	ug/l	2713.91
V	51	72	3	He	0.533	ug/l	22863.33
Cr	52	72	1	No Gas	0.518	ug/l	136125.42
Cr	52	72	3	He	0.501	ug/l	4177.28
Mn	55	72	1	No Gas	0.497	ug/l	31204.52
Mn	55	72	3	He	0.490	ug/l	2259.06
Fe	56	72	2	H2	12.633	ug/l	271817.72
Fe	56	72	3	He	12.430	ug/l	77967.51
Co	59	72	1	No Gas	0.471	ug/l	18158.62
Ni	60	72	1	No Gas	0.591	ug/l	5979.38
Ni	60	72	3	He	0.618	ug/l	1850.13
Cu	63	72	1	No Gas	0.535	ug/l	13226.63
Cu	63	72	3	He	0.538	ug/l	4544.47
Cu	65	72	1	No Gas	0.539	ug/l	6380.63
Zn	66	72	1	No Gas	0.532	ug/l	5021.58
Zn	66	72	3	He	0.505	ug/l	1075.60
As	75	72	1	No Gas	1.246	ug/l	17764.12
As	75	72	3	He	0.492	ug/l	983.41
Se	78	72	2	H2	0.486	ug/l	381.01
Br	79	72	1	No Gas		ug/l	198504.76
Br	79	72	2	H2		ug/l	103465.50
Se	82	72	1	No Gas	-3.321	ug/l	1166.40
Kr	84	72	1	No Gas		ug/l	25518.80
Sr	88	72	1	No Gas	0.487	ug/l	27908.42
Sr	88	72	3	He	0.477	ug/l	3422.66
Mo	95	115	1	No Gas	0.487	ug/l	5013.14
Mo	95	115	3	He	0.502	ug/l	1926.81
Mo	98	115	1	No Gas	0.497	ug/l	8315.33
Ag	107	115	1	No Gas	0.196	ug/l	7396.24
Ag	109	115	1	No Gas	0.194	ug/l	7023.24
Cd	111	115	1	No Gas	0.495	ug/l	2962.27

ICPMS207-B Analytical Data

Name	Mass	ISTD	Tune Step	Tune Mode	Conc.	Units	CPS
Cd	111	115	3	He	0.488	ug/l	1023.48
Cd	114	115	1	No Gas	0.492	ug/l	6449.81
Cd	114	115	3	He	0.498	ug/l	2508.40
Sn	118	115	1	No Gas	0.507	ug/l	12001.40
Sn	118	115	3	He	0.526	ug/l	3389.32
Sb	121	115	1	No Gas	0.498	ug/l	13180.82
Sb	121	115	3	He	0.499	ug/l	3645.84
Sb	123	115	1	No Gas	0.502	ug/l	10026.58
Sb	123	115	3	He	0.488	ug/l	2821.90
Ba	135	115	1	No Gas	0.498	ug/l	2714.90
Ba	137	115	1	No Gas	0.485	ug/l	4644.91
La	139	115	3	He	0.483	ug/l	13119.55
Ce	140	115	3	He	0.478	ug/l	14268.51
Hg	201	209	1	No Gas	0.010	ug/l	45.99
Hg	202	209	1	No Gas	0.008	ug/l	119.65
Hg	202	209	3	He	0.009	ug/l	53.32
Tl	203	209	3	He	0.473	ug/l	5002.96
Tl	205	209	1	No Gas	0.495	ug/l	22965.42
Tl	205	209	3	He	0.484	ug/l	12186.48
[Pb]	206	209	1	No Gas	0.491	ug/l	8528.35
[Pb]	207	209	1	No Gas	0.491	ug/l	7339.85
Pb	208	209	1	No Gas	0.488	ug/l	33962.80
Th	232	209	3	He	0.456	ug/l	13538.45
U	238	209	1	No Gas	0.491	ug/l	30573.83

Name	Mass	Tune Step	Tune Mode	CPS	ISTD Recovery %
Sc	45	1	No Gas	6268371.13	99.4
Sc	45	2	H2	3010530.66	99.3
Sc	45	3	He	368345.00	97.5
Ge	72	1	No Gas	1636087.09	99.4
Ge	72	2	H2	1069551.55	96.4
Ge	72	3	He	243660.82	95.9
In	115	1	No Gas	12298954.79	98.7
In	115	3	He	2757464.74	98.1
Tb	159	1	No Gas	15818982.80	99.8
Tb	159	3	He	6720822.93	95.4
Ho	165	1	No Gas	14739836.82	98.4
Ho	165	3	He	6433338.58	97.2
Lu	175	1	No Gas	14617780.08	97.0
Lu	175	3	He	5352605.17	99.6
Bi	209	1	No Gas	10129232.61	97.2
Bi	209	3	He	4787628.03	98.2

ICPMS207-B Analytical Data

Sample Name 1 ppb STD
File Name 009CAL.S.d
Data Path Name D:\Agilent\ICPMH\1\DATA\220121ADoD.b
Acq Time 2022-01-21 15:01:11
Sample Type CalStd
Total Dilution 1.0000
Comment ICPMS-6020B-Cal
Operator CAR/SRH/JPV/AEM
Method SW6020/ SW6020B

Name	Mass	ISTD	Tune Step	Tune Mode	Conc.	Units	CPS
Li	7	45	1	No Gas	12.663	ug/l	154483.34
Be	9	45	1	No Gas	1.010	ug/l	4594.78
B	11	45	1	No Gas	1.522	ug/l	6492.67
Na	23	45	3	He	252.329	ug/l	302870.02
Mg	24	45	3	He	252.064	ug/l	145012.80
Al	27	45	1	No Gas	0.968	ug/l	44110.21
Si	28	45	2	H2	4.122	ug/l	16241.98
K	39	72	3	He	251.306	ug/l	242577.09
Ca	40	72	2	H2	252.169	ug/l	2477060.23
Ti	47	72	1	No Gas	1.025	ug/l	3111.79
V	51	72	1	No Gas	0.862	ug/l	20459.66
V	51	72	3	He	0.975	ug/l	25781.49
Cr	52	72	1	No Gas	0.962	ug/l	152647.59
Cr	52	72	3	He	1.001	ug/l	7231.82
Mn	55	72	1	No Gas	1.000	ug/l	51498.18
Mn	55	72	3	He	1.005	ug/l	4333.78
Fe	56	72	2	H2	26.153	ug/l	544261.18
Fe	56	72	3	He	26.264	ug/l	156202.66
Co	59	72	1	No Gas	1.014	ug/l	36853.24
Ni	60	72	1	No Gas	0.954	ug/l	8878.42
Ni	60	72	3	He	0.940	ug/l	2722.49
Cu	63	72	1	No Gas	0.982	ug/l	21666.73
Cu	63	72	3	He	0.980	ug/l	7649.81
Cu	65	72	1	No Gas	0.981	ug/l	10413.24
Zn	66	72	1	No Gas	0.990	ug/l	7643.54
Zn	66	72	3	He	1.000	ug/l	1790.12
As	75	72	1	No Gas	0.352	ug/l	21658.39
As	75	72	3	He	1.000	ug/l	1610.53
Se	78	72	2	H2	1.007	ug/l	735.24
Br	79	72	1	No Gas		ug/l	175739.43
Br	79	72	2	H2		ug/l	92048.38
Se	82	72	1	No Gas	4.354	ug/l	1489.01
Kr	84	72	1	No Gas		ug/l	28878.82
Sr	88	72	1	No Gas	1.006	ug/l	54963.13
Sr	88	72	3	He	1.013	ug/l	6799.42
Mo	95	115	1	No Gas	1.004	ug/l	10332.67
Mo	95	115	3	He	0.998	ug/l	3848.32
Mo	98	115	1	No Gas	1.000	ug/l	16754.86
Ag	107	115	1	No Gas	0.401	ug/l	13210.81
Ag	109	115	1	No Gas	0.402	ug/l	12655.39
Cd	111	115	1	No Gas	1.001	ug/l	6036.43

ICPMS207-B Analytical Data

Name	Mass	ISTD	Tune Step	Tune Mode	Conc.	Units	CPS
Cd	111	115	3	He	1.005	ug/l	2117.93
Cd	114	115	1	No Gas	1.003	ug/l	13391.75
Cd	114	115	3	He	1.000	ug/l	5068.59
Sn	118	115	1	No Gas	0.995	ug/l	20283.57
Sn	118	115	3	He	0.987	ug/l	5585.59
Sb	121	115	1	No Gas	1.000	ug/l	26370.25
Sb	121	115	3	He	1.000	ug/l	7315.64
Sb	123	115	1	No Gas	0.998	ug/l	19813.89
Sb	123	115	3	He	1.006	ug/l	5822.12
Ba	135	115	1	No Gas	1.001	ug/l	5407.05
Ba	137	115	1	No Gas	1.007	ug/l	9551.05
La	139	115	3	He	1.008	ug/l	27562.94
Ce	140	115	3	He	1.011	ug/l	30379.95
Hg	201	209	1	No Gas	0.020	ug/l	76.65
Hg	202	209	1	No Gas	0.021	ug/l	216.29
Hg	202	209	3	He	0.021	ug/l	92.31
Tl	203	209	3	He	1.013	ug/l	10434.29
Tl	205	209	1	No Gas	1.002	ug/l	46021.97
Tl	205	209	3	He	1.007	ug/l	24730.82
[Pb]	206	209	1	No Gas	1.005	ug/l	16898.53
[Pb]	207	209	1	No Gas	1.004	ug/l	14535.76
Pb	208	209	1	No Gas	1.007	ug/l	67871.91
Th	232	209	3	He	1.024	ug/l	30091.79
U	238	209	1	No Gas	1.004	ug/l	63286.99

Name	Mass	Tune Step	Tune Mode	CPS	ISTD Recovery %
Sc	45	1	No Gas	6306116.73	100.0
Sc	45	2	H2	2972655.22	98.0
Sc	45	3	He	367220.08	97.2
Ge	72	1	No Gas	1590148.58	96.6
Ge	72	2	H2	1055957.42	95.2
Ge	72	3	He	242047.91	95.2
In	115	1	No Gas	12351743.31	99.1
In	115	3	He	2779452.69	98.9
Tb	159	1	No Gas	15830274.09	99.9
Tb	159	3	He	6774639.87	96.2
Ho	165	1	No Gas	14748131.36	98.5
Ho	165	3	He	6382994.07	96.4
Lu	175	1	No Gas	14653770.76	97.2
Lu	175	3	He	5346651.57	99.4
Bi	209	1	No Gas	10271414.78	98.5
Bi	209	3	He	4786691.06	98.2

ICPMS207-B Analytical Data

Sample Name Rinse
File Name 011BLKV.d
Data Path Name D:\Agilent\ICPMH\1\DATA\220121ADoD.b
Acq Time 2022-01-21 16:59:11
Sample Type BkVrfy
Total Dilution 1.0000
Comment ICPMS-200.8-W-D
Operator CAR/SRH/JPV/AEM
Method SW6020/ SW6020B

Name	Mass	ISTD	Tune Step	Tune Mode	Conc.	Units	CPS
Li	7	45	1	No Gas	0.257	ug/l	16763.92
Be	9	45	1	No Gas	-0.039	ug/l	99.98
B	11	45	1	No Gas	2.623	ug/l	6740.22
Na	23	45	3	He	7.395	ug/l	53980.88
Mg	24	45	3	He	0.060	ug/l	1883.06
Al	27	45	1	No Gas	0.020	ug/l	17477.99
Si	28	45	2	H2	0.590	ug/l	9527.61
K	39	72	3	He	-1.194	ug/l	80823.70
Ca	40	72	2	H2	2.869	ug/l	139505.15
Ti	47	72	1	No Gas	-0.041	ug/l	221.89
V	51	72	1	No Gas	0.136	ug/l	-43478.63
V	51	72	3	He	-0.664	ug/l	13358.33
Cr	52	72	1	No Gas	-0.608	ug/l	80787.79
Cr	52	72	3	He	-0.006	ug/l	947.82
Mn	55	72	1	No Gas	0.168	ug/l	16559.81
Mn	55	72	3	He	0.121	ug/l	689.55
Fe	56	72	2	H2	0.192	ug/l	14421.78
Fe	56	72	3	He	0.058	ug/l	6523.05
Co	59	72	1	No Gas	-0.008	ug/l	682.00
Ni	60	72	1	No Gas	-0.016	ug/l	652.05
Ni	60	72	3	He	-0.011	ug/l	97.78
Cu	63	72	1	No Gas	0.004	ug/l	2396.50
Cu	63	72	3	He	0.021	ug/l	788.53
Cu	65	72	1	No Gas	0.001	ug/l	1075.81
Zn	66	72	1	No Gas	-0.056	ug/l	1319.08
Zn	66	72	3	He	-0.005	ug/l	300.00
As	75	72	1	No Gas	1.406	ug/l	16639.22
As	75	72	3	He	-0.073	ug/l	253.67
Se	78	72	2	H2	-0.001	ug/l	40.11
Br	79	72	1	No Gas		ug/l	303967.15
Br	79	72	2	H2		ug/l	170553.59
Se	82	72	1	No Gas	-8.979	ug/l	874.22
Kr	84	72	1	No Gas		ug/l	22243.02
Sr	88	72	1	No Gas	-0.001	ug/l	878.29
Sr	88	72	3	He	-0.009	ug/l	287.78
Mo	95	115	1	No Gas	0.017	ug/l	214.45
Mo	95	115	3	He	0.012	ug/l	57.78
Mo	98	115	1	No Gas	0.015	ug/l	303.06
Ag	107	115	1	No Gas	0.003	ug/l	1971.60
Ag	109	115	1	No Gas	-0.001	ug/l	1796.84
Cd	111	115	1	No Gas	0.006	ug/l	16.77

ICPMS207-B Analytical Data

Name	Mass	ISTD	Tune Step	Tune Mode	Conc.	Units	CPS
Cd	111	115	3	He	0.003	ug/l	12.67
Cd	114	115	1	No Gas	0.008	ug/l	-74.26
Cd	114	115	3	He	0.003	ug/l	26.61
Sn	118	115	1	No Gas	0.003	ug/l	3516.81
Sn	118	115	3	He	0.007	ug/l	932.26
Sb	121	115	1	No Gas	0.147	ug/l	4063.67
Sb	121	115	3	He	0.112	ug/l	828.78
Sb	123	115	1	No Gas	0.147	ug/l	3087.98
Sb	123	115	3	He	0.119	ug/l	695.09
Ba	135	115	1	No Gas	0.004	ug/l	86.49
Ba	137	115	1	No Gas	0.002	ug/l	153.03
La	139	115	3	He	0.000	ug/l	28.89
Ce	140	115	3	He	0.000	ug/l	42.22
Hg	201	209	1	No Gas	0.007	ug/l	37.66
Hg	202	209	1	No Gas	0.006	ug/l	118.98
Hg	202	209	3	He	0.006	ug/l	41.99
Tl	203	209	3	He	0.202	ug/l	2351.83
Tl	205	209	1	No Gas	0.203	ug/l	11115.95
Tl	205	209	3	He	0.205	ug/l	5683.51
[Pb]	206	209	1	No Gas	0.000	ug/l	843.37
[Pb]	207	209	1	No Gas	0.005	ug/l	790.03
Pb	208	209	1	No Gas	0.003	ug/l	3503.54
Th	232	209	3	He	0.043	ug/l	1533.37
U	238	209	1	No Gas	0.009	ug/l	700.16

Name	Mass	Tune Step	Tune Mode	CPS	ISTD Recovery %
Sc	45	1	No Gas	5856510.46	92.9
Sc	45	2	H2	3095622.14	102.1
Sc	45	3	He	320880.05	84.9
Ge	72	1	No Gas	1598353.81	97.1
Ge	72	2	H2	1048063.60	94.5
Ge	72	3	He	224567.79	88.4
In	115	1	No Gas	12362158.48	99.2
In	115	3	He	2654844.23	94.5
Tb	159	1	No Gas	16338841.81	103.1
Tb	159	3	He	6995523.04	99.3
Ho	165	1	No Gas	15425816.11	103.0
Ho	165	3	He	6693821.14	101.1
Lu	175	1	No Gas	15665434.78	104.0
Lu	175	3	He	5473254.88	101.8
Bi	209	1	No Gas	11198520.19	107.4
Bi	209	3	He	4942916.95	101.4

ICPMS207-B Analytical Data

Sample Name 10 ppb STD
File Name 012CAL.S.d
Data Path Name D:\Agilent\ICPMH\1\DATA\220121ADoD.b
Acq Time 2022-01-21 17:05:30
Sample Type CalStd
Total Dilution 1.0000
Comment ICPMS-6020B-Cal
Operator CAR/SRH/JPV/AEM
Method SW6020/ SW6020B

Name	Mass	ISTD	Tune Step	Tune Mode	Conc.	Units	CPS
Li	7	45	1	No Gas	124.645	ug/l	1041836.59
Be	9	45	1	No Gas	9.983	ug/l	34734.11
B	11	45	1	No Gas	10.090	ug/l	27838.75
Na	23	45	3	He	2500.112	ug/l	2235971.84
Mg	24	45	3	He	2499.615	ug/l	1241953.29
Al	27	45	1	No Gas	9.983	ug/l	231672.55
Si	28	45	2	H2	40.062	ug/l	95678.38
K	39	72	3	He	2495.169	ug/l	1360795.08
Ca	40	72	2	H2	2498.847	ug/l	23024226.96
Ti	47	72	1	No Gas	9.991	ug/l	25134.96
V	51	72	1	No Gas	9.799	ug/l	267510.61
V	51	72	3	He	9.947	ug/l	64950.44
Cr	52	72	1	No Gas	9.933	ug/l	398839.80
Cr	52	72	3	He	9.996	ug/l	58202.66
Mn	55	72	1	No Gas	10.000	ug/l	420392.78
Mn	55	72	3	He	9.997	ug/l	38344.06
Fe	56	72	2	H2	259.897	ug/l	5223934.12
Fe	56	72	3	He	259.790	ug/l	1338364.91
Co	59	72	1	No Gas	9.998	ug/l	341772.62
Ni	60	72	1	No Gas	9.990	ug/l	77517.64
Ni	60	72	3	He	9.988	ug/l	24122.25
Cu	63	72	1	No Gas	10.000	ug/l	195229.54
Cu	63	72	3	He	9.993	ug/l	65035.80
Cu	65	72	1	No Gas	10.001	ug/l	95295.01
Zn	66	72	1	No Gas	10.006	ug/l	63953.37
Zn	66	72	3	He	9.990	ug/l	13288.35
As	75	72	1	No Gas	10.214	ug/l	94836.78
As	75	72	3	He	9.991	ug/l	11528.98
Se	78	72	2	H2	9.999	ug/l	6999.57
Br	79	72	1	No Gas		ug/l	205798.76
Br	79	72	2	H2		ug/l	104922.93
Se	82	72	1	No Gas	10.111	ug/l	5122.18
Kr	84	72	1	No Gas		ug/l	27551.63
Sr	88	72	1	No Gas	10.009	ug/l	564563.88
Sr	88	72	3	He	9.997	ug/l	59998.04
Mo	95	115	1	No Gas	10.005	ug/l	106942.86
Mo	95	115	3	He	10.004	ug/l	38056.17
Mo	98	115	1	No Gas	10.007	ug/l	177931.17
Ag	107	115	1	No Gas	4.000	ug/l	115941.06
Ag	109	115	1	No Gas	4.002	ug/l	113248.22
Cd	111	115	1	No Gas	10.006	ug/l	63871.25

ICPMS207-B Analytical Data

Name	Mass	ISTD	Tune Step	Tune Mode	Conc.	Units	CPS
Cd	111	115	3	He	10.003	ug/l	20655.85
Cd	114	115	1	No Gas	10.006	ug/l	142864.12
Cd	114	115	3	He	10.005	ug/l	50669.01
Sn	118	115	1	No Gas	10.007	ug/l	182598.51
Sn	118	115	3	He	10.005	ug/l	47885.76
Sb	121	115	1	No Gas	10.010	ug/l	286758.76
Sb	121	115	3	He	10.006	ug/l	73168.46
Sb	123	115	1	No Gas	10.012	ug/l	218365.51
Sb	123	115	3	He	10.005	ug/l	57331.93
Ba	135	115	1	No Gas	10.004	ug/l	55380.00
Ba	137	115	1	No Gas	10.005	ug/l	97524.22
La	139	115	3	He	10.005	ug/l	272486.99
Ce	140	115	3	He	10.004	ug/l	296859.53
Hg	201	209	1	No Gas	0.200	ug/l	813.86
Hg	202	209	1	No Gas	0.200	ug/l	1832.10
Hg	202	209	3	He	0.200	ug/l	876.19
Tl	203	209	3	He	10.002	ug/l	109857.31
Tl	205	209	1	No Gas	10.014	ug/l	543416.63
Tl	205	209	3	He	10.002	ug/l	263591.71
[Pb]	206	209	1	No Gas	10.009	ug/l	187536.07
[Pb]	207	209	1	No Gas	10.009	ug/l	160754.76
Pb	208	209	1	No Gas	10.009	ug/l	749406.81
Th	232	209	3	He	10.015	ug/l	356378.08
U	238	209	1	No Gas	10.010	ug/l	740264.52

Name	Mass	Tune Step	Tune Mode	CPS	ISTD Recovery %
Sc	45	1	No Gas	5788341.44	91.8
Sc	45	2	H2	2851155.15	94.0
Sc	45	3	He	325237.15	86.1
Ge	72	1	No Gas	1552709.75	94.3
Ge	72	2	H2	1070487.49	96.5
Ge	72	3	He	231982.04	91.3
In	115	1	No Gas	12386020.75	99.4
In	115	3	He	2664703.65	94.8
Tb	159	1	No Gas	16515063.02	104.2
Tb	159	3	He	7017042.99	99.6
Ho	165	1	No Gas	15768245.08	105.3
Ho	165	3	He	6712438.81	101.4
Lu	175	1	No Gas	15895646.65	105.5
Lu	175	3	He	5512752.24	102.5
Bi	209	1	No Gas	11068419.89	106.2
Bi	209	3	He	5146253.17	105.6

ICPMS207-B Analytical Data

Sample Name Rinse
File Name 013BLKV.d
Data Path Name D:\Agilent\ICPMH\1\DATA\220121ADoD.b
Acq Time 2022-01-21 17:13:20
Sample Type BlkVrfy
Total Dilution 1.0000
Comment ICPMS-6020-W-D
Operator CAR/SRH/JPV/AEM
Method SW6020/ SW6020B

Name	Mass	ISTD	Tune Step	Tune Mode	Conc.	Units	CPS
Li	7	45	1	No Gas	0.417	ug/l	17211.94
Be	9	45	1	No Gas	-0.042	ug/l	104.98
B	11	45	1	No Gas	0.449	ug/l	5928.22
Na	23	45	3	He	6.179	ug/l	52185.84
Mg	24	45	3	He	0.434	ug/l	2036.11
Al	27	45	1	No Gas	0.027	ug/l	17161.04
Si	28	45	2	H2	0.164	ug/l	7798.51
K	39	72	3	He	9.801	ug/l	85183.32
Ca	40	72	2	H2	-0.064	ug/l	107184.17
Ti	47	72	1	No Gas	-0.047	ug/l	200.20
V	51	72	1	No Gas	3.645	ug/l	64267.85
V	51	72	3	He	-0.378	ug/l	15699.58
Cr	52	72	1	No Gas	-0.289	ug/l	94555.78
Cr	52	72	3	He	-0.008	ug/l	925.59
Mn	55	72	1	No Gas	0.189	ug/l	16489.89
Mn	55	72	3	He	0.113	ug/l	642.89
Fe	56	72	2	H2	0.161	ug/l	13107.39
Fe	56	72	3	He	0.125	ug/l	6745.02
Co	59	72	1	No Gas	-0.010	ug/l	575.54
Ni	60	72	1	No Gas	-0.032	ug/l	509.00
Ni	60	72	3	He	-0.015	ug/l	88.89
Cu	63	72	1	No Gas	0.001	ug/l	2199.72
Cu	63	72	3	He	0.021	ug/l	770.87
Cu	65	72	1	No Gas	-0.005	ug/l	963.75
Zn	66	72	1	No Gas	-0.069	ug/l	1152.39
Zn	66	72	3	He	-0.027	ug/l	270.01
As	75	72	1	No Gas	-0.406	ug/l	19598.00
As	75	72	3	He	-0.035	ug/l	295.53
Se	78	72	2	H2	-0.008	ug/l	34.11
Br	79	72	1	No Gas		ug/l	310845.22
Br	79	72	2	H2		ug/l	168192.09
Se	82	72	1	No Gas	-0.869	ug/l	901.16
Kr	84	72	1	No Gas		ug/l	21853.19
Sr	88	72	1	No Gas	-0.001	ug/l	818.40
Sr	88	72	3	He	-0.007	ug/l	296.67
Mo	95	115	1	No Gas	0.011	ug/l	155.55
Mo	95	115	3	He	0.006	ug/l	35.55
Mo	98	115	1	No Gas	0.012	ug/l	256.19
Ag	107	115	1	No Gas	-0.001	ug/l	1852.20
Ag	109	115	1	No Gas	0.001	ug/l	1822.19
Cd	111	115	1	No Gas	-0.003	ug/l	-38.26

ICPMS207-B Analytical Data

Name	Mass	ISTD	Tune Step	Tune Mode	Conc.	Units	CPS
Cd	111	115	3	He	0.001	ug/l	8.11
Cd	114	115	1	No Gas	-0.001	ug/l	-207.51
Cd	114	115	3	He	0.001	ug/l	16.08
Sn	118	115	1	No Gas	-0.004	ug/l	3367.07
Sn	118	115	3	He	-0.007	ug/l	861.14
Sb	121	115	1	No Gas	0.056	ug/l	1772.96
Sb	121	115	3	He	0.048	ug/l	400.38
Sb	123	115	1	No Gas	0.055	ug/l	1356.54
Sb	123	115	3	He	0.051	ug/l	330.71
Ba	135	115	1	No Gas	0.008	ug/l	106.45
Ba	137	115	1	No Gas	0.000	ug/l	129.74
La	139	115	3	He	0.000	ug/l	25.55
Ce	140	115	3	He	0.000	ug/l	51.11
Hg	201	209	1	No Gas	0.005	ug/l	33.66
Hg	202	209	1	No Gas	0.004	ug/l	105.65
Hg	202	209	3	He	0.005	ug/l	39.99
Tl	203	209	3	He	0.078	ug/l	1084.48
Tl	205	209	1	No Gas	0.055	ug/l	4240.71
Tl	205	209	3	He	0.071	ug/l	2426.53
[Pb]	206	209	1	No Gas	-0.010	ug/l	673.35
[Pb]	207	209	1	No Gas	-0.005	ug/l	634.46
Pb	208	209	1	No Gas	-0.007	ug/l	2752.35
Th	232	209	3	He	0.021	ug/l	991.11
U	238	209	1	No Gas	0.001	ug/l	145.64

Name	Mass	Tune Step	Tune Mode	CPS	ISTD Recovery %
Sc	45	1	No Gas	5718402.04	90.7
Sc	45	2	H2	2786777.71	91.9
Sc	45	3	He	316243.27	83.7
Ge	72	1	No Gas	1508682.56	91.6
Ge	72	2	H2	1003914.70	90.5
Ge	72	3	He	221520.79	87.2
In	115	1	No Gas	12219561.80	98.0
In	115	3	He	2641072.11	94.0
Tb	159	1	No Gas	16202380.77	102.2
Tb	159	3	He	6924392.54	98.3
Ho	165	1	No Gas	15305408.31	102.2
Ho	165	3	He	6641299.14	100.3
Lu	175	1	No Gas	15795782.41	104.8
Lu	175	3	He	5446037.04	101.3
Bi	209	1	No Gas	11266780.53	108.1
Bi	209	3	He	5013648.06	102.8

ICPMS207-B Analytical Data

Sample Name Cal Blk
File Name 014CALB.d
Data Path Name D:\Agilent\ICPMH\1\DATA\220121ADoD.b
Acq Time 2022-01-21 17:19:33
Sample Type CalBlk
Total Dilution 1.0000
Comment ICPMS-6020-W-D
Operator CAR/SRH/JPV/AEM
Method SW6020/ SW6020B

Name	Mass	ISTD	Tune Step	Tune Mode	Conc.	Units	CPS
Li	7	45	1	No Gas	0.000	ug/l	16116.96
Be	9	45	1	No Gas	0.000	ug/l	240.73
B	11	45	1	No Gas	0.000	ug/l	5588.62
Na	23	45	3	He	0.000	ug/l	48645.13
Mg	24	45	3	He	0.000	ug/l	1869.75
Al	27	45	1	No Gas	0.000	ug/l	16763.86
Si	28	45	2	H2	0.000	ug/l	7382.79
K	39	72	3	He	0.000	ug/l	83413.54
Ca	40	72	2	H2	0.000	ug/l	101282.00
Ti	47	72	1	No Gas	0.000	ug/l	220.23
V	51	72	1	No Gas	0.000	ug/l	-58154.82
V	51	72	3	He	0.000	ug/l	15693.98
Cr	52	72	1	No Gas	0.000	ug/l	98256.00
Cr	52	72	3	He	0.000	ug/l	877.81
Mn	55	72	1	No Gas	0.000	ug/l	10988.97
Mn	55	72	3	He	0.000	ug/l	157.31
Fe	56	72	2	H2	0.000	ug/l	10265.62
Fe	56	72	3	He	0.000	ug/l	5867.09
Co	59	72	1	No Gas	0.000	ug/l	565.56
Ni	60	72	1	No Gas	0.000	ug/l	502.35
Ni	60	72	3	He	0.000	ug/l	98.89
Cu	63	72	1	No Gas	0.000	ug/l	2056.31
Cu	63	72	3	He	0.000	ug/l	683.55
Cu	65	72	1	No Gas	0.000	ug/l	975.09
Zn	66	72	1	No Gas	0.000	ug/l	1036.01
Zn	66	72	3	He	0.000	ug/l	226.67
As	75	72	1	No Gas	0.000	ug/l	14311.92
As	75	72	3	He	0.000	ug/l	282.93
Se	78	72	2	H2	0.000	ug/l	34.11
Br	79	72	1	No Gas	0.000	ug/l	72020.13
Br	79	72	2	H2	0.000	ug/l	33679.13
Se	82	72	1	No Gas	0.000	ug/l	752.88
Kr	84	72	1	No Gas		ug/l	22139.70
Sr	88	72	1	No Gas	0.000	ug/l	808.43
Sr	88	72	3	He	0.000	ug/l	295.56
Mo	95	115	1	No Gas	0.000	ug/l	61.11
Mo	95	115	3	He	0.000	ug/l	22.22
Mo	98	115	1	No Gas	0.000	ug/l	95.21
Ag	107	115	1	No Gas	0.000	ug/l	1866.21
Ag	109	115	1	No Gas	0.000	ug/l	1756.15
Cd	111	115	1	No Gas	0.000	ug/l	-3.64

ICPMS207-B Analytical Data

Name	Mass	ISTD	Tune Step	Tune Mode	Conc.	Units	CPS
Cd	111	115	3	He	0.000	ug/l	6.45
Cd	114	115	1	No Gas	0.000	ug/l	-173.12
Cd	114	115	3	He	0.000	ug/l	13.69
Sn	118	115	1	No Gas	0.000	ug/l	3194.03
Sn	118	115	3	He	0.000	ug/l	892.25
Sb	121	115	1	No Gas	0.000	ug/l	914.12
Sb	121	115	3	He	0.000	ug/l	211.69
Sb	123	115	1	No Gas	0.000	ug/l	684.09
Sb	123	115	3	He	0.000	ug/l	163.69
Ba	135	115	1	No Gas	0.000	ug/l	66.53
Ba	137	115	1	No Gas	0.000	ug/l	99.80
La	139	115	3	He	0.000	ug/l	24.44
Ce	140	115	3	He	0.000	ug/l	33.33
Hg	201	209	1	No Gas	0.000	ug/l	28.99
Hg	202	209	1	No Gas	0.000	ug/l	94.98
Hg	202	209	3	He	0.000	ug/l	32.33
Tl	203	209	3	He	0.000	ug/l	599.59
Tl	205	209	1	No Gas	0.000	ug/l	2612.50
Tl	205	209	3	He	0.000	ug/l	1482.01
[Pb]	206	209	1	No Gas	0.000	ug/l	586.69
[Pb]	207	209	1	No Gas	0.000	ug/l	504.46
Pb	208	209	1	No Gas	0.000	ug/l	2421.22
Th	232	209	3	He	0.000	ug/l	565.57
U	238	209	1	No Gas	0.000	ug/l	92.65

Name	Mass	Tune Step	Tune Mode	CPS	ISTD Recovery %
Sc	45	1	No Gas	5638644.78	100.0
Sc	45	2	H2	2744931.22	100.0
Sc	45	3	He	318486.02	100.0
Ge	72	1	No Gas	1511868.37	100.0
Ge	72	2	H2	992372.26	100.0
Ge	72	3	He	222666.97	100.0
In	115	1	No Gas	12172784.06	100.0
In	115	3	He	2635629.81	100.0
Tb	159	1	No Gas	16341854.82	100.0
Tb	159	3	He	6833358.64	100.0
Ho	165	1	No Gas	15250385.89	100.0
Ho	165	3	He	6614264.50	100.0
Lu	175	1	No Gas	15563578.03	100.0
Lu	175	3	He	5355399.64	100.0
Bi	209	1	No Gas	11322328.97	100.0
Bi	209	3	He	5012354.02	100.0

ICPMS207-B Analytical Data

Sample Name 0.025 ppb STD
File Name 015CAL.S.d
Data Path Name D:\Agilent\ICPMH\1\DATA\220121ADoD.b
Acq Time 2022-01-21 17:26:12
Sample Type CalStd
Total Dilution 1.0000
Comment ICPMS-6020B-Cal
Operator CAR/SRH/JPV/AEM
Method SW6020/ SW6020B

Name	Mass	ISTD	Tune Step	Tune Mode	Conc.	Units	CPS
Li	7	45	1	No Gas	0.345	ug/l	19118.97
Be	9	45	1	No Gas	-0.009	ug/l	204.96
B	11	45	1	No Gas	-0.190	ug/l	5148.95
Na	23	45	3	He	5.041	ug/l	51969.38
Mg	24	45	3	He	6.719	ug/l	4964.34
Al	27	45	1	No Gas	0.140	ug/l	19714.17
Si	28	45	2	H2	0.415	ug/l	8128.14
K	39	72	3	He	8.572	ug/l	86393.88
Ca	40	72	2	H2	7.100	ug/l	156675.14
Ti	47	72	1	No Gas	0.043	ug/l	323.66
V	51	72	1	No Gas	1.595	ug/l	-10013.51
V	51	72	3	He	0.275	ug/l	16784.10
Cr	52	72	1	No Gas	0.143	ug/l	100571.06
Cr	52	72	3	He	0.049	ug/l	1131.16
Mn	55	72	1	No Gas	0.029	ug/l	11881.25
Mn	55	72	3	He	0.033	ug/l	270.62
Fe	56	72	2	H2	0.767	ug/l	23997.01
Fe	56	72	3	He	0.724	ug/l	9275.61
Co	59	72	1	No Gas	0.185	ug/l	6556.94
Ni	60	72	1	No Gas	0.033	ug/l	731.90
Ni	60	72	3	He	0.036	ug/l	177.78
Cu	63	72	1	No Gas	0.037	ug/l	2670.65
Cu	63	72	3	He	0.042	ug/l	920.51
Cu	65	72	1	No Gas	0.034	ug/l	1251.89
Zn	66	72	1	No Gas	0.060	ug/l	1375.27
Zn	66	72	3	He	0.041	ug/l	274.45
As	75	72	1	No Gas	1.232	ug/l	22754.83
As	75	72	3	He	0.047	ug/l	329.00
Se	78	72	2	H2	0.023	ug/l	48.89
Br	79	72	1	No Gas	11.630	ug/l	231093.09
Br	79	72	2	H2	11.576	ug/l	121136.04
Se	82	72	1	No Gas	1.924	ug/l	1509.97
Kr	84	72	1	No Gas		ug/l	34199.78
Sr	88	72	1	No Gas	0.026	ug/l	2096.00
Sr	88	72	3	He	0.021	ug/l	407.79
Mo	95	115	1	No Gas	0.024	ug/l	311.12
Mo	95	115	3	He	0.024	ug/l	114.44
Mo	98	115	1	No Gas	0.024	ug/l	500.50
Ag	107	115	1	No Gas	0.014	ug/l	2207.07
Ag	109	115	1	No Gas	0.017	ug/l	2162.37
Cd	111	115	1	No Gas	0.017	ug/l	98.41

ICPMS207-B Analytical Data

Name	Mass	ISTD	Tune Step	Tune Mode	Conc.	Units	CPS
Cd	111	115	3	He	0.025	ug/l	56.78
Cd	114	115	1	No Gas	0.022	ug/l	121.76
Cd	114	115	3	He	0.023	ug/l	130.11
Sn	118	115	1	No Gas	0.050	ug/l	3999.30
Sn	118	115	3	He	0.061	ug/l	1168.95
Sb	121	115	1	No Gas	0.019	ug/l	1405.21
Sb	121	115	3	He	0.021	ug/l	365.71
Sb	123	115	1	No Gas	0.020	ug/l	1090.82
Sb	123	115	3	He	0.022	ug/l	291.36
Ba	135	115	1	No Gas	0.031	ug/l	229.55
Ba	137	115	1	No Gas	0.026	ug/l	345.99
La	139	115	3	He	0.023	ug/l	640.02
Ce	140	115	3	He	0.024	ug/l	733.36
Hg	201	209	1	No Gas	-0.002	ug/l	22.33
Hg	202	209	1	No Gas	0.000	ug/l	93.65
Hg	202	209	3	He	0.000	ug/l	32.66
Tl	203	209	3	He	0.012	ug/l	746.99
Tl	205	209	1	No Gas	0.015	ug/l	3333.77
Tl	205	209	3	He	0.009	ug/l	1754.16
[Pb]	206	209	1	No Gas	0.026	ug/l	1038.94
[Pb]	207	209	1	No Gas	0.026	ug/l	896.70
Pb	208	209	1	No Gas	0.025	ug/l	4195.84
Th	232	209	3	He	0.013	ug/l	1053.80
U	238	209	1	No Gas	0.024	ug/l	1825.77

Name	Mass	Tune Step	Tune Mode	CPS	ISTD Recovery %
Sc	45	1	No Gas	5631996.31	99.9
Sc	45	2	H2	2706114.19	98.6
Sc	45	3	He	312375.98	98.1
Ge	72	1	No Gas	1485586.22	98.3
Ge	72	2	H2	991600.12	99.9
Ge	72	3	He	219524.83	98.6
In	115	1	No Gas	11914295.42	97.9
In	115	3	He	2596057.80	98.5
Tb	159	1	No Gas	16197737.79	99.1
Tb	159	3	He	6855261.27	100.3
Ho	165	1	No Gas	15351100.87	100.7
Ho	165	3	He	6600398.97	99.8
Lu	175	1	No Gas	15482550.23	99.5
Lu	175	3	He	5430565.43	101.4
Bi	209	1	No Gas	11001879.67	97.2
Bi	209	3	He	5113187.99	102.0

ICPMS207-B Analytical Data

Sample Name 0.05 ppb STD
File Name 016CAL.S.d
Data Path Name D:\Agilent\ICPMH\1\DATA\220121ADoD.b
Acq Time 2022-01-21 17:32:50
Sample Type CalStd
Total Dilution 1.0000
Comment ICPMS-6020B-Cal
Operator CAR/SRH/JPV/AEM
Method SW6020/ SW6020B

Name	Mass	ISTD	Tune Step	Tune Mode	Conc.	Units	CPS
Li	7	45	1	No Gas	0.629	ug/l	21318.78
Be	9	45	1	No Gas	0.018	ug/l	302.61
B	11	45	1	No Gas	-0.293	ug/l	4848.73
Na	23	45	3	He	14.595	ug/l	60081.46
Mg	24	45	3	He	15.626	ug/l	9121.40
Al	27	45	1	No Gas	0.134	ug/l	19308.04
Si	28	45	2	H2	0.822	ug/l	8842.24
K	39	72	3	He	14.353	ug/l	89586.69
Ca	40	72	2	H2	15.069	ug/l	220696.82
Ti	47	72	1	No Gas	0.064	ug/l	375.38
V	51	72	1	No Gas	3.579	ug/l	50611.23
V	51	72	3	He	0.067	ug/l	15873.06
Cr	52	72	1	No Gas	0.067	ug/l	98992.88
Cr	52	72	3	He	0.078	ug/l	1293.40
Mn	55	72	1	No Gas	0.056	ug/l	12966.67
Mn	55	72	3	He	0.065	ug/l	387.26
Fe	56	72	2	H2	1.609	ug/l	39403.99
Fe	56	72	3	He	1.512	ug/l	13135.77
Co	59	72	1	No Gas	0.063	ug/l	2561.82
Ni	60	72	1	No Gas	0.078	ug/l	1061.27
Ni	60	72	3	He	0.087	ug/l	294.45
Cu	63	72	1	No Gas	0.065	ug/l	3176.29
Cu	63	72	3	He	0.072	ug/l	1104.49
Cu	65	72	1	No Gas	0.056	ug/l	1451.32
Zn	66	72	1	No Gas	0.095	ug/l	1598.14
Zn	66	72	3	He	0.080	ug/l	325.56
As	75	72	1	No Gas	0.086	ug/l	14791.24
As	75	72	3	He	0.061	ug/l	345.73
Se	78	72	2	H2	0.051	ug/l	67.56
Br	79	72	1	No Gas	8.774	ug/l	192753.32
Br	79	72	2	H2	8.949	ug/l	102042.16
Se	82	72	1	No Gas	0.041	ug/l	758.35
Kr	84	72	1	No Gas		ug/l	20364.12
Sr	88	72	1	No Gas	0.060	ug/l	3829.60
Sr	88	72	3	He	0.056	ug/l	606.68
Mo	95	115	1	No Gas	0.052	ug/l	625.57
Mo	95	115	3	He	0.047	ug/l	205.56
Mo	98	115	1	No Gas	0.056	ug/l	1076.72
Ag	107	115	1	No Gas	0.026	ug/l	2581.95
Ag	109	115	1	No Gas	0.030	ug/l	2562.60
Cd	111	115	1	No Gas	0.055	ug/l	338.07

ICPMS207-B Analytical Data

Name	Mass	ISTD	Tune Step	Tune Mode	Conc.	Units	CPS
Cd	111	115	3	He	0.054	ug/l	116.34
Cd	114	115	1	No Gas	0.051	ug/l	535.56
Cd	114	115	3	He	0.055	ug/l	288.98
Sn	118	115	1	No Gas	0.055	ug/l	4179.02
Sn	118	115	3	He	0.038	ug/l	1066.71
Sb	121	115	1	No Gas	0.045	ug/l	2169.06
Sb	121	115	3	He	0.047	ug/l	557.07
Sb	123	115	1	No Gas	0.042	ug/l	1592.92
Sb	123	115	3	He	0.046	ug/l	433.05
Ba	135	115	1	No Gas	0.048	ug/l	329.35
Ba	137	115	1	No Gas	0.050	ug/l	582.19
La	139	115	3	He	0.056	ug/l	1536.76
Ce	140	115	3	He	0.059	ug/l	1780.13
Hg	201	209	1	No Gas	-0.001	ug/l	24.33
Hg	202	209	1	No Gas	0.000	ug/l	90.65
Hg	202	209	3	He	0.002	ug/l	42.32
Tl	203	209	3	He	0.037	ug/l	1022.45
Tl	205	209	1	No Gas	0.040	ug/l	4689.75
Tl	205	209	3	He	0.033	ug/l	2385.18
[Pb]	206	209	1	No Gas	0.054	ug/l	1579.00
[Pb]	207	209	1	No Gas	0.055	ug/l	1390.08
Pb	208	209	1	No Gas	0.053	ug/l	6357.31
Th	232	209	3	He	0.033	ug/l	1812.19
U	238	209	1	No Gas	0.056	ug/l	4237.51

Name	Mass	Tune Step	Tune Mode	CPS	ISTD Recovery %
Sc	45	1	No Gas	5555588.03	98.5
Sc	45	2	H2	2685460.83	97.8
Sc	45	3	He	312609.49	98.2
Ge	72	1	No Gas	1493542.20	98.8
Ge	72	2	H2	1000439.60	100.8
Ge	72	3	He	220563.80	99.1
In	115	1	No Gas	12207745.33	100.3
In	115	3	He	2612175.57	99.1
Tb	159	1	No Gas	16305229.34	99.8
Tb	159	3	He	6889694.87	100.8
Ho	165	1	No Gas	15474570.59	101.5
Ho	165	3	He	6669689.66	100.8
Lu	175	1	No Gas	15854267.14	101.9
Lu	175	3	He	5430791.64	101.4
Bi	209	1	No Gas	11187979.17	98.8
Bi	209	3	He	5106148.47	101.9

ICPMS207-B Analytical Data

Sample Name 0.10 ppb STD
File Name 017CAL5.d
Data Path Name D:\Agilent\ICPMH\1\DATA\220121ADoD.b
Acq Time 2022-01-21 17:39:27
Sample Type CalStd
Total Dilution 1.0000
Comment ICPMS-6020B-Cal
Operator CAR/SRH/JPV/AEM
Method SW6020/ SW6020B

Name	Mass	ISTD	Tune Step	Tune Mode	Conc.	Units	CPS
Li	7	45	1	No Gas	1.105	ug/l	25853.56
Be	9	45	1	No Gas	0.054	ug/l	442.92
B	11	45	1	No Gas	-0.419	ug/l	4644.59
Na	23	45	3	He	27.394	ug/l	70518.55
Mg	24	45	3	He	27.225	ug/l	14448.34
Al	27	45	1	No Gas	0.167	ug/l	20342.72
Si	28	45	2	H2	0.878	ug/l	9092.46
K	39	72	3	He	20.284	ug/l	92327.48
Ca	40	72	2	H2	28.253	ug/l	323953.66
Ti	47	72	1	No Gas	0.111	ug/l	497.18
V	51	72	1	No Gas	2.815	ug/l	28028.24
V	51	72	3	He	0.004	ug/l	15547.16
Cr	52	72	1	No Gas	0.054	ug/l	99518.77
Cr	52	72	3	He	0.131	ug/l	1583.43
Mn	55	72	1	No Gas	0.092	ug/l	14468.51
Mn	55	72	3	He	0.116	ug/l	566.23
Fe	56	72	2	H2	2.963	ug/l	63704.80
Fe	56	72	3	He	2.739	ug/l	19046.55
Co	59	72	1	No Gas	0.110	ug/l	4102.45
Ni	60	72	1	No Gas	0.121	ug/l	1390.65
Ni	60	72	3	He	0.117	ug/l	360.01
Cu	63	72	1	No Gas	0.107	ug/l	3947.46
Cu	63	72	3	He	0.106	ug/l	1301.13
Cu	65	72	1	No Gas	0.091	ug/l	1770.16
Zn	66	72	1	No Gas	0.111	ug/l	1704.56
Zn	66	72	3	He	0.090	ug/l	336.67
As	75	72	1	No Gas	-0.210	ug/l	12862.45
As	75	72	3	He	0.112	ug/l	399.47
Se	78	72	2	H2	0.098	ug/l	98.00
Br	79	72	1	No Gas	9.577	ug/l	205883.64
Br	79	72	2	H2	9.506	ug/l	106090.59
Se	82	72	1	No Gas	-0.038	ug/l	733.28
Kr	84	72	1	No Gas		ug/l	18208.78
Sr	88	72	1	No Gas	0.112	ug/l	6555.17
Sr	88	72	3	He	0.117	ug/l	940.04
Mo	95	115	1	No Gas	0.107	ug/l	1242.29
Mo	95	115	3	He	0.094	ug/l	390.01
Mo	98	115	1	No Gas	0.100	ug/l	1891.60
Ag	107	115	1	No Gas	0.045	ug/l	3169.63
Ag	109	115	1	No Gas	0.047	ug/l	3075.58
Cd	111	115	1	No Gas	0.105	ug/l	662.13

ICPMS207-B Analytical Data

Name	Mass	ISTD	Tune Step	Tune Mode	Conc.	Units	CPS
Cd	111	115	3	He	0.108	ug/l	230.00
Cd	114	115	1	No Gas	0.103	ug/l	1272.25
Cd	114	115	3	He	0.106	ug/l	551.54
Sn	118	115	1	No Gas	0.098	ug/l	5017.63
Sn	118	115	3	He	0.089	ug/l	1317.85
Sb	121	115	1	No Gas	0.090	ug/l	3473.45
Sb	121	115	3	He	0.089	ug/l	876.12
Sb	123	115	1	No Gas	0.089	ug/l	2640.85
Sb	123	115	3	He	0.100	ug/l	752.43
Ba	135	115	1	No Gas	0.100	ug/l	625.44
Ba	137	115	1	No Gas	0.100	ug/l	1091.22
La	139	115	3	He	0.106	ug/l	2911.44
Ce	140	115	3	He	0.111	ug/l	3318.19
Hg	201	209	1	No Gas	0.001	ug/l	32.33
Hg	202	209	1	No Gas	0.002	ug/l	110.65
Hg	202	209	3	He	0.002	ug/l	42.99
Tl	203	209	3	He	0.077	ug/l	1489.35
Tl	205	209	1	No Gas	0.087	ug/l	7229.77
Tl	205	209	3	He	0.077	ug/l	3588.60
[Pb]	206	209	1	No Gas	0.104	ug/l	2532.48
[Pb]	207	209	1	No Gas	0.101	ug/l	2152.42
Pb	208	209	1	No Gas	0.100	ug/l	9969.31
Th	232	209	3	He	0.070	ug/l	3231.70
U	238	209	1	No Gas	0.102	ug/l	7706.07

Name	Mass	Tune Step	Tune Mode	CPS	ISTD Recovery %
Sc	45	1	No Gas	5652099.96	100.2
Sc	45	2	H2	2740071.92	99.8
Sc	45	3	He	310955.40	97.6
Ge	72	1	No Gas	1507384.21	99.7
Ge	72	2	H2	998823.38	100.7
Ge	72	3	He	220239.87	98.9
In	115	1	No Gas	12413445.17	102.0
In	115	3	He	2634589.52	100.0
Tb	159	1	No Gas	16641309.68	101.8
Tb	159	3	He	7030053.97	102.9
Ho	165	1	No Gas	15542503.83	101.9
Ho	165	3	He	6775461.47	102.4
Lu	175	1	No Gas	15794246.40	101.5
Lu	175	3	He	5505648.48	102.8
Bi	209	1	No Gas	11321206.36	100.0
Bi	209	3	He	5143004.54	102.6

ICPMS207-B Analytical Data

Sample Name 0.5 ppb STD
File Name 018CAL5.d
Data Path Name D:\Agilent\ICPMH\1\DATA\220121ADoD.b
Acq Time 2022-01-21 17:46:06
Sample Type CalStd
Total Dilution 1.0000
Comment ICPMS-6020B-Cal
Operator CAR/SRH/JPV/AEM
Method SW6020/ SW6020B

Name	Mass	ISTD	Tune Step	Tune Mode	Conc.	Units	CPS
Li	7	45	1	No Gas	5.768	ug/l	65558.83
Be	9	45	1	No Gas	0.407	ug/l	1724.42
B	11	45	1	No Gas	-0.101	ug/l	5267.71
Na	23	45	3	He	127.748	ug/l	155215.46
Mg	24	45	3	He	130.234	ug/l	62348.75
Al	27	45	1	No Gas	0.597	ug/l	28917.90
Si	28	45	2	H2	2.053	ug/l	11668.57
K	39	72	3	He	124.642	ug/l	142339.78
Ca	40	72	2	H2	132.950	ug/l	1155430.23
Ti	47	72	1	No Gas	0.442	ug/l	1374.79
V	51	72	1	No Gas	3.188	ug/l	42458.22
V	51	72	3	He	0.570	ug/l	18204.63
Cr	52	72	1	No Gas	0.340	ug/l	111788.14
Cr	52	72	3	He	0.511	ug/l	3646.03
Mn	55	72	1	No Gas	0.445	ug/l	28994.32
Mn	55	72	3	He	0.519	ug/l	1988.07
Fe	56	72	2	H2	13.711	ug/l	259156.06
Fe	56	72	3	He	13.662	ug/l	71684.26
Co	59	72	1	No Gas	0.483	ug/l	16803.12
Ni	60	72	1	No Gas	0.687	ug/l	5759.75
Ni	60	72	3	He	0.659	ug/l	1574.54
Cu	63	72	1	No Gas	0.631	ug/l	13716.60
Cu	63	72	3	He	0.679	ug/l	4679.15
Cu	65	72	1	No Gas	0.605	ug/l	6489.39
Zn	66	72	1	No Gas	0.511	ug/l	4272.92
Zn	66	72	3	He	0.609	ug/l	977.82
As	75	72	1	No Gas	-0.476	ug/l	11276.81
As	75	72	3	He	0.522	ug/l	836.68
Se	78	72	2	H2	0.508	ug/l	367.34
Br	79	72	1	No Gas	10.536	ug/l	227555.00
Br	79	72	2	H2	11.104	ug/l	119143.43
Se	82	72	1	No Gas	0.170	ug/l	848.36
Kr	84	72	1	No Gas		ug/l	22106.43
Sr	88	72	1	No Gas	0.494	ug/l	27205.23
Sr	88	72	3	He	0.518	ug/l	3165.93
Mo	95	115	1	No Gas	0.478	ug/l	5174.31
Mo	95	115	3	He	0.447	ug/l	1765.68
Mo	98	115	1	No Gas	0.488	ug/l	8597.39
Ag	107	115	1	No Gas	0.206	ug/l	7485.67
Ag	109	115	1	No Gas	0.211	ug/l	7365.56
Cd	111	115	1	No Gas	0.482	ug/l	2973.27

ICPMS207-B Analytical Data

Name	Mass	ISTD	Tune Step	Tune Mode	Conc.	Units	CPS
Cd	111	115	3	He	0.482	ug/l	999.93
Cd	114	115	1	No Gas	0.494	ug/l	6577.73
Cd	114	115	3	He	0.487	ug/l	2478.17
Sn	118	115	1	No Gas	0.505	ug/l	12004.68
Sn	118	115	3	He	0.511	ug/l	3331.53
Sb	121	115	1	No Gas	0.471	ug/l	13928.94
Sb	121	115	3	He	0.473	ug/l	3724.54
Sb	123	115	1	No Gas	0.474	ug/l	10747.19
Sb	123	115	3	He	0.462	ug/l	2876.25
Ba	135	115	1	No Gas	0.495	ug/l	2741.51
Ba	137	115	1	No Gas	0.482	ug/l	4738.10
La	139	115	3	He	0.496	ug/l	13446.55
Ce	140	115	3	He	0.484	ug/l	14335.23
Hg	201	209	1	No Gas	0.007	ug/l	57.32
Hg	202	209	1	No Gas	0.008	ug/l	165.64
Hg	202	209	3	He	0.008	ug/l	67.99
Tl	203	209	3	He	0.442	ug/l	5654.15
Tl	205	209	1	No Gas	0.470	ug/l	27696.69
Tl	205	209	3	He	0.445	ug/l	13548.99
[Pb]	206	209	1	No Gas	0.483	ug/l	9634.66
[Pb]	207	209	1	No Gas	0.482	ug/l	8400.48
Pb	208	209	1	No Gas	0.482	ug/l	38900.47
Th	232	209	3	He	0.402	ug/l	15888.00
U	238	209	1	No Gas	0.475	ug/l	35860.40

Name	Mass	Tune Step	Tune Mode	CPS	ISTD Recovery %
Sc	45	1	No Gas	5546595.75	98.4
Sc	45	2	H2	2751471.65	100.2
Sc	45	3	He	311724.02	97.9
Ge	72	1	No Gas	1564810.60	103.5
Ge	72	2	H2	1004774.58	101.2
Ge	72	3	He	219728.85	98.7
In	115	1	No Gas	12085111.48	99.3
In	115	3	He	2622950.10	99.5
Tb	159	1	No Gas	16893818.01	103.4
Tb	159	3	He	7005815.88	102.5
Ho	165	1	No Gas	15943145.71	104.5
Ho	165	3	He	6631336.67	100.3
Lu	175	1	No Gas	16071831.89	103.3
Lu	175	3	He	5495291.92	102.6
Bi	209	1	No Gas	11381925.48	100.5
Bi	209	3	He	5161221.21	103.0

ICPMS207-B Analytical Data

Sample Name 1 ppb STD
File Name 019CAL5.d
Data Path Name D:\Agilent\ICPMH\1\DATA\220121ADoD.b
Acq Time 2022-01-21 17:52:44
Sample Type CalStd
Total Dilution 1.0000
Comment ICPMS-6020B-Cal
Operator CAR/SRH/JPV/AEM
Method SW6020/ SW6020B

Name	Mass	ISTD	Tune Step	Tune Mode	Conc.	Units	CPS
Li	7	45	1	No Gas	13.286	ug/l	129713.18
Be	9	45	1	No Gas	0.994	ug/l	3854.06
B	11	45	1	No Gas	0.407	ug/l	6379.26
Na	23	45	3	He	263.302	ug/l	272015.80
Mg	24	45	3	He	264.571	ug/l	125981.67
Al	27	45	1	No Gas	1.108	ug/l	39356.03
Si	28	45	2	H2	4.072	ug/l	15438.82
K	39	72	3	He	274.464	ug/l	210233.68
Ca	40	72	2	H2	275.073	ug/l	2234754.15
Ti	47	72	1	No Gas	0.992	ug/l	2672.95
V	51	72	1	No Gas	2.977	ug/l	32961.32
V	51	72	3	He	1.239	ug/l	20964.97
Cr	52	72	1	No Gas	1.156	ug/l	129847.02
Cr	52	72	3	He	1.061	ug/l	6508.14
Mn	55	72	1	No Gas	1.022	ug/l	49552.10
Mn	55	72	3	He	1.071	ug/l	3860.41
Fe	56	72	2	H2	28.259	ug/l	512499.72
Fe	56	72	3	He	28.064	ug/l	138392.51
Co	59	72	1	No Gas	1.069	ug/l	34818.95
Ni	60	72	1	No Gas	1.088	ug/l	8429.06
Ni	60	72	3	He	1.084	ug/l	2476.89
Cu	63	72	1	No Gas	1.054	ug/l	20537.99
Cu	63	72	3	He	1.101	ug/l	7029.62
Cu	65	72	1	No Gas	1.046	ug/l	10004.79
Zn	66	72	1	No Gas	1.039	ug/l	7231.05
Zn	66	72	3	He	1.085	ug/l	1534.53
As	75	72	1	No Gas	0.604	ug/l	18454.02
As	75	72	3	He	1.076	ug/l	1400.77
Se	78	72	2	H2	1.047	ug/l	705.35
Br	79	72	1	No Gas	8.772	ug/l	192783.51
Br	79	72	2	H2	8.640	ug/l	98256.86
Se	82	72	1	No Gas	1.261	ug/l	1254.67
Kr	84	72	1	No Gas		ug/l	22616.20
Sr	88	72	1	No Gas	1.064	ug/l	54976.46
Sr	88	72	3	He	1.080	ug/l	6155.81
Mo	95	115	1	No Gas	0.948	ug/l	10279.32
Mo	95	115	3	He	0.968	ug/l	3773.86
Mo	98	115	1	No Gas	0.961	ug/l	16961.80
Ag	107	115	1	No Gas	0.413	ug/l	13271.54
Ag	109	115	1	No Gas	0.416	ug/l	12905.74
Cd	111	115	1	No Gas	0.992	ug/l	6169.39

ICPMS207-B Analytical Data

Name	Mass	ISTD	Tune Step	Tune Mode	Conc.	Units	CPS
Cd	111	115	3	He	0.993	ug/l	2037.93
Cd	114	115	1	No Gas	1.029	ug/l	13997.52
Cd	114	115	3	He	0.997	ug/l	5017.06
Sn	118	115	1	No Gas	0.978	ug/l	20450.99
Sn	118	115	3	He	0.975	ug/l	5510.00
Sb	121	115	1	No Gas	0.971	ug/l	27937.74
Sb	121	115	3	He	0.958	ug/l	7279.95
Sb	123	115	1	No Gas	0.957	ug/l	21173.01
Sb	123	115	3	He	0.948	ug/l	5692.06
Ba	135	115	1	No Gas	0.982	ug/l	5420.35
Ba	137	115	1	No Gas	0.982	ug/l	9614.26
La	139	115	3	He	1.010	ug/l	27150.99
Ce	140	115	3	He	1.024	ug/l	30115.99
Hg	201	209	1	No Gas	0.015	ug/l	88.65
Hg	202	209	1	No Gas	0.018	ug/l	255.62
Hg	202	209	3	He	0.019	ug/l	115.65
Tl	203	209	3	He	0.955	ug/l	11442.82
Tl	205	209	1	No Gas	1.007	ug/l	56307.46
Tl	205	209	3	He	0.956	ug/l	27177.18
[Pb]	206	209	1	No Gas	1.009	ug/l	19478.78
[Pb]	207	209	1	No Gas	1.017	ug/l	17155.58
Pb	208	209	1	No Gas	0.996	ug/l	77759.00
Th	232	209	3	He	0.898	ug/l	34561.23
U	238	209	1	No Gas	0.990	ug/l	74586.71

Name	Mass	Tune Step	Tune Mode	CPS	ISTD Recovery %
Sc	45	1	No Gas	5517795.02	97.9
Sc	45	2	H2	2677227.29	97.5
Sc	45	3	He	314681.71	98.8
Ge	72	1	No Gas	1494995.66	98.9
Ge	72	2	H2	984450.25	99.2
Ge	72	3	He	215413.54	96.7
In	115	1	No Gas	12173458.75	100.0
In	115	3	He	2604976.80	98.8
Tb	159	1	No Gas	16314957.51	99.8
Tb	159	3	He	6809750.81	99.7
Ho	165	1	No Gas	15327361.82	100.5
Ho	165	3	He	6421536.20	97.1
Lu	175	1	No Gas	15809281.02	101.6
Lu	175	3	He	5286760.74	98.7
Bi	209	1	No Gas	11378384.03	100.5
Bi	209	3	He	5133629.39	102.4

ICPMS207-B Analytical Data

Sample Name 10 ppb STD
File Name 020CAL5.d
Data Path Name D:\Agilent\ICPMH\1\DATA\220121ADoD.b
Acq Time 2022-01-21 17:59:22
Sample Type CalStd
Total Dilution 1.0000
Comment ICPMS-6020B-Cal
Operator CAR/SRH/JPV/AEM
Method SW6020/ SW6020B

Name	Mass	ISTD	Tune Step	Tune Mode	Conc.	Units	CPS
Li	7	45	1	No Gas	109.072	ug/l	954440.26
Be	9	45	1	No Gas	8.746	ug/l	32208.77
B	11	45	1	No Gas	7.750	ug/l	22889.18
Na	23	45	3	He	2422.088	ug/l	2129850.77
Mg	24	45	3	He	2448.863	ug/l	1162787.91
Al	27	45	1	No Gas	9.450	ug/l	212780.04
Si	28	45	2	H2	39.115	ug/l	88095.19
K	39	72	3	He	2525.286	ug/l	1313936.00
Ca	40	72	2	H2	2589.312	ug/l	21100067.45
Ti	47	72	1	No Gas	9.497	ug/l	23589.23
V	51	72	1	No Gas	10.729	ug/l	268491.88
V	51	72	3	He	9.369	ug/l	60778.41
Cr	52	72	1	No Gas	9.683	ug/l	369110.88
Cr	52	72	3	He	10.047	ug/l	56229.69
Mn	55	72	1	No Gas	10.118	ug/l	392037.43
Mn	55	72	3	He	10.309	ug/l	37022.29
Fe	56	72	2	H2	269.148	ug/l	5009844.72
Fe	56	72	3	He	261.927	ug/l	1284878.30
Co	59	72	1	No Gas	10.136	ug/l	323538.33
Ni	60	72	1	No Gas	9.954	ug/l	72706.22
Ni	60	72	3	He	10.136	ug/l	23102.78
Cu	63	72	1	No Gas	10.312	ug/l	182146.62
Cu	63	72	3	He	10.327	ug/l	62344.35
Cu	65	72	1	No Gas	10.131	ug/l	88114.20
Zn	66	72	1	No Gas	9.845	ug/l	59558.01
Zn	66	72	3	He	10.007	ug/l	12758.97
As	75	72	1	No Gas	9.837	ug/l	83715.93
As	75	72	3	He	10.131	ug/l	11240.03
Se	78	72	2	H2	10.096	ug/l	6802.59
Br	79	72	1	No Gas	10.369	ug/l	213955.46
Br	79	72	2	H2	9.542	ug/l	109732.49
Se	82	72	1	No Gas	10.119	ug/l	4831.79
Kr	84	72	1	No Gas		ug/l	25638.52
Sr	88	72	1	No Gas	10.536	ug/l	534700.84
Sr	88	72	3	He	10.586	ug/l	59719.25
Mo	95	115	1	No Gas	9.444	ug/l	101415.49
Mo	95	115	3	He	9.619	ug/l	37609.59
Mo	98	115	1	No Gas	9.520	ug/l	166472.98
Ag	107	115	1	No Gas	3.956	ug/l	110599.31
Ag	109	115	1	No Gas	3.932	ug/l	106660.22
Cd	111	115	1	No Gas	9.796	ug/l	60723.69

ICPMS207-B Analytical Data

Name	Mass	ISTD	Tune Step	Tune Mode	Conc.	Units	CPS
Cd	111	115	3	He	9.794	ug/l	20200.08
Cd	114	115	1	No Gas	10.007	ug/l	137018.81
Cd	114	115	3	He	9.794	ug/l	49591.74
Sn	118	115	1	No Gas	9.707	ug/l	173720.39
Sn	118	115	3	He	9.523	ug/l	46437.60
Sb	121	115	1	No Gas	9.745	ug/l	271110.76
Sb	121	115	3	He	9.540	ug/l	71226.42
Sb	123	115	1	No Gas	9.623	ug/l	205965.58
Sb	123	115	3	He	9.594	ug/l	56604.97
Ba	135	115	1	No Gas	9.801	ug/l	53256.23
Ba	137	115	1	No Gas	9.554	ug/l	92342.76
La	139	115	3	He	9.873	ug/l	267307.64
Ce	140	115	3	He	9.931	ug/l	294150.95
Hg	201	209	1	No Gas	0.174	ug/l	703.21
Hg	202	209	1	No Gas	0.179	ug/l	1680.77
Hg	202	209	3	He	0.192	ug/l	858.19
Tl	203	209	3	He	9.481	ug/l	105448.42
Tl	205	209	1	No Gas	9.758	ug/l	519560.93
Tl	205	209	3	He	9.739	ug/l	256685.17
[Pb]	206	209	1	No Gas	9.728	ug/l	181630.72
[Pb]	207	209	1	No Gas	9.581	ug/l	156330.20
Pb	208	209	1	No Gas	9.602	ug/l	723868.64
Th	232	209	3	He	9.418	ug/l	348383.87
U	238	209	1	No Gas	9.553	ug/l	714491.83

Name	Mass	Tune Step	Tune Mode	CPS	ISTD Recovery %
Sc	45	1	No Gas	5537101.10	98.2
Sc	45	2	H2	2731764.39	99.5
Sc	45	3	He	317875.15	99.8
Ge	72	1	No Gas	1486523.67	98.3
Ge	72	2	H2	1028721.48	103.7
Ge	72	3	He	222455.77	99.9
In	115	1	No Gas	12125528.76	99.6
In	115	3	He	2626617.14	99.7
Tb	159	1	No Gas	16558203.45	101.3
Tb	159	3	He	6979246.35	102.1
Ho	165	1	No Gas	15861605.42	104.0
Ho	165	3	He	6673398.16	100.9
Lu	175	1	No Gas	15718428.19	101.0
Lu	175	3	He	5442731.45	101.6
Bi	209	1	No Gas	11307798.45	99.9
Bi	209	3	He	5004847.59	99.9

ICPMS207-B Analytical Data

Sample Name 50 ppb STD
File Name 021CAL.S.d
Data Path Name D:\Agilent\ICPMH\1\DATA\220121ADoD.b
Acq Time 2022-01-21 18:06:00
Sample Type CalStd
Total Dilution 1.0000
Comment ICPMS-6020B-Cal
Operator CAR/SRH/JPV/AEM
Method SW6020/ SW6020B

Name	Mass	ISTD	Tune Step	Tune Mode	Conc.	Units	CPS
Li	7	45	1	No Gas	603.657	ug/l	5083198.54
Be	9	45	1	No Gas	49.640	ug/l	177275.45
B	11	45	1	No Gas	49.390	ug/l	113558.46
Na	23	45	3	He	12277.521	ug/l	10758078.73
Mg	24	45	3	He	12116.466	ug/l	5832547.09
Al	27	45	1	No Gas	60.112	ug/l	1234429.12
Si	28	45	2	H2	218.338	ug/l	462870.95
K	39	72	3	He	12352.231	ug/l	6190792.48
Ca	40	72	2	H2	12346.869	ug/l	101122993.60
Ti	47	72	1	No Gas	51.900	ug/l	128006.19
V	51	72	1	No Gas	49.745	ug/l	1457839.94
V	51	72	3	He	50.140	ug/l	260780.95
Cr	52	72	1	No Gas	50.259	ug/l	1511692.16
Cr	52	72	3	He	50.288	ug/l	281965.36
Mn	55	72	1	No Gas	50.634	ug/l	1920391.71
Mn	55	72	3	He	50.852	ug/l	184678.91
Fe	56	72	2	H2	1315.539	ug/l	24664788.71
Fe	56	72	3	He	1278.815	ug/l	6340773.78
Co	59	72	1	No Gas	51.170	ug/l	1632206.35
Ni	60	72	1	No Gas	51.858	ug/l	376894.03
Ni	60	72	3	He	50.291	ug/l	115926.44
Cu	63	72	1	No Gas	51.991	ug/l	910727.45
Cu	63	72	3	He	51.447	ug/l	312373.02
Cu	65	72	1	No Gas	50.949	ug/l	439484.03
Zn	66	72	1	No Gas	50.760	ug/l	302999.73
Zn	66	72	3	He	51.194	ug/l	65285.54
As	75	72	1	No Gas	50.539	ug/l	371429.59
As	75	72	3	He	50.448	ug/l	55645.99
Se	78	72	2	H2	51.442	ug/l	34825.00
Br	79	72	1	No Gas	13.534	ug/l	257834.03
Br	79	72	2	H2	13.151	ug/l	139268.44
Se	82	72	1	No Gas	50.227	ug/l	21064.25
Kr	84	72	1	No Gas		ug/l	39015.42
Sr	88	72	1	No Gas	50.827	ug/l	2578193.26
Sr	88	72	3	He	50.995	ug/l	290720.88
Mo	95	115	1	No Gas	52.697	ug/l	547189.31
Mo	95	115	3	He	51.512	ug/l	196018.83
Mo	98	115	1	No Gas	52.691	ug/l	890665.03
Ag	107	115	1	No Gas	20.432	ug/l	544954.70
Ag	109	115	1	No Gas	20.518	ug/l	531324.28
Cd	111	115	1	No Gas	51.174	ug/l	306778.73

ICPMS207-B Analytical Data

Name	Mass	ISTD	Tune Step	Tune Mode	Conc.	Units	CPS
Cd	111	115	3	He	50.434	ug/l	101287.63
Cd	114	115	1	No Gas	52.289	ug/l	693175.18
Cd	114	115	3	He	50.481	ug/l	248902.27
Sn	118	115	1	No Gas	52.929	ug/l	902672.03
Sn	118	115	3	He	52.371	ug/l	244902.88
Sb	121	115	1	No Gas	53.338	ug/l	1431064.47
Sb	121	115	3	He	52.099	ug/l	377950.41
Sb	123	115	1	No Gas	54.233	ug/l	1119623.67
Sb	123	115	3	He	52.493	ug/l	300932.29
Ba	135	115	1	No Gas	51.673	ug/l	271270.65
Ba	137	115	1	No Gas	51.137	ug/l	477360.92
La	139	115	3	He	49.756	ug/l	1311652.08
Ce	140	115	3	He	50.142	ug/l	1446387.62
Hg	201	209	1	No Gas	1.010	ug/l	3679.11
Hg	202	209	1	No Gas	1.024	ug/l	8573.37
Hg	202	209	3	He	1.015	ug/l	4184.83
Tl	203	209	3	He	50.236	ug/l	529004.64
Tl	205	209	1	No Gas	52.005	ug/l	2574860.93
Tl	205	209	3	He	51.497	ug/l	1284992.71
[Pb]	206	209	1	No Gas	52.669	ug/l	915929.00
[Pb]	207	209	1	No Gas	51.501	ug/l	782840.39
Pb	208	209	1	No Gas	51.442	ug/l	3611162.75
Th	232	209	3	He	50.554	ug/l	1776459.96
U	238	209	1	No Gas	50.733	ug/l	3542999.45

Name	Mass	Tune Step	Tune Mode	CPS	ISTD Recovery %
Sc	45	1	No Gas	5399876.84	95.8
Sc	45	2	H2	2760303.14	100.6
Sc	45	3	He	322635.07	101.3
Ge	72	1	No Gas	1488082.95	98.4
Ge	72	2	H2	1037996.12	104.6
Ge	72	3	He	225764.96	101.4
In	115	1	No Gas	11728113.17	96.3
In	115	3	He	2558121.09	97.1
Tb	159	1	No Gas	16084609.67	98.4
Tb	159	3	He	6756590.89	98.9
Ho	165	1	No Gas	14938497.24	98.0
Ho	165	3	He	6580338.65	99.5
Lu	175	1	No Gas	15294135.37	98.3
Lu	175	3	He	5416757.56	101.1
Bi	209	1	No Gas	10560657.59	93.3
Bi	209	3	He	4760195.28	95.0

ICPMS207-B Analytical Data

Sample Name 100 ppb STD
File Name 022CAL.S.d
Data Path Name D:\Agilent\ICPMH\1\DATA\220121ADoD.b
Acq Time 2022-01-21 18:12:35
Sample Type CalStd
Total Dilution 1.0000
Comment ICPMS-6020B-Cal
Operator CAR/SRH/JPV/AEM
Method SW6020/ SW6020B

Name	Mass	ISTD	Tune Step	Tune Mode	Conc.	Units	CPS
Li	7	45	1	No Gas	1262.259	ug/l	11213868.46
Be	9	45	1	No Gas	100.306	ug/l	378236.08
B	11	45	1	No Gas	100.540	ug/l	238418.00
Na	23	45	3	He	25118.881	ug/l	22220267.17
Mg	24	45	3	He	25196.705	ug/l	12274170.52
Al	27	45	1	No Gas	94.997	ug/l	2051325.70
Si	28	45	2	H2	390.918	ug/l	833031.10
K	39	72	3	He	25071.116	ug/l	12541365.64
Ca	40	72	2	H2	25067.339	ug/l	201215236.48
Ti	47	72	1	No Gas	99.101	ug/l	244490.65
V	51	72	1	No Gas	100.017	ug/l	2988230.72
V	51	72	3	He	99.990	ug/l	506666.54
Cr	52	72	1	No Gas	99.901	ug/l	2912079.56
Cr	52	72	3	He	99.851	ug/l	561729.90
Mn	55	72	1	No Gas	99.671	ug/l	3773602.89
Mn	55	72	3	He	99.542	ug/l	363072.59
Fe	56	72	2	H2	2591.289	ug/l	47645535.53
Fe	56	72	3	He	2610.375	ug/l	13001928.76
Co	59	72	1	No Gas	99.401	ug/l	3174232.22
Ni	60	72	1	No Gas	99.074	ug/l	720464.35
Ni	60	72	3	He	99.839	ug/l	231139.90
Cu	63	72	1	No Gas	98.972	ug/l	1733555.00
Cu	63	72	3	He	99.242	ug/l	604824.42
Cu	65	72	1	No Gas	99.511	ug/l	858285.56
Zn	66	72	1	No Gas	99.635	ug/l	594398.26
Zn	66	72	3	He	99.401	ug/l	127150.42
As	75	72	1	No Gas	99.756	ug/l	720504.90
As	75	72	3	He	99.762	ug/l	110292.34
Se	78	72	2	H2	99.269	ug/l	65895.58
Br	79	72	1	No Gas	12.217	ug/l	239931.99
Br	79	72	2	H2	11.365	ug/l	122783.70
Se	82	72	1	No Gas	99.873	ug/l	41206.27
Kr	84	72	1	No Gas		ug/l	54330.93
Sr	88	72	1	No Gas	99.532	ug/l	5052564.12
Sr	88	72	3	He	99.443	ug/l	569391.56
Mo	95	115	1	No Gas	98.708	ug/l	1028871.51
Mo	95	115	3	He	99.283	ug/l	371607.82
Mo	98	115	1	No Gas	98.703	ug/l	1675290.66
Ag	107	115	1	No Gas	39.788	ug/l	1064111.98
Ag	109	115	1	No Gas	39.748	ug/l	1031798.03
Cd	111	115	1	No Gas	99.434	ug/l	598644.24

ICPMS207-B Analytical Data

Name	Mass	ISTD	Tune Step	Tune Mode	Conc.	Units	CPS
Cd	111	115	3	He	99.804	ug/l	197153.20
Cd	114	115	1	No Gas	98.855	ug/l	1316093.25
Cd	114	115	3	He	99.780	ug/l	483911.74
Sn	118	115	1	No Gas	98.565	ug/l	1685122.27
Sn	118	115	3	He	98.863	ug/l	453985.24
Sb	121	115	1	No Gas	98.357	ug/l	2649289.10
Sb	121	115	3	He	98.997	ug/l	706216.82
Sb	123	115	1	No Gas	97.922	ug/l	2029514.94
Sb	123	115	3	He	98.795	ug/l	556977.50
Ba	135	115	1	No Gas	99.183	ug/l	522871.44
Ba	137	115	1	No Gas	99.476	ug/l	932539.26
La	139	115	3	He	100.135	ug/l	2597054.39
Ce	140	115	3	He	99.936	ug/l	2835350.62
Hg	201	209	1	No Gas	1.998	ug/l	7281.53
Hg	202	209	1	No Gas	1.990	ug/l	16653.69
Hg	202	209	3	He	1.993	ug/l	8233.22
Tl	203	209	3	He	99.935	ug/l	1057872.44
Tl	205	209	1	No Gas	99.022	ug/l	4921815.31
Tl	205	209	3	He	99.278	ug/l	2489936.56
[Pb]	206	209	1	No Gas	98.693	ug/l	1723391.61
[Pb]	207	209	1	No Gas	99.291	ug/l	1515535.76
Pb	208	209	1	No Gas	99.319	ug/l	7000960.81
Th	232	209	3	He	99.783	ug/l	3525711.41
U	238	209	1	No Gas	99.678	ug/l	6991687.27

Name	Mass	Tune Step	Tune Mode	CPS	ISTD Recovery %
Sc	45	1	No Gas	5708684.91	101.2
Sc	45	2	H2	2796904.82	101.9
Sc	45	3	He	326546.98	102.5
Ge	72	1	No Gas	1489812.12	98.5
Ge	72	2	H2	1019155.22	102.7
Ge	72	3	He	226811.94	101.9
In	115	1	No Gas	11775393.42	96.7
In	115	3	He	2516107.30	95.5
Tb	159	1	No Gas	16072808.49	98.4
Tb	159	3	He	6710745.14	98.2
Ho	165	1	No Gas	15107791.43	99.1
Ho	165	3	He	6438531.53	97.3
Lu	175	1	No Gas	15303475.33	98.3
Lu	175	3	He	5372375.36	100.3
Bi	209	1	No Gas	10605391.31	93.7
Bi	209	3	He	4789272.06	95.5

ICPMS207-B Analytical Data

Sample Name 1000 ppb STD
File Name 023CAL.S.d
Data Path Name D:\Agilent\ICPMH\1\DATA\220121ADoD.b
Acq Time 2022-01-21 18:19:05
Sample Type CalStd
Total Dilution 1.0000
Comment ICPMS-6020B-Cal
Operator CAR/SRH/JPV/AEM
Method SW6020/ SW6020B

Name	Mass	ISTD	Tune Step	Tune Mode	Conc.	Units	CPS
Li	7	45	1	No Gas		ug/l	
Be	9	45	1	No Gas		ug/l	
B	11	45	1	No Gas		ug/l	
Na	23	45	3	He		ug/l	
Mg	24	45	3	He		ug/l	
Al	27	45	1	No Gas		ug/l	
Si	28	45	2	H2		ug/l	
K	39	72	3	He		ug/l	
Ca	40	72	2	H2		ug/l	
Ti	47	72	1	No Gas		ug/l	
V	51	72	1	No Gas		ug/l	
V	51	72	3	He		ug/l	
Cr	52	72	1	No Gas		ug/l	
Cr	52	72	3	He		ug/l	
Mn	55	72	1	No Gas		ug/l	
Mn	55	72	3	He		ug/l	
Fe	56	72	2	H2		ug/l	
Fe	56	72	3	He		ug/l	
Co	59	72	1	No Gas		ug/l	
Ni	60	72	1	No Gas		ug/l	
Ni	60	72	3	He		ug/l	
Cu	63	72	1	No Gas		ug/l	
Cu	63	72	3	He		ug/l	
Cu	65	72	1	No Gas		ug/l	
Zn	66	72	1	No Gas		ug/l	
Zn	66	72	3	He		ug/l	
As	75	72	1	No Gas		ug/l	
As	75	72	3	He		ug/l	
Se	78	72	2	H2		ug/l	
Br	79	72	1	No Gas		ug/l	
Br	79	72	2	H2		ug/l	
Se	82	72	1	No Gas		ug/l	
Kr	84	72	1	No Gas		ug/l	
Sr	88	72	1	No Gas		ug/l	
Sr	88	72	3	He		ug/l	
Mo	95	115	1	No Gas		ug/l	
Mo	95	115	3	He		ug/l	
Mo	98	115	1	No Gas		ug/l	
Ag	107	115	1	No Gas		ug/l	
Ag	109	115	1	No Gas		ug/l	
Cd	111	115	1	No Gas		ug/l	

ICPMS207-B Analytical Data

Name	Mass	ISTD	Tune Step	Tune Mode	Conc.	Units	CPS
Cd	111	115	3	He		ug/l	
Cd	114	115	1	No Gas		ug/l	
Cd	114	115	3	He		ug/l	
Sn	118	115	1	No Gas		ug/l	
Sn	118	115	3	He		ug/l	
Sb	121	115	1	No Gas		ug/l	
Sb	121	115	3	He		ug/l	
Sb	123	115	1	No Gas		ug/l	
Sb	123	115	3	He		ug/l	
Ba	135	115	1	No Gas		ug/l	
Ba	137	115	1	No Gas		ug/l	
La	139	115	3	He		ug/l	
Ce	140	115	3	He		ug/l	
Hg	201	209	1	No Gas		ug/l	
Hg	202	209	1	No Gas		ug/l	
Hg	202	209	3	He		ug/l	
Tl	203	209	3	He		ug/l	
Tl	205	209	1	No Gas		ug/l	
Tl	205	209	3	He		ug/l	
[Pb]	206	209	1	No Gas		ug/l	
[Pb]	207	209	1	No Gas		ug/l	
Pb	208	209	1	No Gas		ug/l	
Th	232	209	3	He		ug/l	
U	238	209	1	No Gas		ug/l	

Name	Mass	Tune Step	Tune Mode	CPS	ISTD Recovery %
Sc	45	1	No Gas		
Sc	45	2	H2		
Sc	45	3	He		
Ge	72	1	No Gas		
Ge	72	2	H2		
Ge	72	3	He		
In	115	1	No Gas		
In	115	3	He		
Tb	159	1	No Gas		
Tb	159	3	He		
Ho	165	1	No Gas		
Ho	165	3	He		
Lu	175	1	No Gas		
Lu	175	3	He		
Bi	209	1	No Gas		
Bi	209	3	He		

ICPMS207-B Analytical Data

Sample Name 100 ppb Br STD
File Name 024CAL5.d
Data Path Name D:\Agilent\ICPMH\1\DATA\220121ADoD.b
Acq Time 2022-01-21 18:25:33
Sample Type CalStd
Total Dilution 1.0000
Comment ICPMS-6020-W-D
Operator CAR/SRH/JPV/AEM
Method SW6020/ SW6020B

Name	Mass	ISTD	Tune Step	Tune Mode	Conc.	Units	CPS
Li	7	45	1	No Gas	2.412	ug/l	38892.52
Be	9	45	1	No Gas	0.014	ug/l	303.61
B	11	45	1	No Gas	11.135	ug/l	32406.30
Na	23	45	3	He	-4.582	ug/l	46375.68
Mg	24	45	3	He	-0.194	ug/l	1843.13
Al	27	45	1	No Gas	0.035	ug/l	18287.85
Si	28	45	2	H2	0.620	ug/l	8694.03
K	39	72	3	He	606.140	ug/l	386692.30
Ca	40	72	2	H2	0.786	ug/l	107652.48
Ti	47	72	1	No Gas	0.070	ug/l	398.74
V	51	72	1	No Gas	2.995	ug/l	33580.12
V	51	72	3	He	-1.381	ug/l	9229.61
Cr	52	72	1	No Gas	-0.605	ug/l	81406.78
Cr	52	72	3	He	0.015	ug/l	977.82
Mn	55	72	1	No Gas	0.127	ug/l	15943.75
Mn	55	72	3	He	0.008	ug/l	190.96
Fe	56	72	2	H2	0.079	ug/l	11704.78
Fe	56	72	3	He	0.122	ug/l	6591.46
Co	59	72	1	No Gas	0.007	ug/l	785.13
Ni	60	72	1	No Gas	0.029	ug/l	715.27
Ni	60	72	3	He	0.006	ug/l	115.55
Cu	63	72	1	No Gas	0.100	ug/l	3859.40
Cu	63	72	3	He	0.077	ug/l	1166.15
Cu	65	72	1	No Gas	0.089	ug/l	1764.82
Zn	66	72	1	No Gas	0.044	ug/l	1309.85
Zn	66	72	3	He	0.044	ug/l	288.89
As	75	72	1	No Gas	0.149	ug/l	15554.34
As	75	72	3	He	0.061	ug/l	356.07
Se	78	72	2	H2	0.104	ug/l	101.33
Br	79	72	1	No Gas	100.000	ug/l	1484320.77
Br	79	72	2	H2	100.000	ug/l	791803.56
Se	82	72	1	No Gas	2.052	ug/l	1603.66
Kr	84	72	1	No Gas		ug/l	22332.95
Sr	88	72	1	No Gas	0.002	ug/l	931.52
Sr	88	72	3	He	-0.001	ug/l	294.45
Mo	95	115	1	No Gas	0.014	ug/l	214.45
Mo	95	115	3	He	0.010	ug/l	62.22
Mo	98	115	1	No Gas	0.011	ug/l	284.32
Ag	107	115	1	No Gas	0.581	ug/l	17938.64
Ag	109	115	1	No Gas	0.588	ug/l	17552.71
Cd	111	115	1	No Gas	0.015	ug/l	90.24

ICPMS207-B Analytical Data

Name	Mass	ISTD	Tune Step	Tune Mode	Conc.	Units	CPS
Cd	111	115	3	He	0.017	ug/l	41.44
Cd	114	115	1	No Gas	0.015	ug/l	27.04
Cd	114	115	3	He	0.014	ug/l	85.78
Sn	118	115	1	No Gas	0.042	ug/l	3959.40
Sn	118	115	3	He	0.047	ug/l	1123.39
Sb	121	115	1	No Gas	0.031	ug/l	1778.30
Sb	121	115	3	He	0.026	ug/l	408.38
Sb	123	115	1	No Gas	0.031	ug/l	1352.87
Sb	123	115	3	He	0.027	ug/l	325.70
Ba	135	115	1	No Gas	0.003	ug/l	83.17
Ba	137	115	1	No Gas	0.005	ug/l	146.38
La	139	115	3	He	0.000	ug/l	20.00
Ce	140	115	3	He	0.000	ug/l	47.78
Hg	201	209	1	No Gas	0.004	ug/l	42.99
Hg	202	209	1	No Gas	0.006	ug/l	141.64
Hg	202	209	3	He	0.006	ug/l	59.99
Tl	203	209	3	He	0.863	ug/l	10392.91
Tl	205	209	1	No Gas	0.939	ug/l	50774.46
Tl	205	209	3	He	0.882	ug/l	25177.25
[Pb]	206	209	1	No Gas	0.070	ug/l	1832.36
[Pb]	207	209	1	No Gas	0.073	ug/l	1631.22
Pb	208	209	1	No Gas	0.068	ug/l	7269.71
Th	232	209	3	He	0.121	ug/l	5151.10
U	238	209	1	No Gas	0.028	ug/l	2119.09

Name	Mass	Tune Step	Tune Mode	CPS	ISTD Recovery %
Sc	45	1	No Gas	5886079.97	104.4
Sc	45	2	H2	2752933.53	100.3
Sc	45	3	He	330484.92	103.8
Ge	72	1	No Gas	1519997.39	100.5
Ge	72	2	H2	994483.30	100.2
Ge	72	3	He	227166.41	102.0
In	115	1	No Gas	12214239.82	100.3
In	115	3	He	2647919.16	100.5
Tb	159	1	No Gas	16109613.53	98.6
Tb	159	3	He	6928950.16	101.4
Ho	165	1	No Gas	15339520.13	100.6
Ho	165	3	He	6657251.86	100.6
Lu	175	1	No Gas	15724056.42	101.0
Lu	175	3	He	5464931.51	102.0
Bi	209	1	No Gas	10945525.92	96.7
Bi	209	3	He	5124189.60	102.2

ICPMS207-B Analytical Data

Sample Name Rinse
File Name 025BLKV.d
Data Path Name D:\Agilent\ICPMH\1\DATA\220121ADoD.b
Acq Time 2022-01-21 18:31:55
Sample Type BlkVrfy
Total Dilution 1.0000
Comment ICPMS-6020-W-D
Operator CAR/SRH/JPV/AEM
Method SW6020/ SW6020B

Name	Mass	ISTD	Tune Step	Tune Mode	Conc.	Units	CPS
Li	7	45	1	No Gas	0.584	ug/l	22006.03
Be	9	45	1	No Gas	-0.018	ug/l	178.63
B	11	45	1	No Gas	4.534	ug/l	16530.98
Na	23	45	3	He	-5.194	ug/l	44941.38
Mg	24	45	3	He	0.104	ug/l	1952.92
Al	27	45	1	No Gas	-0.053	ug/l	16211.03
Si	28	45	2	H2	-0.099	ug/l	7318.76
K	39	72	3	He	9.954	ug/l	88768.53
Ca	40	72	2	H2	-0.068	ug/l	102350.44
Ti	47	72	1	No Gas	0.007	ug/l	243.58
V	51	72	1	No Gas	2.704	ug/l	25091.54
V	51	72	3	He	-1.537	ug/l	8340.18
Cr	52	72	1	No Gas	-0.941	ug/l	72722.06
Cr	52	72	3	He	0.010	ug/l	935.59
Mn	55	72	1	No Gas	0.180	ug/l	18225.18
Mn	55	72	3	He	0.142	ug/l	670.22
Fe	56	72	2	H2	0.124	ug/l	12691.62
Fe	56	72	3	He	0.197	ug/l	6867.20
Co	59	72	1	No Gas	0.002	ug/l	628.77
Ni	60	72	1	No Gas	0.006	ug/l	552.25
Ni	60	72	3	He	-0.003	ug/l	93.33
Cu	63	72	1	No Gas	0.009	ug/l	2254.42
Cu	63	72	3	He	0.008	ug/l	735.87
Cu	65	72	1	No Gas	0.002	ug/l	1009.78
Zn	66	72	1	No Gas	-0.012	ug/l	980.40
Zn	66	72	3	He	0.031	ug/l	267.78
As	75	72	1	No Gas	-0.213	ug/l	13122.19
As	75	72	3	He	-0.021	ug/l	261.53
Se	78	72	2	H2	0.023	ug/l	49.44
Br	79	72	1	No Gas	19.147	ug/l	347237.26
Br	79	72	2	H2	19.320	ug/l	182687.15
Se	82	72	1	No Gas	0.469	ug/l	960.77
Kr	84	72	1	No Gas		ug/l	21863.25
Sr	88	72	1	No Gas	0.004	ug/l	1028.03
Sr	88	72	3	He	0.001	ug/l	303.34
Mo	95	115	1	No Gas	0.002	ug/l	84.45
Mo	95	115	3	He	0.002	ug/l	32.22
Mo	98	115	1	No Gas	0.007	ug/l	214.18
Ag	107	115	1	No Gas	0.048	ug/l	3201.65
Ag	109	115	1	No Gas	0.053	ug/l	3181.65
Cd	111	115	1	No Gas	0.000	ug/l	-4.76

ICPMS207-B Analytical Data

Name	Mass	ISTD	Tune Step	Tune Mode	Conc.	Units	CPS
Cd	111	115	3	He	0.008	ug/l	22.78
Cd	114	115	1	No Gas	0.004	ug/l	-113.88
Cd	114	115	3	He	0.006	ug/l	45.80
Sn	118	115	1	No Gas	0.001	ug/l	3207.35
Sn	118	115	3	He	-0.002	ug/l	892.26
Sb	121	115	1	No Gas	0.004	ug/l	1036.48
Sb	121	115	3	He	0.012	ug/l	307.37
Sb	123	115	1	No Gas	0.004	ug/l	777.77
Sb	123	115	3	He	0.011	ug/l	231.36
Ba	135	115	1	No Gas	0.004	ug/l	89.82
Ba	137	115	1	No Gas	0.008	ug/l	172.99
La	139	115	3	He	0.000	ug/l	18.89
Ce	140	115	3	He	0.000	ug/l	42.22
Hg	201	209	1	No Gas	0.000	ug/l	29.99
Hg	202	209	1	No Gas	0.002	ug/l	109.98
Hg	202	209	3	He	0.003	ug/l	47.32
Tl	203	209	3	He	0.310	ug/l	4150.98
Tl	205	209	1	No Gas	0.248	ug/l	15587.19
Tl	205	209	3	He	0.313	ug/l	9984.42
[Pb]	206	209	1	No Gas	0.032	ug/l	1165.61
[Pb]	207	209	1	No Gas	0.033	ug/l	1017.82
Pb	208	209	1	No Gas	0.032	ug/l	4732.59
Th	232	209	3	He	0.022	ug/l	1399.31
U	238	209	1	No Gas	0.005	ug/l	472.92

Name	Mass	Tune Step	Tune Mode	CPS	ISTD Recovery %
Sc	45	1	No Gas	5845626.87	103.7
Sc	45	2	H2	2812921.06	102.5
Sc	45	3	He	324051.61	101.7
Ge	72	1	No Gas	1540590.32	101.9
Ge	72	2	H2	1009648.26	101.7
Ge	72	3	He	223830.78	100.5
In	115	1	No Gas	12176986.79	100.0
In	115	3	He	2659116.83	100.9
Tb	159	1	No Gas	16293400.74	99.7
Tb	159	3	He	6923602.89	101.3
Ho	165	1	No Gas	15194893.42	99.6
Ho	165	3	He	6669604.47	100.8
Lu	175	1	No Gas	15380699.95	98.8
Lu	175	3	He	5484319.54	102.4
Bi	209	1	No Gas	11145274.92	98.4
Bi	209	3	He	5158115.98	102.9

ICPMS207-B Analytical Data

Sample Name QCS
File Name 026_QC1.d
Data Path Name D:\Agilent\ICPMH\1\DATA\220121ADoD.b
Acq Time 2022-01-21 18:38:09
Sample Type QC1
Total Dilution 1.0000
Comment ICPMS-6020-W-D
Operator CAR/SRH/JPV/AEM
Method SW6020/ SW6020B

Name	Mass	ISTD	Tune Step	Tune Mode	Conc.	Units	CPS
Li	7	45	1	No Gas	51.212	ug/l	483789.80
Be	9	45	1	No Gas	23.689	ug/l	91999.71
B	11	45	1	No Gas	52.632	ug/l	131013.90
Na	23	45	3	He	2464.510	ug/l	2232589.53
Mg	24	45	3	He	2465.051	ug/l	1206132.75
Al	27	45	1	No Gas	235.790	ug/l	5206652.63
Si	28	45	2	H2	496.422	ug/l	1079350.75
K	39	72	3	He	2435.897	ug/l	1323216.92
Ca	40	72	2	H2	2494.771	ug/l	20613944.26
Ti	47	72	1	No Gas	49.197	ug/l	123624.49
V	51	72	1	No Gas	49.768	ug/l	1485639.66
V	51	72	3	He	46.196	ug/l	247905.30
Cr	52	72	1	No Gas	49.468	ug/l	1517539.87
Cr	52	72	3	He	48.342	ug/l	278312.94
Mn	55	72	1	No Gas	252.144	ug/l	9694567.37
Mn	55	72	3	He	247.763	ug/l	923052.79
Fe	56	72	2	H2	252.321	ug/l	4762937.41
Fe	56	72	3	He	250.479	ug/l	1280125.37
Co	59	72	1	No Gas	51.185	ug/l	1663187.95
Ni	60	72	1	No Gas	49.921	ug/l	369725.92
Ni	60	72	3	He	48.902	ug/l	115706.38
Cu	63	72	1	No Gas	50.979	ug/l	909638.53
Cu	63	72	3	He	50.613	ug/l	315493.36
Cu	65	72	1	No Gas	50.269	ug/l	441760.31
Zn	66	72	1	No Gas	47.577	ug/l	289431.83
Zn	66	72	3	He	48.671	ug/l	63723.29
As	75	72	1	No Gas	47.834	ug/l	359034.99
As	75	72	3	He	48.194	ug/l	54584.97
Se	78	72	2	H2	48.915	ug/l	33280.16
Br	79	72	1	No Gas	10.748	ug/l	223382.56
Br	79	72	2	H2	10.175	ug/l	116277.17
Se	82	72	1	No Gas	48.679	ug/l	20824.96
Kr	84	72	1	No Gas		ug/l	38428.09
Sr	88	72	1	No Gas	49.522	ug/l	2558864.29
Sr	88	72	3	He	50.016	ug/l	292718.05
Mo	95	115	1	No Gas	47.751	ug/l	517143.98
Mo	95	115	3	He	48.122	ug/l	189103.29
Mo	98	115	1	No Gas	47.942	ug/l	845466.83
Ag	107	115	1	No Gas	24.747	ug/l	688259.83
Ag	109	115	1	No Gas	24.289	ug/l	655711.94
Cd	111	115	1	No Gas	24.028	ug/l	150294.56

ICPMS207-B Analytical Data

Name	Mass	ISTD	Tune Step	Tune Mode	Conc.	Units	CPS
Cd	111	115	3	He	24.010	ug/l	49800.59
Cd	114	115	1	No Gas	24.546	ug/l	339364.41
Cd	114	115	3	He	24.214	ug/l	123298.74
Sn	118	115	1	No Gas	48.913	ug/l	870356.22
Sn	118	115	3	He	48.872	ug/l	236048.62
Sb	121	115	1	No Gas	47.724	ug/l	1336089.66
Sb	121	115	3	He	47.903	ug/l	358886.13
Sb	123	115	1	No Gas	47.203	ug/l	1016891.56
Sb	123	115	3	He	47.726	ug/l	282583.31
Ba	135	115	1	No Gas	48.381	ug/l	264940.80
Ba	137	115	1	No Gas	46.938	ug/l	457092.06
La	139	115	3	He	50.852	ug/l	1384653.71
Ce	140	115	3	He	50.697	ug/l	1510002.22
Hg	201	209	1	No Gas	0.958	ug/l	3742.11
Hg	202	209	1	No Gas	0.972	ug/l	8728.77
Hg	202	209	3	He	0.972	ug/l	4270.17
Tl	203	209	3	He	47.561	ug/l	533568.85
Tl	205	209	1	No Gas	48.437	ug/l	2570214.89
Tl	205	209	3	He	48.289	ug/l	1283869.52
[Pb]	206	209	1	No Gas	48.514	ug/l	904226.06
[Pb]	207	209	1	No Gas	48.550	ug/l	790896.38
Pb	208	209	1	No Gas	48.028	ug/l	3613577.08
Th	232	209	3	He	48.958	ug/l	1832870.96
U	238	209	1	No Gas	50.997	ug/l	3816702.45

Name	Mass	Tune Step	Tune Mode	CPS	ISTD Recovery %
Sc	45	1	No Gas	5866031.74	104.0
Sc	45	2	H2	2856651.47	104.1
Sc	45	3	He	327573.43	102.9
Ge	72	1	No Gas	1515359.49	100.2
Ge	72	2	H2	1043197.61	105.1
Ge	72	3	He	231722.11	104.1
In	115	1	No Gas	12232835.05	100.5
In	115	3	He	2641700.03	100.2
Tb	159	1	No Gas	16497774.48	101.0
Tb	159	3	He	6976751.45	102.1
Ho	165	1	No Gas	15618854.97	102.4
Ho	165	3	He	6647436.00	100.5
Lu	175	1	No Gas	16089006.67	103.4
Lu	175	3	He	5488335.74	102.5
Bi	209	1	No Gas	11315393.31	99.9
Bi	209	3	He	5072317.52	101.2

ICPMS207-B Analytical Data

Sample Name CCV
File Name 027_CCV.d
Data Path Name D:\Agilent\ICPMH\1\DATA\220121ADoD.b
Acq Time 2022-01-21 18:44:23
Sample Type CCV
Total Dilution 1.0000
Comment ICPMS-6020-W-D
Operator CAR/SRH/JPV/AEM
Method SW6020/ SW6020B

Name	Mass	ISTD	Tune Step	Tune Mode	Conc.	Units	CPS
Li	7	45	1	No Gas	624.054	ug/l	5570196.87
Be	9	45	1	No Gas	50.252	ug/l	190242.81
B	11	45	1	No Gas	54.490	ug/l	132231.63
Na	23	45	3	He	12190.802	ug/l	10994068.17
Mg	24	45	3	He	12354.476	ug/l	6120850.12
Al	27	45	1	No Gas	60.059	ug/l	1307581.65
Si	28	45	2	H2	221.487	ug/l	477566.63
K	39	72	3	He	12355.403	ug/l	6314079.14
Ca	40	72	2	H2	12690.658	ug/l	103112794.16
Ti	47	72	1	No Gas	51.705	ug/l	131640.32
V	51	72	1	No Gas	51.165	ug/l	1548787.83
V	51	72	3	He	49.458	ug/l	262494.73
Cr	52	72	1	No Gas	49.698	ug/l	1543274.99
Cr	52	72	3	He	51.241	ug/l	292915.27
Mn	55	72	1	No Gas	50.951	ug/l	1993385.52
Mn	55	72	3	He	51.193	ug/l	189535.57
Fe	56	72	2	H2	1309.634	ug/l	24363295.35
Fe	56	72	3	He	1295.155	ug/l	6548052.67
Co	59	72	1	No Gas	51.691	ug/l	1701253.36
Ni	60	72	1	No Gas	51.396	ug/l	385451.97
Ni	60	72	3	He	51.871	ug/l	121888.60
Cu	63	72	1	No Gas	52.148	ug/l	942476.97
Cu	63	72	3	He	51.919	ug/l	321397.02
Cu	65	72	1	No Gas	51.294	ug/l	456556.10
Zn	66	72	1	No Gas	51.131	ug/l	314889.44
Zn	66	72	3	He	50.376	ug/l	65500.92
As	75	72	1	No Gas	49.392	ug/l	375031.74
As	75	72	3	He	50.751	ug/l	57073.20
Se	78	72	2	H2	51.642	ug/l	34685.78
Br	79	72	1	No Gas	15.277	ug/l	290948.15
Br	79	72	2	H2	15.312	ug/l	155145.71
Se	82	72	1	No Gas	50.846	ug/l	21995.81
Kr	84	72	1	No Gas		ug/l	39292.24
Sr	88	72	1	No Gas	50.921	ug/l	2664541.38
Sr	88	72	3	He	51.815	ug/l	301145.31
Mo	95	115	1	No Gas	53.013	ug/l	559611.66
Mo	95	115	3	He	51.955	ug/l	200857.75
Mo	98	115	1	No Gas	52.869	ug/l	908550.23
Ag	107	115	1	No Gas	20.712	ug/l	561648.90
Ag	109	115	1	No Gas	20.536	ug/l	540543.55
Cd	111	115	1	No Gas	51.036	ug/l	311092.91

ICPMS207-B Analytical Data

Name	Mass	ISTD	Tune Step	Tune Mode	Conc.	Units	CPS
Cd	111	115	3	He	50.529	ug/l	103097.78
Cd	114	115	1	No Gas	51.945	ug/l	700116.42
Cd	114	115	3	He	50.314	ug/l	252036.62
Sn	118	115	1	No Gas	52.714	ug/l	913894.32
Sn	118	115	3	He	51.616	ug/l	245203.31
Sb	121	115	1	No Gas	53.051	ug/l	1447189.82
Sb	121	115	3	He	52.050	ug/l	383606.43
Sb	123	115	1	No Gas	53.431	ug/l	1121434.77
Sb	123	115	3	He	52.317	ug/l	304712.89
Ba	135	115	1	No Gas	51.980	ug/l	277473.50
Ba	137	115	1	No Gas	50.584	ug/l	480172.96
La	139	115	3	He	49.939	ug/l	1337767.45
Ce	140	115	3	He	51.241	ug/l	1501427.29
Hg	201	209	1	No Gas	1.014	ug/l	3813.78
Hg	202	209	1	No Gas	1.000	ug/l	8654.41
Hg	202	209	3	He	1.006	ug/l	4298.51
Tl	203	209	3	He	49.773	ug/l	543042.31
Tl	205	209	1	No Gas	50.441	ug/l	2579877.69
Tl	205	209	3	He	50.541	ug/l	1306613.06
[Pb]	206	209	1	No Gas	51.090	ug/l	917821.34
[Pb]	207	209	1	No Gas	51.643	ug/l	810942.10
Pb	208	209	1	No Gas	51.051	ug/l	3702356.36
Th	232	209	3	He	49.546	ug/l	1803752.42
U	238	209	1	No Gas	50.322	ug/l	3630266.08

Name	Mass	Tune Step	Tune Mode	CPS	ISTD Recovery %
Sc	45	1	No Gas	5724964.75	101.5
Sc	45	2	H2	2807741.32	102.3
Sc	45	3	He	332051.37	104.3
Ge	72	1	No Gas	1535100.12	101.5
Ge	72	2	H2	1029774.97	103.8
Ge	72	3	He	230146.90	103.4
In	115	1	No Gas	11924452.97	98.0
In	115	3	He	2598742.34	98.6
Tb	159	1	No Gas	16331369.96	99.9
Tb	159	3	He	6852824.98	100.3
Ho	165	1	No Gas	15480197.99	101.5
Ho	165	3	He	6600597.50	99.8
Lu	175	1	No Gas	15982005.19	102.7
Lu	175	3	He	5537045.08	103.4
Bi	209	1	No Gas	10908171.40	96.3
Bi	209	3	He	4931896.93	98.4

ICPMS207-B Analytical Data

Sample Name CCB
File Name 028_CCB.d
Data Path Name D:\Agilent\ICPMH\1\DATA\220121ADoD.b
Acq Time 2022-01-21 18:50:38
Sample Type CCB
Total Dilution 1.0000
Comment ICPMS-6020-W-D
Operator CAR/SRH/JPV/AEM
Method SW6020/ SW6020B

Name	Mass	ISTD	Tune Step	Tune Mode	Conc.	Units	CPS
Li	7	45	1	No Gas	0.569	ug/l	21487.06
Be	9	45	1	No Gas	-0.030	ug/l	130.97
B	11	45	1	No Gas	3.158	ug/l	13073.60
Na	23	45	3	He	-6.108	ug/l	43176.29
Mg	24	45	3	He	0.005	ug/l	1863.10
Al	27	45	1	No Gas	-0.083	ug/l	15270.05
Si	28	45	2	H2	-0.058	ug/l	7324.74
K	39	72	3	He	5.592	ug/l	86847.36
Ca	40	72	2	H2	-0.659	ug/l	98659.90
Ti	47	72	1	No Gas	-0.002	ug/l	216.89
V	51	72	1	No Gas	1.328	ug/l	-18031.83
V	51	72	3	He	-1.229	ug/l	9855.58
Cr	52	72	1	No Gas	-0.630	ug/l	80815.14
Cr	52	72	3	He	-0.006	ug/l	853.37
Mn	55	72	1	No Gas	0.018	ug/l	11771.40
Mn	55	72	3	He	-0.004	ug/l	144.97
Fe	56	72	2	H2	-0.028	ug/l	10015.16
Fe	56	72	3	He	0.050	ug/l	6159.17
Co	59	72	1	No Gas	0.000	ug/l	568.88
Ni	60	72	1	No Gas	0.001	ug/l	509.00
Ni	60	72	3	He	-0.002	ug/l	95.56
Cu	63	72	1	No Gas	-0.005	ug/l	1978.26
Cu	63	72	3	He	-0.004	ug/l	665.55
Cu	65	72	1	No Gas	-0.005	ug/l	935.08
Zn	66	72	1	No Gas	-0.024	ug/l	900.15
Zn	66	72	3	He	0.032	ug/l	270.01
As	75	72	1	No Gas	-0.307	ug/l	12282.04
As	75	72	3	He	-0.018	ug/l	265.73
Se	78	72	2	H2	0.003	ug/l	36.89
Br	79	72	1	No Gas	0.500	ug/l	79543.70
Br	79	72	2	H2	0.326	ug/l	37093.81
Se	82	72	1	No Gas	0.029	ug/l	768.21
Kr	84	72	1	No Gas		ug/l	22302.96
Sr	88	72	1	No Gas	0.000	ug/l	798.44
Sr	88	72	3	He	0.000	ug/l	298.90
Mo	95	115	1	No Gas	0.027	ug/l	364.46
Mo	95	115	3	He	0.021	ug/l	106.67
Mo	98	115	1	No Gas	0.027	ug/l	573.97
Ag	107	115	1	No Gas	0.000	ug/l	1887.56
Ag	109	115	1	No Gas	0.001	ug/l	1826.85
Cd	111	115	1	No Gas	-0.004	ug/l	-27.79

ICPMS207-B Analytical Data

Name	Mass	ISTD	Tune Step	Tune Mode	Conc.	Units	CPS
Cd	111	115	3	He	0.003	ug/l	13.78
Cd	114	115	1	No Gas	0.000	ug/l	-177.11
Cd	114	115	3	He	0.004	ug/l	32.42
Sn	118	115	1	No Gas	0.033	ug/l	3832.95
Sn	118	115	3	He	0.000	ug/l	902.26
Sb	121	115	1	No Gas	0.099	ug/l	3754.23
Sb	121	115	3	He	0.924	ug/l	7029.48
Sb	123	115	1	No Gas	0.098	ug/l	2827.58
Sb	123	115	3	He	0.069	ug/l	575.07
Ba	135	115	1	No Gas	-0.004	ug/l	46.57
Ba	137	115	1	No Gas	-0.002	ug/l	79.84
La	139	115	3	He	0.000	ug/l	27.78
Ce	140	115	3	He	0.000	ug/l	24.44
Hg	201	209	1	No Gas	0.008	ug/l	60.66
Hg	202	209	1	No Gas	0.007	ug/l	163.30
Hg	202	209	3	He	0.009	ug/l	71.32
Tl	203	209	3	He	0.224	ug/l	3117.62
Tl	205	209	1	No Gas	0.184	ug/l	12668.49
Tl	205	209	3	He	0.217	ug/l	7266.91
[Pb]	206	209	1	No Gas	0.020	ug/l	983.38
[Pb]	207	209	1	No Gas	0.016	ug/l	784.47
Pb	208	209	1	No Gas	0.017	ug/l	3786.91
Th	232	209	3	He	0.023	ug/l	1415.98
U	238	209	1	No Gas	0.003	ug/l	357.93

Name	Mass	Tune Step	Tune Mode	CPS	ISTD Recovery %
Sc	45	1	No Gas	5739950.09	101.8
Sc	45	2	H2	2768234.06	100.8
Sc	45	3	He	316939.41	99.5
Ge	72	1	No Gas	1522618.32	100.7
Ge	72	2	H2	1018525.99	102.6
Ge	72	3	He	224394.32	100.8
In	115	1	No Gas	12399727.96	101.9
In	115	3	He	2662308.26	101.0
Tb	159	1	No Gas	16747123.62	102.5
Tb	159	3	He	6832186.79	100.0
Ho	165	1	No Gas	15626244.55	102.5
Ho	165	3	He	6582825.51	99.5
Lu	175	1	No Gas	15934328.77	102.4
Lu	175	3	He	5464219.91	102.0
Bi	209	1	No Gas	11568187.72	102.2
Bi	209	3	He	5076143.09	101.3

ICPMS207-B Analytical Data

Sample Name Rinse
File Name 029BLKV.d
Data Path Name D:\Agilent\ICPMH1\DATA\220121ADoD.b
Acq Time 2022-01-21 18:56:53
Sample Type BlkVrfy
Total Dilution 1.0000
Comment ICPMS-6020-W-D
Operator CAR/SRH/JPV/AEM
Method SW6020/ SW6020B

Name	Mass	ISTD	Tune Step	Tune Mode	Conc.	Units	CPS
Li	7	45	1	No Gas	0.294	ug/l	18999.46
Be	9	45	1	No Gas	-0.031	ug/l	125.31
B	11	45	1	No Gas	1.589	ug/l	9373.34
Na	23	45	3	He	-5.594	ug/l	43748.97
Mg	24	45	3	He	0.337	ug/l	2026.13
Al	27	45	1	No Gas	-0.083	ug/l	15252.26
Si	28	45	2	H2	-0.120	ug/l	7169.94
K	39	72	3	He	6.841	ug/l	85951.15
Ca	40	72	2	H2	-0.192	ug/l	100340.11
Ti	47	72	1	No Gas	-0.011	ug/l	188.52
V	51	72	1	No Gas	3.105	ug/l	36614.08
V	51	72	3	He	-1.174	ug/l	9947.86
Cr	52	72	1	No Gas	-0.738	ug/l	75795.17
Cr	52	72	3	He	0.009	ug/l	916.70
Mn	55	72	1	No Gas	0.026	ug/l	11788.01
Mn	55	72	3	He	-0.001	ug/l	152.30
Fe	56	72	2	H2	-0.034	ug/l	9702.96
Fe	56	72	3	He	0.015	ug/l	5883.80
Co	59	72	1	No Gas	0.001	ug/l	582.19
Ni	60	72	1	No Gas	-0.012	ug/l	402.54
Ni	60	72	3	He	-0.003	ug/l	91.11
Cu	63	72	1	No Gas	0.006	ug/l	2123.68
Cu	63	72	3	He	0.000	ug/l	678.88
Cu	65	72	1	No Gas	-0.001	ug/l	954.42
Zn	66	72	1	No Gas	-0.018	ug/l	913.70
Zn	66	72	3	He	0.015	ug/l	244.45
As	75	72	1	No Gas	0.096	ug/l	14835.73
As	75	72	3	He	-0.027	ug/l	251.00
Se	78	72	2	H2	0.000	ug/l	34.00
Br	79	72	1	No Gas	0.225	ug/l	73768.03
Br	79	72	2	H2	0.090	ug/l	34549.28
Se	82	72	1	No Gas	0.085	ug/l	773.68
Kr	84	72	1	No Gas		ug/l	22296.32
Sr	88	72	1	No Gas	-0.001	ug/l	758.52
Sr	88	72	3	He	-0.006	ug/l	256.67
Mo	95	115	1	No Gas	0.006	ug/l	125.56
Mo	95	115	3	He	0.004	ug/l	37.78
Mo	98	115	1	No Gas	0.006	ug/l	201.40
Ag	107	115	1	No Gas	0.001	ug/l	1866.88
Ag	109	115	1	No Gas	0.001	ug/l	1761.49
Cd	111	115	1	No Gas	-0.002	ug/l	-13.19

ICPMS207-B Analytical Data

Name	Mass	ISTD	Tune Step	Tune Mode	Conc.	Units	CPS
Cd	111	115	3	He	0.002	ug/l	10.78
Cd	114	115	1	No Gas	0.003	ug/l	-125.98
Cd	114	115	3	He	0.003	ug/l	28.99
Sn	118	115	1	No Gas	0.005	ug/l	3250.61
Sn	118	115	3	He	0.019	ug/l	980.04
Sb	121	115	1	No Gas	0.021	ug/l	1479.56
Sb	121	115	3	He	0.019	ug/l	356.37
Sb	123	115	1	No Gas	0.020	ug/l	1111.16
Sb	123	115	3	He	0.017	ug/l	261.36
Ba	135	115	1	No Gas	0.001	ug/l	69.86
Ba	137	115	1	No Gas	0.002	ug/l	116.44
La	139	115	3	He	0.000	ug/l	13.33
Ce	140	115	3	He	0.000	ug/l	35.55
Hg	201	209	1	No Gas	0.006	ug/l	49.99
Hg	202	209	1	No Gas	0.005	ug/l	140.30
Hg	202	209	3	He	0.008	ug/l	65.32
Tl	203	209	3	He	0.090	ug/l	1604.08
Tl	205	209	1	No Gas	0.070	ug/l	6183.76
Tl	205	209	3	He	0.091	ug/l	3885.47
[Pb]	206	209	1	No Gas	0.016	ug/l	873.37
[Pb]	207	209	1	No Gas	0.016	ug/l	747.81
Pb	208	209	1	No Gas	0.014	ug/l	3419.08
Th	232	209	3	He	0.004	ug/l	702.30
U	238	209	1	No Gas	0.001	ug/l	173.63

Name	Mass	Tune Step	Tune Mode	CPS	ISTD Recovery %
Sc	45	1	No Gas	5728462.70	101.6
Sc	45	2	H2	2759564.86	100.5
Sc	45	3	He	317914.69	99.8
Ge	72	1	No Gas	1485154.04	98.2
Ge	72	2	H2	997980.33	100.6
Ge	72	3	He	220516.79	99.0
In	115	1	No Gas	12072729.09	99.2
In	115	3	He	2629963.36	99.8
Tb	159	1	No Gas	15979917.48	97.8
Tb	159	3	He	6911391.83	101.1
Ho	165	1	No Gas	15141248.84	99.3
Ho	165	3	He	6564148.03	99.2
Lu	175	1	No Gas	15544758.48	99.9
Lu	175	3	He	5408212.35	101.0
Bi	209	1	No Gas	11090206.10	97.9
Bi	209	3	He	5042985.35	100.6

ICPMS207-B Analytical Data

Sample Name LRB
File Name 030MBLK.d
Data Path Name D:\Agilent\ICPMH\1\DATA\220121ADoD.b
Acq Time 2022-01-21 19:03:09
Sample Type MBLK
Total Dilution 1.0000
Comment ICPMS-6020-W-D
Operator CAR/SRH/JPV/AEM
Method SW6020/ SW6020B

Name	Mass	ISTD	Tune Step	Tune Mode	Conc.	Units	CPS
Li	7	45	1	No Gas	0.106	ug/l	17263.36
Be	9	45	1	No Gas	-0.034	ug/l	113.98
B	11	45	1	No Gas	1.155	ug/l	8338.31
Na	23	45	3	He	5.793	ug/l	52696.33
Mg	24	45	3	He	1.005	ug/l	2305.61
Al	27	45	1	No Gas	0.413	ug/l	25844.53
Si	28	45	2	H2	72.646	ug/l	159633.50
K	39	72	3	He	7.913	ug/l	86174.71
Ca	40	72	2	H2	8.124	ug/l	165682.39
Ti	47	72	1	No Gas	0.007	ug/l	240.24
V	51	72	1	No Gas	2.806	ug/l	28250.89
V	51	72	3	He	-1.178	ug/l	9895.61
Cr	52	72	1	No Gas	-0.638	ug/l	80674.29
Cr	52	72	3	He	0.011	ug/l	928.92
Mn	55	72	1	No Gas	0.053	ug/l	13116.55
Mn	55	72	3	He	0.026	ug/l	247.62
Fe	56	72	2	H2	0.337	ug/l	16383.97
Fe	56	72	3	He	0.316	ug/l	7319.22
Co	59	72	1	No Gas	0.000	ug/l	585.52
Ni	60	72	1	No Gas	0.023	ug/l	675.35
Ni	60	72	3	He	0.022	ug/l	146.67
Cu	63	72	1	No Gas	0.025	ug/l	2515.90
Cu	63	72	3	He	0.023	ug/l	811.20
Cu	65	72	1	No Gas	0.015	ug/l	1115.83
Zn	66	72	1	No Gas	0.280	ug/l	2753.64
Zn	66	72	3	He	0.296	ug/l	591.13
As	75	72	1	No Gas	0.315	ug/l	16808.92
As	75	72	3	He	-0.021	ug/l	257.13
Se	78	72	2	H2	0.000	ug/l	34.45
Br	79	72	1	No Gas	19.081	ug/l	342712.00
Br	79	72	2	H2	20.555	ug/l	190105.96
Se	82	72	1	No Gas	0.594	ug/l	1002.24
Kr	84	72	1	No Gas		ug/l	21819.88
Sr	88	72	1	No Gas	0.040	ug/l	2887.91
Sr	88	72	3	He	0.037	ug/l	497.79
Mo	95	115	1	No Gas	0.008	ug/l	143.34
Mo	95	115	3	He	0.010	ug/l	60.00
Mo	98	115	1	No Gas	0.006	ug/l	204.31
Ag	107	115	1	No Gas	-0.066	ug/l	54.69
Ag	109	115	1	No Gas	-0.063	ug/l	56.02
Cd	111	115	1	No Gas	0.008	ug/l	46.93

ICPMS207-B Analytical Data

Name	Mass	ISTD	Tune Step	Tune Mode	Conc.	Units	CPS
Cd	111	115	3	He	0.005	ug/l	16.89
Cd	114	115	1	No Gas	0.020	ug/l	99.71
Cd	114	115	3	He	0.004	ug/l	34.12
Sn	118	115	1	No Gas	0.015	ug/l	3453.59
Sn	118	115	3	He	0.004	ug/l	913.37
Sb	121	115	1	No Gas	0.008	ug/l	1124.49
Sb	121	115	3	He	0.011	ug/l	298.36
Sb	123	115	1	No Gas	0.008	ug/l	864.78
Sb	123	115	3	He	0.012	ug/l	234.03
Ba	135	115	1	No Gas	0.080	ug/l	502.35
Ba	137	115	1	No Gas	0.093	ug/l	1001.39
La	139	115	3	He	0.000	ug/l	32.22
Ce	140	115	3	He	0.002	ug/l	80.00
Hg	201	209	1	No Gas	0.004	ug/l	42.66
Hg	202	209	1	No Gas	0.005	ug/l	130.64
Hg	202	209	3	He	0.005	ug/l	52.99
Tl	203	209	3	He	0.038	ug/l	1018.45
Tl	205	209	1	No Gas	0.029	ug/l	3992.86
Tl	205	209	3	He	0.039	ug/l	2496.58
[Pb]	206	209	1	No Gas	0.020	ug/l	928.93
[Pb]	207	209	1	No Gas	0.025	ug/l	884.48
Pb	208	209	1	No Gas	0.020	ug/l	3820.24
Th	232	209	3	He	0.000	ug/l	554.91
U	238	209	1	No Gas	0.001	ug/l	143.64

Name	Mass	Tune Step	Tune Mode	CPS	ISTD Recovery %
Sc	45	1	No Gas	5711779.87	101.3
Sc	45	2	H2	2772677.94	101.0
Sc	45	3	He	312954.70	98.3
Ge	72	1	No Gas	1523982.11	100.8
Ge	72	2	H2	997553.19	100.5
Ge	72	3	He	219763.72	98.7
In	115	1	No Gas	12168114.34	100.0
In	115	3	He	2644299.44	100.3
Tb	159	1	No Gas	16288592.60	99.7
Tb	159	3	He	6937285.58	101.5
Ho	165	1	No Gas	15297417.71	100.3
Ho	165	3	He	6597700.23	99.7
Lu	175	1	No Gas	15699029.41	100.9
Lu	175	3	He	5410738.62	101.0
Bi	209	1	No Gas	10925875.34	96.5
Bi	209	3	He	5001004.56	99.8

ICPMS207-B Analytical Data

Sample Name LFB
File Name 031_LFB.d
Data Path Name D:\Agilent\ICPMH\1\DATA\220121ADoD.b
Acq Time 2022-01-21 19:09:24
Sample Type LFB
Total Dilution 1.0300
Comment ICPMS-6020-W-D
Operator CAR/SRH/JPV/AEM
Method SW6020/ SW6020B

Name	Mass	ISTD	Tune Step	Tune Mode	Conc.	Units	CPS
Li	7	45	1	No Gas	2253.600	ug/l	18616251.41
Be	9	45	1	No Gas	45.824	ug/l	160934.82
B	11	45	1	No Gas	47.343	ug/l	107395.58
Na	23	45	3	He	48198.092	ug/l	39353079.14
Mg	24	45	3	He	48790.358	ug/l	21951918.40
Al	27	45	1	No Gas	47.189	ug/l	956576.10
Si	28	45	2	H2	271.527	ug/l	542190.75
K	39	72	3	He	48059.130	ug/l	22677499.66
Ca	40	72	2	H2	50024.892	ug/l	376196079.49
Ti	47	72	1	No Gas	51.306	ug/l	122712.44
V	51	72	1	No Gas	48.650	ug/l	1378416.07
V	51	72	3	He	48.091	ug/l	238902.20
Cr	52	72	1	No Gas	49.149	ug/l	1438005.34
Cr	52	72	3	He	47.951	ug/l	255727.01
Mn	55	72	1	No Gas	48.081	ug/l	1768219.18
Mn	55	72	3	He	49.082	ug/l	169507.58
Fe	56	72	2	H2	5152.352	ug/l	88753875.75
Fe	56	72	3	He	4983.835	ug/l	23482715.01
Co	59	72	1	No Gas	47.557	ug/l	1470422.30
Ni	60	72	1	No Gas	47.271	ug/l	333137.14
Ni	60	72	3	He	47.620	ug/l	104398.34
Cu	63	72	1	No Gas	48.880	ug/l	830163.48
Cu	63	72	3	He	48.295	ug/l	278917.82
Cu	65	72	1	No Gas	47.506	ug/l	397382.93
Zn	66	72	1	No Gas	46.840	ug/l	271080.10
Zn	66	72	3	He	49.399	ug/l	59910.68
As	75	72	1	No Gas	49.185	ug/l	351367.08
As	75	72	3	He	49.790	ug/l	52237.60
Se	78	72	2	H2	50.425	ug/l	31372.61
Br	79	72	1	No Gas	15.692	ug/l	280933.67
Br	79	72	2	H2	15.330	ug/l	144802.43
Se	82	72	1	No Gas	48.179	ug/l	19637.47
Kr	84	72	1	No Gas		ug/l	36813.94
Sr	88	72	1	No Gas	50.215	ug/l	2468889.50
Sr	88	72	3	He	50.417	ug/l	273385.50
Mo	95	115	1	No Gas	49.085	ug/l	484913.93
Mo	95	115	3	He	47.200	ug/l	171278.50
Mo	98	115	1	No Gas	48.179	ug/l	774949.69
Ag	107	115	1	No Gas	20.109	ug/l	510515.09
Ag	109	115	1	No Gas	20.014	ug/l	493195.56
Cd	111	115	1	No Gas	48.628	ug/l	277428.57

ICPMS207-B Analytical Data

Name	Mass	ISTD	Tune Step	Tune Mode	Conc.	Units	CPS
Cd	111	115	3	He	48.205	ug/l	92314.19
Cd	114	115	1	No Gas	49.484	ug/l	624241.49
Cd	114	115	3	He	48.335	ug/l	227249.47
Sn	118	115	1	No Gas	48.525	ug/l	787660.89
Sn	118	115	3	He	47.326	ug/l	211112.28
Sb	121	115	1	No Gas	49.568	ug/l	1265687.66
Sb	121	115	3	He	48.099	ug/l	332734.91
Sb	123	115	1	No Gas	48.877	ug/l	960309.55
Sb	123	115	3	He	48.105	ug/l	262992.76
Ba	135	115	1	No Gas	49.407	ug/l	246886.03
Ba	137	115	1	No Gas	48.893	ug/l	434429.97
La	139	115	3	He	0.005	ug/l	157.78
Ce	140	115	3	He	50.570	ug/l	1390824.93
Hg	201	209	1	No Gas	1.030	ug/l	3509.43
Hg	202	209	1	No Gas	1.029	ug/l	8059.82
Hg	202	209	3	He	0.989	ug/l	3849.46
Tl	203	209	3	He	49.203	ug/l	488933.34
Tl	205	209	1	No Gas	51.060	ug/l	2364089.86
Tl	205	209	3	He	49.648	ug/l	1168929.92
[Pb]	206	209	1	No Gas	51.030	ug/l	829894.52
[Pb]	207	209	1	No Gas	50.025	ug/l	711193.16
Pb	208	209	1	No Gas	50.121	ug/l	3291092.52
Th	232	209	3	He	49.309	ug/l	1634798.97
U	238	209	1	No Gas	50.404	ug/l	3291810.07

Name	Mass	Tune Step	Tune Mode	CPS	ISTD Recovery %
Sc	45	1	No Gas	5468579.03	97.0
Sc	45	2	H2	2685274.99	97.8
Sc	45	3	He	310676.58	97.5
Ge	72	1	No Gas	1485218.61	98.2
Ge	72	2	H2	982458.61	99.0
Ge	72	3	He	221154.05	99.3
In	115	1	No Gas	11493850.75	94.4
In	115	3	He	2512408.93	95.3
Tb	159	1	No Gas	15811676.01	96.8
Tb	159	3	He	6799184.31	99.5
Ho	165	1	No Gas	15031544.87	98.6
Ho	165	3	He	6457691.94	97.6
Lu	175	1	No Gas	15265070.57	98.1
Lu	175	3	He	5368895.74	100.3
Bi	209	1	No Gas	10172405.30	89.8
Bi	209	3	He	4628675.82	92.3

ICPMS207-B Analytical Data

Sample Name ICSA
File Name 032ICSA.d
Data Path Name D:\Agilent\ICPMH\1\DATA\220121ADoD.b
Acq Time 2022-01-21 19:15:40
Sample Type ICSA
Total Dilution 1.0000
Comment ICPMS-6020-W-D
Operator CAR/SRH/JPV/AEM
Method SW6020/ SW6020B

Name	Mass	ISTD	Tune Step	Tune Mode	Conc.	Units	CPS
Li	7	45	1	No Gas	1.751	ug/l	32476.20
Be	9	45	1	No Gas	-0.041	ug/l	87.65
B	11	45	1	No Gas	1.432	ug/l	9146.44
Na	23	45	3	He	98150.387	ug/l	83846952.08
Mg	24	45	3	He	39766.600	ug/l	18730424.22
Al	27	45	1	No Gas	36609.969	ug/l	799054805.87
Si	28	45	2	H2	4.010	ug/l	15451.52
K	39	72	3	He	40001.313	ug/l	19425752.07
Ca	40	72	2	H2	123398.618	ug/l	940931638.49
Ti	47	72	1	No Gas	766.473	ug/l	1905932.13
V	51	72	1	No Gas	1.926	ug/l	683.44
V	51	72	3	He	-2.681	ug/l	2762.50
Cr	52	72	1	No Gas	-0.884	ug/l	72514.80
Cr	52	72	3	He	0.866	ug/l	5607.77
Mn	55	72	1	No Gas	0.247	ug/l	20317.15
Mn	55	72	3	He	0.223	ug/l	946.92
Fe	56	72	2	H2	104970.902	ug/l	1833064039.47
Fe	56	72	3	He	103151.256	ug/l	499894333.39
Co	59	72	1	No Gas	0.343	ug/l	11598.26
Ni	60	72	1	No Gas	0.811	ug/l	6442.03
Ni	60	72	3	He	0.182	ug/l	508.90
Cu	63	72	1	No Gas	1.302	ug/l	25016.69
Cu	63	72	3	He	0.057	ug/l	1012.83
Cu	65	72	1	No Gas	0.616	ug/l	6325.93
Zn	66	72	1	No Gas	0.712	ug/l	5310.62
Zn	66	72	3	He	0.346	ug/l	655.58
As	75	72	1	No Gas	0.199	ug/l	15742.48
As	75	72	3	He	-0.007	ug/l	273.53
Se	78	72	2	H2	0.123	ug/l	110.78
Br	79	72	1	No Gas	9.744	ug/l	207487.37
Br	79	72	2	H2	9.482	ug/l	102755.71
Se	82	72	1	No Gas	0.002	ug/l	748.21
Kr	84	72	1	No Gas		ug/l	22902.61
Sr	88	72	1	No Gas	1.221	ug/l	63320.40
Sr	88	72	3	He	1.213	ug/l	7046.22
Mo	95	115	1	No Gas	790.032	ug/l	8093535.78
Mo	95	115	3	He	782.908	ug/l	2938797.46
Mo	98	115	1	No Gas	795.042	ug/l	13261357.80
Ag	107	115	1	No Gas	0.006	ug/l	1922.24
Ag	109	115	1	No Gas	0.009	ug/l	1907.57
Cd	111	115	1	No Gas	0.057	ug/l	337.36

ICPMS207-B Analytical Data

Name	Mass	ISTD	Tune Step	Tune Mode	Conc.	Units	CPS
Cd	111	115	3	He	0.242	ug/l	485.12
Cd	114	115	1	No Gas	0.076	ug/l	839.84
Cd	114	115	3	He	0.174	ug/l	860.13
Sn	118	115	1	No Gas	0.044	ug/l	3783.03
Sn	118	115	3	He	0.033	ug/l	1004.49
Sb	121	115	1	No Gas	0.177	ug/l	5579.27
Sb	121	115	3	He	0.165	ug/l	1383.17
Sb	123	115	1	No Gas	0.148	ug/l	3672.81
Sb	123	115	3	He	0.107	ug/l	762.11
Ba	135	115	1	No Gas	0.065	ug/l	399.22
Ba	137	115	1	No Gas	0.072	ug/l	755.19
La	139	115	3	He	0.010	ug/l	274.45
Ce	140	115	3	He	0.002	ug/l	95.55
Hg	201	209	1	No Gas	0.006	ug/l	47.66
Hg	202	209	1	No Gas	0.006	ug/l	138.30
Hg	202	209	3	He	0.008	ug/l	62.99
Tl	203	209	3	He	0.085	ug/l	1466.01
Tl	205	209	1	No Gas	0.075	ug/l	6018.10
Tl	205	209	3	He	0.082	ug/l	3439.83
[Pb]	206	209	1	No Gas	0.027	ug/l	992.27
[Pb]	207	209	1	No Gas	0.026	ug/l	844.48
Pb	208	209	1	No Gas	0.024	ug/l	3839.13
Th	232	209	3	He	0.025	ug/l	1399.31
U	238	209	1	No Gas	0.003	ug/l	265.95

Name	Mass	Tune Step	Tune Mode	CPS	ISTD Recovery %
Sc	45	1	No Gas	5820401.12	103.2
Sc	45	2	H2	2701011.63	98.4
Sc	45	3	He	315833.12	99.2
Ge	72	1	No Gas	1502352.68	99.4
Ge	72	2	H2	967609.39	97.5
Ge	72	3	He	220752.01	99.1
In	115	1	No Gas	11580937.77	95.1
In	115	3	He	2523567.90	95.7
Tb	159	1	No Gas	15991251.21	97.9
Tb	159	3	He	6842921.43	100.1
Ho	165	1	No Gas	15197345.35	99.7
Ho	165	3	He	6609175.82	99.9
Lu	175	1	No Gas	15485568.25	99.5
Lu	175	3	He	5498262.55	102.7
Bi	209	1	No Gas	10326508.07	91.2
Bi	209	3	He	4756401.62	94.9

ICPMS207-B Analytical Data

Sample Name ICSAB
File Name 033ICSB.d
Data Path Name D:\Agilent\ICPMH\1\DATA\220121ADoD.b
Acq Time 2022-01-21 19:21:57
Sample Type ICSAB
Total Dilution 1.0000
Comment ICPMS-6020-W-D
Operator CAR/SRH/JPV/AEM
Method SW6020/ SW6020B

Name	Mass	ISTD	Tune Step	Tune Mode	Conc.	Units	CPS
Li	7	45	1	No Gas	0.892	ug/l	24421.31
Be	9	45	1	No Gas	-0.046	ug/l	70.65
B	11	45	1	No Gas	0.725	ug/l	7396.11
Na	23	45	3	He	98679.011	ug/l	83540350.98
Mg	24	45	3	He	39382.173	ug/l	18385206.94
Al	27	45	1	No Gas	35693.684	ug/l	770664575.18
Si	28	45	2	H2	2.787	ug/l	13009.31
K	39	72	3	He	40813.738	ug/l	19737896.93
Ca	40	72	2	H2	121510.037	ug/l	949373326.55
Ti	47	72	1	No Gas	770.459	ug/l	1937236.90
V	51	72	1	No Gas	21.762	ug/l	617482.46
V	51	72	3	He	17.151	ug/l	97083.95
Cr	52	72	1	No Gas	18.409	ug/l	627809.70
Cr	52	72	3	He	20.364	ug/l	111765.13
Mn	55	72	1	No Gas	19.529	ug/l	762689.62
Mn	55	72	3	He	20.023	ug/l	70919.00
Fe	56	72	2	H2	102832.767	ug/l	1840509724.89
Fe	56	72	3	He	101833.030	ug/l	491556999.68
Co	59	72	1	No Gas	19.508	ug/l	635549.53
Ni	60	72	1	No Gas	19.515	ug/l	145121.14
Ni	60	72	3	He	20.111	ug/l	45214.21
Cu	63	72	1	No Gas	20.395	ug/l	365927.47
Cu	63	72	3	He	19.699	ug/l	116932.08
Cu	65	72	1	No Gas	19.313	ug/l	170681.40
Zn	66	72	1	No Gas	9.676	ug/l	59803.80
Zn	66	72	3	He	10.059	ug/l	12672.24
As	75	72	1	No Gas	9.310	ug/l	81683.33
As	75	72	3	He	9.885	ug/l	10846.48
Se	78	72	2	H2	10.087	ug/l	6548.03
Br	79	72	1	No Gas	27.919	ug/l	466150.52
Br	79	72	2	H2	27.920	ug/l	244578.03
Se	82	72	1	No Gas	10.020	ug/l	4893.80
Kr	84	72	1	No Gas		ug/l	22376.34
Sr	88	72	1	No Gas	1.234	ug/l	64667.19
Sr	88	72	3	He	1.263	ug/l	7297.45
Mo	95	115	1	No Gas	793.717	ug/l	8403250.08
Mo	95	115	3	He	788.235	ug/l	3010074.85
Mo	98	115	1	No Gas	786.381	ug/l	13556268.83
Ag	107	115	1	No Gas	4.652	ug/l	127985.44
Ag	109	115	1	No Gas	4.732	ug/l	126275.56
Cd	111	115	1	No Gas	9.444	ug/l	57747.06

ICPMS207-B Analytical Data

Name	Mass	ISTD	Tune Step	Tune Mode	Conc.	Units	CPS
Cd	111	115	3	He	9.639	ug/l	19431.35
Cd	114	115	1	No Gas	9.671	ug/l	130617.66
Cd	114	115	3	He	9.608	ug/l	47549.64
Sn	118	115	1	No Gas	0.037	ug/l	3783.03
Sn	118	115	3	He	0.013	ug/l	932.26
Sb	121	115	1	No Gas	0.044	ug/l	2092.03
Sb	121	115	3	He	0.043	ug/l	521.73
Sb	123	115	1	No Gas	0.047	ug/l	1664.27
Sb	123	115	3	He	0.045	ug/l	420.05
Ba	135	115	1	No Gas	0.073	ug/l	455.77
Ba	137	115	1	No Gas	0.055	ug/l	622.12
La	139	115	3	He	0.009	ug/l	272.23
Ce	140	115	3	He	0.003	ug/l	115.56
Hg	201	209	1	No Gas	0.004	ug/l	41.66
Hg	202	209	1	No Gas	0.003	ug/l	110.98
Hg	202	209	3	He	0.005	ug/l	50.32
Tl	203	209	3	He	0.024	ug/l	835.70
Tl	205	209	1	No Gas	0.018	ug/l	3357.12
Tl	205	209	3	He	0.021	ug/l	1948.27
[Pb]	206	209	1	No Gas	0.020	ug/l	908.93
[Pb]	207	209	1	No Gas	0.020	ug/l	787.81
Pb	208	209	1	No Gas	0.019	ug/l	3594.66
Th	232	209	3	He	0.007	ug/l	778.34
U	238	209	1	No Gas	0.001	ug/l	170.30

Name	Mass	Tune Step	Tune Mode	CPS	ISTD Recovery %
Sc	45	1	No Gas	5754139.22	102.0
Sc	45	2	H2	2711860.77	98.8
Sc	45	3	He	313038.21	98.3
Ge	72	1	No Gas	1518419.30	100.4
Ge	72	2	H2	991164.66	99.9
Ge	72	3	He	219912.79	98.8
In	115	1	No Gas	11960751.28	98.3
In	115	3	He	2567390.94	97.4
Tb	159	1	No Gas	16529765.22	101.1
Tb	159	3	He	6980773.86	102.2
Ho	165	1	No Gas	15588899.91	102.2
Ho	165	3	He	6689463.65	101.1
Lu	175	1	No Gas	16018243.20	102.9
Lu	175	3	He	5508186.64	102.9
Bi	209	1	No Gas	10670499.35	94.2
Bi	209	3	He	4817792.44	96.1

ICPMS207-B Analytical Data

Sample Name Rinse
File Name 034BLKV.d
Data Path Name D:\Agilent\ICPMH\1\DATA\220121ADoD.b
Acq Time 2022-01-21 19:28:14
Sample Type BlkVrfy
Total Dilution 1.0000
Comment ICPMS-6020-W-D
Operator CAR/SRH/JPV/AEM
Method SW6020/ SW6020B

Name	Mass	ISTD	Tune Step	Tune Mode	Conc.	Units	CPS
Li	7	45	1	No Gas	0.876	ug/l	24485.48
Be	9	45	1	No Gas	-0.047	ug/l	66.32
B	11	45	1	No Gas	0.006	ug/l	5763.42
Na	23	45	3	He	12.951	ug/l	59822.64
Mg	24	45	3	He	-0.574	ug/l	1596.92
Al	27	45	1	No Gas	0.067	ug/l	18695.03
Si	28	45	2	H2	0.387	ug/l	8377.71
K	39	72	3	He	0.265	ug/l	83929.65
Ca	40	72	2	H2	0.601	ug/l	107679.56
Ti	47	72	1	No Gas	0.119	ug/l	527.21
V	51	72	1	No Gas	2.236	ug/l	10545.49
V	51	72	3	He	-2.597	ug/l	3203.70
Cr	52	72	1	No Gas	-2.181	ug/l	36486.26
Cr	52	72	3	He	-0.014	ug/l	802.25
Mn	55	72	1	No Gas	0.144	ug/l	16779.66
Mn	55	72	3	He	0.127	ug/l	613.89
Fe	56	72	2	H2	0.931	ug/l	27381.73
Fe	56	72	3	He	0.675	ug/l	9205.50
Co	59	72	1	No Gas	0.000	ug/l	575.54
Ni	60	72	1	No Gas	0.034	ug/l	765.17
Ni	60	72	3	He	0.006	ug/l	112.22
Cu	63	72	1	No Gas	0.076	ug/l	3458.48
Cu	63	72	3	He	-0.006	ug/l	651.22
Cu	65	72	1	No Gas	0.001	ug/l	1005.11
Zn	66	72	1	No Gas	-0.002	ug/l	1044.29
Zn	66	72	3	He	-0.011	ug/l	214.45
As	75	72	1	No Gas	-0.071	ug/l	14116.20
As	75	72	3	He	-0.109	ug/l	166.13
Se	78	72	2	H2	-0.003	ug/l	32.33
Br	79	72	1	No Gas	19.140	ug/l	346771.29
Br	79	72	2	H2	19.320	ug/l	182689.94
Se	82	72	1	No Gas	0.538	ug/l	988.64
Kr	84	72	1	No Gas		ug/l	22013.21
Sr	88	72	1	No Gas	0.002	ug/l	921.54
Sr	88	72	3	He	0.001	ug/l	303.34
Mo	95	115	1	No Gas	0.199	ug/l	2301.32
Mo	95	115	3	He	0.118	ug/l	500.01
Mo	98	115	1	No Gas	0.191	ug/l	3600.30
Ag	107	115	1	No Gas	-0.001	ug/l	1932.91
Ag	109	115	1	No Gas	0.000	ug/l	1840.86
Cd	111	115	1	No Gas	-0.001	ug/l	-9.73

ICPMS207-B Analytical Data

Name	Mass	ISTD	Tune Step	Tune Mode	Conc.	Units	CPS
Cd	111	115	3	He	0.001	ug/l	9.22
Cd	114	115	1	No Gas	0.003	ug/l	-146.02
Cd	114	115	3	He	0.001	ug/l	21.47
Sn	118	115	1	No Gas	-0.010	ug/l	3164.08
Sn	118	115	3	He	-0.015	ug/l	846.70
Sb	121	115	1	No Gas	0.006	ug/l	1122.82
Sb	121	115	3	He	0.007	ug/l	271.36
Sb	123	115	1	No Gas	0.007	ug/l	874.78
Sb	123	115	3	He	0.007	ug/l	212.35
Ba	135	115	1	No Gas	0.005	ug/l	96.47
Ba	137	115	1	No Gas	0.004	ug/l	146.38
La	139	115	3	He	0.000	ug/l	24.44
Ce	140	115	3	He	0.000	ug/l	38.89
Hg	201	209	1	No Gas	0.002	ug/l	35.32
Hg	202	209	1	No Gas	0.001	ug/l	98.65
Hg	202	209	3	He	0.004	ug/l	49.99
Tl	203	209	3	He	0.020	ug/l	855.04
Tl	205	209	1	No Gas	0.018	ug/l	3519.38
Tl	205	209	3	He	0.018	ug/l	2033.64
[Pb]	206	209	1	No Gas	0.003	ug/l	640.02
[Pb]	207	209	1	No Gas	0.005	ug/l	576.68
Pb	208	209	1	No Gas	0.004	ug/l	2645.68
Th	232	209	3	He	-0.003	ug/l	457.53
U	238	209	1	No Gas	0.001	ug/l	130.97

Name	Mass	Tune Step	Tune Mode	CPS	ISTD Recovery %
Sc	45	1	No Gas	5801065.10	102.9
Sc	45	2	H2	2809346.59	102.3
Sc	45	3	He	318663.48	100.1
Ge	72	1	No Gas	1538302.03	101.7
Ge	72	2	H2	1008237.80	101.6
Ge	72	3	He	223598.21	100.4
In	115	1	No Gas	12785113.75	105.0
In	115	3	He	2725636.99	103.4
Tb	159	1	No Gas	16723288.11	102.3
Tb	159	3	He	7037507.26	103.0
Ho	165	1	No Gas	15972542.60	104.7
Ho	165	3	He	6669780.17	100.8
Lu	175	1	No Gas	16393388.85	105.3
Lu	175	3	He	5577129.54	104.1
Bi	209	1	No Gas	11147511.78	98.5
Bi	209	3	He	5205978.79	103.9

ICPMS207-B Analytical Data

Sample Name Rinse
File Name 035BLKV.d
Data Path Name D:\Agilent\ICPMH\1\DATA\220121ADoD.b
Acq Time 2022-01-21 19:34:27
Sample Type BlkVrfy
Total Dilution 1.0000
Comment ICPMS-6020-W-D
Operator CAR/SRH/JPV/AEM
Method SW6020/ SW6020B

Name	Mass	ISTD	Tune Step	Tune Mode	Conc.	Units	CPS
Li	7	45	1	No Gas	0.586	ug/l	21393.57
Be	9	45	1	No Gas	-0.046	ug/l	67.99
B	11	45	1	No Gas	-0.186	ug/l	5198.31
Na	23	45	3	He	10.258	ug/l	55399.26
Mg	24	45	3	He	-0.652	ug/l	1503.77
Al	27	45	1	No Gas	0.023	ug/l	17368.98
Si	28	45	2	H2	0.234	ug/l	7858.56
K	39	72	3	He	-4.613	ug/l	80420.52
Ca	40	72	2	H2	0.168	ug/l	104411.84
Ti	47	72	1	No Gas	0.054	ug/l	360.37
V	51	72	1	No Gas	2.202	ug/l	8942.17
V	51	72	3	He	-2.550	ug/l	3383.75
Cr	52	72	1	No Gas	-2.097	ug/l	38841.11
Cr	52	72	3	He	-0.005	ug/l	841.14
Mn	55	72	1	No Gas	0.153	ug/l	17142.75
Mn	55	72	3	He	0.129	ug/l	611.22
Fe	56	72	2	H2	0.387	ug/l	17489.66
Fe	56	72	3	He	0.312	ug/l	7322.53
Co	59	72	1	No Gas	0.001	ug/l	595.50
Ni	60	72	1	No Gas	0.007	ug/l	562.23
Ni	60	72	3	He	-0.001	ug/l	95.56
Cu	63	72	1	No Gas	0.049	ug/l	2972.17
Cu	63	72	3	He	-0.011	ug/l	613.22
Cu	65	72	1	No Gas	-0.005	ug/l	949.75
Zn	66	72	1	No Gas	-0.002	ug/l	1034.38
Zn	66	72	3	He	0.016	ug/l	245.56
As	75	72	1	No Gas	-0.128	ug/l	13674.91
As	75	72	3	He	-0.108	ug/l	164.47
Se	78	72	2	H2	-0.015	ug/l	24.89
Br	79	72	1	No Gas	18.135	ug/l	331632.09
Br	79	72	2	H2	18.388	ug/l	175811.68
Se	82	72	1	No Gas	0.316	ug/l	896.23
Kr	84	72	1	No Gas		ug/l	21386.80
Sr	88	72	1	No Gas	-0.001	ug/l	755.19
Sr	88	72	3	He	-0.002	ug/l	282.23
Mo	95	115	1	No Gas	0.049	ug/l	608.91
Mo	95	115	3	He	0.047	ug/l	211.12
Mo	98	115	1	No Gas	0.048	ug/l	969.28
Ag	107	115	1	No Gas	-0.003	ug/l	1838.19
Ag	109	115	1	No Gas	0.002	ug/l	1874.88
Cd	111	115	1	No Gas	0.005	ug/l	26.29

ICPMS207-B Analytical Data

Name	Mass	ISTD	Tune Step	Tune Mode	Conc.	Units	CPS
Cd	111	115	3	He	0.001	ug/l	8.11
Cd	114	115	1	No Gas	0.004	ug/l	-120.12
Cd	114	115	3	He	0.000	ug/l	14.55
Sn	118	115	1	No Gas	-0.001	ug/l	3277.22
Sn	118	115	3	He	-0.007	ug/l	876.70
Sb	121	115	1	No Gas	-0.001	ug/l	902.79
Sb	121	115	3	He	0.000	ug/l	218.02
Sb	123	115	1	No Gas	-0.002	ug/l	667.75
Sb	123	115	3	He	0.001	ug/l	172.02
Ba	135	115	1	No Gas	0.000	ug/l	69.86
Ba	137	115	1	No Gas	0.001	ug/l	106.46
La	139	115	3	He	0.000	ug/l	18.89
Ce	140	115	3	He	0.000	ug/l	37.78
Hg	201	209	1	No Gas	0.001	ug/l	32.32
Hg	202	209	1	No Gas	0.000	ug/l	101.31
Hg	202	209	3	He	0.002	ug/l	45.32
Tl	203	209	3	He	0.005	ug/l	690.30
Tl	205	209	1	No Gas	0.008	ug/l	3103.72
Tl	205	209	3	He	0.008	ug/l	1776.84
[Pb]	206	209	1	No Gas	0.003	ug/l	653.35
[Pb]	207	209	1	No Gas	0.001	ug/l	532.24
Pb	208	209	1	No Gas	0.001	ug/l	2542.33
Th	232	209	3	He	-0.005	ug/l	384.16
U	238	209	1	No Gas	0.000	ug/l	124.64

Name	Mass	Tune Step	Tune Mode	CPS	ISTD Recovery %
Sc	45	1	No Gas	5684299.41	100.8
Sc	45	2	H2	2743030.42	99.9
Sc	45	3	He	307012.81	96.4
Ge	72	1	No Gas	1536349.17	101.6
Ge	72	2	H2	1010058.11	101.8
Ge	72	3	He	220554.11	99.1
In	115	1	No Gas	12525031.36	102.9
In	115	3	He	2687416.09	102.0
Tb	159	1	No Gas	16919060.34	103.5
Tb	159	3	He	7084651.64	103.7
Ho	165	1	No Gas	15987072.97	104.8
Ho	165	3	He	6953513.01	105.1
Lu	175	1	No Gas	16373429.94	105.2
Lu	175	3	He	5637319.78	105.3
Bi	209	1	No Gas	11658944.19	103.0
Bi	209	3	He	5294112.68	105.6

ICPMS207-B Analytical Data

Sample Name CCV
File Name 036_CCV.d
Data Path Name D:\Agilent\ICPMH\1\DATA\220121ADoD.b
Acq Time 2022-01-21 19:40:40
Sample Type CCV
Total Dilution 1.0000
Comment ICPMS-6020-W-D
Operator CAR/SRH/JPV/AEM
Method SW6020/ SW6020B

Name	Mass	ISTD	Tune Step	Tune Mode	Conc.	Units	CPS
Li	7	45	1	No Gas	516.363	ug/l	4441104.42
Be	9	45	1	No Gas	42.987	ug/l	156772.55
B	11	45	1	No Gas	44.807	ug/l	105683.05
Na	23	45	3	He	12244.986	ug/l	10288798.53
Mg	24	45	3	He	11962.932	ug/l	5521074.92
Al	27	45	1	No Gas	56.745	ug/l	1190555.12
Si	28	45	2	H2	218.794	ug/l	458569.11
K	39	72	3	He	12204.421	ug/l	5971574.98
Ca	40	72	2	H2	12546.289	ug/l	101582041.80
Ti	47	72	1	No Gas	49.730	ug/l	124202.02
V	51	72	1	No Gas	50.465	ug/l	1497337.59
V	51	72	3	He	48.531	ug/l	246925.33
Cr	52	72	1	No Gas	48.244	ug/l	1473060.56
Cr	52	72	3	He	50.152	ug/l	274460.29
Mn	55	72	1	No Gas	50.408	ug/l	1934972.09
Mn	55	72	3	He	50.985	ug/l	180758.13
Fe	56	72	2	H2	1322.924	ug/l	24521457.89
Fe	56	72	3	He	1308.718	ug/l	6335745.11
Co	59	72	1	No Gas	49.662	ug/l	1603097.44
Ni	60	72	1	No Gas	49.378	ug/l	363451.56
Ni	60	72	3	He	50.127	ug/l	112755.74
Cu	63	72	1	No Gas	51.257	ug/l	908989.26
Cu	63	72	3	He	51.966	ug/l	308014.43
Cu	65	72	1	No Gas	49.727	ug/l	434255.58
Zn	66	72	1	No Gas	50.529	ug/l	305372.05
Zn	66	72	3	He	52.563	ug/l	65422.97
As	75	72	1	No Gas	50.014	ug/l	372418.64
As	75	72	3	He	51.587	ug/l	55539.40
Se	78	72	2	H2	52.152	ug/l	34901.52
Br	79	72	1	No Gas	14.545	ug/l	275168.23
Br	79	72	2	H2	14.198	ug/l	145883.39
Se	82	72	1	No Gas	50.829	ug/l	21574.23
Kr	84	72	1	No Gas		ug/l	38391.61
Sr	88	72	1	No Gas	52.354	ug/l	2688372.05
Sr	88	72	3	He	53.097	ug/l	295438.98
Mo	95	115	1	No Gas	51.297	ug/l	556028.86
Mo	95	115	3	He	51.788	ug/l	197657.52
Mo	98	115	1	No Gas	50.384	ug/l	889252.80
Ag	107	115	1	No Gas	19.840	ug/l	552630.36
Ag	109	115	1	No Gas	19.906	ug/l	538183.32
Cd	111	115	1	No Gas	49.963	ug/l	312764.32

ICPMS207-B Analytical Data

Name	Mass	ISTD	Tune Step	Tune Mode	Conc.	Units	CPS
Cd	111	115	3	He	50.845	ug/l	102422.00
Cd	114	115	1	No Gas	50.889	ug/l	704346.47
Cd	114	115	3	He	50.897	ug/l	251714.73
Sn	118	115	1	No Gas	52.402	ug/l	933177.21
Sn	118	115	3	He	51.587	ug/l	241957.83
Sb	121	115	1	No Gas	52.538	ug/l	1471784.22
Sb	121	115	3	He	52.522	ug/l	382168.25
Sb	123	115	1	No Gas	52.635	ug/l	1134577.31
Sb	123	115	3	He	52.432	ug/l	301493.62
Ba	135	115	1	No Gas	50.309	ug/l	275813.44
Ba	137	115	1	No Gas	50.064	ug/l	487977.98
La	139	115	3	He	50.735	ug/l	1341690.61
Ce	140	115	3	He	51.626	ug/l	1493599.40
Hg	201	209	1	No Gas	0.984	ug/l	3840.46
Hg	202	209	1	No Gas	0.959	ug/l	8609.39
Hg	202	209	3	He	0.979	ug/l	4288.17
Tl	203	209	3	He	48.530	ug/l	542832.88
Tl	205	209	1	No Gas	50.267	ug/l	2665776.64
Tl	205	209	3	He	48.772	ug/l	1292736.50
[Pb]	206	209	1	No Gas	50.905	ug/l	948185.76
[Pb]	207	209	1	No Gas	50.328	ug/l	819432.44
Pb	208	209	1	No Gas	50.442	ug/l	3792755.68
Th	232	209	3	He	48.762	ug/l	1819915.34
U	238	209	1	No Gas	49.730	ug/l	3719698.31

Name	Mass	Tune Step	Tune Mode	CPS	ISTD Recovery %
Sc	45	1	No Gas	5512912.96	97.8
Sc	45	2	H2	2730276.96	99.5
Sc	45	3	He	309373.58	97.1
Ge	72	1	No Gas	1505820.90	99.6
Ge	72	2	H2	1026181.87	103.4
Ge	72	3	He	220448.39	99.0
In	115	1	No Gas	12245111.59	100.6
In	115	3	He	2565688.85	97.3
Tb	159	1	No Gas	16579436.77	101.5
Tb	159	3	He	7050171.85	103.2
Ho	165	1	No Gas	15595514.34	102.3
Ho	165	3	He	6640131.41	100.4
Lu	175	1	No Gas	15835163.04	101.7
Lu	175	3	He	5486779.97	102.5
Bi	209	1	No Gas	11310010.43	99.9
Bi	209	3	He	5056149.05	100.9

ICPMS207-B Analytical Data

Sample Name CCB
File Name 037_CCB.d
Data Path Name D:\Agilent\ICPMH\1\DATA\220121ADoD.b
Acq Time 2022-01-21 19:46:55
Sample Type CCB
Total Dilution 1.0000
Comment ICPMS-6020-W-D
Operator CAR/SRH/JPV/AEM
Method SW6020/ SW6020B

Name	Mass	ISTD	Tune Step	Tune Mode	Conc.	Units	CPS
Li	7	45	1	No Gas	0.622	ug/l	20837.91
Be	9	45	1	No Gas	-0.040	ug/l	87.65
B	11	45	1	No Gas	0.389	ug/l	6262.48
Na	23	45	3	He	1.802	ug/l	47279.52
Mg	24	45	3	He	-0.189	ug/l	1676.77
Al	27	45	1	No Gas	0.025	ug/l	16724.98
Si	28	45	2	H2	0.360	ug/l	7947.97
K	39	72	3	He	6.306	ug/l	82550.85
Ca	40	72	2	H2	-0.092	ug/l	98618.08
Ti	47	72	1	No Gas	0.023	ug/l	278.62
V	51	72	1	No Gas	3.019	ug/l	34344.05
V	51	72	3	He	-1.890	ug/l	6296.94
Cr	52	72	1	No Gas	-1.674	ug/l	50343.02
Cr	52	72	3	He	0.116	ug/l	1440.12
Mn	55	72	1	No Gas	0.052	ug/l	12970.06
Mn	55	72	3	He	-0.007	ug/l	127.31
Fe	56	72	2	H2	0.149	ug/l	12693.28
Fe	56	72	3	He	0.183	ug/l	6452.95
Co	59	72	1	No Gas	-0.002	ug/l	509.00
Ni	60	72	1	No Gas	-0.005	ug/l	465.75
Ni	60	72	3	He	-0.004	ug/l	85.56
Cu	63	72	1	No Gas	-0.002	ug/l	2029.63
Cu	63	72	3	He	-0.006	ug/l	619.22
Cu	65	72	1	No Gas	-0.011	ug/l	878.38
Zn	66	72	1	No Gas	-0.020	ug/l	914.21
Zn	66	72	3	He	0.004	ug/l	221.12
As	75	72	1	No Gas	-0.436	ug/l	11254.02
As	75	72	3	He	-0.075	ug/l	192.73
Se	78	72	2	H2	0.003	ug/l	35.33
Br	79	72	1	No Gas	0.516	ug/l	79180.87
Br	79	72	2	H2	0.497	ug/l	36707.04
Se	82	72	1	No Gas	-0.087	ug/l	714.21
Kr	84	72	1	No Gas		ug/l	21586.69
Sr	88	72	1	No Gas	-0.002	ug/l	721.92
Sr	88	72	3	He	-0.001	ug/l	274.45
Mo	95	115	1	No Gas	0.035	ug/l	443.34
Mo	95	115	3	He	0.028	ug/l	130.00
Mo	98	115	1	No Gas	0.034	ug/l	692.24
Ag	107	115	1	No Gas	0.000	ug/l	1885.55
Ag	109	115	1	No Gas	0.002	ug/l	1809.51
Cd	111	115	1	No Gas	0.001	ug/l	4.69

ICPMS207-B Analytical Data

Name	Mass	ISTD	Tune Step	Tune Mode	Conc.	Units	CPS
Cd	111	115	3	He	0.001	ug/l	9.11
Cd	114	115	1	No Gas	0.002	ug/l	-147.53
Cd	114	115	3	He	0.001	ug/l	16.76
Sn	118	115	1	No Gas	0.010	ug/l	3377.05
Sn	118	115	3	He	0.015	ug/l	938.93
Sb	121	115	1	No Gas	0.078	ug/l	3084.00
Sb	121	115	3	He	0.048	ug/l	558.07
Sb	123	115	1	No Gas	0.079	ug/l	2374.45
Sb	123	115	3	He	0.049	ug/l	441.72
Ba	135	115	1	No Gas	-0.002	ug/l	53.23
Ba	137	115	1	No Gas	0.004	ug/l	136.39
La	139	115	3	He	0.000	ug/l	17.78
Ce	140	115	3	He	0.000	ug/l	36.67
Hg	201	209	1	No Gas	0.006	ug/l	52.99
Hg	202	209	1	No Gas	0.006	ug/l	152.97
Hg	202	209	3	He	0.006	ug/l	58.66
Tl	203	209	3	He	0.167	ug/l	2523.26
Tl	205	209	1	No Gas	0.149	ug/l	10811.25
Tl	205	209	3	He	0.162	ug/l	5917.70
[Pb]	206	209	1	No Gas	0.004	ug/l	686.69
[Pb]	207	209	1	No Gas	0.007	ug/l	636.69
Pb	208	209	1	No Gas	0.005	ug/l	2849.03
Th	232	209	3	He	0.009	ug/l	943.75
U	238	209	1	No Gas	0.002	ug/l	269.95

Name	Mass	Tune Step	Tune Mode	CPS	ISTD Recovery %
Sc	45	1	No Gas	5449021.99	96.6
Sc	45	2	H2	2683384.87	97.8
Sc	45	3	He	299994.60	94.2
Ge	72	1	No Gas	1510662.81	99.9
Ge	72	2	H2	973320.04	98.1
Ge	72	3	He	212463.18	95.4
In	115	1	No Gas	12205249.32	100.3
In	115	3	He	2569802.79	97.5
Tb	159	1	No Gas	16659493.28	101.9
Tb	159	3	He	6843290.50	100.1
Ho	165	1	No Gas	15694607.59	102.9
Ho	165	3	He	6566789.47	99.3
Lu	175	1	No Gas	16021557.76	102.9
Lu	175	3	He	5450588.89	101.8
Bi	209	1	No Gas	11661930.72	103.0
Bi	209	3	He	5167194.59	103.1

ICPMS207-B Analytical Data

Sample Name Rinse
File Name 038BLKV.d
Data Path Name D:\Agilent\ICPMH\1\DATA\220121ADoD.b
Acq Time 2022-01-21 19:53:09
Sample Type BlkVrfy
Total Dilution 1.0000
Comment ICPMS-6020-W-D
Operator CAR/SRH/JPV/AEM
Method SW6020/ SW6020B

Name	Mass	ISTD	Tune Step	Tune Mode	Conc.	Units	CPS
Li	7	45	1	No Gas	0.042	ug/l	15955.42
Be	9	45	1	No Gas	-0.045	ug/l	69.99
B	11	45	1	No Gas	-0.353	ug/l	4629.24
Na	23	45	3	He	2.645	ug/l	48057.59
Mg	24	45	3	He	-0.255	ug/l	1650.15
Al	27	45	1	No Gas	0.027	ug/l	16780.55
Si	28	45	2	H2	0.221	ug/l	7536.29
K	39	72	3	He	-1.828	ug/l	79223.04
Ca	40	72	2	H2	0.124	ug/l	101954.18
Ti	47	72	1	No Gas	0.022	ug/l	276.95
V	51	72	1	No Gas	1.628	ug/l	-8858.23
V	51	72	3	He	-2.236	ug/l	4730.79
Cr	52	72	1	No Gas	-1.912	ug/l	43648.31
Cr	52	72	3	He	-0.014	ug/l	768.91
Mn	55	72	1	No Gas	0.144	ug/l	16533.18
Mn	55	72	3	He	0.122	ug/l	570.90
Fe	56	72	2	H2	0.210	ug/l	13979.04
Fe	56	72	3	He	0.152	ug/l	6346.11
Co	59	72	1	No Gas	0.000	ug/l	572.21
Ni	60	72	1	No Gas	-0.007	ug/l	449.12
Ni	60	72	3	He	0.008	ug/l	113.33
Cu	63	72	1	No Gas	0.008	ug/l	2211.06
Cu	63	72	3	He	-0.018	ug/l	552.57
Cu	65	72	1	No Gas	-0.022	ug/l	781.67
Zn	66	72	1	No Gas	-0.016	ug/l	944.38
Zn	66	72	3	He	0.021	ug/l	243.34
As	75	72	1	No Gas	0.084	ug/l	15067.64
As	75	72	3	He	-0.102	ug/l	165.93
Se	78	72	2	H2	-0.008	ug/l	28.67
Br	79	72	1	No Gas	17.409	ug/l	317058.89
Br	79	72	2	H2	18.217	ug/l	171008.54
Se	82	72	1	No Gas	0.515	ug/l	962.77
Kr	84	72	1	No Gas		ug/l	21353.54
Sr	88	72	1	No Gas	0.003	ug/l	941.50
Sr	88	72	3	He	0.003	ug/l	298.89
Mo	95	115	1	No Gas	0.017	ug/l	247.78
Mo	95	115	3	He	0.015	ug/l	80.00
Mo	98	115	1	No Gas	0.014	ug/l	345.99
Ag	107	115	1	No Gas	-0.003	ug/l	1820.85
Ag	109	115	1	No Gas	0.000	ug/l	1770.16
Cd	111	115	1	No Gas	-0.005	ug/l	-32.33

ICPMS207-B Analytical Data

Name	Mass	ISTD	Tune Step	Tune Mode	Conc.	Units	CPS
Cd	111	115	3	He	0.001	ug/l	9.11
Cd	114	115	1	No Gas	-0.001	ug/l	-186.75
Cd	114	115	3	He	0.000	ug/l	15.85
Sn	118	115	1	No Gas	-0.001	ug/l	3227.31
Sn	118	115	3	He	-0.016	ug/l	795.59
Sb	121	115	1	No Gas	0.012	ug/l	1264.52
Sb	121	115	3	He	0.011	ug/l	287.03
Sb	123	115	1	No Gas	0.012	ug/l	964.80
Sb	123	115	3	He	0.008	ug/l	206.69
Ba	135	115	1	No Gas	0.002	ug/l	79.84
Ba	137	115	1	No Gas	0.004	ug/l	136.40
La	139	115	3	He	0.000	ug/l	12.22
Ce	140	115	3	He	0.000	ug/l	36.67
Hg	201	209	1	No Gas	0.003	ug/l	41.32
Hg	202	209	1	No Gas	0.002	ug/l	117.31
Hg	202	209	3	He	0.004	ug/l	51.32
Tl	203	209	3	He	0.050	ug/l	1215.88
Tl	205	209	1	No Gas	0.041	ug/l	4924.36
Tl	205	209	3	He	0.049	ug/l	2926.84
[Pb]	206	209	1	No Gas	0.000	ug/l	611.13
[Pb]	207	209	1	No Gas	0.001	ug/l	544.46
Pb	208	209	1	No Gas	0.000	ug/l	2534.55
Th	232	209	3	He	-0.001	ug/l	570.24
U	238	209	1	No Gas	0.001	ug/l	150.30

Name	Mass	Tune Step	Tune Mode	CPS	ISTD Recovery %
Sc	45	1	No Gas	5457260.15	96.8
Sc	45	2	H2	2683402.05	97.8
Sc	45	3	He	300573.42	94.4
Ge	72	1	No Gas	1514723.73	100.2
Ge	72	2	H2	994836.16	100.2
Ge	72	3	He	213690.25	96.0
In	115	1	No Gas	12351113.64	101.5
In	115	3	He	2577328.62	97.8
Tb	159	1	No Gas	17271422.06	105.7
Tb	159	3	He	6892130.59	100.9
Ho	165	1	No Gas	16284317.08	106.8
Ho	165	3	He	6667086.70	100.8
Lu	175	1	No Gas	16399426.87	105.4
Lu	175	3	He	5452014.69	101.8
Bi	209	1	No Gas	11686428.19	103.2
Bi	209	3	He	5279602.66	105.3

ICPMS207-B Analytical Data

Sample Name MB-163063
File Name 039ARef.d
Data Path Name D:\Agilent\ICPMH\1\DATA\220121ADoD.b
Acq Time 2022-01-21 19:59:24
Sample Type AIRRef
Total Dilution 1.0000
Comment ICPMS-6020-W-T
Operator CAR/SRH/JPV/AEM
Method SW6020/ SW6020B

Name	Mass	ISTD	Tune Step	Tune Mode	Conc.	Units	CPS
Li	7	45	1	No Gas	0.674	ug/l	19406.11
Be	9	45	1	No Gas	-0.037	ug/l	88.31
B	11	45	1	No Gas	1.124	ug/l	7188.62
Na	23	45	3	He	22.948	ug/l	58436.69
Mg	24	45	3	He	0.921	ug/l	1969.56
Al	27	45	1	No Gas	1.822	ug/l	48724.69
Si	28	45	2	H2	21.197	ug/l	46265.20
K	39	72	3	He	-6.019	ug/l	70925.89
Ca	40	72	2	H2	35.788	ug/l	351269.53
Ti	47	72	1	No Gas	0.478	ug/l	1278.01
V	51	72	1	No Gas	4.098	ug/l	61237.69
V	51	72	3	He	-1.483	ug/l	7544.20
Cr	52	72	1	No Gas	-0.430	ug/l	77517.00
Cr	52	72	3	He	0.066	ug/l	1092.27
Mn	55	72	1	No Gas	0.711	ug/l	34492.05
Mn	55	72	3	He	0.130	ug/l	546.90
Fe	56	72	2	H2	1.119	ug/l	27936.32
Fe	56	72	3	He	1.126	ug/l	10020.20
Co	59	72	1	No Gas	0.091	ug/l	3170.73
Ni	60	72	1	No Gas	0.014	ug/l	545.60
Ni	60	72	3	He	0.002	ug/l	91.11
Cu	63	72	1	No Gas	0.269	ug/l	6159.11
Cu	63	72	3	He	0.190	ug/l	1605.10
Cu	65	72	1	No Gas	0.133	ug/l	1929.57
Zn	66	72	1	No Gas	0.122	ug/l	1602.89
Zn	66	72	3	He	0.193	ug/l	415.56
As	75	72	1	No Gas	0.582	ug/l	16762.17
As	75	72	3	He	0.020	ug/l	268.40
Se	78	72	2	H2	0.018	ug/l	41.89
Br	79	72	1	No Gas	4.870	ug/l	126596.37
Br	79	72	2	H2	4.361	ug/l	61424.79
Se	82	72	1	No Gas	0.084	ug/l	707.54
Kr	84	72	1	No Gas		ug/l	20497.28
Sr	88	72	1	No Gas	0.027	ug/l	1962.92
Sr	88	72	3	He	0.033	ug/l	424.45
Mo	95	115	1	No Gas	0.426	ug/l	4298.45
Mo	95	115	3	He	0.399	ug/l	1455.64
Mo	98	115	1	No Gas	0.426	ug/l	6991.27
Ag	107	115	1	No Gas	-0.066	ug/l	39.35
Ag	109	115	1	No Gas	-0.063	ug/l	51.35
Cd	111	115	1	No Gas	0.004	ug/l	18.11

ICPMS207-B Analytical Data

Name	Mass	ISTD	Tune Step	Tune Mode	Conc.	Units	CPS
Cd	111	115	3	He	0.000	ug/l	5.44
Cd	114	115	1	No Gas	0.012	ug/l	-3.73
Cd	114	115	3	He	0.000	ug/l	12.69
Sn	118	115	1	No Gas	0.415	ug/l	9714.13
Sn	118	115	3	He	0.431	ug/l	2719.17
Sb	121	115	1	No Gas	0.012	ug/l	1149.17
Sb	121	115	3	He	0.014	ug/l	292.36
Sb	123	115	1	No Gas	0.014	ug/l	906.45
Sb	123	115	3	He	0.014	ug/l	223.69
Ba	135	115	1	No Gas	0.010	ug/l	109.78
Ba	137	115	1	No Gas	0.012	ug/l	202.94
La	139	115	3	He	0.000	ug/l	21.11
Ce	140	115	3	He	0.001	ug/l	50.00
Hg	201	209	1	No Gas	0.015	ug/l	82.32
Hg	202	209	1	No Gas	0.017	ug/l	238.95
Hg	202	209	3	He	0.018	ug/l	111.98
Tl	203	209	3	He	0.072	ug/l	1409.31
Tl	205	209	1	No Gas	0.076	ug/l	6403.81
Tl	205	209	3	He	0.070	ug/l	3335.10
[Pb]	206	209	1	No Gas	0.046	ug/l	1392.30
[Pb]	207	209	1	No Gas	0.048	ug/l	1230.07
Pb	208	209	1	No Gas	0.045	ug/l	5584.94
Th	232	209	3	He	0.041	ug/l	2110.36
U	238	209	1	No Gas	0.001	ug/l	177.63

Name	Mass	Tune Step	Tune Mode	CPS	ISTD Recovery %
Sc	45	1	No Gas	4967184.30	88.1
Sc	45	2	H2	2472865.13	90.1
Sc	45	3	He	272671.03	85.6
Ge	72	1	No Gas	1363441.91	90.2
Ge	72	2	H2	914358.14	92.1
Ge	72	3	He	196355.40	88.2
In	115	1	No Gas	11241008.58	92.3
In	115	3	He	2418529.72	91.8
Tb	159	1	No Gas	15612713.93	95.5
Tb	159	3	He	6878318.44	100.7
Ho	165	1	No Gas	14828684.93	97.2
Ho	165	3	He	6501486.99	98.3
Lu	175	1	No Gas	15242045.36	97.9
Lu	175	3	He	5242364.11	97.9
Bi	209	1	No Gas	10864058.80	96.0
Bi	209	3	He	5050293.81	100.8

ICPMS207-B Analytical Data

Sample Name MB-163116
File Name 040ARef.d
Data Path Name D:\Agilent\ICPMH\1\DATA\220121ADoD.b
Acq Time 2022-01-21 20:05:39
Sample Type AIRRef
Total Dilution 1.0000
Comment ICPMS-6020-W-T
Operator CAR/SRH/JPV/AEM
Method SW6020/ SW6020B

Name	Mass	ISTD	Tune Step	Tune Mode	Conc.	Units	CPS
Li	7	45	1	No Gas	0.381	ug/l	16842.72
Be	9	45	1	No Gas	-0.038	ug/l	83.31
B	11	45	1	No Gas	0.697	ug/l	6215.12
Na	23	45	3	He	19.674	ug/l	54671.20
Mg	24	45	3	He	0.962	ug/l	1939.62
Al	27	45	1	No Gas	1.598	ug/l	43700.28
Si	28	45	2	H2	17.557	ug/l	39548.08
K	39	72	3	He	-7.508	ug/l	69607.70
Ca	40	72	2	H2	10.450	ug/l	169823.91
Ti	47	72	1	No Gas	0.312	ug/l	904.27
V	51	72	1	No Gas	4.360	ug/l	70068.61
V	51	72	3	He	-1.676	ug/l	6653.78
Cr	52	72	1	No Gas	-0.869	ug/l	66081.03
Cr	52	72	3	He	0.052	ug/l	1017.82
Mn	55	72	1	No Gas	0.656	ug/l	32534.83
Mn	55	72	3	He	0.113	ug/l	489.25
Fe	56	72	2	H2	0.419	ug/l	16494.14
Fe	56	72	3	He	0.525	ug/l	7359.31
Co	59	72	1	No Gas	0.120	ug/l	4002.63
Ni	60	72	1	No Gas	0.010	ug/l	522.31
Ni	60	72	3	He	0.013	ug/l	111.11
Cu	63	72	1	No Gas	0.257	ug/l	5965.62
Cu	63	72	3	He	0.201	ug/l	1642.77
Cu	65	72	1	No Gas	0.142	ug/l	1994.27
Zn	66	72	1	No Gas	0.083	ug/l	1393.36
Zn	66	72	3	He	0.164	ug/l	377.78
As	75	72	1	No Gas	0.124	ug/l	13916.38
As	75	72	3	He	-0.008	ug/l	239.33
Se	78	72	2	H2	0.005	ug/l	34.89
Br	79	72	1	No Gas	4.141	ug/l	117503.11
Br	79	72	2	H2	3.441	ug/l	55419.38
Se	82	72	1	No Gas	0.119	ug/l	721.41
Kr	84	72	1	No Gas		ug/l	20437.17
Sr	88	72	1	No Gas	0.014	ug/l	1377.34
Sr	88	72	3	He	0.010	ug/l	305.56
Mo	95	115	1	No Gas	0.425	ug/l	4291.79
Mo	95	115	3	He	0.415	ug/l	1510.09
Mo	98	115	1	No Gas	0.426	ug/l	7013.50
Ag	107	115	1	No Gas	-0.065	ug/l	58.69
Ag	109	115	1	No Gas	-0.064	ug/l	50.02
Cd	111	115	1	No Gas	0.007	ug/l	37.23

ICPMS207-B Analytical Data

Name	Mass	ISTD	Tune Step	Tune Mode	Conc.	Units	CPS
Cd	111	115	3	He	0.001	ug/l	7.11
Cd	114	115	1	No Gas	0.016	ug/l	43.95
Cd	114	115	3	He	-0.001	ug/l	10.06
Sn	118	115	1	No Gas	0.426	ug/l	9900.55
Sn	118	115	3	He	0.457	ug/l	2824.75
Sb	121	115	1	No Gas	0.000	ug/l	852.45
Sb	121	115	3	He	0.004	ug/l	218.36
Sb	123	115	1	No Gas	0.003	ug/l	693.09
Sb	123	115	3	He	0.008	ug/l	192.69
Ba	135	115	1	No Gas	0.018	ug/l	149.70
Ba	137	115	1	No Gas	0.028	ug/l	332.68
La	139	115	3	He	0.000	ug/l	31.11
Ce	140	115	3	He	0.001	ug/l	68.89
Hg	201	209	1	No Gas	0.016	ug/l	88.98
Hg	202	209	1	No Gas	0.020	ug/l	270.28
Hg	202	209	3	He	0.019	ug/l	112.65
Tl	203	209	3	He	0.046	ug/l	1097.16
Tl	205	209	1	No Gas	0.040	ug/l	4637.51
Tl	205	209	3	He	0.043	ug/l	2576.62
[Pb]	206	209	1	No Gas	0.046	ug/l	1408.97
[Pb]	207	209	1	No Gas	0.048	ug/l	1260.07
Pb	208	209	1	No Gas	0.045	ug/l	5658.28
Th	232	209	3	He	0.016	ug/l	1141.18
U	238	209	1	No Gas	0.001	ug/l	128.31

Name	Mass	Tune Step	Tune Mode	CPS	ISTD Recovery %
Sc	45	1	No Gas	4940597.32	87.6
Sc	45	2	H2	2478389.46	90.3
Sc	45	3	He	265519.79	83.4
Ge	72	1	No Gas	1369856.09	90.6
Ge	72	2	H2	920872.81	92.8
Ge	72	3	He	194301.74	87.3
In	115	1	No Gas	11405127.56	93.7
In	115	3	He	2414883.47	91.6
Tb	159	1	No Gas	16258552.77	99.5
Tb	159	3	He	6642807.16	97.2
Ho	165	1	No Gas	15273155.43	100.1
Ho	165	3	He	6309926.89	95.4
Lu	175	1	No Gas	15702841.98	100.9
Lu	175	3	He	5292525.88	98.8
Bi	209	1	No Gas	11136656.38	98.4
Bi	209	3	He	4962941.69	99.0

ICPMS207-B Analytical Data

Sample Name LCS4-163063
File Name 041LCS4.d
Data Path Name D:\Agilent\ICPMH\1\DATA\220121ADoD.b
Acq Time 2022-01-21 20:11:53
Sample Type LCS4
Total Dilution 1.0000
Comment ICPMS-6020-W-T
Operator CAR/SRH/JPV/AEM
Method SW6020/ SW6020B

Name	Mass	ISTD	Tune Step	Tune Mode	Conc.	Units	CPS
Li	7	45	1	No Gas	79.815	ug/l	599961.86
Be	9	45	1	No Gas	41.417	ug/l	129499.27
B	11	45	1	No Gas	88.699	ug/l	174936.29
Na	23	45	3	He	4986.316	ug/l	3618895.60
Mg	24	45	3	He	4950.830	ug/l	1962623.83
Al	27	45	1	No Gas	453.656	ug/l	8073349.67
Si	28	45	2	H2	1251.229	ug/l	1861192.71
K	39	72	3	He	4563.819	ug/l	2082750.56
Ca	40	72	2	H2	5695.831	ug/l	36908850.89
Ti	47	72	1	No Gas	87.555	ug/l	195263.93
V	51	72	1	No Gas	96.003	ug/l	2595118.20
V	51	72	3	He	95.474	ug/l	428942.96
Cr	52	72	1	No Gas	96.785	ug/l	2554068.18
Cr	52	72	3	He	96.022	ug/l	478389.01
Mn	55	72	1	No Gas	506.415	ug/l	17284635.34
Mn	55	72	3	He	487.951	ug/l	1575493.71
Fe	56	72	2	H2	602.222	ug/l	8915658.15
Fe	56	72	3	He	508.744	ug/l	2247769.17
Co	59	72	1	No Gas	99.544	ug/l	2872401.96
Ni	60	72	1	No Gas	97.702	ug/l	643367.90
Ni	60	72	3	He	99.144	ug/l	203193.61
Cu	63	72	1	No Gas	98.075	ug/l	1554384.30
Cu	63	72	3	He	101.541	ug/l	548043.75
Cu	65	72	1	No Gas	95.791	ug/l	747384.48
Zn	66	72	1	No Gas	94.192	ug/l	508592.02
Zn	66	72	3	He	97.506	ug/l	110471.64
As	75	72	1	No Gas	95.692	ug/l	625745.61
As	75	72	3	He	97.510	ug/l	95465.59
Se	78	72	2	H2	117.407	ug/l	63010.29
Br	79	72	1	No Gas	4.549	ug/l	121171.77
Br	79	72	2	H2	4.635	ug/l	57376.57
Se	82	72	1	No Gas	98.011	ug/l	36628.84
Kr	84	72	1	No Gas		ug/l	51075.70
Sr	88	72	1	No Gas	104.952	ug/l	4821324.35
Sr	88	72	3	He	103.057	ug/l	522634.32
Mo	95	115	1	No Gas	94.203	ug/l	950128.56
Mo	95	115	3	He	99.416	ug/l	344284.13
Mo	98	115	1	No Gas	94.290	ug/l	1547847.32
Ag	107	115	1	No Gas	9.614	ug/l	249991.59
Ag	109	115	1	No Gas	9.468	ug/l	239289.12
Cd	111	115	1	No Gas	48.211	ug/l	280670.52

ICPMS207-B Analytical Data

Name	Mass	ISTD	Tune Step	Tune Mode	Conc.	Units	CPS
Cd	111	115	3	He	50.614	ug/l	92532.26
Cd	114	115	1	No Gas	49.272	ug/l	634236.37
Cd	114	115	3	He	51.012	ug/l	228945.02
Sn	118	115	1	No Gas	99.186	ug/l	1640908.34
Sn	118	115	3	He	102.105	ug/l	433925.77
Sb	121	115	1	No Gas	100.120	ug/l	2608470.68
Sb	121	115	3	He	100.093	ug/l	660778.93
Sb	123	115	1	No Gas	100.284	ug/l	2009958.11
Sb	123	115	3	He	101.740	ug/l	530796.99
Ba	135	115	1	No Gas	93.678	ug/l	477361.46
Ba	137	115	1	No Gas	93.448	ug/l	846820.05
La	139	115	3	He	107.559	ug/l	2581479.70
Ce	140	115	3	He	109.573	ug/l	2877097.98
Hg	201	209	1	No Gas	0.017	ug/l	91.31
Hg	202	209	1	No Gas	0.019	ug/l	257.95
Hg	202	209	3	He	0.021	ug/l	116.65
Tl	203	209	3	He	100.396	ug/l	1066586.88
Tl	205	209	1	No Gas	100.984	ug/l	5147333.05
Tl	205	209	3	He	102.619	ug/l	2583857.63
[Pb]	206	209	1	No Gas	101.594	ug/l	1820725.30
[Pb]	207	209	1	No Gas	101.802	ug/l	1591818.83
Pb	208	209	1	No Gas	101.343	ug/l	7318301.37
Th	232	209	3	He	101.831	ug/l	3612045.98
U	238	209	1	No Gas	103.386	ug/l	7437911.67

Name	Mass	Tune Step	Tune Mode	CPS	ISTD Recovery %
Sc	45	1	No Gas	4803886.00	85.2
Sc	45	2	H2	2268068.27	82.6
Sc	45	3	He	265802.55	83.5
Ge	72	1	No Gas	1359424.03	89.9
Ge	72	2	H2	879752.24	88.7
Ge	72	3	He	200924.32	90.2
In	115	1	No Gas	11578029.07	95.1
In	115	3	He	2329303.34	88.4
Tb	159	1	No Gas	16300403.79	99.7
Tb	159	3	He	6619271.80	96.9
Ho	165	1	No Gas	15489131.29	101.6
Ho	165	3	He	6330729.46	95.7
Lu	175	1	No Gas	15863733.80	101.9
Lu	175	3	He	5151770.34	96.2
Bi	209	1	No Gas	11029577.23	97.4
Bi	209	3	He	4811143.82	96.0

ICPMS207-B Analytical Data

Sample Name LCS4-163116
File Name 042LCS4.d
Data Path Name D:\Agilent\ICPMH\1\DATA\220121ADoD.b
Acq Time 2022-01-21 20:18:08
Sample Type LCS4
Total Dilution 1.0000
Comment ICPMS-6020-W-T
Operator CAR/SRH/JPV/AEM
Method SW6020/ SW6020B

Name	Mass	ISTD	Tune Step	Tune Mode	Conc.	Units	CPS
Li	7	45	1	No Gas	71.846	ug/l	583891.60
Be	9	45	1	No Gas	37.565	ug/l	126583.30
B	11	45	1	No Gas	79.887	ug/l	170306.00
Na	23	45	3	He	4935.627	ug/l	3596573.45
Mg	24	45	3	He	4943.199	ug/l	1964285.21
Al	27	45	1	No Gas	402.018	ug/l	7711383.70
Si	28	45	2	H2	1101.137	ug/l	1880485.00
K	39	72	3	He	4742.655	ug/l	2145684.46
Ca	40	72	2	H2	5357.573	ug/l	38411838.82
Ti	47	72	1	No Gas	86.893	ug/l	207923.90
V	51	72	1	No Gas	90.063	ug/l	2602461.39
V	51	72	3	He	97.931	ug/l	436461.91
Cr	52	72	1	No Gas	89.795	ug/l	2542838.37
Cr	52	72	3	He	98.350	ug/l	486468.56
Mn	55	72	1	No Gas	472.446	ug/l	17271355.86
Mn	55	72	3	He	499.686	ug/l	1601375.79
Fe	56	72	2	H2	557.915	ug/l	9154015.78
Fe	56	72	3	He	511.770	ug/l	2244785.62
Co	59	72	1	No Gas	92.676	ug/l	2856091.64
Ni	60	72	1	No Gas	91.749	ug/l	645864.21
Ni	60	72	3	He	101.302	ug/l	206159.85
Cu	63	72	1	No Gas	93.924	ug/l	1594276.04
Cu	63	72	3	He	104.038	ug/l	557299.43
Cu	65	72	1	No Gas	92.640	ug/l	773848.50
Zn	66	72	1	No Gas	89.124	ug/l	515242.98
Zn	66	72	3	He	99.547	ug/l	111951.78
As	75	72	1	No Gas	92.798	ug/l	648793.98
As	75	72	3	He	100.713	ug/l	97855.04
Se	78	72	2	H2	109.484	ug/l	64780.28
Br	79	72	1	No Gas	3.701	ug/l	118863.65
Br	79	72	2	H2	3.625	ug/l	55866.89
Se	82	72	1	No Gas	94.726	ug/l	37924.79
Kr	84	72	1	No Gas		ug/l	51840.24
Sr	88	72	1	No Gas	99.113	ug/l	4874962.13
Sr	88	72	3	He	106.001	ug/l	533408.68
Mo	95	115	1	No Gas	93.423	ug/l	970341.31
Mo	95	115	3	He	99.549	ug/l	345671.51
Mo	98	115	1	No Gas	93.303	ug/l	1579452.86
Ag	107	115	1	No Gas	9.573	ug/l	256871.25
Ag	109	115	1	No Gas	9.428	ug/l	245669.03
Cd	111	115	1	No Gas	47.443	ug/l	285025.78

ICPMS207-B Analytical Data

Name	Mass	ISTD	Tune Step	Tune Mode	Conc.	Units	CPS
Cd	111	115	3	He	51.369	ug/l	94174.24
Cd	114	115	1	No Gas	48.498	ug/l	644783.60
Cd	114	115	3	He	51.536	ug/l	231974.20
Sn	118	115	1	No Gas	99.520	ug/l	1698052.13
Sn	118	115	3	He	104.805	ug/l	447010.33
Sb	121	115	1	No Gas	97.650	ug/l	2625462.92
Sb	121	115	3	He	102.411	ug/l	678262.38
Sb	123	115	1	No Gas	98.559	ug/l	2038517.03
Sb	123	115	3	He	104.202	ug/l	545177.64
Ba	135	115	1	No Gas	92.296	ug/l	485125.39
Ba	137	115	1	No Gas	92.062	ug/l	860853.19
La	139	115	3	He	109.458	ug/l	2636276.26
Ce	140	115	3	He	110.711	ug/l	2914942.21
Hg	201	209	1	No Gas	0.014	ug/l	85.31
Hg	202	209	1	No Gas	0.019	ug/l	269.62
Hg	202	209	3	He	0.020	ug/l	111.31
Tl	203	209	3	He	103.513	ug/l	1078199.77
Tl	205	209	1	No Gas	99.942	ug/l	5345767.66
Tl	205	209	3	He	105.889	ug/l	2613125.46
[Pb]	206	209	1	No Gas	98.894	ug/l	1855411.09
[Pb]	207	209	1	No Gas	97.669	ug/l	1601394.25
Pb	208	209	1	No Gas	98.164	ug/l	7430590.66
Th	232	209	3	He	104.948	ug/l	3645973.22
U	238	209	1	No Gas	99.559	ug/l	7497175.40

Name	Mass	Tune Step	Tune Mode	CPS	ISTD Recovery %
Sc	45	1	No Gas	5234774.34	92.8
Sc	45	2	H2	2270213.22	82.7
Sc	45	3	He	267071.02	83.9
Ge	72	1	No Gas	1464316.48	96.9
Ge	72	2	H2	911878.09	91.9
Ge	72	3	He	199451.42	89.6
In	115	1	No Gas	12173196.58	100.0
In	115	3	He	2343445.42	88.9
Tb	159	1	No Gas	17594115.47	107.7
Tb	159	3	He	6505802.45	95.2
Ho	165	1	No Gas	16392392.76	107.5
Ho	165	3	He	6200739.06	93.7
Lu	175	1	No Gas	16496033.68	106.0
Lu	175	3	He	5094859.73	95.1
Bi	209	1	No Gas	11658967.51	103.0
Bi	209	3	He	4722757.46	94.2

ICPMS207-B Analytical Data

Sample Name Rinse
File Name 043BLKV.d
Data Path Name D:\Agilent\ICPMH\1\DATA\220121ADoD.b
Acq Time 2022-01-21 20:24:22
Sample Type BkVrfy
Total Dilution 1.0000
Comment ICPMS-6020-W-D
Operator CAR/SRH/JPV/AEM
Method SW6020/ SW6020B

Name	Mass	ISTD	Tune Step	Tune Mode	Conc.	Units	CPS
Li	7	45	1	No Gas	-0.204	ug/l	13839.17
Be	9	45	1	No Gas	-0.040	ug/l	87.32
B	11	45	1	No Gas	0.117	ug/l	5656.00
Na	23	45	3	He	3.119	ug/l	47266.30
Mg	24	45	3	He	-0.156	ug/l	1653.49
Al	27	45	1	No Gas	0.030	ug/l	16800.58
Si	28	45	2	H2	0.576	ug/l	8339.65
K	39	72	3	He	-16.434	ug/l	72839.72
Ca	40	72	2	H2	-0.654	ug/l	95894.82
Ti	47	72	1	No Gas	0.012	ug/l	248.59
V	51	72	1	No Gas	1.569	ug/l	-10290.30
V	51	72	3	He	-2.121	ug/l	5295.43
Cr	52	72	1	No Gas	-1.732	ug/l	48350.56
Cr	52	72	3	He	-0.010	ug/l	794.47
Mn	55	72	1	No Gas	0.166	ug/l	17209.30
Mn	55	72	3	He	0.141	ug/l	638.22
Fe	56	72	2	H2	0.171	ug/l	13282.77
Fe	56	72	3	He	0.017	ug/l	5750.27
Co	59	72	1	No Gas	0.001	ug/l	582.19
Ni	60	72	1	No Gas	0.004	ug/l	525.63
Ni	60	72	3	He	0.004	ug/l	104.44
Cu	63	72	1	No Gas	-0.001	ug/l	2021.62
Cu	63	72	3	He	-0.008	ug/l	613.56
Cu	65	72	1	No Gas	-0.012	ug/l	863.71
Zn	66	72	1	No Gas	0.089	ug/l	1563.11
Zn	66	72	3	He	0.069	ug/l	303.34
As	75	72	1	No Gas	-0.632	ug/l	9790.47
As	75	72	3	He	-0.095	ug/l	174.20
Se	78	72	2	H2	0.000	ug/l	33.89
Br	79	72	1	No Gas	23.041	ug/l	392709.13
Br	79	72	2	H2	23.669	ug/l	212111.36
Se	82	72	1	No Gas	0.060	ug/l	770.35
Kr	84	72	1	No Gas		ug/l	20990.33
Sr	88	72	1	No Gas	0.001	ug/l	845.02
Sr	88	72	3	He	-0.001	ug/l	277.78
Mo	95	115	1	No Gas	0.017	ug/l	253.34
Mo	95	115	3	He	0.011	ug/l	64.45
Mo	98	115	1	No Gas	0.017	ug/l	415.92
Ag	107	115	1	No Gas	-0.001	ug/l	1924.91
Ag	109	115	1	No Gas	0.002	ug/l	1891.56
Cd	111	115	1	No Gas	0.004	ug/l	23.03

ICPMS207-B Analytical Data

Name	Mass	ISTD	Tune Step	Tune Mode	Conc.	Units	CPS
Cd	111	115	3	He	0.006	ug/l	19.00
Cd	114	115	1	No Gas	0.007	ug/l	-74.23
Cd	114	115	3	He	0.006	ug/l	42.21
Sn	118	115	1	No Gas	0.026	ug/l	3796.34
Sn	118	115	3	He	0.005	ug/l	897.81
Sb	121	115	1	No Gas	0.151	ug/l	5332.91
Sb	121	115	3	He	0.111	ug/l	1019.14
Sb	123	115	1	No Gas	0.154	ug/l	4161.06
Sb	123	115	3	He	0.114	ug/l	815.77
Ba	135	115	1	No Gas	0.002	ug/l	83.17
Ba	137	115	1	No Gas	0.003	ug/l	129.74
La	139	115	3	He	0.000	ug/l	35.56
Ce	140	115	3	He	0.000	ug/l	34.44
Hg	201	209	1	No Gas	0.002	ug/l	37.99
Hg	202	209	1	No Gas	0.001	ug/l	110.98
Hg	202	209	3	He	0.003	ug/l	46.66
Tl	203	209	3	He	0.247	ug/l	3532.56
Tl	205	209	1	No Gas	0.227	ug/l	15814.22
Tl	205	209	3	He	0.245	ug/l	8364.68
[Pb]	206	209	1	No Gas	0.021	ug/l	1057.83
[Pb]	207	209	1	No Gas	0.019	ug/l	880.04
Pb	208	209	1	No Gas	0.018	ug/l	4094.73
Th	232	209	3	He	0.022	ug/l	1446.00
U	238	209	1	No Gas	0.002	ug/l	296.95

Name	Mass	Tune Step	Tune Mode	CPS	ISTD Recovery %
Sc	45	1	No Gas	5444318.27	96.6
Sc	45	2	H2	2669635.46	97.3
Sc	45	3	He	293272.38	92.1
Ge	72	1	No Gas	1500718.08	99.3
Ge	72	2	H2	989469.31	99.7
Ge	72	3	He	215023.23	96.6
In	115	1	No Gas	12691044.46	104.3
In	115	3	He	2577525.22	97.8
Tb	159	1	No Gas	17339916.81	106.1
Tb	159	3	He	6971725.54	102.0
Ho	165	1	No Gas	16361091.56	107.3
Ho	165	3	He	6848434.81	103.5
Lu	175	1	No Gas	16490589.80	106.0
Lu	175	3	He	5592209.41	104.4
Bi	209	1	No Gas	12206490.95	107.8
Bi	209	3	He	5310200.10	105.9

ICPMS207-B Analytical Data

Sample Name B22011124-001A
File Name 044SMPL.d
Data Path Name D:\Agilent\ICPMH\1\DATA\220121ADoD.b
Acq Time 2022-01-21 20:30:36
Sample Type Sample
Total Dilution 1.0000
Comment ICPMS-6020-W-D
Operator CAR/SRH/JPV/AEM
Method SW6020/ SW6020B

Name	Mass	ISTD	Tune Step	Tune Mode	Conc.	Units	CPS
Li	7	45	1	No Gas	-0.281	ug/l	15503.43
Be	9	45	1	No Gas	-0.047	ug/l	72.32
B	11	45	1	No Gas	58.409	ug/l	157970.54
Na	23	45	3	He	36846.306	ug/l	35032850.59
Mg	24	45	3	He	10951.950	ug/l	5738201.61
Al	27	45	1	No Gas	1.400	ug/l	52657.46
Si	28	45	2	H2	24608.616	ug/l	54495538.30
K	39	72	3	He	1949.312	ug/l	1097075.40
Ca	40	72	2	H2	9723.114	ug/l	78665263.33
Ti	47	72	1	No Gas	1.801	ug/l	4969.19
V	51	72	1	No Gas	21.307	ug/l	631136.73
V	51	72	3	He	17.258	ug/l	104843.37
Cr	52	72	1	No Gas	-0.367	ug/l	92227.98
Cr	52	72	3	He	1.809	ug/l	11511.22
Mn	55	72	1	No Gas	0.410	ug/l	28074.48
Mn	55	72	3	He	0.496	ug/l	2049.40
Fe	56	72	2	H2	1.158	ug/l	32039.59
Fe	56	72	3	He	1.015	ug/l	11491.13
Co	59	72	1	No Gas	0.031	ug/l	1653.49
Ni	60	72	1	No Gas	1.748	ug/l	14082.24
Ni	60	72	3	He	1.756	ug/l	4338.45
Cu	63	72	1	No Gas	0.491	ug/l	11328.28
Cu	63	72	3	He	0.298	ug/l	2615.05
Cu	65	72	1	No Gas	0.336	ug/l	4116.25
Zn	66	72	1	No Gas	4.427	ug/l	29221.46
Zn	66	72	3	He	4.587	ug/l	6341.41
As	75	72	1	No Gas	-0.177	ug/l	13800.55
As	75	72	3	He	-0.119	ug/l	163.20
Se	78	72	2	H2	0.144	ug/l	131.67
Br	79	72	1	No Gas	20.710	ug/l	381327.42
Br	79	72	2	H2	21.140	ug/l	199970.47
Se	82	72	1	No Gas	0.628	ug/l	1061.18
Kr	84	72	1	No Gas		ug/l	42782.06
Sr	88	72	1	No Gas	64.259	ug/l	3481012.54
Sr	88	72	3	He	65.719	ug/l	392011.01
Mo	95	115	1	No Gas	0.495	ug/l	5601.15
Mo	95	115	3	He	0.472	ug/l	1942.37
Mo	98	115	1	No Gas	0.468	ug/l	8612.30
Ag	107	115	1	No Gas	-0.062	ug/l	163.40
Ag	109	115	1	No Gas	-0.059	ug/l	181.41
Cd	111	115	1	No Gas	0.026	ug/l	162.11

ICPMS207-B Analytical Data

Name	Mass	ISTD	Tune Step	Tune Mode	Conc.	Units	CPS
Cd	111	115	3	He	0.026	ug/l	62.44
Cd	114	115	1	No Gas	0.038	ug/l	369.65
Cd	114	115	3	He	0.025	ug/l	148.51
Sn	118	115	1	No Gas	-0.078	ug/l	1893.07
Sn	118	115	3	He	-0.095	ug/l	454.46
Sb	121	115	1	No Gas	0.024	ug/l	1630.93
Sb	121	115	3	He	0.022	ug/l	393.05
Sb	123	115	1	No Gas	0.023	ug/l	1224.51
Sb	123	115	3	He	0.020	ug/l	292.70
Ba	135	115	1	No Gas	3.139	ug/l	17809.49
Ba	137	115	1	No Gas	3.061	ug/l	30886.47
La	139	115	3	He	0.000	ug/l	20.00
Ce	140	115	3	He	0.000	ug/l	33.33
Hg	201	209	1	No Gas	0.002	ug/l	35.99
Hg	202	209	1	No Gas	0.005	ug/l	139.64
Hg	202	209	3	He	0.006	ug/l	59.99
Tl	203	209	3	He	0.125	ug/l	1993.62
Tl	205	209	1	No Gas	0.093	ug/l	7645.65
Tl	205	209	3	He	0.120	ug/l	4663.36
[Pb]	206	209	1	No Gas	0.013	ug/l	837.81
[Pb]	207	209	1	No Gas	0.013	ug/l	734.47
Pb	208	209	1	No Gas	0.011	ug/l	3299.06
Th	232	209	3	He	-0.002	ug/l	487.55
U	238	209	1	No Gas	0.010	ug/l	832.53

Name	Mass	Tune Step	Tune Mode	CPS	ISTD Recovery %
Sc	45	1	No Gas	6402621.54	113.5
Sc	45	2	H2	2930010.79	106.7
Sc	45	3	He	351162.29	110.3
Ge	72	1	No Gas	1588725.13	105.1
Ge	72	2	H2	1025232.83	103.3
Ge	72	3	He	236224.69	106.1
In	115	1	No Gas	12636634.31	103.8
In	115	3	He	2734910.94	103.8
Tb	159	1	No Gas	17065177.28	104.4
Tb	159	3	He	7203874.40	105.4
Ho	165	1	No Gas	16100397.23	105.6
Ho	165	3	He	6861224.79	103.7
Lu	175	1	No Gas	16587333.83	106.6
Lu	175	3	He	5642538.07	105.4
Bi	209	1	No Gas	11523317.20	101.8
Bi	209	3	He	5045920.27	100.7

ICPMS207-B Analytical Data

Sample Name B22011124-001ADIL
File Name 045ARef.d
Data Path Name D:\Agilent\ICPMH\1\DATA\220121ADoD.b
Acq Time 2022-01-21 20:36:50
Sample Type AIRRef
Total Dilution 5.0000
Comment ICPMS-6020-W-D
Operator CAR/SRH/JPV/AEM
Method SW6020/ SW6020B

Name	Mass	ISTD	Tune Step	Tune Mode	Conc.	Units	CPS
Li	7	45	1	No Gas	-0.401	ug/l	17250.68
Be	9	45	1	No Gas	-0.182	ug/l	115.99
B	11	45	1	No Gas	296.506	ug/l	158000.47
Na	23	45	3	He	181800.160	ug/l	33855176.72
Mg	24	45	3	He	52834.244	ug/l	5422491.61
Al	27	45	1	No Gas	7.206	ug/l	52884.46
Si	28	45	2	H2	124048.592	ug/l	54336827.48
K	39	72	3	He	9482.991	ug/l	1079700.92
Ca	40	72	2	H2	49241.258	ug/l	78162846.76
Ti	47	72	1	No Gas	9.216	ug/l	4972.53
V	51	72	1	No Gas	107.830	ug/l	626099.47
V	51	72	3	He	85.577	ug/l	105061.52
Cr	52	72	1	No Gas	-0.851	ug/l	96051.92
Cr	52	72	3	He	8.634	ug/l	11137.60
Mn	55	72	1	No Gas	2.058	ug/l	27521.21
Mn	55	72	3	He	2.387	ug/l	1997.74
Fe	56	72	2	H2	5.833	ug/l	31589.31
Fe	56	72	3	He	5.112	ug/l	11629.65
Co	59	72	1	No Gas	0.156	ug/l	1623.53
Ni	60	72	1	No Gas	8.933	ug/l	14072.31
Ni	60	72	3	He	8.415	ug/l	4198.41
Cu	63	72	1	No Gas	2.576	ug/l	11529.86
Cu	63	72	3	He	1.549	ug/l	2715.05
Cu	65	72	1	No Gas	1.780	ug/l	4207.64
Zn	66	72	1	No Gas	22.460	ug/l	28997.98
Zn	66	72	3	He	22.900	ug/l	6388.10
As	75	72	1	No Gas	-1.528	ug/l	12558.15
As	75	72	3	He	-0.581	ug/l	168.27
Se	78	72	2	H2	0.771	ug/l	135.55
Br	79	72	1	No Gas	98.250	ug/l	357857.84
Br	79	72	2	H2	97.848	ug/l	184161.77
Se	82	72	1	No Gas	2.984	ug/l	1025.05
Kr	84	72	1	No Gas		ug/l	42474.80
Sr	88	72	1	No Gas	325.886	ug/l	3454945.67
Sr	88	72	3	He	323.273	ug/l	389260.54
Mo	95	115	1	No Gas	2.497	ug/l	5469.97
Mo	95	115	3	He	2.536	ug/l	2097.94
Mo	98	115	1	No Gas	2.401	ug/l	8565.47
Ag	107	115	1	No Gas	-0.317	ug/l	119.38
Ag	109	115	1	No Gas	-0.304	ug/l	128.72
Cd	111	115	1	No Gas	0.147	ug/l	180.41

ICPMS207-B Analytical Data

Name	Mass	ISTD	Tune Step	Tune Mode	Conc.	Units	CPS
Cd	111	115	3	He	0.117	ug/l	57.11
Cd	114	115	1	No Gas	0.194	ug/l	361.46
Cd	114	115	3	He	0.123	ug/l	144.42
Sn	118	115	1	No Gas	-0.427	ug/l	1696.74
Sn	118	115	3	He	-0.501	ug/l	428.90
Sb	121	115	1	No Gas	0.042	ug/l	1151.83
Sb	121	115	3	He	0.042	ug/l	286.36
Sb	123	115	1	No Gas	0.042	ug/l	867.78
Sb	123	115	3	He	0.042	ug/l	222.02
Ba	135	115	1	No Gas	15.502	ug/l	17046.69
Ba	137	115	1	No Gas	15.639	ug/l	30563.02
La	139	115	3	He	0.000	ug/l	23.33
Ce	140	115	3	He	0.005	ug/l	66.67
Hg	201	209	1	No Gas	0.006	ug/l	33.66
Hg	202	209	1	No Gas	0.022	ug/l	133.31
Hg	202	209	3	He	0.019	ug/l	49.66
Tl	203	209	3	He	0.294	ug/l	1287.25
Tl	205	209	1	No Gas	0.185	ug/l	4560.84
Tl	205	209	3	He	0.268	ug/l	2975.53
[Pb]	206	209	1	No Gas	0.059	ug/l	805.59
[Pb]	207	209	1	No Gas	0.067	ug/l	721.14
Pb	208	209	1	No Gas	0.054	ug/l	3232.40
Th	232	209	3	He	-0.031	ug/l	342.81
U	238	209	1	No Gas	0.046	ug/l	778.54

Name	Mass	Tune Step	Tune Mode	CPS	ISTD Recovery %
Sc	45	1	No Gas	6307634.27	111.9
Sc	45	2	H2	2897519.79	105.6
Sc	45	3	He	343874.68	108.0
Ge	72	1	No Gas	1554802.65	102.8
Ge	72	2	H2	1005722.04	101.3
Ge	72	3	He	238487.30	107.1
In	115	1	No Gas	12234918.07	100.5
In	115	3	He	2748264.58	104.3
Tb	159	1	No Gas	17028967.12	104.2
Tb	159	3	He	7260477.72	106.3
Ho	165	1	No Gas	15991778.51	104.9
Ho	165	3	He	6923943.75	104.7
Lu	175	1	No Gas	16274444.70	104.6
Lu	175	3	He	5719935.15	106.8
Bi	209	1	No Gas	11308736.16	99.9
Bi	209	3	He	5161814.32	103.0

ICPMS207-B Analytical Data

Sample Name B22011124-001AMS
File Name 046MS.d
Data Path Name D:\Agilent\ICPMH\1\DATA\220121ADoD.b
Acq Time 2022-01-21 20:43:05
Sample Type MS
Total Dilution 1.0300
Comment ICPMS-6020-W-D
Operator CAR/SRH/JPV/AEM
Method SW6020/ SW6020B

Name	Mass	ISTD	Tune Step	Tune Mode	Conc.	Units	CPS
Li	7	45	1	No Gas	0.021	ug/l	17838.92
Be	9	45	1	No Gas	45.242	ug/l	179270.76
B	11	45	1	No Gas	100.694	ug/l	250885.13
Na	23	45	3	He	36791.657	ug/l	33261350.06
Mg	24	45	3	He	11044.717	ug/l	5502196.58
Al	27	45	1	No Gas	46.860	ug/l	1072117.22
Si	28	45	2	H2	24610.779	ug/l	53177893.94
K	39	72	3	He	1965.328	ug/l	1073007.78
Ca	40	72	2	H2	9604.639	ug/l	78316185.93
Ti	47	72	1	No Gas	48.648	ug/l	123563.70
V	51	72	1	No Gas	71.480	ug/l	2179065.02
V	51	72	3	He	68.559	ug/l	355869.64
Cr	52	72	1	No Gas	50.476	ug/l	1565468.67
Cr	52	72	3	He	51.063	ug/l	290214.42
Mn	55	72	1	No Gas	51.211	ug/l	1998932.94
Mn	55	72	3	He	51.042	ug/l	187831.27
Fe	56	72	2	H2	53.310	ug/l	1005498.05
Fe	56	72	3	He	51.739	ug/l	265969.08
Co	59	72	1	No Gas	49.805	ug/l	1635079.61
Ni	60	72	1	No Gas	51.088	ug/l	382214.88
Ni	60	72	3	He	52.049	ug/l	121576.33
Cu	63	72	1	No Gas	52.341	ug/l	943808.23
Cu	63	72	3	He	51.766	ug/l	318543.94
Cu	65	72	1	No Gas	50.817	ug/l	451227.87
Zn	66	72	1	No Gas	54.726	ug/l	336232.41
Zn	66	72	3	He	56.738	ug/l	73285.62
As	75	72	1	No Gas	49.893	ug/l	378207.42
As	75	72	3	He	49.814	ug/l	55695.10
Se	78	72	2	H2	51.614	ug/l	34775.23
Br	79	72	1	No Gas	20.638	ug/l	368563.08
Br	79	72	2	H2	19.746	ug/l	191582.84
Se	82	72	1	No Gas	50.675	ug/l	21894.52
Kr	84	72	1	No Gas		ug/l	60609.93
Sr	88	72	1	No Gas	118.655	ug/l	6193354.91
Sr	88	72	3	He	116.879	ug/l	674939.21
Mo	95	115	1	No Gas	48.024	ug/l	517181.17
Mo	95	115	3	He	47.487	ug/l	183396.91
Mo	98	115	1	No Gas	47.494	ug/l	832701.91
Ag	107	115	1	No Gas	19.883	ug/l	550334.05
Ag	109	115	1	No Gas	19.572	ug/l	525843.33
Cd	111	115	1	No Gas	50.161	ug/l	311991.86

ICPMS207-B Analytical Data

Name	Mass	ISTD	Tune Step	Tune Mode	Conc.	Units	CPS
Cd	111	115	3	He	49.654	ug/l	101213.23
Cd	114	115	1	No Gas	50.891	ug/l	699871.13
Cd	114	115	3	He	49.564	ug/l	248043.33
Sn	118	115	1	No Gas	45.217	ug/l	800342.66
Sn	118	115	3	He	45.659	ug/l	216836.57
Sb	121	115	1	No Gas	49.747	ug/l	1384748.95
Sb	121	115	3	He	47.973	ug/l	353243.57
Sb	123	115	1	No Gas	49.045	ug/l	1050475.33
Sb	123	115	3	He	48.121	ug/l	280023.84
Ba	135	115	1	No Gas	53.068	ug/l	289070.11
Ba	137	115	1	No Gas	52.207	ug/l	505665.11
La	139	115	3	He	0.002	ug/l	72.22
Ce	140	115	3	He	51.149	ug/l	1497394.58
Hg	201	209	1	No Gas	0.967	ug/l	3695.44
Hg	202	209	1	No Gas	0.964	ug/l	8475.33
Hg	202	209	3	He	0.975	ug/l	4149.82
Tl	203	209	3	He	48.347	ug/l	525330.20
Tl	205	209	1	No Gas	49.537	ug/l	2571973.24
Tl	205	209	3	He	49.100	ug/l	1264181.46
[Pb]	206	209	1	No Gas	50.375	ug/l	918537.50
[Pb]	207	209	1	No Gas	50.134	ug/l	799100.66
Pb	208	209	1	No Gas	49.398	ug/l	3636243.96
Th	232	209	3	He	48.093	ug/l	1743713.70
U	238	209	1	No Gas	48.915	ug/l	3581807.35

Name	Mass	Tune Step	Tune Mode	CPS	ISTD Recovery %
Sc	45	1	No Gas	6171347.52	109.4
Sc	45	2	H2	2944507.92	107.3
Sc	45	3	He	343922.84	108.0
Ge	72	1	No Gas	1577032.38	104.3
Ge	72	2	H2	1064083.19	107.2
Ge	72	3	He	235616.58	105.8
In	115	1	No Gas	12530532.12	102.9
In	115	3	He	2674226.24	101.5
Tb	159	1	No Gas	17214987.71	105.3
Tb	159	3	He	7179904.44	105.1
Ho	165	1	No Gas	16230385.23	106.4
Ho	165	3	He	6825146.47	103.2
Lu	175	1	No Gas	16680917.00	107.2
Lu	175	3	He	5644884.27	105.4
Bi	209	1	No Gas	11404210.35	100.7
Bi	209	3	He	5059802.25	100.9

ICPMS207-B Analytical Data

Sample Name B22011124-001AMSD
File Name 047MSD.d
Data Path Name D:\Agilent\ICPMH\1\DATA\220121ADoD.b
Acq Time 2022-01-21 20:49:19
Sample Type MSD
Total Dilution 1.0300
Comment ICPMS-6020-W-D
Operator CAR/SRH/JPV/AEM
Method SW6020/ SW6020B

Name	Mass	ISTD	Tune Step	Tune Mode	Conc.	Units	CPS
Li	7	45	1	No Gas	0.168	ug/l	18883.91
Be	9	45	1	No Gas	50.133	ug/l	195221.99
B	11	45	1	No Gas	110.626	ug/l	270189.62
Na	23	45	3	He	36898.931	ug/l	33224504.50
Mg	24	45	3	He	10692.799	ug/l	5305279.06
Al	27	45	1	No Gas	49.669	ug/l	1115845.36
Si	28	45	2	H2	25206.432	ug/l	53380510.98
K	39	72	3	He	1928.071	ug/l	1063102.87
Ca	40	72	2	H2	9522.653	ug/l	77467707.48
Ti	47	72	1	No Gas	48.592	ug/l	120948.55
V	51	72	1	No Gas	72.467	ug/l	2167360.80
V	51	72	3	He	67.306	ug/l	352571.87
Cr	52	72	1	No Gas	51.101	ug/l	1551779.66
Cr	52	72	3	He	51.298	ug/l	293923.99
Mn	55	72	1	No Gas	50.631	ug/l	1936577.75
Mn	55	72	3	He	50.034	ug/l	185651.21
Fe	56	72	2	H2	53.093	ug/l	999165.12
Fe	56	72	3	He	52.156	ug/l	270298.39
Co	59	72	1	No Gas	50.423	ug/l	1622258.35
Ni	60	72	1	No Gas	53.069	ug/l	389109.24
Ni	60	72	3	He	51.788	ug/l	121963.34
Cu	63	72	1	No Gas	52.777	ug/l	932580.99
Cu	63	72	3	He	51.425	ug/l	319049.03
Cu	65	72	1	No Gas	51.320	ug/l	446646.92
Zn	66	72	1	No Gas	55.799	ug/l	335860.49
Zn	66	72	3	He	55.608	ug/l	72438.23
As	75	72	1	No Gas	49.823	ug/l	370133.24
As	75	72	3	He	49.615	ug/l	55931.88
Se	78	72	2	H2	51.186	ug/l	34412.35
Br	79	72	1	No Gas	21.024	ug/l	366822.67
Br	79	72	2	H2	19.499	ug/l	189226.80
Se	82	72	1	No Gas	51.082	ug/l	21625.25
Kr	84	72	1	No Gas		ug/l	59236.93
Sr	88	72	1	No Gas	115.250	ug/l	5895663.62
Sr	88	72	3	He	115.276	ug/l	671137.80
Mo	95	115	1	No Gas	48.280	ug/l	510854.47
Mo	95	115	3	He	47.647	ug/l	185127.04
Mo	98	115	1	No Gas	48.470	ug/l	835098.92
Ag	107	115	1	No Gas	19.986	ug/l	543659.38
Ag	109	115	1	No Gas	19.733	ug/l	520802.89
Cd	111	115	1	No Gas	50.296	ug/l	307404.39

ICPMS207-B Analytical Data

Name	Mass	ISTD	Tune Step	Tune Mode	Conc.	Units	CPS
Cd	111	115	3	He	49.787	ug/l	102098.77
Cd	114	115	1	No Gas	51.366	ug/l	694243.83
Cd	114	115	3	He	49.774	ug/l	250596.14
Sn	118	115	1	No Gas	46.801	ug/l	813706.64
Sn	118	115	3	He	44.789	ug/l	214000.08
Sb	121	115	1	No Gas	50.315	ug/l	1376156.30
Sb	121	115	3	He	48.408	ug/l	358613.21
Sb	123	115	1	No Gas	49.297	ug/l	1037382.51
Sb	123	115	3	He	48.334	ug/l	282970.97
Ba	135	115	1	No Gas	54.606	ug/l	292313.72
Ba	137	115	1	No Gas	53.944	ug/l	513450.95
La	139	115	3	He	0.001	ug/l	61.11
Ce	140	115	3	He	51.520	ug/l	1517311.73
Hg	201	209	1	No Gas	0.998	ug/l	3834.12
Hg	202	209	1	No Gas	0.972	ug/l	8586.38
Hg	202	209	3	He	0.972	ug/l	4233.16
Tl	203	209	3	He	48.382	ug/l	538228.29
Tl	205	209	1	No Gas	50.128	ug/l	2617746.09
Tl	205	209	3	He	49.194	ug/l	1296672.30
[Pb]	206	209	1	No Gas	50.239	ug/l	921573.28
[Pb]	207	209	1	No Gas	49.459	ug/l	792802.22
Pb	208	209	1	No Gas	49.554	ug/l	3669161.53
Th	232	209	3	He	47.694	ug/l	1770238.20
U	238	209	1	No Gas	49.066	ug/l	3613395.91

Name	Mass	Tune Step	Tune Mode	CPS	ISTD Recovery %
Sc	45	1	No Gas	6069569.40	107.6
Sc	45	2	H2	2886116.86	105.1
Sc	45	3	He	342542.80	107.6
Ge	72	1	No Gas	1546147.74	102.3
Ge	72	2	H2	1061636.38	107.0
Ge	72	3	He	237542.24	106.7
In	115	1	No Gas	12320994.76	101.2
In	115	3	He	2690310.45	102.1
Tb	159	1	No Gas	16923399.26	103.6
Tb	159	3	He	7195935.84	105.3
Ho	165	1	No Gas	15963943.07	104.7
Ho	165	3	He	6818461.92	103.1
Lu	175	1	No Gas	16163482.39	103.9
Lu	175	3	He	5617130.89	104.9
Bi	209	1	No Gas	11475291.03	101.4
Bi	209	3	He	5179596.91	103.3

ICPMS207-B Analytical Data

Sample Name Rinse
File Name 048BLKV.d
Data Path Name D:\Agilent\ICPMH\1\DATA\220121ADoD.b
Acq Time 2022-01-21 20:55:33
Sample Type BlkVrfy
Total Dilution 1.0000
Comment ICPMS-6020-W-D
Operator CAR/SRH/JPV/AEM
Method SW6020/ SW6020B

Name	Mass	ISTD	Tune Step	Tune Mode	Conc.	Units	CPS
Li	7	45	1	No Gas	0.338	ug/l	17280.72
Be	9	45	1	No Gas	-0.038	ug/l	88.31
B	11	45	1	No Gas	1.256	ug/l	7670.37
Na	23	45	3	He	22.018	ug/l	59051.99
Mg	24	45	3	He	0.267	ug/l	1743.31
Al	27	45	1	No Gas	-0.074	ug/l	13764.26
Si	28	45	2	H2	1.181	ug/l	9214.54
K	39	72	3	He	-16.042	ug/l	69372.09
Ca	40	72	2	H2	-0.820	ug/l	91782.99
Ti	47	72	1	No Gas	0.016	ug/l	236.91
V	51	72	1	No Gas	3.149	ug/l	34862.61
V	51	72	3	He	-0.206	ug/l	13491.82
Cr	52	72	1	No Gas	-0.371	ug/l	80293.45
Cr	52	72	3	He	0.025	ug/l	933.37
Mn	55	72	1	No Gas	0.196	ug/l	16926.17
Mn	55	72	3	He	0.142	ug/l	610.89
Fe	56	72	2	H2	0.135	ug/l	12264.13
Fe	56	72	3	He	0.122	ug/l	5928.85
Co	59	72	1	No Gas	0.003	ug/l	615.46
Ni	60	72	1	No Gas	0.006	ug/l	499.02
Ni	60	72	3	He	0.001	ug/l	93.33
Cu	63	72	1	No Gas	-0.008	ug/l	1762.15
Cu	63	72	3	He	-0.020	ug/l	520.24
Cu	65	72	1	No Gas	-0.011	ug/l	803.01
Zn	66	72	1	No Gas	-0.011	ug/l	886.64
Zn	66	72	3	He	0.009	ug/l	218.89
As	75	72	1	No Gas	0.687	ug/l	17685.92
As	75	72	3	He	-0.038	ug/l	221.47
Se	78	72	2	H2	0.012	ug/l	40.44
Br	79	72	1	No Gas	19.022	ug/l	310923.97
Br	79	72	2	H2	18.804	ug/l	170200.85
Se	82	72	1	No Gas	0.488	ug/l	871.96
Kr	84	72	1	No Gas		ug/l	20473.96
Sr	88	72	1	No Gas	0.002	ug/l	841.69
Sr	88	72	3	He	-0.004	ug/l	248.89
Mo	95	115	1	No Gas	0.084	ug/l	940.04
Mo	95	115	3	He	0.065	ug/l	258.89
Mo	98	115	1	No Gas	0.088	ug/l	1593.30
Ag	107	115	1	No Gas	0.000	ug/l	1824.19
Ag	109	115	1	No Gas	0.002	ug/l	1764.82
Cd	111	115	1	No Gas	0.007	ug/l	40.00

ICPMS207-B Analytical Data

Name	Mass	ISTD	Tune Step	Tune Mode	Conc.	Units	CPS
Cd	111	115	3	He	0.003	ug/l	11.67
Cd	114	115	1	No Gas	0.008	ug/l	-54.71
Cd	114	115	3	He	0.002	ug/l	24.21
Sn	118	115	1	No Gas	0.383	ug/l	9687.52
Sn	118	115	3	He	0.290	ug/l	2144.63
Sb	121	115	1	No Gas	0.125	ug/l	4288.78
Sb	121	115	3	He	0.081	ug/l	764.76
Sb	123	115	1	No Gas	0.125	ug/l	3275.73
Sb	123	115	3	He	0.084	ug/l	621.74
Ba	135	115	1	No Gas	0.007	ug/l	103.13
Ba	137	115	1	No Gas	0.002	ug/l	113.11
La	139	115	3	He	0.000	ug/l	18.89
Ce	140	115	3	He	0.001	ug/l	50.00
Hg	201	209	1	No Gas	0.011	ug/l	75.32
Hg	202	209	1	No Gas	0.012	ug/l	205.96
Hg	202	209	3	He	0.010	ug/l	80.65
Tl	203	209	3	He	0.104	ug/l	1822.86
Tl	205	209	1	No Gas	0.092	ug/l	7766.81
Tl	205	209	3	He	0.102	ug/l	4334.46
[Pb]	206	209	1	No Gas	0.011	ug/l	831.14
[Pb]	207	209	1	No Gas	0.010	ug/l	692.25
Pb	208	209	1	No Gas	0.009	ug/l	3192.39
Th	232	209	3	He	0.063	ug/l	3011.56
U	238	209	1	No Gas	0.006	ug/l	537.91

Name	Mass	Tune Step	Tune Mode	CPS	ISTD Recovery %
Sc	45	1	No Gas	5108355.50	90.6
Sc	45	2	H2	2572447.75	93.7
Sc	45	3	He	278205.70	87.4
Ge	72	1	No Gas	1386504.19	91.7
Ge	72	2	H2	960075.74	96.7
Ge	72	3	He	204249.68	91.7
In	115	1	No Gas	11837862.81	97.2
In	115	3	He	2475544.49	93.9
Tb	159	1	No Gas	16586258.28	101.5
Tb	159	3	He	6905855.35	101.1
Ho	165	1	No Gas	15975114.97	104.8
Ho	165	3	He	6612503.57	100.0
Lu	175	1	No Gas	16320894.80	104.9
Lu	175	3	He	5456729.04	101.9
Bi	209	1	No Gas	11739017.61	103.7
Bi	209	3	He	5223494.53	104.2

ICPMS207-B Analytical Data

Sample Name B22011124-001B
File Name 049SMPL.d
Data Path Name D:\Agilent\ICPMH\1\DATA\220121ADoD.b
Acq Time 2022-01-21 21:01:46
Sample Type Sample
Total Dilution 1.0000
Comment ICPMS-6020-W-T
Operator CAR/SRH/JPV/AEM
Method SW6020/ SW6020B

Name	Mass	ISTD	Tune Step	Tune Mode	Conc.	Units	CPS
Li	7	45	1	No Gas	1.466	ug/l	22445.47
Be	9	45	1	No Gas	-0.035	ug/l	85.65
B	11	45	1	No Gas	54.817	ug/l	101471.31
Na	23	45	3	He	37987.999	ug/l	24189604.09
Mg	24	45	3	He	10492.051	ug/l	3681899.14
Al	27	45	1	No Gas	5.018	ug/l	95292.40
Si	28	45	2	H2	23633.767	ug/l	41980582.60
K	39	72	3	He	1708.975	ug/l	747567.40
Ca	40	72	2	H2	9449.234	ug/l	65209841.71
Ti	47	72	1	No Gas	1.994	ug/l	4376.75
V	51	72	1	No Gas	21.280	ug/l	505033.53
V	51	72	3	He	21.481	ug/l	97153.88
Cr	52	72	1	No Gas	3.416	ug/l	164645.96
Cr	52	72	3	He	2.230	ug/l	10742.86
Mn	55	72	1	No Gas	1.856	ug/l	68961.22
Mn	55	72	3	He	1.292	ug/l	3896.74
Fe	56	72	2	H2	16.048	ug/l	262371.77
Fe	56	72	3	He	15.270	ug/l	65628.81
Co	59	72	1	No Gas	0.134	ug/l	4119.09
Ni	60	72	1	No Gas	1.943	ug/l	12450.74
Ni	60	72	3	He	1.935	ug/l	3663.82
Cu	63	72	1	No Gas	0.637	ug/l	11218.17
Cu	63	72	3	He	0.367	ug/l	2344.06
Cu	65	72	1	No Gas	0.388	ug/l	3663.94
Zn	66	72	1	No Gas	5.558	ug/l	29086.58
Zn	66	72	3	He	5.856	ug/l	6169.13
As	75	72	1	No Gas	1.032	ug/l	18279.66
As	75	72	3	He	0.182	ug/l	391.60
Se	78	72	2	H2	0.215	ug/l	152.56
Br	79	72	1	No Gas	10.236	ug/l	181235.90
Br	79	72	2	H2	9.013	ug/l	89739.22
Se	82	72	1	No Gas	0.155	ug/l	682.74
Kr	84	72	1	No Gas		ug/l	38074.56
Sr	88	72	1	No Gas	70.497	ug/l	3050086.31
Sr	88	72	3	He	68.072	ug/l	312032.80
Mo	95	115	1	No Gas	1.922	ug/l	17672.16
Mo	95	115	3	He	1.897	ug/l	6409.26
Mo	98	115	1	No Gas	1.908	ug/l	28553.87
Ag	107	115	1	No Gas	-0.061	ug/l	150.73
Ag	109	115	1	No Gas	-0.059	ug/l	154.06
Cd	111	115	1	No Gas	0.005	ug/l	24.20

ICPMS207-B Analytical Data

Name	Mass	ISTD	Tune Step	Tune Mode	Conc.	Units	CPS
Cd	111	115	3	He	0.002	ug/l	9.44
Cd	114	115	1	No Gas	0.014	ug/l	14.94
Cd	114	115	3	He	-0.001	ug/l	6.85
Sn	118	115	1	No Gas	0.827	ug/l	15134.93
Sn	118	115	3	He	0.727	ug/l	3762.75
Sb	121	115	1	No Gas	0.078	ug/l	2635.52
Sb	121	115	3	He	0.066	ug/l	602.41
Sb	123	115	1	No Gas	0.078	ug/l	2009.68
Sb	123	115	3	He	0.069	ug/l	490.73
Ba	135	115	1	No Gas	3.725	ug/l	17313.20
Ba	137	115	1	No Gas	3.590	ug/l	29683.17
La	139	115	3	He	0.001	ug/l	41.11
Ce	140	115	3	He	0.004	ug/l	133.33
Hg	201	209	1	No Gas	0.025	ug/l	116.31
Hg	202	209	1	No Gas	0.039	ug/l	405.26
Hg	202	209	3	He	0.029	ug/l	150.97
Tl	203	209	3	He	0.071	ug/l	1320.60
Tl	205	209	1	No Gas	0.056	ug/l	5132.15
Tl	205	209	3	He	0.070	ug/l	3159.65
[Pb]	206	209	1	No Gas	0.072	ug/l	1771.24
[Pb]	207	209	1	No Gas	0.073	ug/l	1550.10
Pb	208	209	1	No Gas	0.070	ug/l	7083.01
Th	232	209	3	He	0.095	ug/l	3879.47
U	238	209	1	No Gas	0.014	ug/l	1050.17

Name	Mass	Tune Step	Tune Mode	CPS	ISTD Recovery %
Sc	45	1	No Gas	4375566.38	77.6
Sc	45	2	H2	2350247.73	85.6
Sc	45	3	He	235198.14	73.8
Ge	72	1	No Gas	1270180.91	84.0
Ge	72	2	H2	874440.78	88.1
Ge	72	3	He	181520.54	81.5
In	115	1	No Gas	10376290.66	85.2
In	115	3	He	2264327.27	85.9
Tb	159	1	No Gas	15087176.02	92.3
Tb	159	3	He	6475607.78	94.8
Ho	165	1	No Gas	14299233.73	93.8
Ho	165	3	He	6198980.17	93.7
Lu	175	1	No Gas	14940953.55	96.0
Lu	175	3	He	5027918.89	93.9
Bi	209	1	No Gas	10405896.04	91.9
Bi	209	3	He	4784220.13	95.4

ICPMS207-B Analytical Data

Sample Name B22011124-001BDIL
File Name 050ARef.d
Data Path Name D:\Agilent\ICPMH\1\DATA\220121ADoD.b
Acq Time 2022-01-21 21:08:00
Sample Type AIRRef
Total Dilution 5.0000
Comment ICPMS-6020-W-T
Operator CAR/SRH/JPV/AEM
Method SW6020/ SW6020B

Name	Mass	ISTD	Tune Step	Tune Mode	Conc.	Units	CPS
Li	7	45	1	No Gas	4.557	ug/l	19732.66
Be	9	45	1	No Gas	-0.211	ug/l	66.99
B	11	45	1	No Gas	52.953	ug/l	24376.10
Na	23	45	3	He	36654.394	ug/l	4864328.23
Mg	24	45	3	He	10408.135	ug/l	757581.44
Al	27	45	1	No Gas	6.890	ug/l	37583.98
Si	28	45	2	H2	23656.085	ug/l	8793260.94
K	39	72	3	He	1599.629	ug/l	201368.50
Ca	40	72	2	H2	9129.710	ug/l	13512050.43
Ti	47	72	1	No Gas	2.060	ug/l	1092.81
V	51	72	1	No Gas	36.921	ug/l	149999.39
V	51	72	3	He	20.333	ug/l	29673.34
Cr	52	72	1	No Gas	-0.594	ug/l	82808.72
Cr	52	72	3	He	2.430	ug/l	2990.32
Mn	55	72	1	No Gas	1.978	ug/l	22839.17
Mn	55	72	3	He	1.357	ug/l	948.84
Fe	56	72	2	H2	16.078	ug/l	63775.68
Fe	56	72	3	He	14.791	ug/l	17095.50
Co	59	72	1	No Gas	0.123	ug/l	1187.70
Ni	60	72	1	No Gas	2.125	ug/l	3174.07
Ni	60	72	3	He	2.225	ug/l	933.37
Cu	63	72	1	No Gas	1.707	ug/l	7086.57
Cu	63	72	3	He	1.530	ug/l	2112.07
Cu	65	72	1	No Gas	1.477	ug/l	3107.59
Zn	66	72	1	No Gas	8.163	ug/l	9515.49
Zn	66	72	3	He	8.468	ug/l	1974.59
As	75	72	1	No Gas	-0.285	ug/l	12360.61
As	75	72	3	He	-0.084	ug/l	222.60
Se	78	72	2	H2	0.170	ug/l	52.67
Br	79	72	1	No Gas	265.100	ug/l	713197.90
Br	79	72	2	H2	259.506	ug/l	400456.43
Se	82	72	1	No Gas	4.638	ug/l	987.17
Kr	84	72	1	No Gas		ug/l	22986.03
Sr	88	72	1	No Gas	69.032	ug/l	622206.12
Sr	88	72	3	He	67.491	ug/l	64006.60
Mo	95	115	1	No Gas	1.763	ug/l	3694.95
Mo	95	115	3	He	1.747	ug/l	1268.95
Mo	98	115	1	No Gas	1.815	ug/l	6171.11
Ag	107	115	1	No Gas	-0.327	ug/l	61.36
Ag	109	115	1	No Gas	-0.315	ug/l	64.69
Cd	111	115	1	No Gas	0.033	ug/l	35.88

ICPMS207-B Analytical Data

Name	Mass	ISTD	Tune Step	Tune Mode	Conc.	Units	CPS
Cd	111	115	3	He	0.009	ug/l	9.33
Cd	114	115	1	No Gas	0.084	ug/l	55.33
Cd	114	115	3	He	0.008	ug/l	20.23
Sn	118	115	1	No Gas	0.713	ug/l	5463.57
Sn	118	115	3	He	0.688	ug/l	1415.64
Sb	121	115	1	No Gas	0.063	ug/l	1214.18
Sb	121	115	3	He	0.068	ug/l	285.70
Sb	123	115	1	No Gas	0.064	ug/l	919.79
Sb	123	115	3	He	0.080	ug/l	235.36
Ba	135	115	1	No Gas	3.543	ug/l	3756.41
Ba	137	115	1	No Gas	3.270	ug/l	6155.86
La	139	115	3	He	0.001	ug/l	25.55
Ce	140	115	3	He	0.004	ug/l	54.44
Hg	201	209	1	No Gas	0.029	ug/l	52.66
Hg	202	209	1	No Gas	0.055	ug/l	197.63
Hg	202	209	3	He	0.055	ug/l	81.65
Tl	203	209	3	He	0.071	ug/l	779.01
Tl	205	209	1	No Gas	0.033	ug/l	3048.15
Tl	205	209	3	He	0.056	ug/l	1824.20
[Pb]	206	209	1	No Gas	0.152	ug/l	1184.51
[Pb]	207	209	1	No Gas	0.167	ug/l	1076.72
Pb	208	209	1	No Gas	0.163	ug/l	5002.64
Th	232	209	3	He	0.039	ug/l	876.38
U	238	209	1	No Gas	0.011	ug/l	264.62

Name	Mass	Tune Step	Tune Mode	CPS	ISTD Recovery %
Sc	45	1	No Gas	4619185.03	81.9
Sc	45	2	H2	2457348.70	89.5
Sc	45	3	He	243568.40	76.5
Ge	72	1	No Gas	1321559.39	87.4
Ge	72	2	H2	932303.42	93.9
Ge	72	3	He	187214.26	84.1
In	115	1	No Gas	11659631.68	95.8
In	115	3	He	2402720.14	91.2
Tb	159	1	No Gas	16683295.00	102.1
Tb	159	3	He	6781319.47	99.2
Ho	165	1	No Gas	15634991.94	102.5
Ho	165	3	He	6610665.28	99.9
Lu	175	1	No Gas	15921777.47	102.3
Lu	175	3	He	5283651.75	98.7
Bi	209	1	No Gas	11629129.72	102.7
Bi	209	3	He	5152721.33	102.8

ICPMS207-B Analytical Data

Sample Name CCV
File Name 051_CCV.d
Data Path Name D:\Agilent\ICPMH\1\DATA\220121ADoD.b
Acq Time 2022-01-21 21:14:14
Sample Type CCV
Total Dilution 1.0000
Comment ICPMS-6020-W-D
Operator CAR/SRH/JPV/AEM
Method SW6020/ SW6020B

Name	Mass	ISTD	Tune Step	Tune Mode	Conc.	Units	CPS
Li	7	45	1	No Gas	409.239	ug/l	2932840.96
Be	9	45	1	No Gas	37.819	ug/l	114820.72
B	11	45	1	No Gas	38.880	ug/l	76939.21
Na	23	45	3	He	11829.349	ug/l	8316440.01
Mg	24	45	3	He	11356.659	ug/l	4384914.71
Al	27	45	1	No Gas	51.646	ug/l	903552.22
Si	28	45	2	H2	214.476	ug/l	410507.64
K	39	72	3	He	11046.482	ug/l	4799511.21
Ca	40	72	2	H2	11633.007	ug/l	90173634.63
Ti	47	72	1	No Gas	45.868	ug/l	103048.29
V	51	72	1	No Gas	48.420	ug/l	1291680.58
V	51	72	3	He	48.440	ug/l	218437.24
Cr	52	72	1	No Gas	47.301	ug/l	1300638.95
Cr	52	72	3	He	48.248	ug/l	234189.93
Mn	55	72	1	No Gas	49.360	ug/l	1703255.07
Mn	55	72	3	He	49.416	ug/l	155274.91
Fe	56	72	2	H2	1297.829	ug/l	23024193.80
Fe	56	72	3	He	1244.679	ug/l	5341981.27
Co	59	72	1	No Gas	48.194	ug/l	1399130.45
Ni	60	72	1	No Gas	47.211	ug/l	312550.23
Ni	60	72	3	He	50.811	ug/l	101324.70
Cu	63	72	1	No Gas	49.334	ug/l	786949.61
Cu	63	72	3	He	52.550	ug/l	276073.84
Cu	65	72	1	No Gas	49.541	ug/l	388983.34
Zn	66	72	1	No Gas	50.141	ug/l	272338.38
Zn	66	72	3	He	52.469	ug/l	57889.27
As	75	72	1	No Gas	49.471	ug/l	331230.23
As	75	72	3	He	50.631	ug/l	48323.25
Se	78	72	2	H2	51.083	ug/l	32724.70
Br	79	72	1	No Gas	16.290	ug/l	269168.96
Br	79	72	2	H2	14.996	ug/l	145584.17
Se	82	72	1	No Gas	51.391	ug/l	19604.92
Kr	84	72	1	No Gas		ug/l	34996.19
Sr	88	72	1	No Gas	52.752	ug/l	2435708.62
Sr	88	72	3	He	52.483	ug/l	258886.99
Mo	95	115	1	No Gas	51.132	ug/l	522460.16
Mo	95	115	3	He	52.786	ug/l	187590.86
Mo	98	115	1	No Gas	51.594	ug/l	858384.41
Ag	107	115	1	No Gas	20.278	ug/l	532306.10
Ag	109	115	1	No Gas	20.178	ug/l	514158.11
Cd	111	115	1	No Gas	51.166	ug/l	301936.09

ICPMS207-B Analytical Data

Name	Mass	ISTD	Tune Step	Tune Mode	Conc.	Units	CPS
Cd	111	115	3	He	51.636	ug/l	96852.13
Cd	114	115	1	No Gas	52.141	ug/l	680251.49
Cd	114	115	3	He	51.734	ug/l	238226.80
Sn	118	115	1	No Gas	53.506	ug/l	898246.92
Sn	118	115	3	He	53.945	ug/l	235550.26
Sb	121	115	1	No Gas	54.454	ug/l	1438077.14
Sb	121	115	3	He	53.142	ug/l	360035.80
Sb	123	115	1	No Gas	54.633	ug/l	1109998.80
Sb	123	115	3	He	53.200	ug/l	284842.61
Ba	135	115	1	No Gas	52.141	ug/l	269446.34
Ba	137	115	1	No Gas	51.922	ug/l	477152.22
La	139	115	3	He	52.385	ug/l	1289970.58
Ce	140	115	3	He	53.107	ug/l	1430508.90
Hg	201	209	1	No Gas	0.996	ug/l	4031.14
Hg	202	209	1	No Gas	0.979	ug/l	9110.95
Hg	202	209	3	He	1.018	ug/l	4451.86
Tl	203	209	3	He	49.281	ug/l	550573.23
Tl	205	209	1	No Gas	50.808	ug/l	2796157.46
Tl	205	209	3	He	50.405	ug/l	1334960.37
[Pb]	206	209	1	No Gas	51.084	ug/l	987490.70
[Pb]	207	209	1	No Gas	50.744	ug/l	857437.83
Pb	208	209	1	No Gas	50.763	ug/l	3961123.51
Th	232	209	3	He	50.428	ug/l	1880351.16
U	238	209	1	No Gas	51.758	ug/l	4017757.53

Name	Mass	Tune Step	Tune Mode	CPS	ISTD Recovery %
Sc	45	1	No Gas	4590134.69	81.4
Sc	45	2	H2	2491344.73	90.8
Sc	45	3	He	258822.79	81.3
Ge	72	1	No Gas	1354682.56	89.6
Ge	72	2	H2	982458.23	99.0
Ge	72	3	He	195313.57	87.7
In	115	1	No Gas	11547446.69	94.9
In	115	3	He	2388958.87	90.6
Tb	159	1	No Gas	16699745.10	102.2
Tb	159	3	He	6962652.82	101.9
Ho	165	1	No Gas	16088830.45	105.5
Ho	165	3	He	6630051.07	100.2
Lu	175	1	No Gas	16355228.92	105.1
Lu	175	3	He	5347330.21	99.8
Bi	209	1	No Gas	11737790.93	103.7
Bi	209	3	He	5053982.94	100.8

ICPMS207-B Analytical Data

Sample Name CCB
File Name 052_CCB.d
Data Path Name D:\Agilent\ICPMH\1\DATA\220121ADoD.b
Acq Time 2022-01-21 21:20:28
Sample Type CCB
Total Dilution 1.0000
Comment ICPMS-6020-W-D
Operator CAR/SRH/JPV/AEM
Method SW6020/ SW6020B

Name	Mass	ISTD	Tune Step	Tune Mode	Conc.	Units	CPS
Li	7	45	1	No Gas	1.062	ug/l	21041.60
Be	9	45	1	No Gas	-0.039	ug/l	76.65
B	11	45	1	No Gas	-0.041	ug/l	4549.86
Na	23	45	3	He	26.854	ug/l	56544.74
Mg	24	45	3	He	0.975	ug/l	1836.48
Al	27	45	1	No Gas	-0.072	ug/l	12618.68
Si	28	45	2	H2	1.196	ug/l	8635.37
K	39	72	3	He	-25.097	ug/l	60500.53
Ca	40	72	2	H2	-1.107	ug/l	85984.89
Ti	47	72	1	No Gas	0.017	ug/l	238.58
V	51	72	1	No Gas	2.736	ug/l	23549.92
V	51	72	3	He	0.820	ug/l	16696.24
Cr	52	72	1	No Gas	-0.461	ug/l	76918.66
Cr	52	72	3	He	0.026	ug/l	866.70
Mn	55	72	1	No Gas	0.013	ug/l	10389.72
Mn	55	72	3	He	0.005	ug/l	148.30
Fe	56	72	2	H2	0.102	ug/l	11247.30
Fe	56	72	3	He	0.133	ug/l	5539.98
Co	59	72	1	No Gas	-0.002	ug/l	465.75
Ni	60	72	1	No Gas	-0.010	ug/l	385.91
Ni	60	72	3	He	-0.010	ug/l	65.56
Cu	63	72	1	No Gas	-0.014	ug/l	1642.09
Cu	63	72	3	He	-0.006	ug/l	550.57
Cu	65	72	1	No Gas	-0.023	ug/l	704.30
Zn	66	72	1	No Gas	0.004	ug/l	962.41
Zn	66	72	3	He	0.076	ug/l	274.45
As	75	72	1	No Gas	0.182	ug/l	14215.82
As	75	72	3	He	-0.029	ug/l	213.60
Se	78	72	2	H2	0.001	ug/l	32.45
Br	79	72	1	No Gas	0.772	ug/l	74811.30
Br	79	72	2	H2	0.790	ug/l	36797.11
Se	82	72	1	No Gas	-0.305	ug/l	564.87
Kr	84	72	1	No Gas		ug/l	19577.81
Sr	88	72	1	No Gas	-0.001	ug/l	685.33
Sr	88	72	3	He	-0.008	ug/l	214.45
Mo	95	115	1	No Gas	0.024	ug/l	303.34
Mo	95	115	3	He	0.015	ug/l	74.45
Mo	98	115	1	No Gas	0.025	ug/l	510.77
Ag	107	115	1	No Gas	-0.001	ug/l	1769.49
Ag	109	115	1	No Gas	0.001	ug/l	1704.79
Cd	111	115	1	No Gas	-0.001	ug/l	-7.44

ICPMS207-B Analytical Data

Name	Mass	ISTD	Tune Step	Tune Mode	Conc.	Units	CPS
Cd	111	115	3	He	0.002	ug/l	10.00
Cd	114	115	1	No Gas	0.002	ug/l	-139.64
Cd	114	115	3	He	0.003	ug/l	24.58
Sn	118	115	1	No Gas	0.036	ug/l	3686.52
Sn	118	115	3	He	0.025	ug/l	916.70
Sb	121	115	1	No Gas	0.087	ug/l	3205.70
Sb	121	115	3	He	0.053	ug/l	551.74
Sb	123	115	1	No Gas	0.086	ug/l	2427.80
Sb	123	115	3	He	0.053	ug/l	434.38
Ba	135	115	1	No Gas	-0.001	ug/l	56.55
Ba	137	115	1	No Gas	0.001	ug/l	103.13
La	139	115	3	He	0.000	ug/l	16.67
Ce	140	115	3	He	0.000	ug/l	37.78
Hg	201	209	1	No Gas	0.005	ug/l	51.66
Hg	202	209	1	No Gas	0.007	ug/l	168.97
Hg	202	209	3	He	0.006	ug/l	60.99
Tl	203	209	3	He	0.155	ug/l	2411.20
Tl	205	209	1	No Gas	0.135	ug/l	10429.88
Tl	205	209	3	He	0.153	ug/l	5705.52
[Pb]	206	209	1	No Gas	0.005	ug/l	716.69
[Pb]	207	209	1	No Gas	0.008	ug/l	670.02
Pb	208	209	1	No Gas	0.005	ug/l	2950.15
Th	232	209	3	He	0.014	ug/l	1141.18
U	238	209	1	No Gas	0.003	ug/l	300.28

Name	Mass	Tune Step	Tune Mode	CPS	ISTD Recovery %
Sc	45	1	No Gas	4665197.54	82.7
Sc	45	2	H2	2434998.57	88.7
Sc	45	3	He	250995.72	78.8
Ge	72	1	No Gas	1366874.74	90.4
Ge	72	2	H2	923588.79	93.1
Ge	72	3	He	189213.69	85.0
In	115	1	No Gas	11716728.16	96.3
In	115	3	He	2388776.29	90.6
Tb	159	1	No Gas	17259010.07	105.6
Tb	159	3	He	6800836.48	99.5
Ho	165	1	No Gas	16007446.15	105.0
Ho	165	3	He	6477370.95	97.9
Lu	175	1	No Gas	16469448.45	105.8
Lu	175	3	He	5193680.94	97.0
Bi	209	1	No Gas	12087990.69	106.8
Bi	209	3	He	5205798.22	103.9

ICPMS207-B Analytical Data

Sample Name B22011124-001BPDS1
File Name 053SMPL.d
Data Path Name D:\Agilent\ICPMH\1\DATA\220121ADoD.b
Acq Time 2022-01-21 21:26:42
Sample Type Sample
Total Dilution 1.0300
Comment ICPMS-6020-W-T
Operator CAR/SRH/JPV/AEM
Method SW6020/ SW6020B

Name	Mass	ISTD	Tune Step	Tune Mode	Conc.	Units	CPS
Li	7	45	1	No Gas	2.125	ug/l	24041.23
Be	9	45	1	No Gas	37.426	ug/l	95033.18
B	11	45	1	No Gas	94.645	ug/l	151291.15
Na	23	45	3	He	35840.189	ug/l	21390919.54
Mg	24	45	3	He	10354.277	ug/l	3404654.42
Al	27	45	1	No Gas	47.479	ug/l	695373.42
Si	28	45	2	H2	23741.095	ug/l	39450752.73
K	39	72	3	He	1663.552	ug/l	687090.12
Ca	40	72	2	H2	8813.212	ug/l	59711932.75
Ti	47	72	1	No Gas	43.293	ug/l	84560.37
V	51	72	1	No Gas	64.986	ug/l	1524957.53
V	51	72	3	He	68.706	ug/l	265861.66
Cr	52	72	1	No Gas	49.350	ug/l	1178645.23
Cr	52	72	3	He	48.687	ug/l	206283.97
Mn	55	72	1	No Gas	49.998	ug/l	1501157.49
Mn	55	72	3	He	49.184	ug/l	134951.46
Fe	56	72	2	H2	66.316	ug/l	1036814.04
Fe	56	72	3	He	65.767	ug/l	250766.87
Co	59	72	1	No Gas	48.307	ug/l	1217904.49
Ni	60	72	1	No Gas	48.702	ug/l	280225.78
Ni	60	72	3	He	50.525	ug/l	87989.37
Cu	63	72	1	No Gas	49.045	ug/l	679653.40
Cu	63	72	3	He	51.008	ug/l	234000.73
Cu	65	72	1	No Gas	47.290	ug/l	322899.00
Zn	66	72	1	No Gas	54.095	ug/l	255134.79
Zn	66	72	3	He	55.875	ug/l	53816.79
As	75	72	1	No Gas	50.292	ug/l	292849.13
As	75	72	3	He	49.570	ug/l	41324.46
Se	78	72	2	H2	51.338	ug/l	28739.20
Br	79	72	1	No Gas	12.984	ug/l	200191.96
Br	79	72	2	H2	11.043	ug/l	102246.74
Se	82	72	1	No Gas	51.139	ug/l	16961.76
Kr	84	72	1	No Gas		ug/l	50074.04
Sr	88	72	1	No Gas	125.059	ug/l	5018330.08
Sr	88	72	3	He	119.217	ug/l	513206.10
Mo	95	115	1	No Gas	50.093	ug/l	440073.43
Mo	95	115	3	He	51.602	ug/l	158375.57
Mo	98	115	1	No Gas	51.100	ug/l	730182.14
Ag	107	115	1	No Gas	19.901	ug/l	448474.16
Ag	109	115	1	No Gas	19.548	ug/l	428128.89
Cd	111	115	1	No Gas	50.653	ug/l	256640.86

ICPMS207-B Analytical Data

Name	Mass	ISTD	Tune Step	Tune Mode	Conc.	Units	CPS
Cd	111	115	3	He	51.661	ug/l	83672.02
Cd	114	115	1	No Gas	52.041	ug/l	582901.94
Cd	114	115	3	He	51.524	ug/l	204880.54
Sn	118	115	1	No Gas	53.817	ug/l	776185.95
Sn	118	115	3	He	52.662	ug/l	198584.83
Sb	121	115	1	No Gas	52.630	ug/l	1193167.47
Sb	121	115	3	He	50.517	ug/l	295571.28
Sb	123	115	1	No Gas	51.911	ug/l	905010.11
Sb	123	115	3	He	50.424	ug/l	233136.47
Ba	135	115	1	No Gas	56.642	ug/l	251070.89
Ba	137	115	1	No Gas	54.395	ug/l	429027.12
La	139	115	3	He	0.003	ug/l	86.67
Ce	140	115	3	He	54.335	ug/l	1264007.24
Hg	201	209	1	No Gas	1.023	ug/l	3497.10
Hg	202	209	1	No Gas	1.039	ug/l	8153.54
Hg	202	209	3	He	1.066	ug/l	4121.48
Tl	203	209	3	He	49.719	ug/l	491454.17
Tl	205	209	1	No Gas	52.772	ug/l	2450582.48
Tl	205	209	3	He	50.928	ug/l	1192735.08
[Pb]	206	209	1	No Gas	52.568	ug/l	857627.54
[Pb]	207	209	1	No Gas	51.819	ug/l	739048.00
Pb	208	209	1	No Gas	51.943	ug/l	3419458.52
Th	232	209	3	He	51.415	ug/l	1695746.95
U	238	209	1	No Gas	53.484	ug/l	3503138.26

Name	Mass	Tune Step	Tune Mode	CPS	ISTD Recovery %
Sc	45	1	No Gas	4000670.95	71.0
Sc	45	2	H2	2265003.18	82.5
Sc	45	3	He	227017.35	71.3
Ge	72	1	No Gas	1218342.76	80.6
Ge	72	2	H2	884002.64	89.1
Ge	72	3	He	175692.08	78.9
In	115	1	No Gas	10299424.79	84.6
In	115	3	He	2125012.19	80.6
Tb	159	1	No Gas	14345317.11	87.8
Tb	159	3	He	6206596.54	90.8
Ho	165	1	No Gas	13753076.65	90.2
Ho	165	3	He	5997023.12	90.7
Lu	175	1	No Gas	14359587.31	92.3
Lu	175	3	He	4952137.74	92.5
Bi	209	1	No Gas	10287322.16	90.9
Bi	209	3	He	4602794.58	91.8

ICPMS207-B Analytical Data

Sample Name B22011124-001BMS4
File Name 054MS4.d
Data Path Name D:\Agilent\ICPMH\1\DATA\220121ADoD.b
Acq Time 2022-01-21 21:32:56
Sample Type MS4
Total Dilution 1.0000
Comment ICPMS-6020-W-T
Operator CAR/SRH/JPV/AEM
Method SW6020/ SW6020B

Name	Mass	ISTD	Tune Step	Tune Mode	Conc.	Units	CPS
Li	7	45	1	No Gas	65.212	ug/l	433925.10
Be	9	45	1	No Gas	36.298	ug/l	99975.30
B	11	45	1	No Gas	126.766	ug/l	218157.84
Na	23	45	3	He	38954.212	ug/l	23566370.76
Mg	24	45	3	He	14693.934	ug/l	4897577.63
Al	27	45	1	No Gas	401.417	ug/l	6289638.45
Si	28	45	2	H2	23171.756	ug/l	39577790.87
K	39	72	3	He	5989.164	ug/l	2333499.05
Ca	40	72	2	H2	13706.775	ug/l	93513178.22
Ti	47	72	1	No Gas	84.623	ug/l	173066.18
V	51	72	1	No Gas	112.234	ug/l	2786776.06
V	51	72	3	He	112.034	ug/l	431341.95
Cr	52	72	1	No Gas	91.356	ug/l	2217053.76
Cr	52	72	3	He	95.950	ug/l	411630.62
Mn	55	72	1	No Gas	477.938	ug/l	14962215.64
Mn	55	72	3	He	480.188	ug/l	1334972.29
Fe	56	72	2	H2	521.533	ug/l	8152385.22
Fe	56	72	3	He	489.944	ug/l	1864412.37
Co	59	72	1	No Gas	92.391	ug/l	2445957.86
Ni	60	72	1	No Gas	92.260	ug/l	556431.05
Ni	60	72	3	He	100.316	ug/l	177078.27
Cu	63	72	1	No Gas	93.297	ug/l	1355604.47
Cu	63	72	3	He	100.721	ug/l	468016.39
Cu	65	72	1	No Gas	92.764	ug/l	663413.69
Zn	66	72	1	No Gas	100.737	ug/l	498491.54
Zn	66	72	3	He	104.423	ug/l	101833.74
As	75	72	1	No Gas	96.887	ug/l	580826.08
As	75	72	3	He	98.999	ug/l	83449.28
Se	78	72	2	H2	103.110	ug/l	58125.53
Br	79	72	1	No Gas	8.038	ug/l	151056.78
Br	79	72	2	H2	7.089	ug/l	76075.22
Se	82	72	1	No Gas	97.893	ug/l	33514.47
Kr	84	72	1	No Gas		ug/l	63881.10
Sr	88	72	1	No Gas	170.917	ug/l	7194437.98
Sr	88	72	3	He	170.532	ug/l	744295.54
Mo	95	115	1	No Gas	96.760	ug/l	883536.75
Mo	95	115	3	He	98.054	ug/l	312254.55
Mo	98	115	1	No Gas	96.598	ug/l	1437441.84
Ag	107	115	1	No Gas	9.614	ug/l	226439.75
Ag	109	115	1	No Gas	9.602	ug/l	219335.78
Cd	111	115	1	No Gas	50.305	ug/l	265268.23

ICPMS207-B Analytical Data

Name	Mass	ISTD	Tune Step	Tune Mode	Conc.	Units	CPS
Cd	111	115	3	He	49.631	ug/l	83419.90
Cd	114	115	1	No Gas	51.131	ug/l	595948.22
Cd	114	115	3	He	50.002	ug/l	206340.29
Sn	118	115	1	No Gas	104.434	ug/l	1560663.01
Sn	118	115	3	He	101.097	ug/l	394951.64
Sb	121	115	1	No Gas	103.492	ug/l	2440674.46
Sb	121	115	3	He	98.836	ug/l	599883.59
Sb	123	115	1	No Gas	104.517	ug/l	1895451.81
Sb	123	115	3	He	100.435	ug/l	481753.09
Ba	135	115	1	No Gas	101.420	ug/l	468840.81
Ba	137	115	1	No Gas	100.442	ug/l	823847.09
La	139	115	3	He	106.086	ug/l	2340904.49
Ce	140	115	3	He	107.216	ug/l	2588243.14
Hg	201	209	1	No Gas	0.030	ug/l	132.31
Hg	202	209	1	No Gas	0.039	ug/l	403.92
Hg	202	209	3	He	0.038	ug/l	179.97
Tl	203	209	3	He	98.540	ug/l	999736.72
Tl	205	209	1	No Gas	102.860	ug/l	4985629.65
Tl	205	209	3	He	100.054	ug/l	2405339.69
[Pb]	206	209	1	No Gas	103.081	ug/l	1756496.02
[Pb]	207	209	1	No Gas	104.749	ug/l	1558613.15
Pb	208	209	1	No Gas	103.322	ug/l	7103428.07
Th	232	209	3	He	102.533	ug/l	3472509.05
U	238	209	1	No Gas	107.042	ug/l	7314645.41

Name	Mass	Tune Step	Tune Mode	CPS	ISTD Recovery %
Sc	45	1	No Gas	4175836.07	74.1
Sc	45	2	H2	2259753.37	82.3
Sc	45	3	He	223473.73	70.2
Ge	72	1	No Gas	1236541.92	81.8
Ge	72	2	H2	864738.54	87.1
Ge	72	3	He	172942.89	77.7
In	115	1	No Gas	10393746.39	85.4
In	115	3	He	2140960.95	81.2
Tb	159	1	No Gas	14981292.85	91.7
Tb	159	3	He	6302402.65	92.2
Ho	165	1	No Gas	14348112.61	94.1
Ho	165	3	He	6154864.33	93.1
Lu	175	1	No Gas	14993965.73	96.3
Lu	175	3	He	4792476.84	89.5
Bi	209	1	No Gas	10519648.03	92.9
Bi	209	3	He	4589039.72	91.6

ICPMS207-B Analytical Data

Sample Name B22011124-001BMSD4
File Name 055MSD4.d
Data Path Name D:\Agilent\ICPMH\1\DATA\220121ADoD.b
Acq Time 2022-01-21 21:39:10
Sample Type MSD4
Total Dilution 1.0000
Comment ICPMS-6020-W-T
Operator CAR/SRH/JPV/AEM
Method SW6020/ SW6020B

Name	Mass	ISTD	Tune Step	Tune Mode	Conc.	Units	CPS
Li	7	45	1	No Gas	67.984	ug/l	438737.89
Be	9	45	1	No Gas	38.342	ug/l	102471.83
B	11	45	1	No Gas	136.201	ug/l	227544.34
Na	23	45	3	He	40367.961	ug/l	24149538.53
Mg	24	45	3	He	14896.411	ug/l	4910054.65
Al	27	45	1	No Gas	408.326	ug/l	6212014.91
Si	28	45	2	H2	24252.264	ug/l	40704535.88
K	39	72	3	He	5913.573	ug/l	2293093.32
Ca	40	72	2	H2	13557.687	ug/l	91622409.18
Ti	47	72	1	No Gas	85.184	ug/l	175127.61
V	51	72	1	No Gas	106.565	ug/l	2660213.50
V	51	72	3	He	113.783	ug/l	435630.85
Cr	52	72	1	No Gas	89.242	ug/l	2174015.20
Cr	52	72	3	He	96.176	ug/l	410551.89
Mn	55	72	1	No Gas	472.872	ug/l	14863562.01
Mn	55	72	3	He	477.076	ug/l	1319697.84
Fe	56	72	2	H2	530.570	ug/l	8214746.23
Fe	56	72	3	He	505.927	ug/l	1915666.82
Co	59	72	1	No Gas	93.135	ug/l	2474210.50
Ni	60	72	1	No Gas	90.390	ug/l	546989.43
Ni	60	72	3	He	99.790	ug/l	175353.27
Cu	63	72	1	No Gas	92.879	ug/l	1352868.07
Cu	63	72	3	He	100.794	ug/l	466300.76
Cu	65	72	1	No Gas	89.852	ug/l	645209.33
Zn	66	72	1	No Gas	96.677	ug/l	480861.58
Zn	66	72	3	He	104.620	ug/l	101513.96
As	75	72	1	No Gas	93.782	ug/l	564842.67
As	75	72	3	He	98.916	ug/l	82980.01
Se	78	72	2	H2	103.569	ug/l	57837.40
Br	79	72	1	No Gas	8.464	ug/l	157005.93
Br	79	72	2	H2	7.616	ug/l	78800.86
Se	82	72	1	No Gas	97.547	ug/l	33515.77
Kr	84	72	1	No Gas		ug/l	62942.29
Sr	88	72	1	No Gas	169.468	ug/l	7167517.44
Sr	88	72	3	He	168.805	ug/l	733446.64
Mo	95	115	1	No Gas	93.604	ug/l	864989.13
Mo	95	115	3	He	99.835	ug/l	309085.91
Mo	98	115	1	No Gas	94.154	ug/l	1414672.35
Ag	107	115	1	No Gas	9.406	ug/l	223717.92
Ag	109	115	1	No Gas	9.381	ug/l	217039.32
Cd	111	115	1	No Gas	49.028	ug/l	261409.20

ICPMS207-B Analytical Data

Name	Mass	ISTD	Tune Step	Tune Mode	Conc.	Units	CPS
Cd	111	115	3	He	51.083	ug/l	83536.92
Cd	114	115	1	No Gas	50.312	ug/l	593161.73
Cd	114	115	3	He	51.628	ug/l	207255.95
Sn	118	115	1	No Gas	100.523	ug/l	1524595.93
Sn	118	115	3	He	103.475	ug/l	393480.20
Sb	121	115	1	No Gas	102.227	ug/l	2438378.38
Sb	121	115	3	He	102.611	ug/l	605786.36
Sb	123	115	1	No Gas	102.757	ug/l	1885390.90
Sb	123	115	3	He	103.677	ug/l	483669.25
Ba	135	115	1	No Gas	96.592	ug/l	451953.22
Ba	137	115	1	No Gas	96.390	ug/l	800650.11
La	139	115	3	He	108.732	ug/l	2334271.56
Ce	140	115	3	He	110.929	ug/l	2605964.18
Hg	201	209	1	No Gas	0.026	ug/l	117.31
Hg	202	209	1	No Gas	0.033	ug/l	354.60
Hg	202	209	3	He	0.030	ug/l	151.97
Tl	203	209	3	He	97.358	ug/l	1003099.48
Tl	205	209	1	No Gas	104.195	ug/l	5068800.03
Tl	205	209	3	He	100.923	ug/l	2460779.75
[Pb]	206	209	1	No Gas	102.329	ug/l	1747365.01
[Pb]	207	209	1	No Gas	104.585	ug/l	1559401.83
Pb	208	209	1	No Gas	102.987	ug/l	7098047.79
Th	232	209	3	He	102.474	ug/l	3519670.33
U	238	209	1	No Gas	107.697	ug/l	7389088.44

Name	Mass	Tune Step	Tune Mode	CPS	ISTD Recovery %
Sc	45	1	No Gas	4124857.78	73.2
Sc	45	2	H2	2220539.83	80.9
Sc	45	3	He	221050.86	69.4
Ge	72	1	No Gas	1248479.31	82.6
Ge	72	2	H2	856674.00	86.3
Ge	72	3	He	172379.32	77.4
In	115	1	No Gas	10591877.63	87.0
In	115	3	He	2090747.84	79.3
Tb	159	1	No Gas	15237387.90	93.2
Tb	159	3	He	6161562.80	90.2
Ho	165	1	No Gas	14629124.86	95.9
Ho	165	3	He	6052515.79	91.5
Lu	175	1	No Gas	14996369.49	96.4
Lu	175	3	He	4886340.96	91.2
Bi	209	1	No Gas	10543489.75	93.1
Bi	209	3	He	4682709.92	93.4

ICPMS207-B Analytical Data

Sample Name Rinse
File Name 056BLKV.d
Data Path Name D:\Agilent\ICPMH\1\DATA\220121ADoD.b
Acq Time 2022-01-21 21:45:24
Sample Type BlkVrfy
Total Dilution 1.0000
Comment ICPMS-6020-W-D
Operator CAR/SRH/JPV/AEM
Method SW6020/ SW6020B

Name	Mass	ISTD	Tune Step	Tune Mode	Conc.	Units	CPS
Li	7	45	1	No Gas	1.083	ug/l	20792.48
Be	9	45	1	No Gas	-0.036	ug/l	86.65
B	11	45	1	No Gas	0.779	ug/l	5987.61
Na	23	45	3	He	44.620	ug/l	66544.06
Mg	24	45	3	He	1.070	ug/l	1816.52
Al	27	45	1	No Gas	-0.069	ug/l	12420.77
Si	28	45	2	H2	7.756	ug/l	20540.35
K	39	72	3	He	-24.928	ug/l	58528.07
Ca	40	72	2	H2	-1.546	ug/l	82030.32
Ti	47	72	1	No Gas	0.009	ug/l	210.21
V	51	72	1	No Gas	3.170	ug/l	34835.11
V	51	72	3	He	0.457	ug/l	14695.22
Cr	52	72	1	No Gas	-0.732	ug/l	66716.12
Cr	52	72	3	He	0.035	ug/l	881.14
Mn	55	72	1	No Gas	0.158	ug/l	14688.26
Mn	55	72	3	He	0.151	ug/l	573.57
Fe	56	72	2	H2	0.159	ug/l	12050.44
Fe	56	72	3	He	0.166	ug/l	5484.88
Co	59	72	1	No Gas	0.009	ug/l	741.89
Ni	60	72	1	No Gas	0.004	ug/l	455.77
Ni	60	72	3	He	0.010	ug/l	100.00
Cu	63	72	1	No Gas	0.006	ug/l	1870.21
Cu	63	72	3	He	0.010	ug/l	611.89
Cu	65	72	1	No Gas	0.001	ug/l	847.03
Zn	66	72	1	No Gas	0.086	ug/l	1342.34
Zn	66	72	3	He	0.094	ug/l	283.34
As	75	72	1	No Gas	0.466	ug/l	15352.80
As	75	72	3	He	-0.012	ug/l	221.60
Se	78	72	2	H2	0.000	ug/l	31.11
Br	79	72	1	No Gas	23.320	ug/l	344804.73
Br	79	72	2	H2	22.440	ug/l	187181.10
Se	82	72	1	No Gas	0.488	ug/l	820.89
Kr	84	72	1	No Gas		ug/l	18611.73
Sr	88	72	1	No Gas	0.000	ug/l	688.65
Sr	88	72	3	He	-0.007	ug/l	210.00
Mo	95	115	1	No Gas	0.018	ug/l	236.67
Mo	95	115	3	He	0.009	ug/l	51.11
Mo	98	115	1	No Gas	0.016	ug/l	358.14
Ag	107	115	1	No Gas	-0.002	ug/l	1712.13
Ag	109	115	1	No Gas	0.001	ug/l	1678.11
Cd	111	115	1	No Gas	0.007	ug/l	38.77

ICPMS207-B Analytical Data

Name	Mass	ISTD	Tune Step	Tune Mode	Conc.	Units	CPS
Cd	111	115	3	He	0.010	ug/l	23.00
Cd	114	115	1	No Gas	0.011	ug/l	-23.01
Cd	114	115	3	He	0.009	ug/l	51.27
Sn	118	115	1	No Gas	0.034	ug/l	3593.36
Sn	118	115	3	He	0.021	ug/l	866.70
Sb	121	115	1	No Gas	0.125	ug/l	4145.73
Sb	121	115	3	He	0.089	ug/l	765.10
Sb	123	115	1	No Gas	0.128	ug/l	3249.06
Sb	123	115	3	He	0.081	ug/l	558.40
Ba	135	115	1	No Gas	0.006	ug/l	93.15
Ba	137	115	1	No Gas	0.002	ug/l	109.78
La	139	115	3	He	0.000	ug/l	23.33
Ce	140	115	3	He	0.000	ug/l	34.44
Hg	201	209	1	No Gas	0.005	ug/l	51.32
Hg	202	209	1	No Gas	0.004	ug/l	134.31
Hg	202	209	3	He	0.005	ug/l	56.32
Tl	203	209	3	He	0.247	ug/l	3415.16
Tl	205	209	1	No Gas	0.240	ug/l	16016.79
Tl	205	209	3	He	0.246	ug/l	8144.44
[Pb]	206	209	1	No Gas	0.022	ug/l	1047.83
[Pb]	207	209	1	No Gas	0.023	ug/l	926.71
Pb	208	209	1	No Gas	0.022	ug/l	4231.41
Th	232	209	3	He	0.021	ug/l	1395.31
U	238	209	1	No Gas	0.003	ug/l	302.61

Name	Mass	Tune Step	Tune Mode	CPS	ISTD Recovery %
Sc	45	1	No Gas	4577789.28	81.2
Sc	45	2	H2	2404404.83	87.6
Sc	45	3	He	243490.13	76.5
Ge	72	1	No Gas	1305415.35	86.3
Ge	72	2	H2	913118.50	92.0
Ge	72	3	He	182788.08	82.1
In	115	1	No Gas	11504793.93	94.5
In	115	3	He	2297747.73	87.2
Tb	159	1	No Gas	16166763.90	98.9
Tb	159	3	He	6628575.37	97.0
Ho	165	1	No Gas	15750868.86	103.3
Ho	165	3	He	6479834.82	98.0
Lu	175	1	No Gas	16279961.26	104.6
Lu	175	3	He	5247954.12	98.0
Bi	209	1	No Gas	11848545.09	104.6
Bi	209	3	He	5144382.66	102.6

ICPMS207-B Analytical Data

Sample Name B22011125-001A
File Name 057SMPL.d
Data Path Name D:\Agilent\ICPMH\1\DATA\220121ADoD.b
Acq Time 2022-01-21 21:51:37
Sample Type Sample
Total Dilution 1.0000
Comment ICPMS-6020-W-D
Operator CAR/SRH/JPV/AEM
Method SW6020/ SW6020B

Name	Mass	ISTD	Tune Step	Tune Mode	Conc.	Units	CPS
Li	7	45	1	No Gas	0.336	ug/l	18847.85
Be	9	45	1	No Gas	-0.048	ug/l	60.99
B	11	45	1	No Gas	31.952	ug/l	77799.01
Na	23	45	3	He	32126.916	ug/l	27127814.32
Mg	24	45	3	He	15111.242	ug/l	7028956.54
Al	27	45	1	No Gas	4.066	ug/l	101682.39
Si	28	45	2	H2	23744.232	ug/l	50271414.41
K	39	72	3	He	1847.569	ug/l	986785.45
Ca	40	72	2	H2	15149.724	ug/l	121155232.63
Ti	47	72	1	No Gas	1.742	ug/l	4475.22
V	51	72	1	No Gas	20.023	ug/l	547809.52
V	51	72	3	He	15.395	ug/l	90050.73
Cr	52	72	1	No Gas	0.350	ug/l	105790.02
Cr	52	72	3	He	2.359	ug/l	13918.87
Mn	55	72	1	No Gas	2.721	ug/l	112629.70
Mn	55	72	3	He	2.899	ug/l	10556.68
Fe	56	72	2	H2	8.715	ug/l	170069.23
Fe	56	72	3	He	8.091	ug/l	45507.12
Co	59	72	1	No Gas	0.041	ug/l	1859.78
Ni	60	72	1	No Gas	0.571	ug/l	4601.62
Ni	60	72	3	He	0.479	ug/l	1190.06
Cu	63	72	1	No Gas	0.685	ug/l	13891.53
Cu	63	72	3	He	0.491	ug/l	3622.73
Cu	65	72	1	No Gas	0.544	ug/l	5605.34
Zn	66	72	1	No Gas	7.363	ug/l	44516.46
Zn	66	72	3	He	7.734	ug/l	9942.33
As	75	72	1	No Gas	-0.075	ug/l	13536.29
As	75	72	3	He	-0.103	ug/l	171.73
Se	78	72	2	H2	0.155	ug/l	137.45
Br	79	72	1	No Gas	15.175	ug/l	278559.24
Br	79	72	2	H2	14.579	ug/l	147044.03
Se	82	72	1	No Gas	0.422	ug/l	902.63
Kr	84	72	1	No Gas		ug/l	51068.70
Sr	88	72	1	No Gas	100.440	ug/l	5057125.46
Sr	88	72	3	He	96.120	ug/l	541463.28
Mo	95	115	1	No Gas	0.114	ug/l	1306.74
Mo	95	115	3	He	0.117	ug/l	483.35
Mo	98	115	1	No Gas	0.115	ug/l	2141.91
Ag	107	115	1	No Gas	-0.055	ug/l	359.48
Ag	109	115	1	No Gas	-0.054	ug/l	312.13
Cd	111	115	1	No Gas	0.026	ug/l	160.97

ICPMS207-B Analytical Data

Name	Mass	ISTD	Tune Step	Tune Mode	Conc.	Units	CPS
Cd	111	115	3	He	0.027	ug/l	61.89
Cd	114	115	1	No Gas	0.037	ug/l	342.97
Cd	114	115	3	He	0.030	ug/l	165.22
Sn	118	115	1	No Gas	-0.055	ug/l	2252.39
Sn	118	115	3	He	-0.059	ug/l	613.35
Sb	121	115	1	No Gas	0.213	ug/l	6951.75
Sb	121	115	3	He	0.213	ug/l	1815.97
Sb	123	115	1	No Gas	0.214	ug/l	5338.55
Sb	123	115	3	He	0.210	ug/l	1413.55
Ba	135	115	1	No Gas	3.793	ug/l	21037.57
Ba	137	115	1	No Gas	3.792	ug/l	37379.30
La	139	115	3	He	0.005	ug/l	157.78
Ce	140	115	3	He	0.014	ug/l	438.90
Hg	201	209	1	No Gas	0.001	ug/l	34.66
Hg	202	209	1	No Gas	-0.001	ug/l	87.65
Hg	202	209	3	He	0.003	ug/l	44.32
Tl	203	209	3	He	0.130	ug/l	2089.67
Tl	205	209	1	No Gas	0.093	ug/l	7882.50
Tl	205	209	3	He	0.125	ug/l	4875.52
[Pb]	206	209	1	No Gas	0.058	ug/l	1745.68
[Pb]	207	209	1	No Gas	0.054	ug/l	1444.53
Pb	208	209	1	No Gas	0.054	ug/l	6744.04
Th	232	209	3	He	-0.002	ug/l	508.22
U	238	209	1	No Gas	0.009	ug/l	831.19

Name	Mass	Tune Step	Tune Mode	CPS	ISTD Recovery %
Sc	45	1	No Gas	5574866.61	98.9
Sc	45	2	H2	2801219.30	102.1
Sc	45	3	He	311817.75	97.9
Ge	72	1	No Gas	1477059.54	97.7
Ge	72	2	H2	1013726.98	102.2
Ge	72	3	He	223170.62	100.2
In	115	1	No Gas	12349611.76	101.5
In	115	3	He	2657651.62	100.8
Tb	159	1	No Gas	17088490.60	104.6
Tb	159	3	He	7130647.27	104.4
Ho	165	1	No Gas	15931645.77	104.5
Ho	165	3	He	6841193.92	103.4
Lu	175	1	No Gas	16606136.49	106.7
Lu	175	3	He	5703923.57	106.5
Bi	209	1	No Gas	11790008.03	104.1
Bi	209	3	He	5135327.75	102.5

ICPMS207-B Analytical Data

Sample Name B22011125-001B
File Name 058SMPL.d
Data Path Name D:\Agilent\ICPMH\1\DATA\220121ADoD.b
Acq Time 2022-01-21 21:57:52
Sample Type Sample
Total Dilution 1.0000
Comment ICPMS-6020-W-T
Operator CAR/SRH/JPV/AEM
Method SW6020/ SW6020B

Name	Mass	ISTD	Tune Step	Tune Mode	Conc.	Units	CPS
Li	7	45	1	No Gas	1.916	ug/l	23686.52
Be	9	45	1	No Gas	-0.035	ug/l	77.98
B	11	45	1	No Gas	35.031	ug/l	61686.17
Na	23	45	3	He	32179.228	ug/l	18320650.00
Mg	24	45	3	He	15405.271	ug/l	4839324.03
Al	27	45	1	No Gas	114.071	ug/l	1749596.48
Si	28	45	2	H2	23867.963	ug/l	39392452.07
K	39	72	3	He	1683.632	ug/l	669163.33
Ca	40	72	2	H2	14597.647	ug/l	94323547.73
Ti	47	72	1	No Gas	9.402	ug/l	18640.69
V	51	72	1	No Gas	19.427	ug/l	424727.45
V	51	72	3	He	20.213	ug/l	83595.96
Cr	52	72	1	No Gas	4.064	ug/l	168299.96
Cr	52	72	3	He	2.870	ug/l	12347.50
Mn	55	72	1	No Gas	19.203	ug/l	586148.62
Mn	55	72	3	He	19.028	ug/l	50479.66
Fe	56	72	2	H2	148.910	ug/l	2210885.55
Fe	56	72	3	He	139.455	ug/l	508404.43
Co	59	72	1	No Gas	0.231	ug/l	6322.22
Ni	60	72	1	No Gas	1.306	ug/l	7949.76
Ni	60	72	3	He	1.240	ug/l	2155.73
Cu	63	72	1	No Gas	1.409	ug/l	21249.98
Cu	63	72	3	He	1.253	ug/l	6044.05
Cu	65	72	1	No Gas	1.204	ug/l	9030.43
Zn	66	72	1	No Gas	15.075	ug/l	72356.10
Zn	66	72	3	He	15.706	ug/l	14739.77
As	75	72	1	No Gas	1.283	ug/l	18551.76
As	75	72	3	He	0.230	ug/l	393.40
Se	78	72	2	H2	0.204	ug/l	137.22
Br	79	72	1	No Gas	9.510	ug/l	161268.14
Br	79	72	2	H2	8.519	ug/l	80988.63
Se	82	72	1	No Gas	0.154	ug/l	639.27
Kr	84	72	1	No Gas		ug/l	42037.67
Sr	88	72	1	No Gas	100.043	ug/l	4045487.73
Sr	88	72	3	He	97.585	ug/l	405796.30
Mo	95	115	1	No Gas	0.205	ug/l	1935.70
Mo	95	115	3	He	0.218	ug/l	690.02
Mo	98	115	1	No Gas	0.214	ug/l	3286.72
Ag	107	115	1	No Gas	0.541	ug/l	14315.64
Ag	109	115	1	No Gas	0.533	ug/l	13664.74
Cd	111	115	1	No Gas	0.009	ug/l	42.52

ICPMS207-B Analytical Data

Name	Mass	ISTD	Tune Step	Tune Mode	Conc.	Units	CPS
Cd	111	115	3	He	0.006	ug/l	15.45
Cd	114	115	1	No Gas	0.014	ug/l	11.53
Cd	114	115	3	He	0.004	ug/l	25.61
Sn	118	115	1	No Gas	0.590	ug/l	11598.49
Sn	118	115	3	He	0.687	ug/l	3285.96
Sb	121	115	1	No Gas	0.241	ug/l	6497.15
Sb	121	115	3	He	0.249	ug/l	1626.26
Sb	123	115	1	No Gas	0.244	ug/l	5033.75
Sb	123	115	3	He	0.241	ug/l	1242.85
Ba	135	115	1	No Gas	4.461	ug/l	20777.73
Ba	137	115	1	No Gas	4.502	ug/l	37266.07
La	139	115	3	He	0.051	ug/l	1100.05
Ce	140	115	3	He	0.132	ug/l	3089.26
Hg	201	209	1	No Gas	0.012	ug/l	70.32
Hg	202	209	1	No Gas	0.017	ug/l	223.62
Hg	202	209	3	He	0.018	ug/l	99.98
Tl	203	209	3	He	0.092	ug/l	1484.02
Tl	205	209	1	No Gas	0.071	ug/l	5878.04
Tl	205	209	3	He	0.093	ug/l	3602.61
[Pb]	206	209	1	No Gas	0.264	ug/l	5084.34
[Pb]	207	209	1	No Gas	0.257	ug/l	4336.29
Pb	208	209	1	No Gas	0.258	ug/l	20180.60
Th	232	209	3	He	0.051	ug/l	2247.77
U	238	209	1	No Gas	0.013	ug/l	949.86

Name	Mass	Tune Step	Tune Mode	CPS	ISTD Recovery %
Sc	45	1	No Gas	4061565.41	72.0
Sc	45	2	H2	2183677.88	79.6
Sc	45	3	He	211026.63	66.3
Ge	72	1	No Gas	1186301.07	78.5
Ge	72	2	H2	819077.57	82.5
Ge	72	3	He	165082.31	74.1
In	115	1	No Gas	10379466.85	85.3
In	115	3	He	2077911.76	78.8
Tb	159	1	No Gas	15202650.55	93.0
Tb	159	3	He	6299806.98	92.2
Ho	165	1	No Gas	14872929.18	97.5
Ho	165	3	He	6093091.21	92.1
Lu	175	1	No Gas	15056757.79	96.7
Lu	175	3	He	4933698.63	92.1
Bi	209	1	No Gas	10457794.67	92.4
Bi	209	3	He	4596902.26	91.7

ICPMS207-B Analytical Data

Sample Name B22011126-001A
File Name 059SMPL.d
Data Path Name D:\Agilent\ICPMH\1\DATA\220121ADoD.b
Acq Time 2022-01-21 22:04:07
Sample Type Sample
Total Dilution 1.0000
Comment ICPMS-6020-W-D
Operator CAR/SRH/JPV/AEM
Method SW6020/ SW6020B

Name	Mass	ISTD	Tune Step	Tune Mode	Conc.	Units	CPS
Li	7	45	1	No Gas	0.104	ug/l	16897.46
Be	9	45	1	No Gas	-0.046	ug/l	67.65
B	11	45	1	No Gas	74.442	ug/l	174528.89
Na	23	45	3	He	56307.099	ug/l	46390304.31
Mg	24	45	3	He	30976.162	ug/l	14067802.16
Al	27	45	1	No Gas	2.161	ug/l	62005.33
Si	28	45	2	H2	19214.308	ug/l	38670189.18
K	39	72	3	He	2843.332	ug/l	1430090.81
Ca	40	72	2	H2	29674.400	ug/l	225163262.00
Ti	47	72	1	No Gas	1.181	ug/l	3130.16
V	51	72	1	No Gas	10.106	ug/l	250015.12
V	51	72	3	He	6.104	ug/l	43875.21
Cr	52	72	1	No Gas	-1.699	ug/l	48923.96
Cr	52	72	3	He	0.131	ug/l	1556.76
Mn	55	72	1	No Gas	185.210	ug/l	7002332.81
Mn	55	72	3	He	187.306	ug/l	652263.73
Fe	56	72	2	H2	0.980	ug/l	26978.22
Fe	56	72	3	He	0.719	ug/l	9125.37
Co	59	72	1	No Gas	0.313	ug/l	10552.93
Ni	60	72	1	No Gas	2.070	ug/l	15540.91
Ni	60	72	3	He	2.021	ug/l	4560.74
Cu	63	72	1	No Gas	0.881	ug/l	17448.76
Cu	63	72	3	He	0.630	ug/l	4325.45
Cu	65	72	1	No Gas	0.646	ug/l	6532.09
Zn	66	72	1	No Gas	2.047	ug/l	13216.24
Zn	66	72	3	He	2.205	ug/l	2910.31
As	75	72	1	No Gas	0.170	ug/l	15392.68
As	75	72	3	He	0.470	ug/l	769.81
Se	78	72	2	H2	0.106	ug/l	99.78
Br	79	72	1	No Gas	39.304	ug/l	614729.21
Br	79	72	2	H2	40.493	ug/l	329686.65
Se	82	72	1	No Gas	0.557	ug/l	965.57
Kr	84	72	1	No Gas		ug/l	89392.13
Sr	88	72	1	No Gas	221.815	ug/l	11261667.06
Sr	88	72	3	He	224.305	ug/l	1226115.01
Mo	95	115	1	No Gas	10.356	ug/l	110302.57
Mo	95	115	3	He	10.600	ug/l	40206.52
Mo	98	115	1	No Gas	10.142	ug/l	175921.50
Ag	107	115	1	No Gas	-0.064	ug/l	108.71
Ag	109	115	1	No Gas	-0.061	ug/l	116.05
Cd	111	115	1	No Gas	0.030	ug/l	182.76

ICPMS207-B Analytical Data

Name	Mass	ISTD	Tune Step	Tune Mode	Conc.	Units	CPS
Cd	111	115	3	He	0.028	ug/l	63.22
Cd	114	115	1	No Gas	0.043	ug/l	420.39
Cd	114	115	3	He	0.028	ug/l	152.61
Sn	118	115	1	No Gas	-0.027	ug/l	2691.61
Sn	118	115	3	He	-0.051	ug/l	627.80
Sb	121	115	1	No Gas	0.374	ug/l	11201.24
Sb	121	115	3	He	0.376	ug/l	2919.60
Sb	123	115	1	No Gas	0.370	ug/l	8503.77
Sb	123	115	3	He	0.366	ug/l	2250.74
Ba	135	115	1	No Gas	4.063	ug/l	21940.62
Ba	137	115	1	No Gas	4.042	ug/l	38800.60
La	139	115	3	He	0.000	ug/l	27.78
Ce	140	115	3	He	0.001	ug/l	66.67
Hg	201	209	1	No Gas	0.006	ug/l	54.99
Hg	202	209	1	No Gas	0.051	ug/l	561.24
Hg	202	209	3	He	0.044	ug/l	224.29
Tl	203	209	3	He	0.042	ug/l	1075.81
Tl	205	209	1	No Gas	0.033	ug/l	4444.12
Tl	205	209	3	He	0.043	ug/l	2638.66
[Pb]	206	209	1	No Gas	0.010	ug/l	794.47
[Pb]	207	209	1	No Gas	0.013	ug/l	732.25
Pb	208	209	1	No Gas	0.010	ug/l	3276.85
Th	232	209	3	He	-0.007	ug/l	312.13
U	238	209	1	No Gas	0.076	ug/l	5934.83

Name	Mass	Tune Step	Tune Mode	CPS	ISTD Recovery %
Sc	45	1	No Gas	5594715.92	99.2
Sc	45	2	H2	2662787.26	97.0
Sc	45	3	He	304456.94	95.6
Ge	72	1	No Gas	1489288.49	98.5
Ge	72	2	H2	962337.98	97.0
Ge	72	3	He	216601.79	97.3
In	115	1	No Gas	12029864.31	98.8
In	115	3	He	2549049.65	96.7
Tb	159	1	No Gas	17190333.89	105.2
Tb	159	3	He	7033946.77	102.9
Ho	165	1	No Gas	16330875.51	107.1
Ho	165	3	He	6796263.99	102.8
Lu	175	1	No Gas	17166180.16	110.3
Lu	175	3	He	5621643.48	105.0
Bi	209	1	No Gas	11607547.98	102.5
Bi	209	3	He	5060523.74	101.0

ICPMS207-B Analytical Data

Sample Name B22011126-001B
File Name 060SMPL.d
Data Path Name D:\Agilent\ICPMH\1\DATA\220121ADoD.b
Acq Time 2022-01-21 22:10:23
Sample Type Sample
Total Dilution 1.0000
Comment ICPMS-6020-W-T
Operator CAR/SRH/JPV/AEM
Method SW6020/ SW6020B

Name	Mass	ISTD	Tune Step	Tune Mode	Conc.	Units	CPS
Li	7	45	1	No Gas	1.482	ug/l	19854.86
Be	9	45	1	No Gas	-0.035	ug/l	74.32
B	11	45	1	No Gas	73.919	ug/l	119190.86
Na	23	45	3	He	54737.053	ug/l	31060844.81
Mg	24	45	3	He	29563.527	ug/l	9245896.05
Al	27	45	1	No Gas	9.249	ug/l	144682.94
Si	28	45	2	H2	18311.460	ug/l	30004269.02
K	39	72	3	He	2490.263	ug/l	960392.18
Ca	40	72	2	H2	27784.836	ug/l	181588628.90
Ti	47	72	1	No Gas	1.805	ug/l	3625.78
V	51	72	1	No Gas	2.836	ug/l	21739.17
V	51	72	3	He	10.524	ug/l	49117.71
Cr	52	72	1	No Gas	1.482	ug/l	107679.51
Cr	52	72	3	He	0.355	ug/l	2100.17
Mn	55	72	1	No Gas	195.180	ug/l	5733635.79
Mn	55	72	3	He	184.985	ug/l	489919.78
Fe	56	72	2	H2	11.497	ug/l	180640.47
Fe	56	72	3	He	11.211	ug/l	44880.00
Co	59	72	1	No Gas	0.437	ug/l	11301.96
Ni	60	72	1	No Gas	2.161	ug/l	12607.18
Ni	60	72	3	He	2.230	ug/l	3819.42
Cu	63	72	1	No Gas	1.277	ug/l	18939.25
Cu	63	72	3	He	0.967	ug/l	4779.83
Cu	65	72	1	No Gas	0.996	ug/l	7417.54
Zn	66	72	1	No Gas	1.756	ug/l	8906.43
Zn	66	72	3	He	1.796	ug/l	1833.46
As	75	72	1	No Gas	3.340	ug/l	29279.64
As	75	72	3	He	0.783	ug/l	836.81
Se	78	72	2	H2	0.156	ug/l	112.56
Br	79	72	1	No Gas	14.815	ug/l	214692.82
Br	79	72	2	H2	13.195	ug/l	111496.52
Se	82	72	1	No Gas	0.504	ug/l	732.34
Kr	84	72	1	No Gas		ug/l	77346.68
Sr	88	72	1	No Gas	250.312	ug/l	9879785.58
Sr	88	72	3	He	231.386	ug/l	961976.35
Mo	95	115	1	No Gas	11.260	ug/l	97144.76
Mo	95	115	3	He	11.666	ug/l	35954.26
Mo	98	115	1	No Gas	11.515	ug/l	161776.90
Ag	107	115	1	No Gas	-0.064	ug/l	80.03
Ag	109	115	1	No Gas	-0.061	ug/l	89.37
Cd	111	115	1	No Gas	0.012	ug/l	60.34

ICPMS207-B Analytical Data

Name	Mass	ISTD	Tune Step	Tune Mode	Conc.	Units	CPS
Cd	111	115	3	He	0.008	ug/l	18.78
Cd	114	115	1	No Gas	0.019	ug/l	71.72
Cd	114	115	3	He	0.007	ug/l	38.38
Sn	118	115	1	No Gas	0.536	ug/l	10150.23
Sn	118	115	3	He	0.562	ug/l	2821.41
Sb	121	115	1	No Gas	0.445	ug/l	10630.43
Sb	121	115	3	He	0.421	ug/l	2640.18
Sb	123	115	1	No Gas	0.452	ug/l	8300.29
Sb	123	115	3	He	0.433	ug/l	2139.05
Ba	135	115	1	No Gas	4.555	ug/l	19871.55
Ba	137	115	1	No Gas	4.579	ug/l	35538.43
La	139	115	3	He	0.007	ug/l	160.00
Ce	140	115	3	He	0.017	ug/l	432.23
Hg	201	209	1	No Gas	0.013	ug/l	67.99
Hg	202	209	1	No Gas	0.079	ug/l	687.21
Hg	202	209	3	He	0.058	ug/l	259.95
Tl	203	209	3	He	0.054	ug/l	1097.82
Tl	205	209	1	No Gas	0.045	ug/l	4295.18
Tl	205	209	3	He	0.055	ug/l	2688.03
[Pb]	206	209	1	No Gas	0.037	ug/l	1100.05
[Pb]	207	209	1	No Gas	0.036	ug/l	937.82
Pb	208	209	1	No Gas	0.035	ug/l	4328.08
Th	232	209	3	He	0.023	ug/l	1299.92
U	238	209	1	No Gas	0.089	ug/l	5835.81

Name	Mass	Tune Step	Tune Mode	CPS	ISTD Recovery %
Sc	45	1	No Gas	3864332.34	68.5
Sc	45	2	H2	2167963.28	79.0
Sc	45	3	He	209705.28	65.8
Ge	72	1	No Gas	1159913.27	76.7
Ge	72	2	H2	828820.67	83.5
Ge	72	3	He	164729.06	74.0
In	115	1	No Gas	9811687.27	80.6
In	115	3	He	2070672.03	78.6
Tb	159	1	No Gas	14228263.08	87.1
Tb	159	3	He	6324213.31	92.5
Ho	165	1	No Gas	13563317.74	88.9
Ho	165	3	He	6058841.13	91.6
Lu	175	1	No Gas	14013527.82	90.0
Lu	175	3	He	4919405.53	91.9
Bi	209	1	No Gas	9831235.20	86.8
Bi	209	3	He	4603465.76	91.8

ICPMS207-B Analytical Data

Sample Name B22011127-001A
File Name 061SMPL.d
Data Path Name D:\Agilent\ICPMH\1\DATA\220121ADoD.b
Acq Time 2022-01-21 22:16:39
Sample Type Sample
Total Dilution 1.0000
Comment ICPMS-6020-W-D
Operator CAR/SRH/JPV/AEM
Method SW6020/ SW6020B

Name	Mass	ISTD	Tune Step	Tune Mode	Conc.	Units	CPS
Li	7	45	1	No Gas	0.884	ug/l	23559.67
Be	9	45	1	No Gas	-0.049	ug/l	56.32
B	11	45	1	No Gas	67.560	ug/l	158225.49
Na	23	45	3	He	90915.508	ug/l	76830709.41
Mg	24	45	3	He	34748.934	ug/l	16193437.09
Al	27	45	1	No Gas	13.923	ug/l	307447.12
Si	28	45	2	H2	23119.256	ug/l	48323213.51
K	39	72	3	He	3304.363	ug/l	1708308.41
Ca	40	72	2	H2	41733.553	ug/l	330958516.86
Ti	47	72	1	No Gas	2.499	ug/l	6264.55
V	51	72	1	No Gas	16.519	ug/l	437083.96
V	51	72	3	He	12.096	ug/l	74528.83
Cr	52	72	1	No Gas	-0.648	ug/l	77028.15
Cr	52	72	3	He	1.127	ug/l	7146.22
Mn	55	72	1	No Gas	4.886	ug/l	191434.67
Mn	55	72	3	He	4.952	ug/l	18019.75
Fe	56	72	2	H2	60.208	ug/l	1103312.05
Fe	56	72	3	He	57.807	ug/l	290642.92
Co	59	72	1	No Gas	0.131	ug/l	4641.55
Ni	60	72	1	No Gas	1.019	ug/l	7746.73
Ni	60	72	3	He	0.793	ug/l	1914.58
Cu	63	72	1	No Gas	1.707	ug/l	31287.31
Cu	63	72	3	He	1.200	ug/l	7912.56
Cu	65	72	1	No Gas	1.290	ug/l	11846.25
Zn	66	72	1	No Gas	3.610	ug/l	22102.36
Zn	66	72	3	He	3.540	ug/l	4699.67
As	75	72	1	No Gas	1.444	ug/l	23949.99
As	75	72	3	He	1.650	ug/l	2085.31
Se	78	72	2	H2	0.392	ug/l	291.45
Br	79	72	1	No Gas	62.317	ug/l	915263.52
Br	79	72	2	H2	61.383	ug/l	504796.08
Se	82	72	1	No Gas	1.556	ug/l	1344.68
Kr	84	72	1	No Gas		ug/l	112429.68
Sr	88	72	1	No Gas	299.429	ug/l	14908842.90
Sr	88	72	3	He	305.192	ug/l	1728230.22
Mo	95	115	1	No Gas	3.684	ug/l	40158.69
Mo	95	115	3	He	3.823	ug/l	15066.90
Mo	98	115	1	No Gas	3.770	ug/l	66911.45
Ag	107	115	1	No Gas	-0.052	ug/l	439.52
Ag	109	115	1	No Gas	-0.050	ug/l	422.18
Cd	111	115	1	No Gas	0.028	ug/l	174.50

ICPMS207-B Analytical Data

Name	Mass	ISTD	Tune Step	Tune Mode	Conc.	Units	CPS
Cd	111	115	3	He	0.023	ug/l	53.67
Cd	114	115	1	No Gas	0.039	ug/l	369.27
Cd	114	115	3	He	0.025	ug/l	143.74
Sn	118	115	1	No Gas	-0.004	ug/l	3150.79
Sn	118	115	3	He	-0.023	ug/l	783.36
Sb	121	115	1	No Gas	0.079	ug/l	3158.01
Sb	121	115	3	He	0.076	ug/l	784.43
Sb	123	115	1	No Gas	0.082	ug/l	2472.80
Sb	123	115	3	He	0.086	ug/l	672.42
Ba	135	115	1	No Gas	10.073	ug/l	55513.60
Ba	137	115	1	No Gas	9.899	ug/l	96988.26
La	139	115	3	He	0.042	ug/l	1173.39
Ce	140	115	3	He	0.093	ug/l	2808.08
Hg	201	209	1	No Gas	0.115	ug/l	484.25
Hg	202	209	1	No Gas	2.249	ug/l	20509.32
Hg	202	209	3	He	1.813	ug/l	7892.10
Tl	203	209	3	He	0.031	ug/l	947.75
Tl	205	209	1	No Gas	0.013	ug/l	3359.35
Tl	205	209	3	He	0.015	ug/l	1881.56
[Pb]	206	209	1	No Gas	0.172	ug/l	3863.92
[Pb]	207	209	1	No Gas	0.171	ug/l	3367.11
Pb	208	209	1	No Gas	0.169	ug/l	15425.82
Th	232	209	3	He	-0.008	ug/l	270.78
U	238	209	1	No Gas	0.180	ug/l	13858.22

Name	Mass	Tune Step	Tune Mode	CPS	ISTD Recovery %
Sc	45	1	No Gas	5572867.07	98.8
Sc	45	2	H2	2770139.68	100.9
Sc	45	3	He	312411.29	98.1
Ge	72	1	No Gas	1460507.82	96.6
Ge	72	2	H2	1006254.73	101.4
Ge	72	3	He	224381.03	100.8
In	115	1	No Gas	12295953.42	101.0
In	115	3	He	2645762.18	100.4
Tb	159	1	No Gas	17304658.01	105.9
Tb	159	3	He	7229412.54	105.8
Ho	165	1	No Gas	16470722.85	108.0
Ho	165	3	He	6857218.49	103.7
Lu	175	1	No Gas	16941673.99	108.9
Lu	175	3	He	5637814.23	105.3
Bi	209	1	No Gas	11560865.31	102.1
Bi	209	3	He	5042463.00	100.6

ICPMS207-B Analytical Data

Sample Name B22011127-001B
File Name 062SMPL.d
Data Path Name D:\Agilent\ICPMH\1\DATA\220121ADoD.b
Acq Time 2022-01-21 22:22:54
Sample Type Sample
Total Dilution 1.0000
Comment ICPMS-6020-W-T
Operator CAR/SRH/JPV/AEM
Method SW6020/ SW6020B

Name	Mass	ISTD	Tune Step	Tune Mode	Conc.	Units	CPS
Li	7	45	1	No Gas	1.884	ug/l	22162.30
Be	9	45	1	No Gas	-0.038	ug/l	65.66
B	11	45	1	No Gas	70.808	ug/l	113833.04
Na	23	45	3	He	92709.797	ug/l	55649263.61
Mg	24	45	3	He	34290.368	ug/l	11352574.94
Al	27	45	1	No Gas	57.808	ug/l	843110.37
Si	28	45	2	H2	22299.983	ug/l	37595091.50
K	39	72	3	He	2985.047	ug/l	1174383.15
Ca	40	72	2	H2	39984.267	ug/l	264424992.34
Ti	47	72	1	No Gas	5.825	ug/l	11262.40
V	51	72	1	No Gas	18.740	ug/l	396603.56
V	51	72	3	He	16.936	ug/l	74191.16
Cr	52	72	1	No Gas	2.958	ug/l	139086.98
Cr	52	72	3	He	1.543	ug/l	7157.34
Mn	55	72	1	No Gas	6.733	ug/l	204784.30
Mn	55	72	3	He	6.022	ug/l	16557.67
Fe	56	72	2	H2	151.812	ug/l	2307767.37
Fe	56	72	3	He	140.264	ug/l	527432.75
Co	59	72	1	No Gas	0.281	ug/l	7353.95
Ni	60	72	1	No Gas	1.002	ug/l	6006.02
Ni	60	72	3	He	0.784	ug/l	1434.53
Cu	63	72	1	No Gas	1.864	ug/l	26751.27
Cu	63	72	3	He	1.255	ug/l	6244.43
Cu	65	72	1	No Gas	1.354	ug/l	9761.87
Zn	66	72	1	No Gas	3.849	ug/l	18480.00
Zn	66	72	3	He	3.933	ug/l	3935.00
As	75	72	1	No Gas	4.834	ug/l	37514.55
As	75	72	3	He	2.082	ug/l	1934.56
Se	78	72	2	H2	0.462	ug/l	281.45
Br	79	72	1	No Gas	21.767	ug/l	287018.26
Br	79	72	2	H2	18.798	ug/l	148641.03
Se	82	72	1	No Gas	0.867	ug/l	840.49
Kr	84	72	1	No Gas		ug/l	94411.66
Sr	88	72	1	No Gas	331.752	ug/l	13006313.64
Sr	88	72	3	He	315.944	ug/l	1353789.41
Mo	95	115	1	No Gas	4.159	ug/l	36721.90
Mo	95	115	3	He	4.264	ug/l	13369.65
Mo	98	115	1	No Gas	4.257	ug/l	61153.03
Ag	107	115	1	No Gas	-0.049	ug/l	429.51
Ag	109	115	1	No Gas	-0.046	ug/l	435.52
Cd	111	115	1	No Gas	0.014	ug/l	67.05

ICPMS207-B Analytical Data

Name	Mass	ISTD	Tune Step	Tune Mode	Conc.	Units	CPS
Cd	111	115	3	He	0.008	ug/l	18.33
Cd	114	115	1	No Gas	0.020	ug/l	77.87
Cd	114	115	3	He	0.004	ug/l	28.58
Sn	118	115	1	No Gas	0.570	ug/l	10849.40
Sn	118	115	3	He	0.632	ug/l	3134.81
Sb	121	115	1	No Gas	0.111	ug/l	3271.05
Sb	121	115	3	He	0.104	ug/l	791.77
Sb	123	115	1	No Gas	0.121	ug/l	2675.20
Sb	123	115	3	He	0.108	ug/l	639.41
Ba	135	115	1	No Gas	10.922	ug/l	48742.62
Ba	137	115	1	No Gas	11.126	ug/l	88242.01
La	139	115	3	He	0.077	ug/l	1690.11
Ce	140	115	3	He	0.182	ug/l	4357.39
Hg	201	209	1	No Gas	0.154	ug/l	535.57
Hg	202	209	1	No Gas	2.963	ug/l	22603.64
Hg	202	209	3	He	2.004	ug/l	7955.46
Tl	203	209	3	He	0.054	ug/l	1103.16
Tl	205	209	1	No Gas	0.032	ug/l	3681.65
Tl	205	209	3	He	0.041	ug/l	2349.16
[Pb]	206	209	1	No Gas	0.305	ug/l	5362.22
[Pb]	207	209	1	No Gas	0.300	ug/l	4618.61
Pb	208	209	1	No Gas	0.292	ug/l	20835.32
Th	232	209	3	He	0.013	ug/l	971.09
U	238	209	1	No Gas	0.207	ug/l	13347.81

Name	Mass	Tune Step	Tune Mode	CPS	ISTD Recovery %
Sc	45	1	No Gas	3845454.61	68.2
Sc	45	2	H2	2230247.69	81.2
Sc	45	3	He	221949.58	69.7
Ge	72	1	No Gas	1151621.25	76.2
Ge	72	2	H2	838778.02	84.5
Ge	72	3	He	169845.04	76.3
In	115	1	No Gas	9961606.34	81.8
In	115	3	He	2105280.20	79.9
Tb	159	1	No Gas	14174998.14	86.7
Tb	159	3	He	6180732.75	90.4
Ho	165	1	No Gas	13440607.01	88.1
Ho	165	3	He	6104789.26	92.3
Lu	175	1	No Gas	14082079.71	90.5
Lu	175	3	He	4965584.16	92.7
Bi	209	1	No Gas	9711715.55	85.8
Bi	209	3	He	4601095.29	91.8

ICPMS207-B Analytical Data

Sample Name B22011128-001A
File Name 063SMPL.d
Data Path Name D:\Agilent\ICPMH\1\DATA\220121ADoD.b
Acq Time 2022-01-21 22:29:09
Sample Type Sample
Total Dilution 1.0000
Comment ICPMS-6020-W-D
Operator CAR/SRH/JPV/AEM
Method SW6020/ SW6020B

Name	Mass	ISTD	Tune Step	Tune Mode	Conc.	Units	CPS
Li	7	45	1	No Gas	5.034	ug/l	60480.07
Be	9	45	1	No Gas	-0.051	ug/l	48.66
B	11	45	1	No Gas	89.962	ug/l	212189.38
Na	23	45	3	He	105899.635	ug/l	90495321.98
Mg	24	45	3	He	27452.362	ug/l	12936890.72
Al	27	45	1	No Gas	0.696	ug/l	31617.93
Si	28	45	2	H2	24386.583	ug/l	51599622.00
K	39	72	3	He	7103.350	ug/l	3563044.57
Ca	40	72	2	H2	25973.575	ug/l	202486486.02
Ti	47	72	1	No Gas	1.655	ug/l	4286.62
V	51	72	1	No Gas	14.236	ug/l	374840.12
V	51	72	3	He	10.458	ug/l	66362.26
Cr	52	72	1	No Gas	-0.603	ug/l	79557.13
Cr	52	72	3	He	1.325	ug/l	8222.35
Mn	55	72	1	No Gas	0.125	ug/l	15484.14
Mn	55	72	3	He	0.221	ug/l	952.18
Fe	56	72	2	H2	0.430	ug/l	17898.89
Fe	56	72	3	He	0.314	ug/l	7432.71
Co	59	72	1	No Gas	0.038	ug/l	1773.26
Ni	60	72	1	No Gas	0.968	ug/l	7503.76
Ni	60	72	3	He	0.818	ug/l	1965.70
Cu	63	72	1	No Gas	1.049	ug/l	20314.92
Cu	63	72	3	He	0.489	ug/l	3624.73
Cu	65	72	1	No Gas	0.573	ug/l	5882.23
Zn	66	72	1	No Gas	0.542	ug/l	4238.64
Zn	66	72	3	He	0.575	ug/l	953.37
As	75	72	1	No Gas	3.230	ug/l	36936.67
As	75	72	3	He	3.308	ug/l	3880.77
Se	78	72	2	H2	0.714	ug/l	494.12
Br	79	72	1	No Gas	38.244	ug/l	598258.03
Br	79	72	2	H2	37.029	ug/l	312464.03
Se	82	72	1	No Gas	1.536	ug/l	1357.75
Kr	84	72	1	No Gas		ug/l	105632.53
Sr	88	72	1	No Gas	279.107	ug/l	14128070.06
Sr	88	72	3	He	284.410	ug/l	1605471.28
Mo	95	115	1	No Gas	9.835	ug/l	106294.98
Mo	95	115	3	He	10.024	ug/l	38902.98
Mo	98	115	1	No Gas	9.814	ug/l	172700.19
Ag	107	115	1	No Gas	-0.062	ug/l	166.74
Ag	109	115	1	No Gas	-0.059	ug/l	174.74
Cd	111	115	1	No Gas	0.032	ug/l	197.19

ICPMS207-B Analytical Data

Name	Mass	ISTD	Tune Step	Tune Mode	Conc.	Units	CPS
Cd	111	115	3	He	0.026	ug/l	60.44
Cd	114	115	1	No Gas	0.039	ug/l	369.68
Cd	114	115	3	He	0.024	ug/l	135.76
Sn	118	115	1	No Gas	0.155	ug/l	5942.81
Sn	118	115	3	He	0.146	ug/l	1576.76
Sb	121	115	1	No Gas	0.306	ug/l	9442.44
Sb	121	115	3	He	0.298	ug/l	2413.45
Sb	123	115	1	No Gas	0.304	ug/l	7220.59
Sb	123	115	3	He	0.303	ug/l	1929.66
Ba	135	115	1	No Gas	26.078	ug/l	142520.03
Ba	137	115	1	No Gas	25.134	ug/l	244240.91
La	139	115	3	He	0.002	ug/l	81.11
Ce	140	115	3	He	0.023	ug/l	719.14
Hg	201	209	1	No Gas	0.061	ug/l	266.95
Hg	202	209	1	No Gas	1.158	ug/l	10501.05
Hg	202	209	3	He	0.933	ug/l	4046.81
Tl	203	209	3	He	0.019	ug/l	813.02
Tl	205	209	1	No Gas	0.008	ug/l	3067.04
Tl	205	209	3	He	0.009	ug/l	1726.14
[Pb]	206	209	1	No Gas	0.019	ug/l	954.49
[Pb]	207	209	1	No Gas	0.017	ug/l	794.47
Pb	208	209	1	No Gas	0.016	ug/l	3679.11
Th	232	209	3	He	-0.006	ug/l	328.14
U	238	209	1	No Gas	0.377	ug/l	28649.53

Name	Mass	Tune Step	Tune Mode	CPS	ISTD Recovery %
Sc	45	1	No Gas	5664158.55	100.5
Sc	45	2	H2	2799439.34	102.0
Sc	45	3	He	315929.13	99.2
Ge	72	1	No Gas	1484896.28	98.2
Ge	72	2	H2	988702.16	99.6
Ge	72	3	He	223661.71	100.4
In	115	1	No Gas	12201336.12	100.2
In	115	3	He	2607515.88	98.9
Tb	159	1	No Gas	16921160.15	103.5
Tb	159	3	He	6974848.09	102.1
Ho	165	1	No Gas	15977324.47	104.8
Ho	165	3	He	6766035.17	102.3
Lu	175	1	No Gas	16484312.48	105.9
Lu	175	3	He	5595726.62	104.5
Bi	209	1	No Gas	11447284.42	101.1
Bi	209	3	He	5008749.14	99.9

ICPMS207-B Analytical Data

Sample Name CCV
File Name 064_CCV.d
Data Path Name D:\Agilent\ICPMH\1\DATA\220121ADoD.b
Acq Time 2022-01-21 22:35:25
Sample Type CCV
Total Dilution 1.0000
Comment ICPMS-6020-W-D
Operator CAR/SRH/JPV/AEM
Method SW6020/ SW6020B

Name	Mass	ISTD	Tune Step	Tune Mode	Conc.	Units	CPS
Li	7	45	1	No Gas	492.159	ug/l	3659185.96
Be	9	45	1	No Gas	43.360	ug/l	136743.77
B	11	45	1	No Gas	45.675	ug/l	93069.81
Na	23	45	3	He	12416.311	ug/l	8943432.02
Mg	24	45	3	He	12182.191	ug/l	4817689.64
Al	27	45	1	No Gas	53.593	ug/l	973035.19
Si	28	45	2	H2	225.209	ug/l	424904.81
K	39	72	3	He	11290.203	ug/l	4990926.59
Ca	40	72	2	H2	12075.549	ug/l	89599915.09
Ti	47	72	1	No Gas	47.168	ug/l	105677.55
V	51	72	1	No Gas	53.313	ug/l	1420655.67
V	51	72	3	He	49.456	ug/l	226714.85
Cr	52	72	1	No Gas	48.220	ug/l	1320106.11
Cr	52	72	3	He	47.696	ug/l	235625.58
Mn	55	72	1	No Gas	49.342	ug/l	1698840.63
Mn	55	72	3	He	48.611	ug/l	155469.47
Fe	56	72	2	H2	1296.894	ug/l	22033849.74
Fe	56	72	3	He	1254.405	ug/l	5479691.79
Co	59	72	1	No Gas	49.164	ug/l	1423643.16
Ni	60	72	1	No Gas	48.602	ug/l	320722.26
Ni	60	72	3	He	49.905	ug/l	101305.19
Cu	63	72	1	No Gas	48.653	ug/l	773863.28
Cu	63	72	3	He	50.925	ug/l	272334.23
Cu	65	72	1	No Gas	48.592	ug/l	380573.47
Zn	66	72	1	No Gas	49.777	ug/l	269730.48
Zn	66	72	3	He	51.498	ug/l	57836.74
As	75	72	1	No Gas	49.766	ug/l	332445.56
As	75	72	3	He	50.365	ug/l	48930.00
Se	78	72	2	H2	51.853	ug/l	31805.10
Br	79	72	1	No Gas	16.895	ug/l	276213.90
Br	79	72	2	H2	16.030	ug/l	146847.35
Se	82	72	1	No Gas	49.430	ug/l	18831.56
Kr	84	72	1	No Gas		ug/l	34126.00
Sr	88	72	1	No Gas	52.457	ug/l	2415659.84
Sr	88	72	3	He	50.754	ug/l	254849.57
Mo	95	115	1	No Gas	49.346	ug/l	501945.83
Mo	95	115	3	He	51.259	ug/l	178141.62
Mo	98	115	1	No Gas	49.586	ug/l	821262.92
Ag	107	115	1	No Gas	19.666	ug/l	514051.60
Ag	109	115	1	No Gas	19.381	ug/l	491762.04
Cd	111	115	1	No Gas	49.263	ug/l	289386.96

ICPMS207-B Analytical Data

Name	Mass	ISTD	Tune Step	Tune Mode	Conc.	Units	CPS
Cd	111	115	3	He	51.281	ug/l	94045.92
Cd	114	115	1	No Gas	50.575	ug/l	656913.75
Cd	114	115	3	He	51.534	ug/l	232030.40
Sn	118	115	1	No Gas	51.236	ug/l	856122.98
Sn	118	115	3	He	53.215	ug/l	227189.56
Sb	121	115	1	No Gas	52.957	ug/l	1392178.51
Sb	121	115	3	He	53.447	ug/l	354046.70
Sb	123	115	1	No Gas	52.827	ug/l	1068615.77
Sb	123	115	3	He	53.582	ug/l	280488.64
Ba	135	115	1	No Gas	51.057	ug/l	262654.72
Ba	137	115	1	No Gas	49.351	ug/l	451456.22
La	139	115	3	He	51.379	ug/l	1237116.36
Ce	140	115	3	He	52.473	ug/l	1381908.35
Hg	201	209	1	No Gas	0.959	ug/l	3800.79
Hg	202	209	1	No Gas	0.984	ug/l	8958.22
Hg	202	209	3	He	1.019	ug/l	4353.18
Tl	203	209	3	He	48.832	ug/l	533180.73
Tl	205	209	1	No Gas	49.631	ug/l	2671760.58
Tl	205	209	3	He	49.843	ug/l	1289577.94
[Pb]	206	209	1	No Gas	50.739	ug/l	959388.32
[Pb]	207	209	1	No Gas	49.628	ug/l	820233.22
Pb	208	209	1	No Gas	49.912	ug/l	3809936.03
Th	232	209	3	He	50.804	ug/l	1850891.79
U	238	209	1	No Gas	50.885	ug/l	3864083.39

Name	Mass	Tune Step	Tune Mode	CPS	ISTD Recovery %
Sc	45	1	No Gas	4771663.41	84.6
Sc	45	2	H2	2457682.12	89.5
Sc	45	3	He	265195.57	83.3
Ge	72	1	No Gas	1350479.06	89.3
Ge	72	2	H2	940663.35	94.8
Ge	72	3	He	198802.64	89.3
In	115	1	No Gas	11489393.23	94.4
In	115	3	He	2335931.40	88.6
Tb	159	1	No Gas	16011411.58	98.0
Tb	159	3	He	6666236.32	97.6
Ho	165	1	No Gas	15412547.42	101.1
Ho	165	3	He	6433912.75	97.3
Lu	175	1	No Gas	16136542.33	103.7
Lu	175	3	He	5234309.65	97.7
Bi	209	1	No Gas	11484303.64	101.4
Bi	209	3	He	4935353.05	98.5

ICPMS207-B Analytical Data

Sample Name CCB
File Name 065_CCB.d
Data Path Name D:\Agilent\ICPMH\1\DATA\220121ADoD.b
Acq Time 2022-01-21 22:41:39
Sample Type CCB
Total Dilution 1.0000
Comment ICPMS-6020-W-D
Operator CAR/SRH/JPV/AEM
Method SW6020/ SW6020B

Name	Mass	ISTD	Tune Step	Tune Mode	Conc.	Units	CPS
Li	7	45	1	No Gas	0.488	ug/l	16524.91
Be	9	45	1	No Gas	-0.049	ug/l	47.32
B	11	45	1	No Gas	0.687	ug/l	5802.13
Na	23	45	3	He	46.382	ug/l	66197.04
Mg	24	45	3	He	0.668	ug/l	1633.53
Al	27	45	1	No Gas	-0.234	ug/l	9570.90
Si	28	45	2	H2	4.356	ug/l	14228.50
K	39	72	3	He	-23.051	ug/l	59993.80
Ca	40	72	2	H2	-0.987	ug/l	84726.32
Ti	47	72	1	No Gas	0.019	ug/l	235.24
V	51	72	1	No Gas	4.905	ug/l	81741.24
V	51	72	3	He	1.181	ug/l	17774.16
Cr	52	72	1	No Gas	-0.299	ug/l	79016.17
Cr	52	72	3	He	0.037	ug/l	900.03
Mn	55	72	1	No Gas	0.037	ug/l	10935.69
Mn	55	72	3	He	0.004	ug/l	141.64
Fe	56	72	2	H2	0.036	ug/l	9886.63
Fe	56	72	3	He	0.044	ug/l	5054.32
Co	59	72	1	No Gas	0.001	ug/l	515.65
Ni	60	72	1	No Gas	-0.003	ug/l	422.50
Ni	60	72	3	He	0.007	ug/l	94.44
Cu	63	72	1	No Gas	-0.009	ug/l	1669.44
Cu	63	72	3	He	-0.002	ug/l	560.57
Cu	65	72	1	No Gas	-0.004	ug/l	830.36
Zn	66	72	1	No Gas	-0.006	ug/l	882.52
Zn	66	72	3	He	0.025	ug/l	215.56
As	75	72	1	No Gas	0.369	ug/l	15011.59
As	75	72	3	He	-0.006	ug/l	229.27
Se	78	72	2	H2	0.000	ug/l	30.89
Br	79	72	1	No Gas	0.894	ug/l	74401.00
Br	79	72	2	H2	0.763	ug/l	35723.17
Se	82	72	1	No Gas	-0.122	ug/l	617.41
Kr	84	72	1	No Gas		ug/l	18711.81
Sr	88	72	1	No Gas	0.000	ug/l	728.58
Sr	88	72	3	He	-0.006	ug/l	218.89
Mo	95	115	1	No Gas	0.019	ug/l	256.67
Mo	95	115	3	He	0.012	ug/l	61.11
Mo	98	115	1	No Gas	0.018	ug/l	396.81
Ag	107	115	1	No Gas	-0.004	ug/l	1672.77
Ag	109	115	1	No Gas	-0.002	ug/l	1622.08
Cd	111	115	1	No Gas	-0.001	ug/l	-6.52

ICPMS207-B Analytical Data

Name	Mass	ISTD	Tune Step	Tune Mode	Conc.	Units	CPS
Cd	111	115	3	He	0.003	ug/l	10.89
Cd	114	115	1	No Gas	0.005	ug/l	-93.58
Cd	114	115	3	He	0.003	ug/l	27.39
Sn	118	115	1	No Gas	0.030	ug/l	3546.75
Sn	118	115	3	He	0.010	ug/l	833.36
Sb	121	115	1	No Gas	0.073	ug/l	2797.57
Sb	121	115	3	He	0.045	ug/l	487.39
Sb	123	115	1	No Gas	0.073	ug/l	2147.72
Sb	123	115	3	He	0.049	ug/l	401.38
Ba	135	115	1	No Gas	-0.001	ug/l	56.55
Ba	137	115	1	No Gas	0.003	ug/l	123.09
La	139	115	3	He	0.000	ug/l	17.78
Ce	140	115	3	He	0.000	ug/l	21.11
Hg	201	209	1	No Gas	0.004	ug/l	44.99
Hg	202	209	1	No Gas	0.009	ug/l	183.30
Hg	202	209	3	He	0.009	ug/l	68.65
Tl	203	209	3	He	0.126	ug/l	1990.95
Tl	205	209	1	No Gas	0.108	ug/l	8679.61
Tl	205	209	3	He	0.126	ug/l	4778.78
[Pb]	206	209	1	No Gas	0.007	ug/l	740.03
[Pb]	207	209	1	No Gas	0.007	ug/l	648.91
Pb	208	209	1	No Gas	0.006	ug/l	2953.48
Th	232	209	3	He	0.013	ug/l	1033.13
U	238	209	1	No Gas	0.002	ug/l	266.28

Name	Mass	Tune Step	Tune Mode	CPS	ISTD Recovery %
Sc	45	1	No Gas	4567984.25	81.0
Sc	45	2	H2	2378675.98	86.7
Sc	45	3	He	238030.62	74.7
Ge	72	1	No Gas	1331299.29	88.1
Ge	72	2	H2	898642.69	90.6
Ge	72	3	He	185005.99	83.1
In	115	1	No Gas	11574531.56	95.1
In	115	3	He	2332540.03	88.5
Tb	159	1	No Gas	16815945.77	102.9
Tb	159	3	He	6631139.34	97.0
Ho	165	1	No Gas	15804883.49	103.6
Ho	165	3	He	6321499.72	95.6
Lu	175	1	No Gas	15965056.47	102.6
Lu	175	3	He	5091315.41	95.1
Bi	209	1	No Gas	11775585.02	104.0
Bi	209	3	He	5000545.96	99.8

ICPMS207-B Analytical Data

Sample Name B22011128-001B
File Name 066SMPL.d
Data Path Name D:\Agilent\ICPMH\1\DATA\220121ADoD.b
Acq Time 2022-01-21 22:47:53
Sample Type Sample
Total Dilution 1.0000
Comment ICPMS-6020-W-T
Operator CAR/SRH/JPV/AEM
Method SW6020/ SW6020B

Name	Mass	ISTD	Tune Step	Tune Mode	Conc.	Units	CPS
Li	7	45	1	No Gas	4.947	ug/l	41277.98
Be	9	45	1	No Gas	-0.041	ug/l	60.66
B	11	45	1	No Gas	82.537	ug/l	134629.23
Na	23	45	3	He	101004.131	ug/l	55974485.28
Mg	24	45	3	He	25856.543	ug/l	7901550.95
Al	27	45	1	No Gas	4.466	ug/l	77048.77
Si	28	45	2	H2	22325.048	ug/l	36353548.25
K	39	72	3	He	6077.331	ug/l	2250781.48
Ca	40	72	2	H2	24705.489	ug/l	159277263.32
Ti	47	72	1	No Gas	1.805	ug/l	3682.52
V	51	72	1	No Gas	7.822	ug/l	144860.09
V	51	72	3	He	14.811	ug/l	64307.22
Cr	52	72	1	No Gas	2.542	ug/l	132623.63
Cr	52	72	3	He	1.512	ug/l	6808.27
Mn	55	72	1	No Gas	2.104	ug/l	71078.03
Mn	55	72	3	He	1.683	ug/l	4566.80
Fe	56	72	2	H2	3.754	ug/l	63892.94
Fe	56	72	3	He	3.465	ug/l	16845.01
Co	59	72	1	No Gas	0.142	ug/l	4025.91
Ni	60	72	1	No Gas	1.011	ug/l	6179.07
Ni	60	72	3	He	0.963	ug/l	1690.11
Cu	63	72	1	No Gas	1.408	ug/l	20982.23
Cu	63	72	3	He	0.798	ug/l	4026.76
Cu	65	72	1	No Gas	0.846	ug/l	6496.74
Zn	66	72	1	No Gas	0.605	ug/l	3645.53
Zn	66	72	3	He	0.614	ug/l	736.69
As	75	72	1	No Gas	4.291	ug/l	34950.43
As	75	72	3	He	3.608	ug/l	3094.34
Se	78	72	2	H2	0.800	ug/l	454.12
Br	79	72	1	No Gas	12.717	ug/l	195107.34
Br	79	72	2	H2	10.825	ug/l	95226.80
Se	82	72	1	No Gas	0.907	ug/l	870.76
Kr	84	72	1	No Gas		ug/l	88421.93
Sr	88	72	1	No Gas	296.054	ug/l	11829045.86
Sr	88	72	3	He	284.884	ug/l	1182825.51
Mo	95	115	1	No Gas	10.202	ug/l	91115.04
Mo	95	115	3	He	10.580	ug/l	32059.43
Mo	98	115	1	No Gas	10.338	ug/l	150439.08
Ag	107	115	1	No Gas	-0.056	ug/l	264.11
Ag	109	115	1	No Gas	-0.055	ug/l	236.77
Cd	111	115	1	No Gas	0.010	ug/l	48.85

ICPMS207-B Analytical Data

Name	Mass	ISTD	Tune Step	Tune Mode	Conc.	Units	CPS
Cd	111	115	3	He	0.004	ug/l	11.22
Cd	114	115	1	No Gas	0.017	ug/l	51.13
Cd	114	115	3	He	0.001	ug/l	13.67
Sn	118	115	1	No Gas	0.701	ug/l	12847.15
Sn	118	115	3	He	0.715	ug/l	3341.53
Sb	121	115	1	No Gas	0.377	ug/l	9456.80
Sb	121	115	3	He	0.381	ug/l	2360.44
Sb	123	115	1	No Gas	0.376	ug/l	7239.27
Sb	123	115	3	He	0.384	ug/l	1878.98
Ba	135	115	1	No Gas	26.992	ug/l	121847.16
Ba	137	115	1	No Gas	26.798	ug/l	214852.35
La	139	115	3	He	0.004	ug/l	96.66
Ce	140	115	3	He	0.007	ug/l	191.11
Hg	201	209	1	No Gas	0.080	ug/l	312.61
Hg	202	209	1	No Gas	1.373	ug/l	11388.94
Hg	202	209	3	He	1.054	ug/l	4070.48
Tl	203	209	3	He	0.077	ug/l	1296.59
Tl	205	209	1	No Gas	0.054	ug/l	5093.25
Tl	205	209	3	He	0.070	ug/l	2960.86
[Pb]	206	209	1	No Gas	0.039	ug/l	1225.62
[Pb]	207	209	1	No Gas	0.037	ug/l	1041.16
Pb	208	209	1	No Gas	0.038	ug/l	4918.17
Th	232	209	3	He	0.041	ug/l	1858.88
U	238	209	1	No Gas	0.393	ug/l	27366.84

Name	Mass	Tune Step	Tune Mode	CPS	ISTD Recovery %
Sc	45	1	No Gas	3975799.72	70.5
Sc	45	2	H2	2154322.20	78.5
Sc	45	3	He	204881.04	64.3
Ge	72	1	No Gas	1180457.36	78.1
Ge	72	2	H2	817590.39	82.4
Ge	72	3	He	164541.55	73.9
In	115	1	No Gas	10250827.95	84.2
In	115	3	He	2036203.69	77.3
Tb	159	1	No Gas	15128606.41	92.6
Tb	159	3	He	6117916.50	89.5
Ho	165	1	No Gas	14496861.14	95.1
Ho	165	3	He	5929349.72	89.6
Lu	175	1	No Gas	15065764.29	96.8
Lu	175	3	He	4807679.02	89.8
Bi	209	1	No Gas	10663395.52	94.2
Bi	209	3	He	4465409.41	89.1

ICPMS207-B Analytical Data

Sample Name B22011129-001A
File Name 067SMPL.d
Data Path Name D:\Agilent\ICPMH\1\DATA\220121ADoD.b
Acq Time 2022-01-21 22:54:08
Sample Type Sample
Total Dilution 1.0000
Comment ICPMS-6020-W-D
Operator CAR/SRH/JPV/AEM
Method SW6020/ SW6020B

Name	Mass	ISTD	Tune Step	Tune Mode	Conc.	Units	CPS
Li	7	45	1	No Gas	-0.077	ug/l	14777.08
Be	9	45	1	No Gas	-0.027	ug/l	131.34
B	11	45	1	No Gas	30.272	ug/l	71592.40
Na	23	45	3	He	33228.732	ug/l	26379883.22
Mg	24	45	3	He	15641.136	ug/l	6841108.90
Al	27	45	1	No Gas	1.307	ug/l	42498.34
Si	28	45	2	H2	23746.822	ug/l	48986511.14
K	39	72	3	He	1815.266	ug/l	940772.63
Ca	40	72	2	H2	14829.379	ug/l	115768439.36
Ti	47	72	1	No Gas	1.382	ug/l	3585.73
V	51	72	1	No Gas	18.274	ug/l	494161.95
V	51	72	3	He	14.667	ug/l	83864.43
Cr	52	72	1	No Gas	-0.106	ug/l	92868.33
Cr	52	72	3	He	2.164	ug/l	12442.01
Mn	55	72	1	No Gas	11.091	ug/l	425126.13
Mn	55	72	3	He	11.761	ug/l	41032.11
Fe	56	72	2	H2	18.505	ug/l	340937.63
Fe	56	72	3	He	18.130	ug/l	91742.14
Co	59	72	1	No Gas	0.044	ug/l	1939.62
Ni	60	72	1	No Gas	0.739	ug/l	5806.33
Ni	60	72	3	He	0.718	ug/l	1680.11
Cu	63	72	1	No Gas	0.314	ug/l	7444.91
Cu	63	72	3	He	0.116	ug/l	1335.79
Cu	65	72	1	No Gas	0.156	ug/l	2284.44
Zn	66	72	1	No Gas	1.466	ug/l	9650.97
Zn	66	72	3	He	1.553	ug/l	2110.17
As	75	72	1	No Gas	-0.094	ug/l	13375.10
As	75	72	3	He	-0.127	ug/l	141.53
Se	78	72	2	H2	0.164	ug/l	140.00
Br	79	72	1	No Gas	15.271	ug/l	279311.48
Br	79	72	2	H2	15.183	ug/l	148119.33
Se	82	72	1	No Gas	0.081	ug/l	765.42
Kr	84	72	1	No Gas		ug/l	49963.92
Sr	88	72	1	No Gas	97.342	ug/l	4891666.48
Sr	88	72	3	He	94.826	ug/l	517648.42
Mo	95	115	1	No Gas	0.115	ug/l	1324.52
Mo	95	115	3	He	0.116	ug/l	475.56
Mo	98	115	1	No Gas	0.110	ug/l	2073.64
Ag	107	115	1	No Gas	-0.063	ug/l	131.39
Ag	109	115	1	No Gas	-0.060	ug/l	143.39
Cd	111	115	1	No Gas	0.025	ug/l	152.75

ICPMS207-B Analytical Data

Name	Mass	ISTD	Tune Step	Tune Mode	Conc.	Units	CPS
Cd	111	115	3	He	0.019	ug/l	46.00
Cd	114	115	1	No Gas	0.034	ug/l	301.77
Cd	114	115	3	He	0.021	ug/l	122.05
Sn	118	115	1	No Gas	-0.065	ug/l	2096.01
Sn	118	115	3	He	-0.069	ug/l	557.79
Sb	121	115	1	No Gas	0.307	ug/l	9654.95
Sb	121	115	3	He	0.307	ug/l	2487.80
Sb	123	115	1	No Gas	0.304	ug/l	7333.99
Sb	123	115	3	He	0.294	ug/l	1889.32
Ba	135	115	1	No Gas	3.848	ug/l	21474.09
Ba	137	115	1	No Gas	3.714	ug/l	36839.31
La	139	115	3	He	0.002	ug/l	73.33
Ce	140	115	3	He	0.006	ug/l	217.78
Hg	201	209	1	No Gas	0.002	ug/l	37.66
Hg	202	209	1	No Gas	0.003	ug/l	126.98
Hg	202	209	3	He	0.004	ug/l	52.66
Tl	203	209	3	He	0.029	ug/l	964.42
Tl	205	209	1	No Gas	0.021	ug/l	3969.51
Tl	205	209	3	He	0.027	ug/l	2293.79
[Pb]	206	209	1	No Gas	0.017	ug/l	954.49
[Pb]	207	209	1	No Gas	0.018	ug/l	844.48
Pb	208	209	1	No Gas	0.016	ug/l	3870.25
Th	232	209	3	He	-0.009	ug/l	235.43
U	238	209	1	No Gas	0.010	ug/l	877.19

Name	Mass	Tune Step	Tune Mode	CPS	ISTD Recovery %
Sc	45	1	No Gas	5395741.83	95.7
Sc	45	2	H2	2729192.72	99.4
Sc	45	3	He	293169.45	92.1
Ge	72	1	No Gas	1474079.52	97.5
Ge	72	2	H2	989810.00	99.7
Ge	72	3	He	216243.08	97.1
In	115	1	No Gas	12428640.17	102.1
In	115	3	He	2619161.28	99.4
Tb	159	1	No Gas	17534333.51	107.3
Tb	159	3	He	7205687.41	105.4
Ho	165	1	No Gas	16698543.16	109.5
Ho	165	3	He	6979843.40	105.5
Lu	175	1	No Gas	17311446.88	111.2
Lu	175	3	He	5593254.62	104.4
Bi	209	1	No Gas	12067213.94	106.6
Bi	209	3	He	5230310.39	104.3

ICPMS207-B Analytical Data

Sample Name B22011129-001B
File Name 068SMPL.d
Data Path Name D:\Agilent\ICPMH\1\DATA\220121ADoD.b
Acq Time 2022-01-21 23:00:24
Sample Type Sample
Total Dilution 1.0000
Comment ICPMS-6020-W-T
Operator CAR/SRH/JPV/AEM
Method SW6020/ SW6020B

Name	Mass	ISTD	Tune Step	Tune Mode	Conc.	Units	CPS
Li	7	45	1	No Gas	1.356	ug/l	18797.12
Be	9	45	1	No Gas	-0.043	ug/l	53.99
B	11	45	1	No Gas	28.503	ug/l	47504.54
Na	23	45	3	He	31145.417	ug/l	16195518.65
Mg	24	45	3	He	14553.392	ug/l	4169283.11
Al	27	45	1	No Gas	311.029	ug/l	4428156.25
Si	28	45	2	H2	19119.284	ug/l	30070290.43
K	39	72	3	He	1649.989	ug/l	612972.75
Ca	40	72	2	H2	14506.399	ug/l	92379351.10
Ti	47	72	1	No Gas	26.328	ug/l	51645.63
V	51	72	1	No Gas	14.569	ug/l	305986.54
V	51	72	3	He	19.370	ug/l	75222.72
Cr	52	72	1	No Gas	3.283	ug/l	150130.59
Cr	52	72	3	He	3.322	ug/l	13254.95
Mn	55	72	1	No Gas	37.208	ug/l	1122155.47
Mn	55	72	3	He	37.474	ug/l	92652.38
Fe	56	72	2	H2	477.616	ug/l	6967872.42
Fe	56	72	3	He	443.384	ug/l	1499466.59
Co	59	72	1	No Gas	0.382	ug/l	10116.83
Ni	60	72	1	No Gas	2.965	ug/l	17475.82
Ni	60	72	3	He	3.188	ug/l	5064.24
Cu	63	72	1	No Gas	2.126	ug/l	31100.24
Cu	63	72	3	He	2.172	ug/l	9429.16
Cu	65	72	1	No Gas	1.938	ug/l	14005.03
Zn	66	72	1	No Gas	12.198	ug/l	58413.72
Zn	66	72	3	He	13.699	ug/l	12006.11
As	75	72	1	No Gas	1.698	ug/l	20840.31
As	75	72	3	He	0.182	ug/l	331.00
Se	78	72	2	H2	0.210	ug/l	138.11
Br	79	72	1	No Gas	9.269	ug/l	157894.20
Br	79	72	2	H2	8.603	ug/l	80314.08
Se	82	72	1	No Gas	0.336	ug/l	694.35
Kr	84	72	1	No Gas		ug/l	42325.13
Sr	88	72	1	No Gas	104.245	ug/l	4196118.39
Sr	88	72	3	He	102.502	ug/l	397661.92
Mo	95	115	1	No Gas	0.525	ug/l	4815.29
Mo	95	115	3	He	0.541	ug/l	1660.11
Mo	98	115	1	No Gas	0.556	ug/l	8292.60
Ag	107	115	1	No Gas	-0.029	ug/l	902.40
Ag	109	115	1	No Gas	-0.028	ug/l	838.36
Cd	111	115	1	No Gas	0.022	ug/l	111.80

ICPMS207-B Analytical Data

Name	Mass	ISTD	Tune Step	Tune Mode	Conc.	Units	CPS
Cd	111	115	3	He	0.008	ug/l	18.33
Cd	114	115	1	No Gas	0.011	ug/l	-18.58
Cd	114	115	3	He	0.007	ug/l	37.30
Sn	118	115	1	No Gas	0.624	ug/l	11958.05
Sn	118	115	3	He	0.696	ug/l	3277.07
Sb	121	115	1	No Gas	0.815	ug/l	19872.99
Sb	121	115	3	He	0.807	ug/l	4832.32
Sb	123	115	1	No Gas	0.812	ug/l	15207.75
Sb	123	115	3	He	0.815	ug/l	3854.92
Ba	135	115	1	No Gas	5.137	ug/l	23619.83
Ba	137	115	1	No Gas	4.978	ug/l	40692.27
La	139	115	3	He	0.139	ug/l	2948.12
Ce	140	115	3	He	0.368	ug/l	8503.77
Hg	201	209	1	No Gas	0.010	ug/l	62.66
Hg	202	209	1	No Gas	0.017	ug/l	229.29
Hg	202	209	3	He	0.016	ug/l	93.31
Tl	203	209	3	He	0.039	ug/l	942.41
Tl	205	209	1	No Gas	0.029	ug/l	3806.13
Tl	205	209	3	He	0.037	ug/l	2257.11
[Pb]	206	209	1	No Gas	0.408	ug/l	7554.40
[Pb]	207	209	1	No Gas	0.402	ug/l	6501.63
Pb	208	209	1	No Gas	0.400	ug/l	29942.27
Th	232	209	3	He	0.022	ug/l	1260.58
U	238	209	1	No Gas	0.017	ug/l	1234.15

Name	Mass	Tune Step	Tune Mode	CPS	ISTD Recovery %
Sc	45	1	No Gas	3784283.48	67.1
Sc	45	2	H2	2080918.72	75.8
Sc	45	3	He	192049.12	60.3
Ge	72	1	No Gas	1180918.91	78.1
Ge	72	2	H2	807159.16	81.3
Ge	72	3	He	153700.70	69.0
In	115	1	No Gas	10247482.65	84.2
In	115	3	He	2040982.19	77.4
Tb	159	1	No Gas	14986640.18	91.7
Tb	159	3	He	6148296.88	90.0
Ho	165	1	No Gas	14593264.94	95.7
Ho	165	3	He	6016831.52	91.0
Lu	175	1	No Gas	15086104.32	96.9
Lu	175	3	He	4853749.26	90.6
Bi	209	1	No Gas	10432114.56	92.1
Bi	209	3	He	4597548.81	91.7

ICPMS207-B Analytical Data

Sample Name B22011130-001A
File Name 069SMPL.d
Data Path Name D:\Agilent\ICPMH\1\DATA\220121ADoD.b
Acq Time 2022-01-21 23:06:38
Sample Type Sample
Total Dilution 1.0000
Comment ICPMS-6020-W-D
Operator CAR/SRH/JPV/AEM
Method SW6020/ SW6020B

Name	Mass	ISTD	Tune Step	Tune Mode	Conc.	Units	CPS
Li	7	45	1	No Gas	0.239	ug/l	16583.65
Be	9	45	1	No Gas	-0.052	ug/l	40.32
B	11	45	1	No Gas	21.477	ug/l	49836.84
Na	23	45	3	He	36410.489	ug/l	27675397.64
Mg	24	45	3	He	15489.145	ug/l	6485851.85
Al	27	45	1	No Gas	3.610	ug/l	84819.77
Si	28	45	2	H2	18537.189	ug/l	37235280.92
K	39	72	3	He	2340.671	ug/l	1161964.87
Ca	40	72	2	H2	17322.120	ug/l	135160767.67
Ti	47	72	1	No Gas	1.035	ug/l	2629.56
V	51	72	1	No Gas	11.907	ug/l	289442.80
V	51	72	3	He	6.921	ug/l	46516.71
Cr	52	72	1	No Gas	-0.576	ug/l	76466.44
Cr	52	72	3	He	1.630	ug/l	9359.69
Mn	55	72	1	No Gas	-0.038	ug/l	8898.40
Mn	55	72	3	He	0.076	ug/l	408.92
Fe	56	72	2	H2	1.948	ug/l	45152.21
Fe	56	72	3	He	0.313	ug/l	7020.43
Co	59	72	1	No Gas	0.018	ug/l	1074.58
Ni	60	72	1	No Gas	0.268	ug/l	2318.93
Ni	60	72	3	He	0.208	ug/l	542.24
Cu	63	72	1	No Gas	0.407	ug/l	8692.09
Cu	63	72	3	He	0.196	ug/l	1757.76
Cu	65	72	1	No Gas	0.220	ug/l	2711.35
Zn	66	72	1	No Gas	3.041	ug/l	18167.63
Zn	66	72	3	He	3.024	ug/l	3811.64
As	75	72	1	No Gas	0.110	ug/l	14203.42
As	75	72	3	He	0.298	ug/l	574.60
Se	78	72	2	H2	0.053	ug/l	68.33
Br	79	72	1	No Gas	33.859	ug/l	512211.07
Br	79	72	2	H2	34.532	ug/l	293957.39
Se	82	72	1	No Gas	0.285	ug/l	812.76
Kr	84	72	1	No Gas		ug/l	55680.23
Sr	88	72	1	No Gas	121.696	ug/l	5865157.54
Sr	88	72	3	He	116.447	ug/l	620912.68
Mo	95	115	1	No Gas	0.727	ug/l	7926.70
Mo	95	115	3	He	0.749	ug/l	2848.08
Mo	98	115	1	No Gas	0.734	ug/l	13026.29
Ag	107	115	1	No Gas	-0.058	ug/l	276.78
Ag	109	115	1	No Gas	-0.054	ug/l	306.13
Cd	111	115	1	No Gas	0.027	ug/l	165.33

ICPMS207-B Analytical Data

Name	Mass	ISTD	Tune Step	Tune Mode	Conc.	Units	CPS
Cd	111	115	3	He	0.024	ug/l	53.89
Cd	114	115	1	No Gas	0.036	ug/l	329.34
Cd	114	115	3	He	0.022	ug/l	118.42
Sn	118	115	1	No Gas	-0.081	ug/l	1773.28
Sn	118	115	3	He	-0.093	ug/l	428.90
Sb	121	115	1	No Gas	-0.009	ug/l	665.42
Sb	121	115	3	He	-0.006	ug/l	159.69
Sb	123	115	1	No Gas	-0.007	ug/l	535.73
Sb	123	115	3	He	-0.003	ug/l	139.68
Ba	135	115	1	No Gas	5.875	ug/l	32253.51
Ba	137	115	1	No Gas	5.723	ug/l	55847.64
La	139	115	3	He	0.001	ug/l	40.00
Ce	140	115	3	He	0.002	ug/l	100.00
Hg	201	209	1	No Gas	0.001	ug/l	33.66
Hg	202	209	1	No Gas	0.002	ug/l	123.31
Hg	202	209	3	He	0.002	ug/l	42.66
Tl	203	209	3	He	0.006	ug/l	680.29
Tl	205	209	1	No Gas	0.007	ug/l	3149.29
Tl	205	209	3	He	0.008	ug/l	1718.14
[Pb]	206	209	1	No Gas	0.014	ug/l	887.81
[Pb]	207	209	1	No Gas	0.012	ug/l	734.47
Pb	208	209	1	No Gas	0.011	ug/l	3396.86
Th	232	209	3	He	-0.010	ug/l	185.41
U	238	209	1	No Gas	0.034	ug/l	2762.74

Name	Mass	Tune Step	Tune Mode	CPS	ISTD Recovery %
Sc	45	1	No Gas	5134060.40	91.1
Sc	45	2	H2	2657402.11	96.8
Sc	45	3	He	280746.60	88.2
Ge	72	1	No Gas	1413769.50	93.5
Ge	72	2	H2	989230.25	99.7
Ge	72	3	He	211227.17	94.9
In	115	1	No Gas	12242717.80	100.6
In	115	3	He	2536526.47	96.2
Tb	159	1	No Gas	17205538.68	105.3
Tb	159	3	He	7096931.26	103.9
Ho	165	1	No Gas	16150913.89	105.9
Ho	165	3	He	6892030.80	104.2
Lu	175	1	No Gas	16695420.98	107.3
Lu	175	3	He	5628530.99	105.1
Bi	209	1	No Gas	11933425.45	105.4
Bi	209	3	He	5087863.04	101.5

ICPMS207-B Analytical Data

Sample Name B22011130-001B
File Name 070SMPL.d
Data Path Name D:\Agilent\ICPMH\1\DATA\220121ADoD.b
Acq Time 2022-01-21 23:12:53
Sample Type Sample
Total Dilution 1.0000
Comment ICPMS-6020-W-T
Operator CAR/SRH/JPV/AEM
Method SW6020/ SW6020B

Name	Mass	ISTD	Tune Step	Tune Mode	Conc.	Units	CPS
Li	7	45	1	No Gas	1.789	ug/l	19909.62
Be	9	45	1	No Gas	-0.045	ug/l	43.99
B	11	45	1	No Gas	20.598	ug/l	32995.48
Na	23	45	3	He	34052.562	ug/l	17110031.97
Mg	24	45	3	He	14131.209	ug/l	3911705.26
Al	27	45	1	No Gas	13.035	ug/l	183159.60
Si	28	45	2	H2	17346.622	ug/l	26885223.14
K	39	72	3	He	2039.686	ug/l	727525.52
Ca	40	72	2	H2	16335.707	ug/l	103382081.78
Ti	47	72	1	No Gas	2.082	ug/l	4079.69
V	51	72	1	No Gas	11.125	ug/l	213809.91
V	51	72	3	He	10.959	ug/l	46209.40
Cr	52	72	1	No Gas	2.169	ug/l	120464.46
Cr	52	72	3	He	1.867	ug/l	7538.66
Mn	55	72	1	No Gas	0.745	ug/l	29694.52
Mn	55	72	3	He	0.281	ug/l	785.53
Fe	56	72	2	H2	11.637	ug/l	176869.62
Fe	56	72	3	He	11.188	ug/l	40849.70
Co	59	72	1	No Gas	0.103	ug/l	2921.18
Ni	60	72	1	No Gas	0.334	ug/l	2225.76
Ni	60	72	3	He	0.323	ug/l	562.24
Cu	63	72	1	No Gas	0.532	ug/l	8641.38
Cu	63	72	3	He	0.310	ug/l	1711.09
Cu	65	72	1	No Gas	0.319	ug/l	2831.42
Zn	66	72	1	No Gas	4.887	ug/l	22976.92
Zn	66	72	3	He	5.380	ug/l	4704.12
As	75	72	1	No Gas	2.232	ug/l	22863.51
As	75	72	3	He	0.592	ug/l	623.13
Se	78	72	2	H2	0.105	ug/l	82.67
Br	79	72	1	No Gas	11.945	ug/l	180148.39
Br	79	72	2	H2	10.494	ug/l	91389.40
Se	82	72	1	No Gas	0.167	ug/l	615.14
Kr	84	72	1	No Gas		ug/l	46218.91
Sr	88	72	1	No Gas	124.635	ug/l	4824857.86
Sr	88	72	3	He	122.684	ug/l	465252.64
Mo	95	115	1	No Gas	0.884	ug/l	7925.58
Mo	95	115	3	He	0.919	ug/l	2725.83
Mo	98	115	1	No Gas	0.861	ug/l	12556.37
Ag	107	115	1	No Gas	-0.052	ug/l	356.15
Ag	109	115	1	No Gas	-0.051	ug/l	333.47
Cd	111	115	1	No Gas	0.004	ug/l	17.33

ICPMS207-B Analytical Data

Name	Mass	ISTD	Tune Step	Tune Mode	Conc.	Units	CPS
Cd	111	115	3	He	0.001	ug/l	5.67
Cd	114	115	1	No Gas	0.013	ug/l	7.28
Cd	114	115	3	He	-0.002	ug/l	2.40
Sn	118	115	1	No Gas	0.397	ug/l	8425.84
Sn	118	115	3	He	0.462	ug/l	2339.10
Sb	121	115	1	No Gas	0.008	ug/l	934.79
Sb	121	115	3	He	0.013	ug/l	231.36
Sb	123	115	1	No Gas	0.014	ug/l	813.77
Sb	123	115	3	He	0.016	ug/l	196.35
Ba	135	115	1	No Gas	6.062	ug/l	27336.15
Ba	137	115	1	No Gas	5.966	ug/l	47844.12
La	139	115	3	He	0.004	ug/l	97.78
Ce	140	115	3	He	0.009	ug/l	232.23
Hg	201	209	1	No Gas	0.007	ug/l	52.66
Hg	202	209	1	No Gas	0.014	ug/l	204.29
Hg	202	209	3	He	0.015	ug/l	87.31
Tl	203	209	3	He	0.029	ug/l	842.37
Tl	205	209	1	No Gas	0.018	ug/l	3313.78
Tl	205	209	3	He	0.025	ug/l	1935.59
[Pb]	206	209	1	No Gas	0.021	ug/l	902.26
[Pb]	207	209	1	No Gas	0.023	ug/l	818.92
Pb	208	209	1	No Gas	0.021	ug/l	3714.68
Th	232	209	3	He	0.005	ug/l	696.30
U	238	209	1	No Gas	0.036	ug/l	2592.74

Name	Mass	Tune Step	Tune Mode	CPS	ISTD Recovery %
Sc	45	1	No Gas	3529683.09	62.6
Sc	45	2	H2	2050481.94	74.7
Sc	45	3	He	185561.46	58.3
Ge	72	1	No Gas	1135655.96	75.1
Ge	72	2	H2	802216.15	80.8
Ge	72	3	He	150229.03	67.5
In	115	1	No Gas	10061985.27	82.7
In	115	3	He	1981336.13	75.2
Tb	159	1	No Gas	15053592.65	92.1
Tb	159	3	He	6080191.59	89.0
Ho	165	1	No Gas	14328738.34	94.0
Ho	165	3	He	5883911.83	89.0
Lu	175	1	No Gas	15039549.33	96.6
Lu	175	3	He	4692761.87	87.6
Bi	209	1	No Gas	10510674.32	92.8
Bi	209	3	He	4560708.06	91.0

ICPMS207-B Analytical Data

Sample Name B22011131-001A
File Name 071SMPL.d
Data Path Name D:\Agilent\ICPMH\1\DATA\220121ADoD.b
Acq Time 2022-01-21 23:19:07
Sample Type Sample
Total Dilution 1.0000
Comment ICPMS-6020-W-D
Operator CAR/SRH/JPV/AEM
Method SW6020/ SW6020B

Name	Mass	ISTD	Tune Step	Tune Mode	Conc.	Units	CPS
Li	7	45	1	No Gas	1.575	ug/l	26686.76
Be	9	45	1	No Gas	-0.053	ug/l	38.32
B	11	45	1	No Gas	28.865	ug/l	63852.91
Na	23	45	3	He	41585.952	ug/l	30991075.65
Mg	24	45	3	He	8939.359	ug/l	3673424.52
Al	27	45	1	No Gas	3.384	ug/l	78795.55
Si	28	45	2	H2	17615.384	ug/l	34704647.06
K	39	72	3	He	2825.878	ug/l	1370074.22
Ca	40	72	2	H2	12859.162	ug/l	97540503.73
Ti	47	72	1	No Gas	0.955	ug/l	2387.60
V	51	72	1	No Gas	11.510	ug/l	272083.39
V	51	72	3	He	6.555	ug/l	44311.26
Cr	52	72	1	No Gas	-0.185	ug/l	85016.51
Cr	52	72	3	He	2.006	ug/l	11190.96
Mn	55	72	1	No Gas	1.884	ug/l	76099.91
Mn	55	72	3	He	1.987	ug/l	6813.22
Fe	56	72	2	H2	1.219	ug/l	31096.23
Fe	56	72	3	He	0.881	ug/l	9536.03
Co	59	72	1	No Gas	0.013	ug/l	888.27
Ni	60	72	1	No Gas	0.268	ug/l	2265.69
Ni	60	72	3	He	0.283	ug/l	694.47
Cu	63	72	1	No Gas	0.486	ug/l	9772.54
Cu	63	72	3	He	0.249	ug/l	2033.74
Cu	65	72	1	No Gas	0.323	ug/l	3476.43
Zn	66	72	1	No Gas	0.674	ug/l	4675.61
Zn	66	72	3	He	0.534	ug/l	841.14
As	75	72	1	No Gas	1.253	ug/l	21415.60
As	75	72	3	He	1.190	ug/l	1472.58
Se	78	72	2	H2	0.076	ug/l	80.67
Br	79	72	1	No Gas	24.387	ug/l	379236.65
Br	79	72	2	H2	25.191	ug/l	217229.04
Se	82	72	1	No Gas	0.476	ug/l	864.23
Kr	84	72	1	No Gas		ug/l	54651.62
Sr	88	72	1	No Gas	126.189	ug/l	5948588.39
Sr	88	72	3	He	116.778	ug/l	615296.87
Mo	95	115	1	No Gas	3.960	ug/l	42012.92
Mo	95	115	3	He	4.120	ug/l	15230.40
Mo	98	115	1	No Gas	3.983	ug/l	68820.07
Ag	107	115	1	No Gas	-0.061	ug/l	175.40
Ag	109	115	1	No Gas	-0.059	ug/l	162.07
Cd	111	115	1	No Gas	0.024	ug/l	140.62

ICPMS207-B Analytical Data

Name	Mass	ISTD	Tune Step	Tune Mode	Conc.	Units	CPS
Cd	111	115	3	He	0.022	ug/l	49.11
Cd	114	115	1	No Gas	0.035	ug/l	305.03
Cd	114	115	3	He	0.022	ug/l	119.00
Sn	118	115	1	No Gas	-0.015	ug/l	2884.58
Sn	118	115	3	He	-0.020	ug/l	748.92
Sb	121	115	1	No Gas	0.397	ug/l	11770.10
Sb	121	115	3	He	0.394	ug/l	2967.95
Sb	123	115	1	No Gas	0.396	ug/l	9022.14
Sb	123	115	3	He	0.401	ug/l	2385.11
Ba	135	115	1	No Gas	21.521	ug/l	115383.10
Ba	137	115	1	No Gas	21.335	ug/l	203389.54
La	139	115	3	He	0.000	ug/l	33.33
Ce	140	115	3	He	0.001	ug/l	68.89
Hg	201	209	1	No Gas	0.012	ug/l	79.32
Hg	202	209	1	No Gas	0.245	ug/l	2395.07
Hg	202	209	3	He	0.185	ug/l	873.52
Tl	203	209	3	He	0.004	ug/l	671.62
Tl	205	209	1	No Gas	0.003	ug/l	2932.57
Tl	205	209	3	He	0.001	ug/l	1574.73
[Pb]	206	209	1	No Gas	0.006	ug/l	742.25
[Pb]	207	209	1	No Gas	0.007	ug/l	655.58
Pb	208	209	1	No Gas	0.005	ug/l	2921.25
Th	232	209	3	He	-0.010	ug/l	210.75
U	238	209	1	No Gas	0.285	ug/l	22678.40

Name	Mass	Tune Step	Tune Mode	CPS	ISTD Recovery %
Sc	45	1	No Gas	5028450.88	89.2
Sc	45	2	H2	2606444.42	95.0
Sc	45	3	He	275392.10	86.5
Ge	72	1	No Gas	1383072.26	91.5
Ge	72	2	H2	961381.23	96.9
Ge	72	3	He	208717.16	93.7
In	115	1	No Gas	11969719.21	98.3
In	115	3	He	2481862.12	94.2
Tb	159	1	No Gas	17566981.99	107.5
Tb	159	3	He	7010378.62	102.6
Ho	165	1	No Gas	16638128.17	109.1
Ho	165	3	He	6820575.44	103.1
Lu	175	1	No Gas	16864415.28	108.4
Lu	175	3	He	5577066.87	104.1
Bi	209	1	No Gas	11964308.05	105.7
Bi	209	3	He	5273745.27	105.2

ICPMS207-B Analytical Data

Sample Name B22011131-001B
File Name 072SMPL.d
Data Path Name D:\Agilent\ICPMH\1\DATA\220121ADoD.b
Acq Time 2022-01-21 23:25:21
Sample Type Sample
Total Dilution 1.0000
Comment ICPMS-6020-W-T
Operator CAR/SRH/JPV/AEM
Method SW6020/ SW6020B

Name	Mass	ISTD	Tune Step	Tune Mode	Conc.	Units	CPS
Li	7	45	1	No Gas	2.883	ug/l	25025.86
Be	9	45	1	No Gas	-0.044	ug/l	46.32
B	11	45	1	No Gas	29.290	ug/l	43887.65
Na	23	45	3	He	39568.638	ug/l	19390202.63
Mg	24	45	3	He	8757.224	ug/l	2365834.51
Al	27	45	1	No Gas	24.204	ug/l	319777.77
Si	28	45	2	H2	17120.556	ug/l	26194980.39
K	39	72	3	He	2543.789	ug/l	875106.37
Ca	40	72	2	H2	12470.674	ug/l	76649792.09
Ti	47	72	1	No Gas	2.296	ug/l	4380.24
V	51	72	1	No Gas	12.442	ug/l	239665.48
V	51	72	3	He	11.282	ug/l	46295.28
Cr	52	72	1	No Gas	2.579	ug/l	126389.02
Cr	52	72	3	He	2.285	ug/l	8907.19
Mn	55	72	1	No Gas	4.513	ug/l	135181.45
Mn	55	72	3	He	4.207	ug/l	10053.11
Fe	56	72	2	H2	23.254	ug/l	335156.73
Fe	56	72	3	He	21.827	ug/l	74398.67
Co	59	72	1	No Gas	0.111	ug/l	3057.61
Ni	60	72	1	No Gas	0.388	ug/l	2468.66
Ni	60	72	3	He	0.376	ug/l	630.02
Cu	63	72	1	No Gas	0.772	ug/l	11594.63
Cu	63	72	3	He	0.574	ug/l	2718.38
Cu	65	72	1	No Gas	0.522	ug/l	4071.54
Zn	66	72	1	No Gas	1.755	ug/l	8560.78
Zn	66	72	3	He	2.062	ug/l	1859.02
As	75	72	1	No Gas	2.621	ug/l	24372.41
As	75	72	3	He	1.510	ug/l	1267.43
Se	78	72	2	H2	0.125	ug/l	90.22
Br	79	72	1	No Gas	11.130	ug/l	167623.83
Br	79	72	2	H2	10.070	ug/l	86222.00
Se	82	72	1	No Gas	-0.030	ug/l	546.47
Kr	84	72	1	No Gas		ug/l	45962.03
Sr	88	72	1	No Gas	129.317	ug/l	4896964.74
Sr	88	72	3	He	123.279	ug/l	457976.02
Mo	95	115	1	No Gas	4.046	ug/l	36190.38
Mo	95	115	3	He	4.450	ug/l	12911.47
Mo	98	115	1	No Gas	4.231	ug/l	61627.43
Ag	107	115	1	No Gas	-0.055	ug/l	300.12
Ag	109	115	1	No Gas	-0.052	ug/l	292.79
Cd	111	115	1	No Gas	0.008	ug/l	39.04

ICPMS207-B Analytical Data

Name	Mass	ISTD	Tune Step	Tune Mode	Conc.	Units	CPS
Cd	111	115	3	He	0.002	ug/l	8.11
Cd	114	115	1	No Gas	0.017	ug/l	47.36
Cd	114	115	3	He	-0.001	ug/l	7.75
Sn	118	115	1	No Gas	0.499	ug/l	9947.20
Sn	118	115	3	He	0.580	ug/l	2716.95
Sb	121	115	1	No Gas	0.420	ug/l	10456.94
Sb	121	115	3	He	0.431	ug/l	2534.49
Sb	123	115	1	No Gas	0.422	ug/l	8064.12
Sb	123	115	3	He	0.433	ug/l	2009.02
Ba	135	115	1	No Gas	22.608	ug/l	102180.57
Ba	137	115	1	No Gas	21.844	ug/l	175553.78
La	139	115	3	He	0.022	ug/l	451.12
Ce	140	115	3	He	0.043	ug/l	978.93
Hg	201	209	1	No Gas	0.021	ug/l	102.31
Hg	202	209	1	No Gas	0.314	ug/l	2719.41
Hg	202	209	3	He	0.223	ug/l	912.52
Tl	203	209	3	He	0.023	ug/l	781.00
Tl	205	209	1	No Gas	0.016	ug/l	3280.43
Tl	205	209	3	He	0.018	ug/l	1800.18
[Pb]	206	209	1	No Gas	0.026	ug/l	1010.05
[Pb]	207	209	1	No Gas	0.025	ug/l	866.70
Pb	208	209	1	No Gas	0.024	ug/l	4010.27
Th	232	209	3	He	0.009	ug/l	820.36
U	238	209	1	No Gas	0.306	ug/l	21665.59

Name	Mass	Tune Step	Tune Mode	CPS	ISTD Recovery %
Sc	45	1	No Gas	3409459.11	60.5
Sc	45	2	H2	2024312.55	73.7
Sc	45	3	He	181071.61	56.9
Ge	72	1	No Gas	1111400.46	73.5
Ge	72	2	H2	779104.86	78.5
Ge	72	3	He	147164.51	66.1
In	115	1	No Gas	10092263.66	82.9
In	115	3	He	1948062.60	73.9
Tb	159	1	No Gas	15001410.99	91.8
Tb	159	3	He	5972020.87	87.4
Ho	165	1	No Gas	14438001.97	94.7
Ho	165	3	He	5887948.57	89.0
Lu	175	1	No Gas	15027702.48	96.6
Lu	175	3	He	4754883.88	88.8
Bi	209	1	No Gas	10679897.88	94.3
Bi	209	3	He	4610579.16	92.0

ICPMS207-B Analytical Data

Sample Name B22011132-001A
File Name 073SMPL.d
Data Path Name D:\Agilent\ICPMH\1\DATA\220121ADoD.b
Acq Time 2022-01-21 23:31:35
Sample Type Sample
Total Dilution 1.0000
Comment ICPMS-6020-W-D
Operator CAR/SRH/JPV/AEM
Method SW6020/ SW6020B

Name	Mass	ISTD	Tune Step	Tune Mode	Conc.	Units	CPS
Li	7	45	1	No Gas	0.344	ug/l	16835.38
Be	9	45	1	No Gas	-0.050	ug/l	46.32
B	11	45	1	No Gas	41.693	ug/l	88856.64
Na	23	45	3	He	35441.301	ug/l	25839624.62
Mg	24	45	3	He	11138.767	ug/l	4474808.05
Al	27	45	1	No Gas	2.304	ug/l	57688.66
Si	28	45	2	H2	22003.673	ug/l	42625245.78
K	39	72	3	He	1774.667	ug/l	849654.04
Ca	40	72	2	H2	11018.568	ug/l	81932587.20
Ti	47	72	1	No Gas	1.217	ug/l	2940.09
V	51	72	1	No Gas	17.480	ug/l	434536.23
V	51	72	3	He	13.411	ug/l	71891.66
Cr	52	72	1	No Gas	-0.198	ug/l	83320.90
Cr	52	72	3	He	2.114	ug/l	11224.35
Mn	55	72	1	No Gas	-0.043	ug/l	8412.42
Mn	55	72	3	He	0.069	ug/l	362.93
Fe	56	72	2	H2	0.671	ug/l	21171.76
Fe	56	72	3	He	0.480	ug/l	7356.19
Co	59	72	1	No Gas	0.008	ug/l	741.88
Ni	60	72	1	No Gas	0.304	ug/l	2465.33
Ni	60	72	3	He	0.253	ug/l	603.35
Cu	63	72	1	No Gas	0.581	ug/l	11141.40
Cu	63	72	3	He	0.409	ug/l	2798.71
Cu	65	72	1	No Gas	0.413	ug/l	4130.25
Zn	66	72	1	No Gas	9.643	ug/l	53381.72
Zn	66	72	3	He	10.251	ug/l	11707.00
As	75	72	1	No Gas	-0.294	ug/l	11010.48
As	75	72	3	He	-0.095	ug/l	161.40
Se	78	72	2	H2	0.190	ug/l	148.67
Br	79	72	1	No Gas	22.414	ug/l	348048.34
Br	79	72	2	H2	22.493	ug/l	193540.00
Se	82	72	1	No Gas	0.701	ug/l	934.63
Kr	84	72	1	No Gas		ug/l	40983.41
Sr	88	72	1	No Gas	80.938	ug/l	3752305.23
Sr	88	72	3	He	77.058	ug/l	387864.18
Mo	95	115	1	No Gas	0.164	ug/l	1806.79
Mo	95	115	3	He	0.173	ug/l	658.91
Mo	98	115	1	No Gas	0.154	ug/l	2760.91
Ag	107	115	1	No Gas	-0.062	ug/l	141.39
Ag	109	115	1	No Gas	-0.060	ug/l	152.06
Cd	111	115	1	No Gas	0.027	ug/l	163.31

ICPMS207-B Analytical Data

Name	Mass	ISTD	Tune Step	Tune Mode	Conc.	Units	CPS
Cd	111	115	3	He	0.022	ug/l	48.00
Cd	114	115	1	No Gas	0.038	ug/l	337.88
Cd	114	115	3	He	0.024	ug/l	126.94
Sn	118	115	1	No Gas	-0.078	ug/l	1796.56
Sn	118	115	3	He	-0.080	ug/l	475.57
Sb	121	115	1	No Gas	0.275	ug/l	8450.72
Sb	121	115	3	He	0.282	ug/l	2171.39
Sb	123	115	1	No Gas	0.281	ug/l	6606.56
Sb	123	115	3	He	0.283	ug/l	1721.61
Ba	135	115	1	No Gas	4.607	ug/l	24809.69
Ba	137	115	1	No Gas	4.471	ug/l	42787.64
La	139	115	3	He	0.001	ug/l	44.45
Ce	140	115	3	He	0.001	ug/l	46.67
Hg	201	209	1	No Gas	0.002	ug/l	40.66
Hg	202	209	1	No Gas	0.014	ug/l	231.96
Hg	202	209	3	He	0.013	ug/l	90.65
Tl	203	209	3	He	-0.004	ug/l	567.57
Tl	205	209	1	No Gas	-0.005	ug/l	2515.81
Tl	205	209	3	He	-0.009	ug/l	1281.24
[Pb]	206	209	1	No Gas	0.014	ug/l	907.82
[Pb]	207	209	1	No Gas	0.013	ug/l	763.36
Pb	208	209	1	No Gas	0.012	ug/l	3557.99
Th	232	209	3	He	-0.010	ug/l	202.75
U	238	209	1	No Gas	0.015	ug/l	1294.47

Name	Mass	Tune Step	Tune Mode	CPS	ISTD Recovery %
Sc	45	1	No Gas	4960748.73	88.0
Sc	45	2	H2	2562896.98	93.4
Sc	45	3	He	269254.61	84.5
Ge	72	1	No Gas	1360477.15	90.0
Ge	72	2	H2	942371.83	95.0
Ge	72	3	He	199341.08	89.5
In	115	1	No Gas	11999741.71	98.6
In	115	3	He	2471922.69	93.8
Tb	159	1	No Gas	17125983.71	104.8
Tb	159	3	He	6940445.88	101.6
Ho	165	1	No Gas	16326783.91	107.1
Ho	165	3	He	6677074.13	100.9
Lu	175	1	No Gas	17056354.51	109.6
Lu	175	3	He	5532252.00	103.3
Bi	209	1	No Gas	12209326.87	107.8
Bi	209	3	He	5139517.58	102.5

ICPMS207-B Analytical Data

Sample Name B22011132-001B
File Name 074SMPL.d
Data Path Name D:\Agilent\ICPMH\1\DATA\220121ADoD.b
Acq Time 2022-01-21 23:37:50
Sample Type Sample
Total Dilution 1.0000
Comment ICPMS-6020-W-T
Operator CAR/SRH/JPV/AEM
Method SW6020/ SW6020B

Name	Mass	ISTD	Tune Step	Tune Mode	Conc.	Units	CPS
Li	7	45	1	No Gas	2.067	ug/l	20363.74
Be	9	45	1	No Gas	-0.044	ug/l	43.99
B	11	45	1	No Gas	41.399	ug/l	59651.14
Na	23	45	3	He	34217.897	ug/l	16359294.62
Mg	24	45	3	He	10882.472	ug/l	2866607.28
Al	27	45	1	No Gas	22.742	ug/l	296260.48
Si	28	45	2	H2	20864.477	ug/l	31554074.24
K	39	72	3	He	1569.791	ug/l	545895.02
Ca	40	72	2	H2	10854.356	ug/l	65614133.49
Ti	47	72	1	No Gas	2.541	ug/l	4653.77
V	51	72	1	No Gas	19.329	ug/l	382874.75
V	51	72	3	He	17.578	ug/l	64533.88
Cr	52	72	1	No Gas	2.804	ug/l	126225.77
Cr	52	72	3	He	2.464	ug/l	9304.11
Mn	55	72	1	No Gas	1.636	ug/l	52115.96
Mn	55	72	3	He	1.212	ug/l	2889.71
Fe	56	72	2	H2	42.337	ug/l	593638.44
Fe	56	72	3	He	38.652	ug/l	125225.17
Co	59	72	1	No Gas	0.112	ug/l	2961.11
Ni	60	72	1	No Gas	0.438	ug/l	2641.69
Ni	60	72	3	He	0.426	ug/l	685.58
Cu	63	72	1	No Gas	1.047	ug/l	14616.53
Cu	63	72	3	He	0.911	ug/l	3938.09
Cu	65	72	1	No Gas	0.859	ug/l	6008.33
Zn	66	72	1	No Gas	20.925	ug/l	90245.01
Zn	66	72	3	He	23.141	ug/l	18783.33
As	75	72	1	No Gas	0.542	ug/l	12897.90
As	75	72	3	He	0.167	ug/l	298.07
Se	78	72	2	H2	0.226	ug/l	139.22
Br	79	72	1	No Gas	9.938	ug/l	149505.17
Br	79	72	2	H2	8.741	ug/l	77011.50
Se	82	72	1	No Gas	0.300	ug/l	617.81
Kr	84	72	1	No Gas		ug/l	34996.29
Sr	88	72	1	No Gas	83.632	ug/l	3049005.89
Sr	88	72	3	He	80.276	ug/l	290281.55
Mo	95	115	1	No Gas	0.220	ug/l	1995.71
Mo	95	115	3	He	0.242	ug/l	708.91
Mo	98	115	1	No Gas	0.226	ug/l	3331.17
Ag	107	115	1	No Gas	-0.026	ug/l	952.42
Ag	109	115	1	No Gas	-0.022	ug/l	947.75
Cd	111	115	1	No Gas	0.010	ug/l	47.90

ICPMS207-B Analytical Data

Name	Mass	ISTD	Tune Step	Tune Mode	Conc.	Units	CPS
Cd	111	115	3	He	0.002	ug/l	8.44
Cd	114	115	1	No Gas	0.017	ug/l	49.32
Cd	114	115	3	He	0.002	ug/l	17.54
Sn	118	115	1	No Gas	0.506	ug/l	9940.50
Sn	118	115	3	He	0.556	ug/l	2596.93
Sb	121	115	1	No Gas	0.283	ug/l	7212.58
Sb	121	115	3	He	0.281	ug/l	1686.27
Sb	123	115	1	No Gas	0.286	ug/l	5578.67
Sb	123	115	3	He	0.299	ug/l	1405.21
Ba	135	115	1	No Gas	5.708	ug/l	25539.55
Ba	137	115	1	No Gas	5.615	ug/l	44659.82
La	139	115	3	He	0.017	ug/l	354.45
Ce	140	115	3	He	0.035	ug/l	784.47
Hg	201	209	1	No Gas	0.005	ug/l	47.32
Hg	202	209	1	No Gas	0.025	ug/l	307.94
Hg	202	209	3	He	0.019	ug/l	105.31
Tl	203	209	3	He	0.015	ug/l	720.31
Tl	205	209	1	No Gas	0.012	ug/l	3133.72
Tl	205	209	3	He	0.013	ug/l	1714.80
[Pb]	206	209	1	No Gas	0.148	ug/l	3209.30
[Pb]	207	209	1	No Gas	0.141	ug/l	2680.29
Pb	208	209	1	No Gas	0.143	ug/l	12605.77
Th	232	209	3	He	0.002	ug/l	603.59
U	238	209	1	No Gas	0.017	ug/l	1291.14

Name	Mass	Tune Step	Tune Mode	CPS	ISTD Recovery %
Sc	45	1	No Gas	3353619.93	59.5
Sc	45	2	H2	2001515.83	72.9
Sc	45	3	He	176607.68	55.5
Ge	72	1	No Gas	1069500.54	70.7
Ge	72	2	H2	765963.00	77.2
Ge	72	3	He	143193.68	64.3
In	115	1	No Gas	9974149.78	81.9
In	115	3	He	1921999.06	72.9
Tb	159	1	No Gas	15036234.45	92.0
Tb	159	3	He	5913802.66	86.5
Ho	165	1	No Gas	14284624.33	93.7
Ho	165	3	He	5852344.12	88.5
Lu	175	1	No Gas	14596772.72	93.8
Lu	175	3	He	4685914.03	87.5
Bi	209	1	No Gas	10858015.67	95.9
Bi	209	3	He	4698084.18	93.7

ICPMS207-B Analytical Data

Sample Name B22011133-001A
File Name 075SMPL.d
Data Path Name D:\Agilent\ICPMH\1\DATA\220121ADoD.b
Acq Time 2022-01-21 23:44:04
Sample Type Sample
Total Dilution 1.0000
Comment ICPMS-6020-W-D
Operator CAR/SRH/JPV/AEM
Method SW6020/ SW6020B

Name	Mass	ISTD	Tune Step	Tune Mode	Conc.	Units	CPS
Li	7	45	1	No Gas	8.398	ug/l	82087.00
Be	9	45	1	No Gas	-0.049	ug/l	50.66
B	11	45	1	No Gas	45.145	ug/l	99555.55
Na	23	45	3	He	387562.028	ug/l	313840615.32
Mg	24	45	3	He	243225.176	ug/l	108654156.15
Al	27	45	1	No Gas	0.312	ug/l	21387.60
Si	28	45	2	H2	27417.867	ug/l	52382544.48
K	39	72	3	He	7220.347	ug/l	3349253.77
Ca	40	72	2	H2	157492.214	ug/l	1108667481.76
Ti	47	72	1	No Gas	1.958	ug/l	4451.83
V	51	72	1	No Gas	13.437	ug/l	310756.70
V	51	72	3	He	8.408	ug/l	52218.17
Cr	52	72	1	No Gas	7.858	ug/l	281059.47
Cr	52	72	3	He	9.272	ug/l	48309.19
Mn	55	72	1	No Gas	2.659	ug/l	98165.48
Mn	55	72	3	He	2.718	ug/l	9186.37
Fe	56	72	2	H2	4.351	ug/l	79396.99
Fe	56	72	3	He	3.984	ug/l	23545.96
Co	59	72	1	No Gas	0.899	ug/l	25821.59
Ni	60	72	1	No Gas	55.627	ug/l	357267.65
Ni	60	72	3	He	57.790	ug/l	122029.74
Cu	63	72	1	No Gas	2.940	ug/l	47180.83
Cu	63	72	3	He	0.992	ug/l	6143.73
Cu	65	72	1	No Gas	1.679	ug/l	13621.84
Zn	66	72	1	No Gas	1.682	ug/l	9746.08
Zn	66	72	3	He	1.154	ug/l	1555.65
As	75	72	1	No Gas	1.895	ug/l	24347.60
As	75	72	3	He	1.093	ug/l	1361.97
Se	78	72	2	H2	4.427	ug/l	2606.79
Br	79	72	1	No Gas	288.755	ug/l	3589381.04
Br	79	72	2	H2	291.293	ug/l	2013182.04
Se	82	72	1	No Gas	9.913	ug/l	4196.10
Kr	84	72	1	No Gas		ug/l	636174.97
Sr	88	72	1	No Gas	2257.328	ug/l	101134636.66
Sr	88	72	3	He	2278.286	ug/l	11890203.02
Mo	95	115	1	No Gas	1.000	ug/l	9715.60
Mo	95	115	3	He	1.022	ug/l	3611.59
Mo	98	115	1	No Gas	0.989	ug/l	15649.92
Ag	107	115	1	No Gas	-0.059	ug/l	220.76
Ag	109	115	1	No Gas	-0.058	ug/l	184.08
Cd	111	115	1	No Gas	0.027	ug/l	148.40

ICPMS207-B Analytical Data

Name	Mass	ISTD	Tune Step	Tune Mode	Conc.	Units	CPS
Cd	111	115	3	He	0.023	ug/l	49.00
Cd	114	115	1	No Gas	0.038	ug/l	310.29
Cd	114	115	3	He	0.025	ug/l	127.58
Sn	118	115	1	No Gas	-0.066	ug/l	1816.53
Sn	118	115	3	He	-0.091	ug/l	406.67
Sb	121	115	1	No Gas	0.120	ug/l	3803.57
Sb	121	115	3	He	0.116	ug/l	968.80
Sb	123	115	1	No Gas	0.133	ug/l	3160.34
Sb	123	115	3	He	0.121	ug/l	785.77
Ba	135	115	1	No Gas	73.746	ug/l	360469.66
Ba	137	115	1	No Gas	72.403	ug/l	629289.17
La	139	115	3	He	0.000	ug/l	24.44
Ce	140	115	3	He	0.001	ug/l	47.78
Hg	201	209	1	No Gas	0.009	ug/l	60.99
Hg	202	209	1	No Gas	0.032	ug/l	354.94
Hg	202	209	3	He	0.027	ug/l	134.31
Tl	203	209	3	He	-0.021	ug/l	330.81
Tl	205	209	1	No Gas	-0.016	ug/l	1631.23
Tl	205	209	3	He	-0.024	ug/l	768.33
[Pb]	206	209	1	No Gas	0.006	ug/l	651.13
[Pb]	207	209	1	No Gas	0.009	ug/l	598.91
Pb	208	209	1	No Gas	0.006	ug/l	2657.90
Th	232	209	3	He	-0.010	ug/l	188.08
U	238	209	1	No Gas	0.076	ug/l	5357.69

Name	Mass	Tune Step	Tune Mode	CPS	ISTD Recovery %
Sc	45	1	No Gas	5154100.16	91.4
Sc	45	2	H2	2527923.57	92.1
Sc	45	3	He	299547.85	94.1
Ge	72	1	No Gas	1314736.80	87.0
Ge	72	2	H2	893068.63	90.0
Ge	72	3	He	206853.97	92.9
In	115	1	No Gas	10918021.16	89.7
In	115	3	He	2363516.95	89.7
Tb	159	1	No Gas	15763487.20	96.5
Tb	159	3	He	6622080.39	96.9
Ho	165	1	No Gas	15234390.73	99.9
Ho	165	3	He	6372962.63	96.4
Lu	175	1	No Gas	16050416.52	103.1
Lu	175	3	He	5300391.25	99.0
Bi	209	1	No Gas	10527665.41	93.0
Bi	209	3	He	4562732.77	91.0

ICPMS207-B Analytical Data

Sample Name CCV
File Name 076_CCV.d
Data Path Name D:\Agilent\ICPMH\1\DATA\220121ADoD.b
Acq Time 2022-01-21 23:50:18
Sample Type CCV
Total Dilution 1.0000
Comment ICPMS-6020-W-D
Operator CAR/SRH/JPV/AEM
Method SW6020/ SW6020B

Name	Mass	ISTD	Tune Step	Tune Mode	Conc.	Units	CPS
Li	7	45	1	No Gas	582.398	ug/l	5002999.63
Be	9	45	1	No Gas	47.363	ug/l	172546.55
B	11	45	1	No Gas	48.815	ug/l	114546.26
Na	23	45	3	He	12580.668	ug/l	10737171.86
Mg	24	45	3	He	12219.670	ug/l	5730021.87
Al	27	45	1	No Gas	58.185	ug/l	1219650.07
Si	28	45	2	H2	228.559	ug/l	466714.21
K	39	72	3	He	12176.690	ug/l	6039125.40
Ca	40	72	2	H2	12714.154	ug/l	99170168.34
Ti	47	72	1	No Gas	49.369	ug/l	121539.62
V	51	72	1	No Gas	51.446	ug/l	1505971.14
V	51	72	3	He	51.495	ug/l	264485.09
Cr	52	72	1	No Gas	52.060	ug/l	1559143.29
Cr	52	72	3	He	49.257	ug/l	273299.86
Mn	55	72	1	No Gas	50.644	ug/l	1916050.90
Mn	55	72	3	He	50.273	ug/l	180618.87
Fe	56	72	2	H2	1344.432	ug/l	24008648.64
Fe	56	72	3	He	1272.058	ug/l	6240407.84
Co	59	72	1	No Gas	48.840	ug/l	1554312.13
Ni	60	72	1	No Gas	49.376	ug/l	358138.09
Ni	60	72	3	He	50.443	ug/l	115028.69
Cu	63	72	1	No Gas	50.418	ug/l	881178.82
Cu	63	72	3	He	50.849	ug/l	305444.11
Cu	65	72	1	No Gas	49.260	ug/l	424062.41
Zn	66	72	1	No Gas	48.517	ug/l	288954.71
Zn	66	72	3	He	51.053	ug/l	64411.67
As	75	72	1	No Gas	51.344	ug/l	376442.30
As	75	72	3	He	51.165	ug/l	55833.26
Se	78	72	2	H2	52.088	ug/l	33584.44
Br	79	72	1	No Gas	21.031	ug/l	360521.70
Br	79	72	2	H2	19.248	ug/l	178583.09
Se	82	72	1	No Gas	49.225	ug/l	20611.57
Kr	84	72	1	No Gas		ug/l	37938.12
Sr	88	72	1	No Gas	51.968	ug/l	2629753.32
Sr	88	72	3	He	51.143	ug/l	288503.58
Mo	95	115	1	No Gas	50.078	ug/l	527937.22
Mo	95	115	3	He	50.862	ug/l	194173.22
Mo	98	115	1	No Gas	50.057	ug/l	859100.46
Ag	107	115	1	No Gas	19.815	ug/l	536869.60
Ag	109	115	1	No Gas	19.634	ug/l	516195.32
Cd	111	115	1	No Gas	49.377	ug/l	300635.45

ICPMS207-B Analytical Data

Name	Mass	ISTD	Tune Step	Tune Mode	Conc.	Units	CPS
Cd	111	115	3	He	49.985	ug/l	100719.13
Cd	114	115	1	No Gas	50.416	ug/l	678589.54
Cd	114	115	3	He	50.316	ug/l	248884.62
Sn	118	115	1	No Gas	52.301	ug/l	906150.20
Sn	118	115	3	He	51.647	ug/l	242279.54
Sb	121	115	1	No Gas	52.838	ug/l	1439248.42
Sb	121	115	3	He	52.608	ug/l	382876.74
Sb	123	115	1	No Gas	52.298	ug/l	1096297.94
Sb	123	115	3	He	52.853	ug/l	303999.27
Ba	135	115	1	No Gas	49.852	ug/l	265745.59
Ba	137	115	1	No Gas	49.464	ug/l	468788.67
La	139	115	3	He	50.415	ug/l	1333680.69
Ce	140	115	3	He	51.355	ug/l	1486168.15
Hg	201	209	1	No Gas	0.988	ug/l	3747.45
Hg	202	209	1	No Gas	0.972	ug/l	8479.00
Hg	202	209	3	He	0.970	ug/l	4190.16
Tl	203	209	3	He	48.908	ug/l	539651.14
Tl	205	209	1	No Gas	51.907	ug/l	2676578.12
Tl	205	209	3	He	49.731	ug/l	1300337.55
[Pb]	206	209	1	No Gas	51.557	ug/l	933830.13
[Pb]	207	209	1	No Gas	50.919	ug/l	806053.24
Pb	208	209	1	No Gas	50.972	ug/l	3726821.57
Th	232	209	3	He	49.752	ug/l	1831880.38
U	238	209	1	No Gas	50.846	ug/l	3698524.43

Name	Mass	Tune Step	Tune Mode	CPS	ISTD Recovery %
Sc	45	1	No Gas	5510795.69	97.7
Sc	45	2	H2	2661449.60	97.0
Sc	45	3	He	314275.55	98.7
Ge	72	1	No Gas	1484124.24	98.2
Ge	72	2	H2	988566.61	99.6
Ge	72	3	He	223321.12	100.3
In	115	1	No Gas	11913877.55	97.9
In	115	3	He	2566609.34	97.4
Tb	159	1	No Gas	16377815.99	100.2
Tb	159	3	He	6981768.55	102.2
Ho	165	1	No Gas	15616899.89	102.4
Ho	165	3	He	6628242.86	100.2
Lu	175	1	No Gas	16012622.79	102.9
Lu	175	3	He	5411177.39	101.0
Bi	209	1	No Gas	11001858.64	97.2
Bi	209	3	He	4988397.00	99.5

ICPMS207-B Analytical Data

Sample Name CCB
File Name 077_CCB.d
Data Path Name D:\Agilent\ICPMH\1\DATA\220121ADoD.b
Acq Time 2022-01-21 23:56:33
Sample Type CCB
Total Dilution 1.0000
Comment ICPMS-6020-W-D
Operator CAR/SRH/JPV/AEM
Method SW6020/ SW6020B

Name	Mass	ISTD	Tune Step	Tune Mode	Conc.	Units	CPS
Li	7	45	1	No Gas	-0.548	ug/l	10837.55
Be	9	45	1	No Gas	-0.051	ug/l	48.66
B	11	45	1	No Gas	0.316	ug/l	6043.64
Na	23	45	3	He	25.059	ug/l	64179.43
Mg	24	45	3	He	0.848	ug/l	2076.03
Al	27	45	1	No Gas	-0.339	ug/l	9185.07
Si	28	45	2	H2	3.727	ug/l	14605.65
K	39	72	3	He	-16.219	ug/l	72404.04
Ca	40	72	2	H2	-0.294	ug/l	98178.57
Ti	47	72	1	No Gas	0.011	ug/l	245.25
V	51	72	1	No Gas	-0.979	ug/l	-88079.68
V	51	72	3	He	1.974	ug/l	24158.78
Cr	52	72	1	No Gas	0.569	ug/l	112857.75
Cr	52	72	3	He	0.024	ug/l	965.60
Mn	55	72	1	No Gas	0.092	ug/l	14315.30
Mn	55	72	3	He	0.001	ug/l	152.64
Fe	56	72	2	H2	0.064	ug/l	11319.10
Fe	56	72	3	He	0.190	ug/l	6513.01
Co	59	72	1	No Gas	-0.001	ug/l	522.31
Ni	60	72	1	No Gas	0.009	ug/l	555.58
Ni	60	72	3	He	-0.001	ug/l	93.33
Cu	63	72	1	No Gas	0.000	ug/l	2022.96
Cu	63	72	3	He	0.002	ug/l	668.55
Cu	65	72	1	No Gas	0.018	ug/l	1118.49
Zn	66	72	1	No Gas	0.031	ug/l	1207.66
Zn	66	72	3	He	0.028	ug/l	251.12
As	75	72	1	No Gas	0.769	ug/l	19629.41
As	75	72	3	He	0.066	ug/l	339.47
Se	78	72	2	H2	0.016	ug/l	44.22
Br	79	72	1	No Gas	1.330	ug/l	89317.26
Br	79	72	2	H2	1.195	ug/l	42367.90
Se	82	72	1	No Gas	-0.116	ug/l	693.28
Kr	84	72	1	No Gas		ug/l	21310.20
Sr	88	72	1	No Gas	0.002	ug/l	884.95
Sr	88	72	3	He	-0.010	ug/l	230.00
Mo	95	115	1	No Gas	0.018	ug/l	258.89
Mo	95	115	3	He	0.012	ug/l	67.78
Mo	98	115	1	No Gas	0.018	ug/l	419.04
Ag	107	115	1	No Gas	-0.001	ug/l	1850.20
Ag	109	115	1	No Gas	0.003	ug/l	1833.52
Cd	111	115	1	No Gas	-0.006	ug/l	-38.41

ICPMS207-B Analytical Data

Name	Mass	ISTD	Tune Step	Tune Mode	Conc.	Units	CPS
Cd	111	115	3	He	0.003	ug/l	12.56
Cd	114	115	1	No Gas	-0.001	ug/l	-189.50
Cd	114	115	3	He	0.001	ug/l	20.97
Sn	118	115	1	No Gas	0.038	ug/l	3872.86
Sn	118	115	3	He	0.020	ug/l	972.26
Sb	121	115	1	No Gas	0.075	ug/l	3015.97
Sb	121	115	3	He	0.041	ug/l	512.39
Sb	123	115	1	No Gas	0.075	ug/l	2302.43
Sb	123	115	3	He	0.046	ug/l	430.05
Ba	135	115	1	No Gas	-0.002	ug/l	56.55
Ba	137	115	1	No Gas	-0.002	ug/l	83.17
La	139	115	3	He	0.000	ug/l	17.78
Ce	140	115	3	He	0.000	ug/l	34.45
Hg	201	209	1	No Gas	0.006	ug/l	51.99
Hg	202	209	1	No Gas	0.004	ug/l	135.64
Hg	202	209	3	He	0.003	ug/l	47.32
Tl	203	209	3	He	0.118	ug/l	1938.93
Tl	205	209	1	No Gas	0.107	ug/l	8457.27
Tl	205	209	3	He	0.112	ug/l	4481.23
[Pb]	206	209	1	No Gas	0.006	ug/l	708.91
[Pb]	207	209	1	No Gas	0.006	ug/l	612.24
Pb	208	209	1	No Gas	0.004	ug/l	2790.14
Th	232	209	3	He	0.012	ug/l	1007.11
U	238	209	1	No Gas	0.002	ug/l	279.61

Name	Mass	Tune Step	Tune Mode	CPS	ISTD Recovery %
Sc	45	1	No Gas	5398052.26	95.7
Sc	45	2	H2	2654296.07	96.7
Sc	45	3	He	291079.97	91.4
Ge	72	1	No Gas	1489396.08	98.5
Ge	72	2	H2	984291.74	99.2
Ge	72	3	He	213480.19	95.9
In	115	1	No Gas	12220176.00	100.4
In	115	3	He	2592225.12	98.4
Tb	159	1	No Gas	16672243.12	102.0
Tb	159	3	He	7079205.00	103.6
Ho	165	1	No Gas	15707317.91	103.0
Ho	165	3	He	6727231.21	101.7
Lu	175	1	No Gas	16053817.63	103.1
Lu	175	3	He	5516284.37	103.0
Bi	209	1	No Gas	11555504.17	102.1
Bi	209	3	He	5102701.62	101.8

ICPMS207-B Analytical Data

Sample Name B22011133-001B
File Name 078SMPL.d
Data Path Name D:\Agilent\ICPMH\1\DATA\220121ADoD.b
Acq Time 2022-01-22 00:02:48
Sample Type Sample
Total Dilution 1.0000
Comment ICPMS-6020-W-T
Operator CAR/SRH/JPV/AEM
Method SW6020/ SW6020B

Name	Mass	ISTD	Tune Step	Tune Mode	Conc.	Units	CPS
Li	7	45	1	No Gas	7.906	ug/l	68645.18
Be	9	45	1	No Gas	-0.047	ug/l	51.99
B	11	45	1	No Gas	44.430	ug/l	86160.14
Na	23	45	3	He	371419.231	ug/l	249034567.40
Mg	24	45	3	He	240216.560	ug/l	88856184.92
Al	27	45	1	No Gas	3.045	ug/l	65262.07
Si	28	45	2	H2	25186.943	ug/l	43036603.65
K	39	72	3	He	6737.045	ug/l	2807200.38
Ca	40	72	2	H2	153006.620	ug/l	1023977734.99
Ti	47	72	1	No Gas	2.131	ug/l	4660.44
V	51	72	1	No Gas	16.794	ug/l	386903.96
V	51	72	3	He	11.615	ug/l	59695.16
Cr	52	72	1	No Gas	14.761	ug/l	436934.74
Cr	52	72	3	He	12.437	ug/l	57872.46
Mn	55	72	1	No Gas	3.544	ug/l	123233.58
Mn	55	72	3	He	2.930	ug/l	8867.23
Fe	56	72	2	H2	86.778	ug/l	1338911.47
Fe	56	72	3	He	79.160	ug/l	327245.54
Co	59	72	1	No Gas	1.106	ug/l	30561.44
Ni	60	72	1	No Gas	55.324	ug/l	343022.65
Ni	60	72	3	He	57.358	ug/l	108651.54
Cu	63	72	1	No Gas	2.713	ug/l	42181.84
Cu	63	72	3	He	0.466	ug/l	2891.38
Cu	65	72	1	No Gas	1.183	ug/l	9506.25
Zn	66	72	1	No Gas	0.897	ug/l	5426.30
Zn	66	72	3	He	0.389	ug/l	595.57
As	75	72	1	No Gas	3.141	ug/l	31067.75
As	75	72	3	He	1.634	ug/l	1709.60
Se	78	72	2	H2	4.572	ug/l	2558.45
Br	79	72	1	No Gas	79.871	ug/l	1002059.68
Br	79	72	2	H2	75.456	ug/l	517139.63
Se	82	72	1	No Gas	5.838	ug/l	2645.30
Kr	84	72	1	No Gas		ug/l	602845.38
Sr	88	72	1	No Gas	2229.592	ug/l	96465049.05
Sr	88	72	3	He	2279.041	ug/l	10667816.09
Mo	95	115	1	No Gas	1.347	ug/l	12397.65
Mo	95	115	3	He	1.407	ug/l	4557.42
Mo	98	115	1	No Gas	1.333	ug/l	19978.18
Ag	107	115	1	No Gas	-0.060	ug/l	185.41
Ag	109	115	1	No Gas	-0.060	ug/l	128.05
Cd	111	115	1	No Gas	0.015	ug/l	77.68

ICPMS207-B Analytical Data

Name	Mass	ISTD	Tune Step	Tune Mode	Conc.	Units	CPS
Cd	111	115	3	He	0.007	ug/l	18.00
Cd	114	115	1	No Gas	0.022	ug/l	110.14
Cd	114	115	3	He	0.006	ug/l	36.79
Sn	118	115	1	No Gas	0.399	ug/l	8702.12
Sn	118	115	3	He	0.419	ug/l	2390.22
Sb	121	115	1	No Gas	0.170	ug/l	4809.31
Sb	121	115	3	He	0.163	ug/l	1175.84
Sb	123	115	1	No Gas	0.235	ug/l	4854.66
Sb	123	115	3	He	0.167	ug/l	944.13
Ba	135	115	1	No Gas	73.603	ug/l	341091.61
Ba	137	115	1	No Gas	73.285	ug/l	603991.41
La	139	115	3	He	0.001	ug/l	48.89
Ce	140	115	3	He	0.001	ug/l	61.11
Hg	201	209	1	No Gas	0.023	ug/l	100.31
Hg	202	209	1	No Gas	0.058	ug/l	509.58
Hg	202	209	3	He	0.047	ug/l	196.96
Tl	203	209	3	He	0.055	ug/l	1019.79
Tl	205	209	1	No Gas	0.045	ug/l	4210.71
Tl	205	209	3	He	0.050	ug/l	2365.83
[Pb]	206	209	1	No Gas	0.027	ug/l	915.60
[Pb]	207	209	1	No Gas	0.028	ug/l	810.03
Pb	208	209	1	No Gas	0.028	ug/l	3814.69
Th	232	209	3	He	0.033	ug/l	1502.70
U	238	209	1	No Gas	0.079	ug/l	5055.64

Name	Mass	Tune Step	Tune Mode	CPS	ISTD Recovery %
Sc	45	1	No Gas	4536657.17	80.5
Sc	45	2	H2	2260793.91	82.4
Sc	45	3	He	247989.10	77.9
Ge	72	1	No Gas	1269199.56	83.9
Ge	72	2	H2	849018.21	85.6
Ge	72	3	He	185510.07	83.3
In	115	1	No Gas	10351866.19	85.0
In	115	3	He	2167909.77	82.3
Tb	159	1	No Gas	14777862.65	90.4
Tb	159	3	He	6115683.33	89.5
Ho	165	1	No Gas	13970639.63	91.6
Ho	165	3	He	6003012.85	90.8
Lu	175	1	No Gas	14300347.34	91.9
Lu	175	3	He	4906461.81	91.6
Bi	209	1	No Gas	9487301.65	83.8
Bi	209	3	He	4237158.49	84.5

ICPMS207-B Analytical Data

Sample Name B22011134-001A
File Name 079SMPL.d
Data Path Name D:\Agilent\ICPMH\1\DATA\220121ADoD.b
Acq Time 2022-01-22 00:09:03
Sample Type Sample
Total Dilution 1.0000
Comment ICPMS-6020-W-D
Operator CAR/SRH/JPV/AEM
Method SW6020/ SW6020B

Name	Mass	ISTD	Tune Step	Tune Mode	Conc.	Units	CPS
Li	7	45	1	No Gas	0.026	ug/l	18323.05
Be	9	45	1	No Gas	-0.054	ug/l	41.32
B	11	45	1	No Gas	63.446	ug/l	168854.37
Na	23	45	3	He	40654.820	ug/l	38393339.43
Mg	24	45	3	He	10495.502	ug/l	5462759.00
Al	27	45	1	No Gas	9.110	ug/l	234449.05
Si	28	45	2	H2	28502.668	ug/l	62856629.87
K	39	72	3	He	2121.575	ug/l	1201317.00
Ca	40	72	2	H2	10677.251	ug/l	87045875.31
Ti	47	72	1	No Gas	3.167	ug/l	8419.50
V	51	72	1	No Gas	3.599	ug/l	54558.55
V	51	72	3	He	-1.395	ug/l	9646.55
Cr	52	72	1	No Gas	-1.580	ug/l	54806.27
Cr	52	72	3	He	0.004	ug/l	964.48
Mn	55	72	1	No Gas	509.031	ug/l	20160726.36
Mn	55	72	3	He	493.223	ug/l	1896631.34
Fe	56	72	2	H2	400.479	ug/l	7482014.25
Fe	56	72	3	He	374.228	ug/l	1971307.73
Co	59	72	1	No Gas	0.460	ug/l	15993.71
Ni	60	72	1	No Gas	1.013	ug/l	8236.04
Ni	60	72	3	He	0.931	ug/l	2377.99
Cu	63	72	1	No Gas	0.644	ug/l	13944.97
Cu	63	72	3	He	0.378	ug/l	3158.38
Cu	65	72	1	No Gas	0.515	ug/l	5670.80
Zn	66	72	1	No Gas	1.537	ug/l	10671.88
Zn	66	72	3	He	1.452	ug/l	2200.18
As	75	72	1	No Gas	0.592	ug/l	19273.46
As	75	72	3	He	0.803	ug/l	1238.43
Se	78	72	2	H2	0.009	ug/l	41.45
Br	79	72	1	No Gas	11.090	ug/l	235268.00
Br	79	72	2	H2	10.617	ug/l	118694.42
Se	82	72	1	No Gas	0.318	ug/l	911.16
Kr	84	72	1	No Gas		ug/l	45274.42
Sr	88	72	1	No Gas	73.838	ug/l	3932073.04
Sr	88	72	3	He	70.852	ug/l	427970.98
Mo	95	115	1	No Gas	0.349	ug/l	4002.81
Mo	95	115	3	He	0.340	ug/l	1393.41
Mo	98	115	1	No Gas	0.332	ug/l	6212.15
Ag	107	115	1	No Gas	-0.060	ug/l	228.76
Ag	109	115	1	No Gas	-0.060	ug/l	166.07
Cd	111	115	1	No Gas	0.021	ug/l	134.61

ICPMS207-B Analytical Data

Name	Mass	ISTD	Tune Step	Tune Mode	Conc.	Units	CPS
Cd	111	115	3	He	0.016	ug/l	39.78
Cd	114	115	1	No Gas	0.031	ug/l	271.44
Cd	114	115	3	He	0.016	ug/l	99.96
Sn	118	115	1	No Gas	-0.068	ug/l	2086.03
Sn	118	115	3	He	-0.078	ug/l	532.24
Sb	121	115	1	No Gas	0.077	ug/l	3206.36
Sb	121	115	3	He	0.081	ug/l	841.44
Sb	123	115	1	No Gas	0.080	ug/l	2523.81
Sb	123	115	3	He	0.078	ug/l	642.75
Ba	135	115	1	No Gas	3.775	ug/l	21630.54
Ba	137	115	1	No Gas	3.737	ug/l	38060.08
La	139	115	3	He	0.027	ug/l	779.65
Ce	140	115	3	He	0.038	ug/l	1186.73
Hg	201	209	1	No Gas	0.017	ug/l	96.65
Hg	202	209	1	No Gas	0.333	ug/l	3169.75
Hg	202	209	3	He	0.254	ug/l	1128.49
Tl	203	209	3	He	0.008	ug/l	689.63
Tl	205	209	1	No Gas	0.004	ug/l	2923.68
Tl	205	209	3	He	0.006	ug/l	1638.76
[Pb]	206	209	1	No Gas	0.017	ug/l	938.93
[Pb]	207	209	1	No Gas	0.018	ug/l	830.03
Pb	208	209	1	No Gas	0.017	ug/l	3808.02
Th	232	209	3	He	-0.009	ug/l	236.10
U	238	209	1	No Gas	0.021	ug/l	1714.64

Name	Mass	Tune Step	Tune Mode	CPS	ISTD Recovery %
Sc	45	1	No Gas	6322583.43	112.1
Sc	45	2	H2	2918056.80	106.3
Sc	45	3	He	348943.75	109.6
Ge	72	1	No Gas	1562515.65	103.3
Ge	72	2	H2	1033350.96	104.1
Ge	72	3	He	239202.45	107.4
In	115	1	No Gas	12758690.65	104.8
In	115	3	He	2712161.89	102.9
Tb	159	1	No Gas	17146008.11	104.9
Tb	159	3	He	7033615.92	102.9
Ho	165	1	No Gas	16359278.70	107.3
Ho	165	3	He	6784803.47	102.6
Lu	175	1	No Gas	16713559.85	107.4
Lu	175	3	He	5606108.72	104.7
Bi	209	1	No Gas	11762206.61	103.9
Bi	209	3	He	5024980.15	100.3

ICPMS207-B Analytical Data

Sample Name B22011134-001B
File Name 080SMPL.d
Data Path Name D:\Agilent\ICPMH\1\DATA\220121ADoD.b
Acq Time 2022-01-22 00:15:19
Sample Type Sample
Total Dilution 1.0000
Comment ICPMS-6020-W-T
Operator CAR/SRH/JPV/AEM
Method SW6020/ SW6020B

Name	Mass	ISTD	Tune Step	Tune Mode	Conc.	Units	CPS
Li	7	45	1	No Gas	0.506	ug/l	17909.72
Be	9	45	1	No Gas	-0.053	ug/l	36.99
B	11	45	1	No Gas	67.856	ug/l	140097.55
Na	23	45	3	He	40705.578	ug/l	29434306.50
Mg	24	45	3	He	10398.955	ug/l	4144778.20
Al	27	45	1	No Gas	20.129	ug/l	385728.39
Si	28	45	2	H2	27206.393	ug/l	48537120.06
K	39	72	3	He	2029.812	ug/l	917208.30
Ca	40	72	2	H2	10279.552	ug/l	70988535.20
Ti	47	72	1	No Gas	3.704	ug/l	8360.82
V	51	72	1	No Gas	-0.129	ug/l	-51780.95
V	51	72	3	He	4.989	ug/l	33947.01
Cr	52	72	1	No Gas	3.015	ug/l	162462.33
Cr	52	72	3	He	0.211	ug/l	1744.56
Mn	55	72	1	No Gas	500.616	ug/l	16908531.50
Mn	55	72	3	He	503.265	ug/l	1539506.15
Fe	56	72	2	H2	436.427	ug/l	6905207.41
Fe	56	72	3	He	417.078	ug/l	1747442.71
Co	59	72	1	No Gas	0.530	ug/l	15640.74
Ni	60	72	1	No Gas	1.025	ug/l	7107.68
Ni	60	72	3	He	0.989	ug/l	2004.60
Cu	63	72	1	No Gas	1.109	ug/l	19165.63
Cu	63	72	3	He	0.837	ug/l	4861.18
Cu	65	72	1	No Gas	0.908	ug/l	7855.95
Zn	66	72	1	No Gas	1.194	ug/l	7270.36
Zn	66	72	3	He	1.219	ug/l	1498.97
As	75	72	1	No Gas	2.045	ug/l	25698.77
As	75	72	3	He	1.298	ug/l	1442.51
Se	78	72	2	H2	0.052	ug/l	59.67
Br	79	72	1	No Gas	8.021	ug/l	162580.63
Br	79	72	2	H2	7.548	ug/l	80048.18
Se	82	72	1	No Gas	0.019	ug/l	665.94
Kr	84	72	1	No Gas		ug/l	39875.92
Sr	88	72	1	No Gas	75.626	ug/l	3433661.67
Sr	88	72	3	He	73.684	ug/l	354032.88
Mo	95	115	1	No Gas	0.556	ug/l	5409.95
Mo	95	115	3	He	0.585	ug/l	2001.27
Mo	98	115	1	No Gas	0.555	ug/l	8794.50
Ag	107	115	1	No Gas	-0.049	ug/l	468.86
Ag	109	115	1	No Gas	-0.048	ug/l	411.51
Cd	111	115	1	No Gas	0.007	ug/l	35.84

ICPMS207-B Analytical Data

Name	Mass	ISTD	Tune Step	Tune Mode	Conc.	Units	CPS
Cd	111	115	3	He	0.002	ug/l	8.33
Cd	114	115	1	No Gas	0.015	ug/l	26.28
Cd	114	115	3	He	0.000	ug/l	9.67
Sn	118	115	1	No Gas	0.406	ug/l	9261.38
Sn	118	115	3	He	0.476	ug/l	2744.73
Sb	121	115	1	No Gas	0.138	ug/l	4243.07
Sb	121	115	3	He	0.136	ug/l	1064.15
Sb	123	115	1	No Gas	0.138	ug/l	3245.70
Sb	123	115	3	He	0.135	ug/l	828.44
Ba	135	115	1	No Gas	4.069	ug/l	19878.19
Ba	137	115	1	No Gas	4.069	ug/l	35334.91
La	139	115	3	He	0.015	ug/l	382.23
Ce	140	115	3	He	0.062	ug/l	1627.89
Hg	201	209	1	No Gas	0.024	ug/l	114.65
Hg	202	209	1	No Gas	0.379	ug/l	3218.75
Hg	202	209	3	He	0.265	ug/l	1111.49
Tl	203	209	3	He	0.023	ug/l	813.02
Tl	205	209	1	No Gas	0.013	ug/l	3051.48
Tl	205	209	3	He	0.017	ug/l	1817.53
[Pb]	206	209	1	No Gas	0.048	ug/l	1384.53
[Pb]	207	209	1	No Gas	0.047	ug/l	1172.28
Pb	208	209	1	No Gas	0.047	ug/l	5514.94
Th	232	209	3	He	0.007	ug/l	796.35
U	238	209	1	No Gas	0.018	ug/l	1314.81

Name	Mass	Tune Step	Tune Mode	CPS	ISTD Recovery %
Sc	45	1	No Gas	4912286.80	87.1
Sc	45	2	H2	2360418.89	86.0
Sc	45	3	He	267184.73	83.9
Ge	72	1	No Gas	1332165.87	88.1
Ge	72	2	H2	875087.62	88.2
Ge	72	3	He	190315.19	85.5
In	115	1	No Gas	10880931.91	89.4
In	115	3	He	2277816.19	86.4
Tb	159	1	No Gas	15344115.76	93.9
Tb	159	3	He	6375471.45	93.3
Ho	165	1	No Gas	14384982.50	94.3
Ho	165	3	He	6200602.94	93.7
Lu	175	1	No Gas	14980023.04	96.3
Lu	175	3	He	5034164.40	94.0
Bi	209	1	No Gas	10518714.40	92.9
Bi	209	3	He	4742738.11	94.6

ICPMS207-B Analytical Data

Sample Name B22011134-001BDIL
File Name 081ARef.d
Data Path Name D:\Agilent\ICPMH\1\DATA\220121ADoD.b
Acq Time 2022-01-22 00:21:34
Sample Type AIRRef
Total Dilution 5.0000
Comment ICPMS-6020-W-T
Operator CAR/SRH/JPV/AEM
Method SW6020/ SW6020B

Name	Mass	ISTD	Tune Step	Tune Mode	Conc.	Units	CPS
Li	7	45	1	No Gas	-2.494	ug/l	10538.54
Be	9	45	1	No Gas	-0.288	ug/l	22.33
B	11	45	1	No Gas	66.451	ug/l	32272.73
Na	23	45	3	He	41241.634	ug/l	6091368.10
Mg	24	45	3	He	10348.455	ug/l	839255.79
Al	27	45	1	No Gas	33.623	ug/l	142665.04
Si	28	45	2	H2	25996.113	ug/l	9644631.96
K	39	72	3	He	2062.814	ug/l	254671.20
Ca	40	72	2	H2	10414.221	ug/l	15099376.87
Ti	47	72	1	No Gas	3.795	ug/l	1928.74
V	51	72	1	No Gas	-0.057	ug/l	-53459.71
V	51	72	3	He	10.520	ug/l	23111.63
Cr	52	72	1	No Gas	3.965	ug/l	109975.05
Cr	52	72	3	He	0.511	ug/l	1290.06
Mn	55	72	1	No Gas	495.617	ug/l	3463554.08
Mn	55	72	3	He	481.178	ug/l	308306.83
Fe	56	72	2	H2	430.572	ug/l	1430549.61
Fe	56	72	3	He	402.323	ug/l	357179.60
Co	59	72	1	No Gas	0.586	ug/l	3969.36
Ni	60	72	1	No Gas	21.498	ug/l	29297.86
Ni	60	72	3	He	21.851	ug/l	8970.58
Cu	63	72	1	No Gas	89.423	ug/l	290678.66
Cu	63	72	3	He	91.896	ug/l	98878.88
Cu	65	72	1	No Gas	87.294	ug/l	139752.93
Zn	66	72	1	No Gas	98.583	ug/l	109324.93
Zn	66	72	3	He	103.625	ug/l	23445.60
As	75	72	1	No Gas	4.876	ug/l	19474.25
As	75	72	3	He	1.390	ug/l	522.47
Se	78	72	2	H2	0.029	ug/l	34.89
Br	79	72	1	No Gas	267.397	ug/l	748473.93
Br	79	72	2	H2	272.071	ug/l	410155.54
Se	82	72	1	No Gas	6.340	ug/l	1156.65
Kr	84	72	1	No Gas		ug/l	24195.59
Sr	88	72	1	No Gas	73.943	ug/l	693686.35
Sr	88	72	3	He	73.014	ug/l	73668.02
Mo	95	115	1	No Gas	0.608	ug/l	1317.85
Mo	95	115	3	He	0.572	ug/l	424.45
Mo	98	115	1	No Gas	0.538	ug/l	1906.19
Ag	107	115	1	No Gas	-0.288	ug/l	264.77
Ag	109	115	1	No Gas	-0.282	ug/l	234.77
Cd	111	115	1	No Gas	0.115	ug/l	133.62

ICPMS207-B Analytical Data

Name	Mass	ISTD	Tune Step	Tune Mode	Conc.	Units	CPS
Cd	111	115	3	He	0.101	ug/l	43.44
Cd	114	115	1	No Gas	0.163	ug/l	265.35
Cd	114	115	3	He	0.093	ug/l	97.73
Sn	118	115	1	No Gas	0.865	ug/l	6002.74
Sn	118	115	3	He	1.008	ug/l	1676.78
Sb	121	115	1	No Gas	0.108	ug/l	1455.22
Sb	121	115	3	He	0.136	ug/l	374.71
Sb	123	115	1	No Gas	0.107	ug/l	1098.82
Sb	123	115	3	He	0.134	ug/l	290.03
Ba	135	115	1	No Gas	4.319	ug/l	4588.36
Ba	137	115	1	No Gas	4.165	ug/l	7853.32
La	139	115	3	He	0.028	ug/l	157.78
Ce	140	115	3	He	0.076	ug/l	434.46
Hg	201	209	1	No Gas	0.028	ug/l	51.32
Hg	202	209	1	No Gas	0.343	ug/l	712.54
Hg	202	209	3	He	0.258	ug/l	257.62
Tl	203	209	3	He	-0.015	ug/l	571.58
Tl	205	209	1	No Gas	-0.019	ug/l	2441.35
Tl	205	209	3	He	-0.017	ug/l	1405.31
[Pb]	206	209	1	No Gas	3.768	ug/l	14781.63
[Pb]	207	209	1	No Gas	3.719	ug/l	12751.74
Pb	208	209	1	No Gas	3.695	ug/l	58626.37
Th	232	209	3	He	-0.032	ug/l	334.81
U	238	209	1	No Gas	0.022	ug/l	420.26

Name	Mass	Tune Step	Tune Mode	CPS	ISTD Recovery %
Sc	45	1	No Gas	5056350.40	89.7
Sc	45	2	H2	2453047.16	89.4
Sc	45	3	He	271371.33	85.2
Ge	72	1	No Gas	1374480.56	90.9
Ge	72	2	H2	914087.66	92.1
Ge	72	3	He	199222.02	89.5
In	115	1	No Gas	11703267.64	96.1
In	115	3	He	2376064.93	90.2
Tb	159	1	No Gas	16191526.79	99.1
Tb	159	3	He	6641719.14	97.2
Ho	165	1	No Gas	15415324.36	101.1
Ho	165	3	He	6462561.13	97.7
Lu	175	1	No Gas	15819421.26	101.6
Lu	175	3	He	5258639.60	98.2
Bi	209	1	No Gas	11440975.43	101.0
Bi	209	3	He	5064561.76	101.0

ICPMS207-B Analytical Data

Sample Name B22011134-001BPDS1
File Name 082SMPL.d
Data Path Name D:\Agilent\ICPMH\1\DATA\220121ADoD.b
Acq Time 2022-01-22 00:27:49
Sample Type Sample
Total Dilution 1.0300
Comment ICPMS-6020-W-T
Operator CAR/SRH/JPV/AEM
Method SW6020/ SW6020B

Name	Mass	ISTD	Tune Step	Tune Mode	Conc.	Units	CPS
Li	7	45	1	No Gas	0.664	ug/l	17169.24
Be	9	45	1	No Gas	42.368	ug/l	121021.72
B	11	45	1	No Gas	112.788	ug/l	201955.95
Na	23	45	3	He	39812.613	ug/l	25321311.01
Mg	24	45	3	He	10165.127	ug/l	3563078.47
Al	27	45	1	No Gas	62.598	ug/l	1027471.90
Si	28	45	2	H2	26733.561	ug/l	44473113.89
K	39	72	3	He	1936.021	ug/l	819564.28
Ca	40	72	2	H2	9924.338	ug/l	66656974.63
Ti	47	72	1	No Gas	47.070	ug/l	98826.45
V	51	72	1	No Gas	55.184	ug/l	1381324.08
V	51	72	3	He	54.912	ug/l	223259.76
Cr	52	72	1	No Gas	49.650	ug/l	1274415.79
Cr	52	72	3	He	49.883	ug/l	219618.67
Mn	55	72	1	No Gas	527.611	ug/l	16927124.73
Mn	55	72	3	He	536.430	ug/l	1527469.71
Fe	56	72	2	H2	471.608	ug/l	7254649.24
Fe	56	72	3	He	454.574	ug/l	1772290.17
Co	59	72	1	No Gas	46.866	ug/l	1271479.34
Ni	60	72	1	No Gas	45.713	ug/l	282719.03
Ni	60	72	3	He	51.361	ug/l	92932.20
Cu	63	72	1	No Gas	48.178	ug/l	718170.76
Cu	63	72	3	He	52.168	ug/l	248565.93
Cu	65	72	1	No Gas	47.266	ug/l	346946.79
Zn	66	72	1	No Gas	47.841	ug/l	242986.65
Zn	66	72	3	He	50.869	ug/l	50916.68
As	75	72	1	No Gas	48.273	ug/l	302805.78
As	75	72	3	He	50.847	ug/l	44018.39
Se	78	72	2	H2	51.108	ug/l	28366.25
Br	79	72	1	No Gas	10.939	ug/l	190741.97
Br	79	72	2	H2	10.247	ug/l	96194.04
Se	82	72	1	No Gas	46.486	ug/l	16654.46
Kr	84	72	1	No Gas		ug/l	53509.51
Sr	88	72	1	No Gas	123.797	ug/l	5340608.92
Sr	88	72	3	He	126.618	ug/l	566142.12
Mo	95	115	1	No Gas	48.756	ug/l	445034.30
Mo	95	115	3	He	50.489	ug/l	157070.69
Mo	98	115	1	No Gas	48.056	ug/l	714183.42
Ag	107	115	1	No Gas	19.544	ug/l	458481.55
Ag	109	115	1	No Gas	19.608	ug/l	446452.97
Cd	111	115	1	No Gas	49.120	ug/l	258931.33

ICPMS207-B Analytical Data

Name	Mass	ISTD	Tune Step	Tune Mode	Conc.	Units	CPS
Cd	111	115	3	He	51.000	ug/l	83744.50
Cd	114	115	1	No Gas	50.663	ug/l	590517.83
Cd	114	115	3	He	51.275	ug/l	206697.31
Sn	118	115	1	No Gas	51.587	ug/l	773696.96
Sn	118	115	3	He	52.802	ug/l	201882.27
Sb	121	115	1	No Gas	51.089	ug/l	1205258.54
Sb	121	115	3	He	51.012	ug/l	302565.19
Sb	123	115	1	No Gas	50.598	ug/l	918553.40
Sb	123	115	3	He	51.221	ug/l	240076.38
Ba	135	115	1	No Gas	55.556	ug/l	256498.24
Ba	137	115	1	No Gas	55.573	ug/l	456200.98
La	139	115	3	He	0.017	ug/l	376.67
Ce	140	115	3	He	54.886	ug/l	1294354.00
Hg	201	209	1	No Gas	1.024	ug/l	3640.11
Hg	202	209	1	No Gas	1.394	ug/l	11365.57
Hg	202	209	3	He	1.266	ug/l	5054.62
Tl	203	209	3	He	48.581	ug/l	496167.08
Tl	205	209	1	No Gas	52.336	ug/l	2529233.04
Tl	205	209	3	He	50.407	ug/l	1220095.67
[Pb]	206	209	1	No Gas	52.238	ug/l	886713.30
[Pb]	207	209	1	No Gas	51.703	ug/l	767161.73
Pb	208	209	1	No Gas	51.337	ug/l	3517765.37
Th	232	209	3	He	50.816	ug/l	1731609.38
U	238	209	1	No Gas	52.753	ug/l	3595929.69

Name	Mass	Tune Step	Tune Mode	CPS	ISTD Recovery %
Sc	45	1	No Gas	4446726.82	78.9
Sc	45	2	H2	2267090.18	82.6
Sc	45	3	He	241978.07	76.0
Ge	72	1	No Gas	1303967.94	86.2
Ge	72	2	H2	876686.86	88.3
Ge	72	3	He	182482.16	82.0
In	115	1	No Gas	10619440.92	87.2
In	115	3	He	2154116.13	81.7
Tb	159	1	No Gas	15291000.15	93.6
Tb	159	3	He	6231159.95	91.2
Ho	165	1	No Gas	14507958.07	95.1
Ho	165	3	He	6076172.21	91.9
Lu	175	1	No Gas	15166301.29	97.4
Lu	175	3	He	4985772.68	93.1
Bi	209	1	No Gas	10615455.53	93.8
Bi	209	3	He	4755828.96	94.9

ICPMS207-B Analytical Data

Sample Name B22011134-001BMS4
File Name 083MS4.d
Data Path Name D:\Agilent\ICPMH\1\DATA\220121ADoD.b
Acq Time 2022-01-22 00:34:03
Sample Type MS4
Total Dilution 1.0000
Comment ICPMS-6020-W-T
Operator CAR/SRH/JPV/AEM
Method SW6020/ SW6020B

Name	Mass	ISTD	Tune Step	Tune Mode	Conc.	Units	CPS
Li	7	45	1	No Gas	74.537	ug/l	527373.44
Be	9	45	1	No Gas	40.755	ug/l	119763.48
B	11	45	1	No Gas	143.229	ug/l	262568.51
Na	23	45	3	He	42566.300	ug/l	27934641.53
Mg	24	45	3	He	14874.489	ug/l	5379649.17
Al	27	45	1	No Gas	439.342	ug/l	7338840.24
Si	28	45	2	H2	26603.406	ug/l	45065560.52
K	39	72	3	He	6358.931	ug/l	2650407.55
Ca	40	72	2	H2	14382.711	ug/l	98954279.13
Ti	47	72	1	No Gas	85.660	ug/l	186743.71
V	51	72	1	No Gas	97.179	ug/l	2568236.24
V	51	72	3	He	100.508	ug/l	415936.59
Cr	52	72	1	No Gas	93.435	ug/l	2412015.40
Cr	52	72	3	He	93.920	ug/l	431744.18
Mn	55	72	1	No Gas	916.094	ug/l	30556564.74
Mn	55	72	3	He	941.285	ug/l	2803686.06
Fe	56	72	2	H2	918.601	ug/l	14474662.69
Fe	56	72	3	He	863.783	ug/l	3517835.11
Co	59	72	1	No Gas	90.226	ug/l	2544423.22
Ni	60	72	1	No Gas	88.036	ug/l	565527.87
Ni	60	72	3	He	99.320	ug/l	187822.47
Cu	63	72	1	No Gas	92.841	ug/l	1437095.60
Cu	63	72	3	He	100.975	ug/l	502758.86
Cu	65	72	1	No Gas	91.104	ug/l	694515.47
Zn	66	72	1	No Gas	90.309	ug/l	476184.03
Zn	66	72	3	He	97.279	ug/l	101667.06
As	75	72	1	No Gas	93.881	ug/l	599729.22
As	75	72	3	He	98.441	ug/l	88913.03
Se	78	72	2	H2	101.323	ug/l	57604.60
Br	79	72	1	No Gas	6.399	ug/l	140911.99
Br	79	72	2	H2	6.166	ug/l	70585.16
Se	82	72	1	No Gas	95.716	ug/l	34920.44
Kr	84	72	1	No Gas		ug/l	68633.58
Sr	88	72	1	No Gas	171.831	ug/l	7706147.07
Sr	88	72	3	He	173.565	ug/l	811720.84
Mo	95	115	1	No Gas	93.197	ug/l	872780.86
Mo	95	115	3	He	100.395	ug/l	323408.10
Mo	98	115	1	No Gas	94.620	ug/l	1443034.01
Ag	107	115	1	No Gas	9.493	ug/l	229334.90
Ag	109	115	1	No Gas	9.643	ug/l	226087.33
Cd	111	115	1	No Gas	49.801	ug/l	269406.97

ICPMS207-B Analytical Data

Name	Mass	ISTD	Tune Step	Tune Mode	Conc.	Units	CPS
Cd	111	115	3	He	50.683	ug/l	86183.01
Cd	114	115	1	No Gas	50.814	ug/l	607830.17
Cd	114	115	3	He	51.023	ug/l	212998.19
Sn	118	115	1	No Gas	102.817	ug/l	1579153.14
Sn	118	115	3	He	103.812	ug/l	410234.56
Sb	121	115	1	No Gas	103.179	ug/l	2497279.40
Sb	121	115	3	He	101.574	ug/l	623694.04
Sb	123	115	1	No Gas	104.317	ug/l	1942690.47
Sb	123	115	3	He	102.681	ug/l	498290.04
Ba	135	115	1	No Gas	100.834	ug/l	477612.68
Ba	137	115	1	No Gas	99.182	ug/l	835418.36
La	139	115	3	He	107.795	ug/l	2405982.38
Ce	140	115	3	He	110.042	ug/l	2687851.80
Hg	201	209	1	No Gas	0.034	ug/l	153.97
Hg	202	209	1	No Gas	0.362	ug/l	3165.41
Hg	202	209	3	He	0.276	ug/l	1134.16
Tl	203	209	3	He	99.773	ug/l	1025374.07
Tl	205	209	1	No Gas	102.083	ug/l	5177908.81
Tl	205	209	3	He	102.297	ug/l	2491414.34
[Pb]	206	209	1	No Gas	102.135	ug/l	1820221.90
[Pb]	207	209	1	No Gas	102.427	ug/l	1595405.86
Pb	208	209	1	No Gas	101.590	ug/l	7308095.79
Th	232	209	3	He	104.698	ug/l	3592027.06
U	238	209	1	No Gas	104.844	ug/l	7505105.64

Name	Mass	Tune Step	Tune Mode	CPS	ISTD Recovery %
Sc	45	1	No Gas	4442421.42	78.8
Sc	45	2	H2	2241335.71	81.7
Sc	45	3	He	242423.64	76.1
Ge	72	1	No Gas	1316019.40	87.0
Ge	72	2	H2	872090.62	87.9
Ge	72	3	He	185293.90	83.2
In	115	1	No Gas	10581243.41	86.9
In	115	3	He	2166752.60	82.2
Tb	159	1	No Gas	15447892.66	94.5
Tb	159	3	He	6291956.89	92.1
Ho	165	1	No Gas	14964420.77	98.1
Ho	165	3	He	6111666.40	92.4
Lu	175	1	No Gas	15477558.47	99.4
Lu	175	3	He	5084453.49	94.9
Bi	209	1	No Gas	10823043.07	95.6
Bi	209	3	He	4648616.36	92.7

ICPMS207-B Analytical Data

Sample Name B22011134-001BMSD4
File Name 084MSD4.d
Data Path Name D:\Agilent\ICPMH\1\DATA\220121ADoD.b
Acq Time 2022-01-22 00:40:17
Sample Type MSD4
Total Dilution 1.0000
Comment ICPMS-6020-W-T
Operator CAR/SRH/JPV/AEM
Method SW6020/ SW6020B

Name	Mass	ISTD	Tune Step	Tune Mode	Conc.	Units	CPS
Li	7	45	1	No Gas	74.194	ug/l	516101.79
Be	9	45	1	No Gas	40.010	ug/l	115475.18
B	11	45	1	No Gas	143.265	ug/l	257841.48
Na	23	45	3	He	43432.140	ug/l	28121166.80
Mg	24	45	3	He	15267.394	ug/l	5446603.97
Al	27	45	1	No Gas	441.154	ug/l	7232514.89
Si	28	45	2	H2	28052.657	ug/l	47952816.02
K	39	72	3	He	6351.095	ug/l	2598661.84
Ca	40	72	2	H2	14569.132	ug/l	100385682.98
Ti	47	72	1	No Gas	87.624	ug/l	185045.23
V	51	72	1	No Gas	89.526	ug/l	2292033.53
V	51	72	3	He	102.679	ug/l	416909.95
Cr	52	72	1	No Gas	96.471	ug/l	2409812.39
Cr	52	72	3	He	96.071	ug/l	433422.88
Mn	55	72	1	No Gas	948.050	ug/l	30627039.21
Mn	55	72	3	He	976.136	ug/l	2854071.53
Fe	56	72	2	H2	942.058	ug/l	14866334.67
Fe	56	72	3	He	886.793	ug/l	3545911.80
Co	59	72	1	No Gas	94.106	ug/l	2571128.07
Ni	60	72	1	No Gas	92.111	ug/l	573281.69
Ni	60	72	3	He	99.224	ug/l	184230.62
Cu	63	72	1	No Gas	95.891	ug/l	1437360.64
Cu	63	72	3	He	103.452	ug/l	505586.38
Cu	65	72	1	No Gas	95.942	ug/l	708058.05
Zn	66	72	1	No Gas	92.327	ug/l	471432.38
Zn	66	72	3	He	99.516	ug/l	102087.90
As	75	72	1	No Gas	98.740	ug/l	610311.87
As	75	72	3	He	100.531	ug/l	89131.15
Se	78	72	2	H2	102.826	ug/l	58551.28
Br	79	72	1	No Gas	6.383	ug/l	136250.26
Br	79	72	2	H2	5.977	ug/l	69444.91
Se	82	72	1	No Gas	99.539	ug/l	35135.61
Kr	84	72	1	No Gas		ug/l	67413.56
Sr	88	72	1	No Gas	179.788	ug/l	7808802.60
Sr	88	72	3	He	180.913	ug/l	830574.31
Mo	95	115	1	No Gas	96.777	ug/l	920048.42
Mo	95	115	3	He	100.421	ug/l	323778.00
Mo	98	115	1	No Gas	96.130	ug/l	1488521.79
Ag	107	115	1	No Gas	9.668	ug/l	237172.35
Ag	109	115	1	No Gas	9.635	ug/l	229327.04
Cd	111	115	1	No Gas	49.635	ug/l	272613.86

ICPMS207-B Analytical Data

Name	Mass	ISTD	Tune Step	Tune Mode	Conc.	Units	CPS
Cd	111	115	3	He	51.213	ug/l	87143.30
Cd	114	115	1	No Gas	50.567	ug/l	614131.49
Cd	114	115	3	He	51.294	ug/l	214285.12
Sn	118	115	1	No Gas	106.268	ug/l	1656842.27
Sn	118	115	3	He	104.320	ug/l	412573.32
Sb	121	115	1	No Gas	103.628	ug/l	2546120.36
Sb	121	115	3	He	101.917	ug/l	626236.30
Sb	123	115	1	No Gas	104.047	ug/l	1967117.45
Sb	123	115	3	He	104.025	ug/l	505151.77
Ba	135	115	1	No Gas	101.442	ug/l	487719.46
Ba	137	115	1	No Gas	99.316	ug/l	849350.59
La	139	115	3	He	108.217	ug/l	2417351.82
Ce	140	115	3	He	112.972	ug/l	2760496.23
Hg	201	209	1	No Gas	0.032	ug/l	147.64
Hg	202	209	1	No Gas	0.359	ug/l	3186.75
Hg	202	209	3	He	0.267	ug/l	1114.16
Tl	203	209	3	He	100.314	ug/l	1048411.05
Tl	205	209	1	No Gas	102.017	ug/l	5252532.39
Tl	205	209	3	He	102.866	ug/l	2547478.08
[Pb]	206	209	1	No Gas	102.980	ug/l	1862824.45
[Pb]	207	209	1	No Gas	102.060	ug/l	1613656.24
Pb	208	209	1	No Gas	101.825	ug/l	7435092.30
Th	232	209	3	He	105.168	ug/l	3669433.52
U	238	209	1	No Gas	105.644	ug/l	7675877.07

Name	Mass	Tune Step	Tune Mode	CPS	ISTD Recovery %
Sc	45	1	No Gas	4366320.55	77.4
Sc	45	2	H2	2261806.11	82.4
Sc	45	3	He	239161.17	75.1
Ge	72	1	No Gas	1274650.07	84.3
Ge	72	2	H2	873535.56	88.0
Ge	72	3	He	181911.49	81.7
In	115	1	No Gas	10744739.87	88.3
In	115	3	He	2167450.26	82.2
Tb	159	1	No Gas	15623800.33	95.6
Tb	159	3	He	6452868.99	94.4
Ho	165	1	No Gas	14971885.01	98.2
Ho	165	3	He	6222027.07	94.1
Lu	175	1	No Gas	15425210.19	99.1
Lu	175	3	He	4941960.27	92.3
Bi	209	1	No Gas	10986179.37	97.0
Bi	209	3	He	4727253.15	94.3

ICPMS207-B Analytical Data

Sample Name Rinse
File Name 085BLKV.d
Data Path Name D:\Agilent\ICPMH\1\DATA\220121ADoD.b
Acq Time 2022-01-22 00:46:31
Sample Type BlkVrfy
Total Dilution 1.0000
Comment ICPMS-6020-W-D
Operator CAR/SRH/JPV/AEM
Method SW6020/ SW6020B

Name	Mass	ISTD	Tune Step	Tune Mode	Conc.	Units	CPS
Li	7	45	1	No Gas	-0.351	ug/l	10860.90
Be	9	45	1	No Gas	-0.050	ug/l	44.66
B	11	45	1	No Gas	0.880	ug/l	6323.87
Na	23	45	3	He	34.109	ug/l	62435.48
Mg	24	45	3	He	-0.140	ug/l	1443.88
Al	27	45	1	No Gas	-0.330	ug/l	8132.25
Si	28	45	2	H2	42.262	ug/l	84084.29
K	39	72	3	He	-29.501	ug/l	60378.66
Ca	40	72	2	H2	-1.237	ug/l	86509.68
Ti	47	72	1	No Gas	-0.018	ug/l	158.49
V	51	72	1	No Gas	2.096	ug/l	5842.47
V	51	72	3	He	0.957	ug/l	17754.19
Cr	52	72	1	No Gas	-0.424	ug/l	78159.54
Cr	52	72	3	He	0.009	ug/l	811.14
Mn	55	72	1	No Gas	0.186	ug/l	16423.29
Mn	55	72	3	He	0.141	ug/l	577.57
Fe	56	72	2	H2	0.131	ug/l	11915.19
Fe	56	72	3	He	0.074	ug/l	5450.01
Co	59	72	1	No Gas	0.000	ug/l	525.63
Ni	60	72	1	No Gas	-0.017	ug/l	342.66
Ni	60	72	3	He	-0.005	ug/l	76.67
Cu	63	72	1	No Gas	0.008	ug/l	1994.94
Cu	63	72	3	He	0.006	ug/l	629.22
Cu	65	72	1	No Gas	0.010	ug/l	967.76
Zn	66	72	1	No Gas	0.025	ug/l	1078.64
Zn	66	72	3	He	0.034	ug/l	235.56
As	75	72	1	No Gas	1.138	ug/l	20500.92
As	75	72	3	He	-0.009	ug/l	238.80
Se	78	72	2	H2	0.011	ug/l	39.11
Br	79	72	1	No Gas	22.339	ug/l	349886.76
Br	79	72	2	H2	22.544	ug/l	192839.94
Se	82	72	1	No Gas	0.191	ug/l	752.75
Kr	84	72	1	No Gas		ug/l	18864.91
Sr	88	72	1	No Gas	0.004	ug/l	931.52
Sr	88	72	3	He	-0.004	ug/l	236.67
Mo	95	115	1	No Gas	0.013	ug/l	197.78
Mo	95	115	3	He	0.012	ug/l	62.22
Mo	98	115	1	No Gas	0.013	ug/l	319.95
Ag	107	115	1	No Gas	-0.002	ug/l	1762.82
Ag	109	115	1	No Gas	0.001	ug/l	1754.82
Cd	111	115	1	No Gas	0.003	ug/l	12.92

ICPMS207-B Analytical Data

Name	Mass	ISTD	Tune Step	Tune Mode	Conc.	Units	CPS
Cd	111	115	3	He	0.006	ug/l	16.67
Cd	114	115	1	No Gas	0.004	ug/l	-110.49
Cd	114	115	3	He	0.005	ug/l	36.43
Sn	118	115	1	No Gas	0.017	ug/l	3420.32
Sn	118	115	3	He	0.005	ug/l	840.03
Sb	121	115	1	No Gas	0.135	ug/l	4573.21
Sb	121	115	3	He	0.103	ug/l	897.79
Sb	123	115	1	No Gas	0.135	ug/l	3491.79
Sb	123	115	3	He	0.104	ug/l	715.43
Ba	135	115	1	No Gas	0.007	ug/l	103.13
Ba	137	115	1	No Gas	0.007	ug/l	163.01
La	139	115	3	He	0.000	ug/l	30.00
Ce	140	115	3	He	0.000	ug/l	38.89
Hg	201	209	1	No Gas	0.000	ug/l	29.33
Hg	202	209	1	No Gas	0.002	ug/l	120.31
Hg	202	209	3	He	0.001	ug/l	38.99
Tl	203	209	3	He	0.196	ug/l	2884.81
Tl	205	209	1	No Gas	0.177	ug/l	12885.51
Tl	205	209	3	He	0.208	ug/l	7210.86
[Pb]	206	209	1	No Gas	0.014	ug/l	904.48
[Pb]	207	209	1	No Gas	0.012	ug/l	746.69
Pb	208	209	1	No Gas	0.011	ug/l	3482.42
Th	232	209	3	He	0.019	ug/l	1315.93
U	238	209	1	No Gas	0.007	ug/l	680.15

Name	Mass	Tune Step	Tune Mode	CPS	ISTD Recovery %
Sc	45	1	No Gas	4694404.12	83.3
Sc	45	2	H2	2428626.44	88.5
Sc	45	3	He	254931.64	80.0
Ge	72	1	No Gas	1371394.76	90.7
Ge	72	2	H2	937153.43	94.4
Ge	72	3	He	194674.70	87.4
In	115	1	No Gas	11920070.64	97.9
In	115	3	He	2418649.00	91.8
Tb	159	1	No Gas	16732481.06	102.4
Tb	159	3	He	6856379.10	100.3
Ho	165	1	No Gas	16081845.65	105.5
Ho	165	3	He	6581280.06	99.5
Lu	175	1	No Gas	16546357.44	106.3
Lu	175	3	He	5429739.39	101.4
Bi	209	1	No Gas	12179012.91	107.6
Bi	209	3	He	5210537.07	104.0

ICPMS207-B Analytical Data

Sample Name B22011135-001A
File Name 086SMPL.d
Data Path Name D:\Agilent\ICPMH\1\DATA\220121ADoD.b
Acq Time 2022-01-22 00:52:45
Sample Type Sample
Total Dilution 1.0000
Comment ICPMS-6020-W-D
Operator CAR/SRH/JPV/AEM
Method SW6020/ SW6020B

Name	Mass	ISTD	Tune Step	Tune Mode	Conc.	Units	CPS
Li	7	45	1	No Gas	2.119	ug/l	35049.20
Be	9	45	1	No Gas	-0.054	ug/l	39.66
B	11	45	1	No Gas	160.193	ug/l	375718.66
Na	23	45	3	He	95615.067	ug/l	79000653.82
Mg	24	45	3	He	31906.533	ug/l	14538200.12
Al	27	45	1	No Gas	2.957	ug/l	80138.91
Si	28	45	2	H2	36694.929	ug/l	75420759.90
K	39	72	3	He	3383.757	ug/l	1699566.14
Ca	40	72	2	H2	23460.283	ug/l	182906358.25
Ti	47	72	1	No Gas	2.716	ug/l	6907.39
V	51	72	1	No Gas	20.421	ug/l	564883.95
V	51	72	3	He	17.022	ug/l	95740.71
Cr	52	72	1	No Gas	0.217	ug/l	102887.43
Cr	52	72	3	He	0.773	ug/l	5038.66
Mn	55	72	1	No Gas	107.163	ug/l	4055075.37
Mn	55	72	3	He	106.138	ug/l	372439.05
Fe	56	72	2	H2	59.620	ug/l	1074485.52
Fe	56	72	3	He	57.281	ug/l	280208.75
Co	59	72	1	No Gas	1.331	ug/l	43038.18
Ni	60	72	1	No Gas	5.075	ug/l	37372.67
Ni	60	72	3	He	5.145	ug/l	11552.38
Cu	63	72	1	No Gas	1.489	ug/l	28080.84
Cu	63	72	3	He	1.005	ug/l	6552.50
Cu	65	72	1	No Gas	1.037	ug/l	9894.66
Zn	66	72	1	No Gas	2.093	ug/l	13486.03
Zn	66	72	3	He	2.062	ug/l	2758.06
As	75	72	1	No Gas	0.224	ug/l	15771.82
As	75	72	3	He	0.394	ug/l	695.07
Se	78	72	2	H2	0.179	ug/l	149.33
Br	79	72	1	No Gas	22.217	ug/l	378230.79
Br	79	72	2	H2	23.184	ug/l	208262.65
Se	82	72	1	No Gas	0.444	ug/l	919.70
Kr	84	72	1	No Gas		ug/l	66798.29
Sr	88	72	1	No Gas	151.241	ug/l	7677183.38
Sr	88	72	3	He	147.908	ug/l	814600.59
Mo	95	115	1	No Gas	2.947	ug/l	31243.08
Mo	95	115	3	He	3.051	ug/l	11632.57
Mo	98	115	1	No Gas	2.929	ug/l	50556.89
Ag	107	115	1	No Gas	-0.062	ug/l	148.73
Ag	109	115	1	No Gas	-0.060	ug/l	142.06
Cd	111	115	1	No Gas	0.026	ug/l	157.11

ICPMS207-B Analytical Data

Name	Mass	ISTD	Tune Step	Tune Mode	Conc.	Units	CPS
Cd	111	115	3	He	0.021	ug/l	47.78
Cd	114	115	1	No Gas	0.036	ug/l	317.70
Cd	114	115	3	He	0.021	ug/l	117.54
Sn	118	115	1	No Gas	-0.083	ug/l	1700.07
Sn	118	115	3	He	-0.089	ug/l	453.34
Sb	121	115	1	No Gas	0.219	ug/l	6888.05
Sb	121	115	3	He	0.214	ug/l	1759.29
Sb	123	115	1	No Gas	0.214	ug/l	5167.47
Sb	123	115	3	He	0.217	ug/l	1400.54
Ba	135	115	1	No Gas	13.970	ug/l	74875.23
Ba	137	115	1	No Gas	13.795	ug/l	131428.79
La	139	115	3	He	0.007	ug/l	197.78
Ce	140	115	3	He	0.018	ug/l	564.46
Hg	201	209	1	No Gas	0.028	ug/l	141.64
Hg	202	209	1	No Gas	0.517	ug/l	4789.91
Hg	202	209	3	He	0.405	ug/l	1823.76
Tl	203	209	3	He	0.101	ug/l	1762.16
Tl	205	209	1	No Gas	0.083	ug/l	7156.50
Tl	205	209	3	He	0.094	ug/l	4038.91
[Pb]	206	209	1	No Gas	0.029	ug/l	1154.50
[Pb]	207	209	1	No Gas	0.030	ug/l	1010.05
Pb	208	209	1	No Gas	0.027	ug/l	4575.90
Th	232	209	3	He	-0.003	ug/l	480.87
U	238	209	1	No Gas	0.150	ug/l	11588.14

Name	Mass	Tune Step	Tune Mode	CPS	ISTD Recovery %
Sc	45	1	No Gas	5695231.71	101.0
Sc	45	2	H2	2719475.66	99.1
Sc	45	3	He	305487.52	95.9
Ge	72	1	No Gas	1489111.86	98.5
Ge	72	2	H2	988587.59	99.6
Ge	72	3	He	218254.86	98.0
In	115	1	No Gas	11963204.56	98.3
In	115	3	He	2558246.52	97.1
Tb	159	1	No Gas	17327811.58	106.0
Tb	159	3	He	7042118.07	103.1
Ho	165	1	No Gas	16435339.55	107.8
Ho	165	3	He	6808581.62	102.9
Lu	175	1	No Gas	16821965.54	108.1
Lu	175	3	He	5596954.88	104.5
Bi	209	1	No Gas	11556710.04	102.1
Bi	209	3	He	5142840.35	102.6

ICPMS207-B Analytical Data

Sample Name B22011135-001B
File Name 087SMPL.d
Data Path Name D:\Agilent\ICPMH\1\DATA\220121ADoD.b
Acq Time 2022-01-22 00:59:00
Sample Type Sample
Total Dilution 1.0000
Comment ICPMS-6020-W-T
Operator CAR/SRH/JPV/AEM
Method SW6020/ SW6020B

Name	Mass	ISTD	Tune Step	Tune Mode	Conc.	Units	CPS
Li	7	45	1	No Gas	2.431	ug/l	29662.23
Be	9	45	1	No Gas	-0.049	ug/l	44.99
B	11	45	1	No Gas	157.231	ug/l	289412.89
Na	23	45	3	He	96463.515	ug/l	59673964.67
Mg	24	45	3	He	32096.579	ug/l	10952197.04
Al	27	45	1	No Gas	190.598	ug/l	3209175.92
Si	28	45	2	H2	31610.842	ug/l	53464465.89
K	39	72	3	He	3123.145	ug/l	1273272.11
Ca	40	72	2	H2	23172.207	ug/l	153670858.78
Ti	47	72	1	No Gas	21.890	ug/l	45166.31
V	51	72	1	No Gas	24.654	ug/l	577203.76
V	51	72	3	He	22.172	ug/l	97057.30
Cr	52	72	1	No Gas	2.931	ug/l	149446.20
Cr	52	72	3	He	1.211	ug/l	5986.81
Mn	55	72	1	No Gas	116.769	ug/l	3680153.59
Mn	55	72	3	He	114.869	ug/l	325878.98
Fe	56	72	2	H2	300.956	ug/l	4579228.75
Fe	56	72	3	He	267.138	ug/l	1039114.43
Co	59	72	1	No Gas	1.588	ug/l	42704.35
Ni	60	72	1	No Gas	5.677	ug/l	34789.34
Ni	60	72	3	He	5.891	ug/l	10681.76
Cu	63	72	1	No Gas	2.339	ug/l	35782.23
Cu	63	72	3	He	1.779	ug/l	8966.29
Cu	65	72	1	No Gas	1.833	ug/l	13970.99
Zn	66	72	1	No Gas	2.521	ug/l	13356.92
Zn	66	72	3	He	2.569	ug/l	2730.28
As	75	72	1	No Gas	3.617	ug/l	32962.43
As	75	72	3	He	0.810	ug/l	918.61
Se	78	72	2	H2	0.217	ug/l	147.78
Br	79	72	1	No Gas	9.803	ug/l	172095.13
Br	79	72	2	H2	8.772	ug/l	84795.98
Se	82	72	1	No Gas	0.032	ug/l	625.54
Kr	84	72	1	No Gas		ug/l	60416.57
Sr	88	72	1	No Gas	161.450	ug/l	6828249.46
Sr	88	72	3	He	150.815	ug/l	671678.05
Mo	95	115	1	No Gas	3.231	ug/l	30130.69
Mo	95	115	3	He	3.429	ug/l	10934.25
Mo	98	115	1	No Gas	3.229	ug/l	49018.26
Ag	107	115	1	No Gas	-0.047	ug/l	486.87
Ag	109	115	1	No Gas	-0.047	ug/l	421.51
Cd	111	115	1	No Gas	0.013	ug/l	64.98

ICPMS207-B Analytical Data

Name	Mass	ISTD	Tune Step	Tune Mode	Conc.	Units	CPS
Cd	111	115	3	He	0.009	ug/l	20.89
Cd	114	115	1	No Gas	0.017	ug/l	52.76
Cd	114	115	3	He	0.007	ug/l	40.40
Sn	118	115	1	No Gas	0.450	ug/l	9630.93
Sn	118	115	3	He	0.521	ug/l	2754.73
Sb	121	115	1	No Gas	0.277	ug/l	7438.71
Sb	121	115	3	He	0.283	ug/l	1887.99
Sb	123	115	1	No Gas	0.284	ug/l	5848.48
Sb	123	115	3	He	0.284	ug/l	1496.23
Ba	135	115	1	No Gas	14.624	ug/l	68900.49
Ba	137	115	1	No Gas	14.624	ug/l	122508.02
La	139	115	3	He	0.065	ug/l	1447.86
Ce	140	115	3	He	0.172	ug/l	4179.54
Hg	201	209	1	No Gas	0.046	ug/l	193.96
Hg	202	209	1	No Gas	0.744	ug/l	6214.88
Hg	202	209	3	He	0.549	ug/l	2220.41
Tl	203	209	3	He	0.085	ug/l	1423.98
Tl	205	209	1	No Gas	0.060	ug/l	5374.49
Tl	205	209	3	He	0.084	ug/l	3407.14
[Pb]	206	209	1	No Gas	0.321	ug/l	6091.43
[Pb]	207	209	1	No Gas	0.329	ug/l	5438.92
Pb	208	209	1	No Gas	0.319	ug/l	24511.19
Th	232	209	3	He	0.045	ug/l	2058.33
U	238	209	1	No Gas	0.156	ug/l	10907.37

Name	Mass	Tune Step	Tune Mode	CPS	ISTD Recovery %
Sc	45	1	No Gas	4468548.28	79.2
Sc	45	2	H2	2237915.28	81.5
Sc	45	3	He	228843.45	71.9
Ge	72	1	No Gas	1241315.27	82.1
Ge	72	2	H2	841205.59	84.8
Ge	72	3	He	176435.52	79.2
In	115	1	No Gas	10517176.62	86.4
In	115	3	He	2140289.27	81.2
Tb	159	1	No Gas	15338138.54	93.9
Tb	159	3	He	6368539.57	93.2
Ho	165	1	No Gas	14519355.20	95.2
Ho	165	3	He	6183535.77	93.5
Lu	175	1	No Gas	14999891.86	96.4
Lu	175	3	He	4980085.33	93.0
Bi	209	1	No Gas	10499441.37	92.7
Bi	209	3	He	4642078.60	92.6

ICPMS207-B Analytical Data

Sample Name B22011136-001A
File Name 088SMPL.d
Data Path Name D:\Agilent\ICPMH\1\DATA\220121ADoD.b
Acq Time 2022-01-22 01:05:15
Sample Type Sample
Total Dilution 1.0000
Comment ICPMS-6020-W-D
Operator CAR/SRH/JPV/AEM
Method SW6020/ SW6020B

Name	Mass	ISTD	Tune Step	Tune Mode	Conc.	Units	CPS
Li	7	45	1	No Gas	0.213	ug/l	18038.59
Be	9	45	1	No Gas	-0.052	ug/l	46.66
B	11	45	1	No Gas	211.265	ug/l	490118.53
Na	23	45	3	He	114865.039	ug/l	93937947.49
Mg	24	45	3	He	9736.621	ug/l	4392639.26
Al	27	45	1	No Gas	43.567	ug/l	940600.92
Si	28	45	2	H2	33211.527	ug/l	68503408.45
K	39	72	3	He	3666.123	ug/l	1834717.72
Ca	40	72	2	H2	5949.951	ug/l	46780095.53
Ti	47	72	1	No Gas	4.524	ug/l	11095.68
V	51	72	1	No Gas	51.186	ug/l	1466641.19
V	51	72	3	He	46.325	ug/l	234102.83
Cr	52	72	1	No Gas	2.323	ug/l	158352.80
Cr	52	72	3	He	4.521	ug/l	25290.73
Mn	55	72	1	No Gas	5.185	ug/l	201524.08
Mn	55	72	3	He	5.341	ug/l	18889.67
Fe	56	72	2	H2	34.565	ug/l	631363.48
Fe	56	72	3	He	34.362	ug/l	170324.63
Co	59	72	1	No Gas	0.158	ug/l	5460.21
Ni	60	72	1	No Gas	0.343	ug/l	2914.53
Ni	60	72	3	He	0.327	ug/l	823.37
Cu	63	72	1	No Gas	1.102	ug/l	20793.80
Cu	63	72	3	He	0.449	ug/l	3297.72
Cu	65	72	1	No Gas	0.506	ug/l	5191.01
Zn	66	72	1	No Gas	0.803	ug/l	5665.12
Zn	66	72	3	He	0.819	ug/l	1228.95
As	75	72	1	No Gas	0.302	ug/l	15934.40
As	75	72	3	He	0.077	ug/l	358.67
Se	78	72	2	H2	0.447	ug/l	323.89
Br	79	72	1	No Gas	41.875	ug/l	634395.82
Br	79	72	2	H2	41.808	ug/l	351024.15
Se	82	72	1	No Gas	0.927	ug/l	1088.92
Kr	84	72	1	No Gas		ug/l	39235.45
Sr	88	72	1	No Gas	62.820	ug/l	3112459.48
Sr	88	72	3	He	59.095	ug/l	325706.41
Mo	95	115	1	No Gas	0.529	ug/l	5756.75
Mo	95	115	3	He	0.545	ug/l	2091.28
Mo	98	115	1	No Gas	0.531	ug/l	9409.81
Ag	107	115	1	No Gas	-0.062	ug/l	164.74
Ag	109	115	1	No Gas	-0.060	ug/l	147.39
Cd	111	115	1	No Gas	0.026	ug/l	159.35

ICPMS207-B Analytical Data

Name	Mass	ISTD	Tune Step	Tune Mode	Conc.	Units	CPS
Cd	111	115	3	He	0.019	ug/l	44.56
Cd	114	115	1	No Gas	0.035	ug/l	314.02
Cd	114	115	3	He	0.019	ug/l	104.70
Sn	118	115	1	No Gas	-0.073	ug/l	1909.70
Sn	118	115	3	He	-0.094	ug/l	426.68
Sb	121	115	1	No Gas	0.104	ug/l	3813.90
Sb	121	115	3	He	0.104	ug/l	960.13
Sb	123	115	1	No Gas	0.103	ug/l	2879.59
Sb	123	115	3	He	0.109	ug/l	780.77
Ba	135	115	1	No Gas	6.451	ug/l	35188.06
Ba	137	115	1	No Gas	6.474	ug/l	62770.00
La	139	115	3	He	0.046	ug/l	1243.40
Ce	140	115	3	He	0.174	ug/l	5029.84
Hg	201	209	1	No Gas	0.007	ug/l	59.99
Hg	202	209	1	No Gas	0.009	ug/l	184.30
Hg	202	209	3	He	0.008	ug/l	65.99
Tl	203	209	3	He	0.025	ug/l	888.39
Tl	205	209	1	No Gas	0.016	ug/l	3618.31
Tl	205	209	3	He	0.020	ug/l	2021.64
[Pb]	206	209	1	No Gas	0.049	ug/l	1570.10
[Pb]	207	209	1	No Gas	0.048	ug/l	1333.41
Pb	208	209	1	No Gas	0.045	ug/l	6040.57
Th	232	209	3	He	-0.005	ug/l	384.83
U	238	209	1	No Gas	0.022	ug/l	1819.10

Name	Mass	Tune Step	Tune Mode	CPS	ISTD Recovery %
Sc	45	1	No Gas	5653800.46	100.3
Sc	45	2	H2	2729152.20	99.4
Sc	45	3	He	302380.52	94.9
Ge	72	1	No Gas	1453220.30	96.1
Ge	72	2	H2	995440.55	100.3
Ge	72	3	He	218260.75	98.0
In	115	1	No Gas	12160925.03	99.9
In	115	3	He	2554274.12	96.9
Tb	159	1	No Gas	17371924.86	106.3
Tb	159	3	He	7083172.19	103.7
Ho	165	1	No Gas	16259521.03	106.6
Ho	165	3	He	6845958.95	103.5
Lu	175	1	No Gas	16894348.54	108.6
Lu	175	3	He	5640841.42	105.3
Bi	209	1	No Gas	11790237.17	104.1
Bi	209	3	He	5071738.81	101.2

ICPMS207-B Analytical Data

Sample Name CCV
File Name 089_CCV.d
Data Path Name D:\Agilent\ICPMH\1\DATA\220121ADoD.b
Acq Time 2022-01-22 01:11:29
Sample Type CCV
Total Dilution 1.0000
Comment ICPMS-6020-W-D
Operator CAR/SRH/JPV/AEM
Method SW6020/ SW6020B

Name	Mass	ISTD	Tune Step	Tune Mode	Conc.	Units	CPS
Li	7	45	1	No Gas	462.554	ug/l	3416435.24
Be	9	45	1	No Gas	40.119	ug/l	125572.29
B	11	45	1	No Gas	44.847	ug/l	90754.32
Na	23	45	3	He	11993.337	ug/l	8770137.79
Mg	24	45	3	He	12014.650	ug/l	4825481.61
Al	27	45	1	No Gas	52.979	ug/l	955123.06
Si	28	45	2	H2	248.312	ug/l	468345.15
K	39	72	3	He	11135.339	ug/l	4987012.60
Ca	40	72	2	H2	11914.313	ug/l	89911582.58
Ti	47	72	1	No Gas	46.758	ug/l	105165.82
V	51	72	1	No Gas	52.926	ug/l	1416629.31
V	51	72	3	He	49.915	ug/l	231616.41
Cr	52	72	1	No Gas	47.622	ug/l	1310446.65
Cr	52	72	3	He	47.645	ug/l	238356.46
Mn	55	72	1	No Gas	50.008	ug/l	1728567.00
Mn	55	72	3	He	48.793	ug/l	158079.57
Fe	56	72	2	H2	1315.954	ug/l	22732312.13
Fe	56	72	3	He	1242.454	ug/l	5496684.30
Co	59	72	1	No Gas	48.405	ug/l	1407431.73
Ni	60	72	1	No Gas	48.112	ug/l	318830.23
Ni	60	72	3	He	49.636	ug/l	102072.84
Cu	63	72	1	No Gas	49.921	ug/l	797136.11
Cu	63	72	3	He	51.035	ug/l	276410.34
Cu	65	72	1	No Gas	48.896	ug/l	384557.15
Zn	66	72	1	No Gas	49.225	ug/l	267841.86
Zn	66	72	3	He	51.147	ug/l	58177.91
As	75	72	1	No Gas	48.281	ug/l	324186.66
As	75	72	3	He	50.289	ug/l	49486.71
Se	78	72	2	H2	51.240	ug/l	31961.67
Br	79	72	1	No Gas	16.833	ug/l	276616.00
Br	79	72	2	H2	16.155	ug/l	150245.47
Se	82	72	1	No Gas	51.056	ug/l	19510.08
Kr	84	72	1	No Gas		ug/l	35203.12
Sr	88	72	1	No Gas	52.436	ug/l	2424338.10
Sr	88	72	3	He	50.807	ug/l	258431.25
Mo	95	115	1	No Gas	49.879	ug/l	516944.67
Mo	95	115	3	He	52.543	ug/l	185026.41
Mo	98	115	1	No Gas	50.023	ug/l	844316.48
Ag	107	115	1	No Gas	19.860	ug/l	529031.88
Ag	109	115	1	No Gas	19.569	ug/l	505855.18
Cd	111	115	1	No Gas	49.619	ug/l	296989.83

ICPMS207-B Analytical Data

Name	Mass	ISTD	Tune Step	Tune Mode	Conc.	Units	CPS
Cd	111	115	3	He	51.415	ug/l	95548.02
Cd	114	115	1	No Gas	50.645	ug/l	670286.66
Cd	114	115	3	He	51.461	ug/l	234787.69
Sn	118	115	1	No Gas	51.624	ug/l	878866.95
Sn	118	115	3	He	54.158	ug/l	234317.45
Sb	121	115	1	No Gas	53.264	ug/l	1426756.78
Sb	121	115	3	He	54.009	ug/l	362533.77
Sb	123	115	1	No Gas	53.126	ug/l	1095034.48
Sb	123	115	3	He	54.206	ug/l	287551.74
Ba	135	115	1	No Gas	49.726	ug/l	260692.74
Ba	137	115	1	No Gas	49.758	ug/l	463695.94
La	139	115	3	He	52.653	ug/l	1284633.26
Ce	140	115	3	He	53.021	ug/l	1414953.73
Hg	201	209	1	No Gas	0.984	ug/l	3889.13
Hg	202	209	1	No Gas	0.967	ug/l	8796.47
Hg	202	209	3	He	0.987	ug/l	4321.84
Tl	203	209	3	He	48.773	ug/l	545361.01
Tl	205	209	1	No Gas	51.145	ug/l	2749027.84
Tl	205	209	3	He	49.636	ug/l	1315029.99
[Pb]	206	209	1	No Gas	51.446	ug/l	971410.92
[Pb]	207	209	1	No Gas	50.504	ug/l	833513.82
Pb	208	209	1	No Gas	50.805	ug/l	3871737.32
Th	232	209	3	He	50.387	ug/l	1879939.41
U	238	209	1	No Gas	51.508	ug/l	3905252.70

Name	Mass	Tune Step	Tune Mode	CPS	ISTD Recovery %
Sc	45	1	No Gas	4733937.66	84.0
Sc	45	2	H2	2460492.39	89.6
Sc	45	3	He	269211.04	84.5
Ge	72	1	No Gas	1355876.86	89.7
Ge	72	2	H2	956411.70	96.4
Ge	72	3	He	201393.63	90.4
In	115	1	No Gas	11713998.14	96.2
In	115	3	He	2366956.11	89.8
Tb	159	1	No Gas	16230677.82	99.3
Tb	159	3	He	6770661.25	99.1
Ho	165	1	No Gas	15686347.15	102.9
Ho	165	3	He	6555480.51	99.1
Lu	175	1	No Gas	16223149.45	104.2
Lu	175	3	He	5308875.56	99.1
Bi	209	1	No Gas	11464651.18	101.3
Bi	209	3	He	5054867.41	100.8

ICPMS207-B Analytical Data

Sample Name CCB
File Name 090_CCB.d
Data Path Name D:\Agilent\ICPMH\1\DATA\220121ADoD.b
Acq Time 2022-01-22 01:17:44
Sample Type CCB
Total Dilution 1.0000
Comment ICPMS-6020-W-D
Operator CAR/SRH/JPV/AEM
Method SW6020/ SW6020B

Name	Mass	ISTD	Tune Step	Tune Mode	Conc.	Units	CPS
Li	7	45	1	No Gas	0.076	ug/l	14040.10
Be	9	45	1	No Gas	-0.052	ug/l	37.99
B	11	45	1	No Gas	1.818	ug/l	8159.50
Na	23	45	3	He	34.485	ug/l	61986.98
Mg	24	45	3	He	-0.837	ug/l	1164.41
Al	27	45	1	No Gas	-0.364	ug/l	7589.75
Si	28	45	2	H2	18.763	ug/l	40809.87
K	39	72	3	He	-27.053	ug/l	59914.63
Ca	40	72	2	H2	-1.531	ug/l	83639.22
Ti	47	72	1	No Gas	0.016	ug/l	231.90
V	51	72	1	No Gas	1.978	ug/l	2000.79
V	51	72	3	He	1.287	ug/l	18677.52
Cr	52	72	1	No Gas	0.175	ug/l	91556.27
Cr	52	72	3	He	0.015	ug/l	821.14
Mn	55	72	1	No Gas	0.043	ug/l	11188.75
Mn	55	72	3	He	0.004	ug/l	146.30
Fe	56	72	2	H2	0.034	ug/l	10177.13
Fe	56	72	3	He	0.043	ug/l	5184.49
Co	59	72	1	No Gas	-0.004	ug/l	389.23
Ni	60	72	1	No Gas	-0.012	ug/l	362.62
Ni	60	72	3	He	-0.002	ug/l	81.11
Cu	63	72	1	No Gas	-0.007	ug/l	1717.46
Cu	63	72	3	He	0.002	ug/l	591.90
Cu	65	72	1	No Gas	-0.004	ug/l	834.36
Zn	66	72	1	No Gas	0.030	ug/l	1078.43
Zn	66	72	3	He	0.060	ug/l	257.78
As	75	72	1	No Gas	-0.274	ug/l	10999.66
As	75	72	3	He	-0.005	ug/l	236.27
Se	78	72	2	H2	0.005	ug/l	35.11
Br	79	72	1	No Gas	0.456	ug/l	69498.79
Br	79	72	2	H2	0.377	ug/l	34205.89
Se	82	72	1	No Gas	0.108	ug/l	705.14
Kr	84	72	1	No Gas		ug/l	19624.40
Sr	88	72	1	No Gas	0.000	ug/l	725.25
Sr	88	72	3	He	-0.016	ug/l	176.67
Mo	95	115	1	No Gas	0.023	ug/l	294.45
Mo	95	115	3	He	0.015	ug/l	73.33
Mo	98	115	1	No Gas	0.019	ug/l	415.71
Ag	107	115	1	No Gas	-0.003	ug/l	1708.13
Ag	109	115	1	No Gas	0.000	ug/l	1684.78
Cd	111	115	1	No Gas	-0.005	ug/l	-31.94

ICPMS207-B Analytical Data

Name	Mass	ISTD	Tune Step	Tune Mode	Conc.	Units	CPS
Cd	111	115	3	He	0.002	ug/l	9.56
Cd	114	115	1	No Gas	0.001	ug/l	-159.82
Cd	114	115	3	He	0.001	ug/l	17.92
Sn	118	115	1	No Gas	0.031	ug/l	3586.72
Sn	118	115	3	He	0.024	ug/l	912.26
Sb	121	115	1	No Gas	0.100	ug/l	3536.14
Sb	121	115	3	He	0.073	ug/l	688.76
Sb	123	115	1	No Gas	0.097	ug/l	2653.19
Sb	123	115	3	He	0.075	ug/l	548.06
Ba	135	115	1	No Gas	0.001	ug/l	69.86
Ba	137	115	1	No Gas	-0.002	ug/l	79.84
La	139	115	3	He	0.000	ug/l	14.45
Ce	140	115	3	He	0.000	ug/l	33.34
Hg	201	209	1	No Gas	0.005	ug/l	51.32
Hg	202	209	1	No Gas	0.003	ug/l	127.98
Hg	202	209	3	He	0.003	ug/l	46.32
Tl	203	209	3	He	0.102	ug/l	1828.20
Tl	205	209	1	No Gas	0.086	ug/l	7577.84
Tl	205	209	3	He	0.105	ug/l	4463.21
[Pb]	206	209	1	No Gas	0.003	ug/l	683.36
[Pb]	207	209	1	No Gas	0.004	ug/l	602.24
Pb	208	209	1	No Gas	0.002	ug/l	2720.13
Th	232	209	3	He	0.014	ug/l	1129.17
U	238	209	1	No Gas	0.003	ug/l	312.28

Name	Mass	Tune Step	Tune Mode	CPS	ISTD Recovery %
Sc	45	1	No Gas	4718279.66	83.7
Sc	45	2	H2	2418986.94	88.1
Sc	45	3	He	252036.52	79.1
Ge	72	1	No Gas	1340076.13	88.6
Ge	72	2	H2	929347.26	93.6
Ge	72	3	He	189901.56	85.3
In	115	1	No Gas	11661553.13	95.8
In	115	3	He	2388756.85	90.6
Tb	159	1	No Gas	16668552.97	102.0
Tb	159	3	He	6823701.43	99.9
Ho	165	1	No Gas	15946922.40	104.6
Ho	165	3	He	6609203.19	99.9
Lu	175	1	No Gas	16360942.34	105.1
Lu	175	3	He	5292055.83	98.8
Bi	209	1	No Gas	11971247.89	105.7
Bi	209	3	He	5299486.83	105.7

ICPMS207-B Analytical Data

Sample Name B22011136-001B
File Name 091SMPL.d
Data Path Name D:\Agilent\ICPMH\1\DATA\220121ADoD.b
Acq Time 2022-01-22 01:23:59
Sample Type Sample
Total Dilution 1.0000
Comment ICPMS-6020-W-T
Operator CAR/SRH/JPV/AEM
Method SW6020/ SW6020B

Name	Mass	ISTD	Tune Step	Tune Mode	Conc.	Units	CPS
Li	7	45	1	No Gas	1.222	ug/l	19782.10
Be	9	45	1	No Gas	-0.036	ug/l	76.65
B	11	45	1	No Gas	177.138	ug/l	302845.71
Na	23	45	3	He	103317.211	ug/l	61461523.53
Mg	24	45	3	He	9160.464	ug/l	3006366.25
Al	27	45	1	No Gas	582.596	ug/l	9103505.21
Si	28	45	2	H2	28845.290	ug/l	48883982.47
K	39	72	3	He	3205.104	ug/l	1276257.57
Ca	40	72	2	H2	5728.801	ug/l	38530947.51
Ti	47	72	1	No Gas	36.789	ug/l	75713.54
V	51	72	1	No Gas	42.409	ug/l	1028651.10
V	51	72	3	He	48.878	ug/l	194661.34
Cr	52	72	1	No Gas	6.949	ug/l	243688.64
Cr	52	72	3	He	5.995	ug/l	26303.63
Mn	55	72	1	No Gas	31.320	ug/l	993312.35
Mn	55	72	3	He	31.674	ug/l	87986.95
Fe	56	72	2	H2	668.850	ug/l	10291257.98
Fe	56	72	3	He	641.430	ug/l	2435041.60
Co	59	72	1	No Gas	0.688	ug/l	18738.24
Ni	60	72	1	No Gas	1.510	ug/l	9547.54
Ni	60	72	3	He	1.605	ug/l	2903.64
Cu	63	72	1	No Gas	2.268	ug/l	34725.15
Cu	63	72	3	He	1.751	ug/l	8640.16
Cu	65	72	1	No Gas	1.654	ug/l	12667.93
Zn	66	72	1	No Gas	1.271	ug/l	7154.03
Zn	66	72	3	He	1.455	ug/l	1590.10
As	75	72	1	No Gas	1.935	ug/l	23220.62
As	75	72	3	He	0.386	ug/l	543.13
Se	78	72	2	H2	0.471	ug/l	290.34
Br	79	72	1	No Gas	10.258	ug/l	177196.74
Br	79	72	2	H2	9.938	ug/l	93377.61
Se	82	72	1	No Gas	0.438	ug/l	763.95
Kr	84	72	1	No Gas		ug/l	33872.59
Sr	88	72	1	No Gas	61.357	ug/l	2593887.45
Sr	88	72	3	He	60.100	ug/l	261957.27
Mo	95	115	1	No Gas	0.660	ug/l	6233.60
Mo	95	115	3	He	0.681	ug/l	2221.30
Mo	98	115	1	No Gas	0.663	ug/l	10198.16
Ag	107	115	1	No Gas	-0.057	ug/l	248.10
Ag	109	115	1	No Gas	-0.056	ug/l	212.09
Cd	111	115	1	No Gas	0.028	ug/l	147.71

ICPMS207-B Analytical Data

Name	Mass	ISTD	Tune Step	Tune Mode	Conc.	Units	CPS
Cd	111	115	3	He	0.022	ug/l	42.22
Cd	114	115	1	No Gas	0.025	ug/l	148.62
Cd	114	115	3	He	0.020	ug/l	95.59
Sn	118	115	1	No Gas	0.417	ug/l	9174.78
Sn	118	115	3	He	0.436	ug/l	2463.57
Sb	121	115	1	No Gas	0.137	ug/l	4099.01
Sb	121	115	3	He	0.135	ug/l	1008.81
Sb	123	115	1	No Gas	0.135	ug/l	3101.66
Sb	123	115	3	He	0.136	ug/l	799.77
Ba	135	115	1	No Gas	7.298	ug/l	34631.17
Ba	137	115	1	No Gas	7.208	ug/l	60835.39
La	139	115	3	He	0.170	ug/l	3839.44
Ce	140	115	3	He	0.682	ug/l	16743.52
Hg	201	209	1	No Gas	0.021	ug/l	103.98
Hg	202	209	1	No Gas	0.031	ug/l	342.27
Hg	202	209	3	He	0.027	ug/l	136.64
Tl	203	209	3	He	0.061	ug/l	1189.87
Tl	205	209	1	No Gas	0.051	ug/l	4935.42
Tl	205	209	3	He	0.067	ug/l	3026.23
[Pb]	206	209	1	No Gas	0.156	ug/l	3239.30
[Pb]	207	209	1	No Gas	0.158	ug/l	2855.89
Pb	208	209	1	No Gas	0.156	ug/l	13137.09
Th	232	209	3	He	0.083	ug/l	3388.47
U	238	209	1	No Gas	0.032	ug/l	2285.75

Name	Mass	Tune Step	Tune Mode	CPS	ISTD Recovery %
Sc	45	1	No Gas	4157659.63	73.7
Sc	45	2	H2	2242201.35	81.7
Sc	45	3	He	219939.23	69.1
Ge	72	1	No Gas	1239879.93	82.0
Ge	72	2	H2	851467.22	85.8
Ge	72	3	He	172593.53	77.5
In	115	1	No Gas	10584792.97	87.0
In	115	3	He	2173875.59	82.5
Tb	159	1	No Gas	14955805.59	91.5
Tb	159	3	He	6371355.25	93.2
Ho	165	1	No Gas	14220522.73	93.2
Ho	165	3	He	6170421.50	93.3
Lu	175	1	No Gas	15257125.76	98.0
Lu	175	3	He	5015507.57	93.7
Bi	209	1	No Gas	10500781.62	92.7
Bi	209	3	He	4674718.06	93.3

ICPMS207-B Analytical Data

Sample Name B22011137-001A
File Name 092SMPL.d
Data Path Name D:\Agilent\ICPMH\1\DATA\220121ADoD.b
Acq Time 2022-01-22 01:30:13
Sample Type Sample
Total Dilution 1.0000
Comment ICPMS-6020-W-D
Operator CAR/SRH/JPV/AEM
Method SW6020/ SW6020B

Name	Mass	ISTD	Tune Step	Tune Mode	Conc.	Units	CPS
Li	7	45	1	No Gas	1.426	ug/l	28170.09
Be	9	45	1	No Gas	-0.046	ug/l	67.32
B	11	45	1	No Gas	71.097	ug/l	165571.11
Na	23	45	3	He	51540.594	ug/l	41455534.66
Mg	24	45	3	He	27697.691	ug/l	12275456.48
Al	27	45	1	No Gas	3.414	ug/l	87600.26
Si	28	45	2	H2	37325.319	ug/l	76868863.78
K	39	72	3	He	2425.493	ug/l	1246961.16
Ca	40	72	2	H2	13959.528	ug/l	110891792.89
Ti	47	72	1	No Gas	3.678	ug/l	9173.81
V	51	72	1	No Gas	4.069	ug/l	65022.74
V	51	72	3	He	-0.625	ug/l	12493.14
Cr	52	72	1	No Gas	-1.267	ug/l	60363.82
Cr	52	72	3	He	0.293	ug/l	2455.78
Mn	55	72	1	No Gas	1841.966	ug/l	68699527.71
Mn	55	72	3	He	1852.210	ug/l	6527195.51
Fe	56	72	2	H2	2942.368	ug/l	53509551.42
Fe	56	72	3	He	2735.527	ug/l	13171411.26
Co	59	72	1	No Gas	0.268	ug/l	8994.96
Ni	60	72	1	No Gas	0.547	ug/l	4411.94
Ni	60	72	3	He	0.552	ug/l	1332.29
Cu	63	72	1	No Gas	0.801	ug/l	15845.15
Cu	63	72	3	He	0.462	ug/l	3392.39
Cu	65	72	1	No Gas	0.512	ug/l	5303.80
Zn	66	72	1	No Gas	0.548	ug/l	4232.39
Zn	66	72	3	He	0.543	ug/l	894.48
As	75	72	1	No Gas	-0.021	ug/l	13862.14
As	75	72	3	He	-0.143	ug/l	125.87
Se	78	72	2	H2	0.152	ug/l	134.22
Br	79	72	1	No Gas	10.369	ug/l	211770.84
Br	79	72	2	H2	9.806	ug/l	109439.23
Se	82	72	1	No Gas	0.866	ug/l	1077.98
Kr	84	72	1	No Gas		ug/l	58642.58
Sr	88	72	1	No Gas	114.708	ug/l	5753209.98
Sr	88	72	3	He	111.302	ug/l	616014.63
Mo	95	115	1	No Gas	0.094	ug/l	1110.05
Mo	95	115	3	He	0.096	ug/l	395.56
Mo	98	115	1	No Gas	0.089	ug/l	1717.40
Ag	107	115	1	No Gas	-0.064	ug/l	112.71
Ag	109	115	1	No Gas	-0.062	ug/l	103.38
Cd	111	115	1	No Gas	0.020	ug/l	122.42

ICPMS207-B Analytical Data

Name	Mass	ISTD	Tune Step	Tune Mode	Conc.	Units	CPS
Cd	111	115	3	He	0.016	ug/l	38.67
Cd	114	115	1	No Gas	0.029	ug/l	230.83
Cd	114	115	3	He	0.015	ug/l	89.38
Sn	118	115	1	No Gas	-0.070	ug/l	2019.48
Sn	118	115	3	He	-0.086	ug/l	475.57
Sb	121	115	1	No Gas	0.065	ug/l	2818.57
Sb	121	115	3	He	0.072	ug/l	739.43
Sb	123	115	1	No Gas	0.064	ug/l	2115.37
Sb	123	115	3	He	0.072	ug/l	583.07
Ba	135	115	1	No Gas	21.077	ug/l	118690.64
Ba	137	115	1	No Gas	20.801	ug/l	208266.70
La	139	115	3	He	0.023	ug/l	644.47
Ce	140	115	3	He	0.092	ug/l	2732.51
Hg	201	209	1	No Gas	0.007	ug/l	53.66
Hg	202	209	1	No Gas	0.023	ug/l	283.95
Hg	202	209	3	He	0.019	ug/l	98.98
Tl	203	209	3	He	0.015	ug/l	676.29
Tl	205	209	1	No Gas	0.012	ug/l	3035.92
Tl	205	209	3	He	0.010	ug/l	1548.71
[Pb]	206	209	1	No Gas	0.023	ug/l	950.04
[Pb]	207	209	1	No Gas	0.021	ug/l	790.03
Pb	208	209	1	No Gas	0.021	ug/l	3752.46
Th	232	209	3	He	-0.006	ug/l	296.12
U	238	209	1	No Gas	0.022	ug/l	1617.92

Name	Mass	Tune Step	Tune Mode	CPS	ISTD Recovery %
Sc	45	1	No Gas	5549381.54	98.4
Sc	45	2	H2	2724869.62	99.3
Sc	45	3	He	297212.88	93.3
Ge	72	1	No Gas	1471301.71	97.3
Ge	72	2	H2	1007279.49	101.5
Ge	72	3	He	219240.70	98.5
In	115	1	No Gas	12574712.17	103.3
In	115	3	He	2608784.70	99.0
Tb	159	1	No Gas	17402601.57	106.5
Tb	159	3	He	7183873.25	105.1
Ho	165	1	No Gas	16564151.90	108.6
Ho	165	3	He	6994544.40	105.7
Lu	175	1	No Gas	17106676.70	109.9
Lu	175	3	He	5649389.45	105.5
Bi	209	1	No Gas	10668487.55	94.2
Bi	209	3	He	4426308.01	88.3

ICPMS207-B Analytical Data

Sample Name B22011137-001B
File Name 093SMPL.d
Data Path Name D:\Agilent\ICPMH\1\DATA\220121ADoD.b
Acq Time 2022-01-22 01:36:28
Sample Type Sample
Total Dilution 1.0000
Comment ICPMS-6020-W-T
Operator CAR/SRH/JPV/AEM
Method SW6020/ SW6020B

Name	Mass	ISTD	Tune Step	Tune Mode	Conc.	Units	CPS
Li	7	45	1	No Gas	1.780	ug/l	23749.41
Be	9	45	1	No Gas	-0.043	ug/l	58.66
B	11	45	1	No Gas	65.440	ug/l	116215.49
Na	23	45	3	He	49704.005	ug/l	29621523.72
Mg	24	45	3	He	26711.787	ug/l	8771169.14
Al	27	45	1	No Gas	81.006	ug/l	1295817.72
Si	28	45	2	H2	31414.934	ug/l	54375078.11
K	39	72	3	He	2145.373	ug/l	877864.57
Ca	40	72	2	H2	13454.094	ug/l	90494470.45
Ti	47	72	1	No Gas	10.630	ug/l	22100.49
V	51	72	1	No Gas	8.295	ug/l	162892.16
V	51	72	3	He	4.879	ug/l	30458.38
Cr	52	72	1	No Gas	1.497	ug/l	116226.12
Cr	52	72	3	He	0.708	ug/l	3713.83
Mn	55	72	1	No Gas	1730.974	ug/l	54641770.36
Mn	55	72	3	He	1773.104	ug/l	4931133.32
Fe	56	72	2	H2	2979.655	ug/l	45877911.71
Fe	56	72	3	He	2819.695	ug/l	10714395.48
Co	59	72	1	No Gas	0.353	ug/l	9893.72
Ni	60	72	1	No Gas	0.738	ug/l	4897.78
Ni	60	72	3	He	0.715	ug/l	1337.85
Cu	63	72	1	No Gas	2.804	ug/l	42713.51
Cu	63	72	3	He	2.630	ug/l	12743.69
Cu	65	72	1	No Gas	2.469	ug/l	18593.34
Zn	66	72	1	No Gas	2.273	ug/l	12173.33
Zn	66	72	3	He	2.309	ug/l	2424.67
As	75	72	1	No Gas	0.443	ug/l	14484.62
As	75	72	3	He	0.146	ug/l	342.60
Se	78	72	2	H2	0.078	ug/l	72.56
Br	79	72	1	No Gas	8.468	ug/l	157256.20
Br	79	72	2	H2	7.707	ug/l	79014.72
Se	82	72	1	No Gas	0.436	ug/l	766.62
Kr	84	72	1	No Gas		ug/l	51002.29
Sr	88	72	1	No Gas	114.896	ug/l	4877183.78
Sr	88	72	3	He	111.547	ug/l	487100.51
Mo	95	115	1	No Gas	0.505	ug/l	4846.41
Mo	95	115	3	He	0.530	ug/l	1721.23
Mo	98	115	1	No Gas	0.498	ug/l	7769.46
Ag	107	115	1	No Gas	-0.017	ug/l	1226.55
Ag	109	115	1	No Gas	-0.014	ug/l	1207.87
Cd	111	115	1	No Gas	0.009	ug/l	44.93

ICPMS207-B Analytical Data

Name	Mass	ISTD	Tune Step	Tune Mode	Conc.	Units	CPS
Cd	111	115	3	He	0.004	ug/l	11.45
Cd	114	115	1	No Gas	0.012	ug/l	-7.92
Cd	114	115	3	He	0.001	ug/l	16.57
Sn	118	115	1	No Gas	0.443	ug/l	9700.79
Sn	118	115	3	He	0.482	ug/l	2629.15
Sb	121	115	1	No Gas	0.369	ug/l	9837.09
Sb	121	115	3	He	0.363	ug/l	2394.44
Sb	123	115	1	No Gas	0.364	ug/l	7466.40
Sb	123	115	3	He	0.378	ug/l	1965.67
Ba	135	115	1	No Gas	21.426	ug/l	102841.00
Ba	137	115	1	No Gas	21.293	ug/l	181697.68
La	139	115	3	He	0.067	ug/l	1504.54
Ce	140	115	3	He	0.242	ug/l	5916.86
Hg	201	209	1	No Gas	0.007	ug/l	53.32
Hg	202	209	1	No Gas	0.035	ug/l	379.26
Hg	202	209	3	He	0.031	ug/l	157.30
Tl	203	209	3	He	0.025	ug/l	835.03
Tl	205	209	1	No Gas	0.018	ug/l	3329.34
Tl	205	209	3	He	0.022	ug/l	1964.27
[Pb]	206	209	1	No Gas	0.212	ug/l	4208.47
[Pb]	207	209	1	No Gas	0.200	ug/l	3479.37
Pb	208	209	1	No Gas	0.199	ug/l	16092.77
Th	232	209	3	He	0.016	ug/l	1092.49
U	238	209	1	No Gas	0.007	ug/l	567.23

Name	Mass	Tune Step	Tune Mode	CPS	ISTD Recovery %
Sc	45	1	No Gas	4221660.54	74.9
Sc	45	2	H2	2290172.16	83.4
Sc	45	3	He	220200.94	69.1
Ge	72	1	No Gas	1245216.89	82.4
Ge	72	2	H2	852543.16	85.9
Ge	72	3	He	173039.30	77.7
In	115	1	No Gas	10714458.44	88.0
In	115	3	He	2160611.32	82.0
Tb	159	1	No Gas	15514531.70	94.9
Tb	159	3	He	6466512.27	94.6
Ho	165	1	No Gas	14816260.32	97.2
Ho	165	3	He	6215200.29	94.0
Lu	175	1	No Gas	15244487.59	97.9
Lu	175	3	He	4884308.30	91.2
Bi	209	1	No Gas	10489611.74	92.6
Bi	209	3	He	4782346.33	95.4

ICPMS207-B Analytical Data

Sample Name B22011214-001A
File Name 094SMPL.d
Data Path Name D:\Agilent\ICPMH\1\DATA\220121ADoD.b
Acq Time 2022-01-22 01:42:42
Sample Type Sample
Total Dilution 1.0000
Comment ICPMS-6020-W-D
Operator CAR/SRH/JPV/AEM
Method SW6020/ SW6020B

Name	Mass	ISTD	Tune Step	Tune Mode	Conc.	Units	CPS
Li	7	45	1	No Gas	0.685	ug/l	20777.16
Be	9	45	1	No Gas	-0.059	ug/l	19.67
B	11	45	1	No Gas	108.455	ug/l	238281.99
Na	23	45	3	He	76858.801	ug/l	59308083.56
Mg	24	45	3	He	24121.748	ug/l	10262547.88
Al	27	45	1	No Gas	1.889	ug/l	53289.24
Si	28	45	2	H2	26675.191	ug/l	54126640.74
K	39	72	3	He	2995.475	ug/l	1471711.16
Ca	40	72	2	H2	22690.391	ug/l	177155414.17
Ti	47	72	1	No Gas	1.592	ug/l	4064.67
V	51	72	1	No Gas	26.296	ug/l	730063.61
V	51	72	3	He	23.338	ug/l	122093.70
Cr	52	72	1	No Gas	-1.362	ug/l	57317.84
Cr	52	72	3	He	0.701	ug/l	4521.83
Mn	55	72	1	No Gas	26.439	ug/l	989947.79
Mn	55	72	3	He	26.988	ug/l	92204.49
Fe	56	72	2	H2	32.010	ug/l	582450.94
Fe	56	72	3	He	30.537	ug/l	147817.61
Co	59	72	1	No Gas	0.177	ug/l	6099.23
Ni	60	72	1	No Gas	1.133	ug/l	8562.26
Ni	60	72	3	He	1.069	ug/l	2409.10
Cu	63	72	1	No Gas	0.682	ug/l	13701.26
Cu	63	72	3	He	0.210	ug/l	1849.42
Cu	65	72	1	No Gas	0.264	ug/l	3172.29
Zn	66	72	1	No Gas	3.818	ug/l	23319.47
Zn	66	72	3	He	4.047	ug/l	5049.80
As	75	72	1	No Gas	6.340	ug/l	57982.50
As	75	72	3	He	6.550	ug/l	7026.08
Se	78	72	2	H2	0.602	ug/l	422.56
Br	79	72	1	No Gas	31.979	ug/l	503757.95
Br	79	72	2	H2	31.042	ug/l	267852.48
Se	82	72	1	No Gas	1.547	ug/l	1341.78
Kr	84	72	1	No Gas		ug/l	59856.25
Sr	88	72	1	No Gas	112.654	ug/l	5612752.45
Sr	88	72	3	He	108.274	ug/l	579913.47
Mo	95	115	1	No Gas	10.579	ug/l	117082.31
Mo	95	115	3	He	11.241	ug/l	42373.90
Mo	98	115	1	No Gas	10.511	ug/l	189425.26
Ag	107	115	1	No Gas	-0.061	ug/l	197.41
Ag	109	115	1	No Gas	-0.059	ug/l	167.40
Cd	111	115	1	No Gas	0.021	ug/l	128.90

ICPMS207-B Analytical Data

Name	Mass	ISTD	Tune Step	Tune Mode	Conc.	Units	CPS
Cd	111	115	3	He	0.014	ug/l	34.22
Cd	114	115	1	No Gas	0.031	ug/l	256.27
Cd	114	115	3	He	0.015	ug/l	84.01
Sn	118	115	1	No Gas	0.008	ug/l	3430.31
Sn	118	115	3	He	-0.009	ug/l	814.48
Sb	121	115	1	No Gas	0.420	ug/l	12941.24
Sb	121	115	3	He	0.432	ug/l	3307.39
Sb	123	115	1	No Gas	0.413	ug/l	9788.39
Sb	123	115	3	He	0.438	ug/l	2641.18
Ba	135	115	1	No Gas	3.328	ug/l	18685.50
Ba	137	115	1	No Gas	3.290	ug/l	32827.19
La	139	115	3	He	0.000	ug/l	27.78
Ce	140	115	3	He	0.002	ug/l	97.78
Hg	201	209	1	No Gas	0.158	ug/l	662.22
Hg	202	209	1	No Gas	3.098	ug/l	28438.24
Hg	202	209	3	He	2.404	ug/l	10532.38
Tl	203	209	3	He	0.009	ug/l	712.97
Tl	205	209	1	No Gas	-0.006	ug/l	2354.67
Tl	205	209	3	He	-0.010	ug/l	1235.22
[Pb]	206	209	1	No Gas	0.005	ug/l	692.25
[Pb]	207	209	1	No Gas	0.003	ug/l	564.46
Pb	208	209	1	No Gas	0.003	ug/l	2716.80
Th	232	209	3	He	-0.009	ug/l	219.42
U	238	209	1	No Gas	0.332	ug/l	25702.68

Name	Mass	Tune Step	Tune Mode	CPS	ISTD Recovery %
Sc	45	1	No Gas	5295074.36	93.9
Sc	45	2	H2	2684604.70	97.8
Sc	45	3	He	285243.21	89.6
Ge	72	1	No Gas	1461296.87	96.7
Ge	72	2	H2	989975.38	99.8
Ge	72	3	He	212209.11	95.3
In	115	1	No Gas	12497329.21	102.7
In	115	3	He	2533554.80	96.1
Tb	159	1	No Gas	17373050.77	106.3
Tb	159	3	He	7025789.24	102.8
Ho	165	1	No Gas	16583462.05	108.7
Ho	165	3	He	6800072.23	102.8
Lu	175	1	No Gas	16857515.05	108.3
Lu	175	3	He	5582430.15	104.2
Bi	209	1	No Gas	11657578.83	103.0
Bi	209	3	He	5081585.85	101.4

ICPMS207-B Analytical Data

Sample Name B22011214-001B
File Name 095SMPL.d
Data Path Name D:\Agilent\ICPMH\1\DATA\220121ADoD.b
Acq Time 2022-01-22 01:48:57
Sample Type Sample
Total Dilution 1.0000
Comment ICPMS-6020-W-T
Operator CAR/SRH/JPV/AEM
Method SW6020/ SW6020B

Name	Mass	ISTD	Tune Step	Tune Mode	Conc.	Units	CPS
Li	7	45	1	No Gas	1.324	ug/l	20003.81
Be	9	45	1	No Gas	-0.054	ug/l	27.66
B	11	45	1	No Gas	86.952	ug/l	147561.30
Na	23	45	3	He	76020.545	ug/l	45097622.11
Mg	24	45	3	He	23234.855	ug/l	7600020.88
Al	27	45	1	No Gas	60.157	ug/l	930596.22
Si	28	45	2	H2	25151.604	ug/l	42464183.70
K	39	72	3	He	2362.114	ug/l	958185.27
Ca	40	72	2	H2	21664.288	ug/l	146756951.78
Ti	47	72	1	No Gas	6.146	ug/l	12635.22
V	51	72	1	No Gas	32.821	ug/l	774000.21
V	51	72	3	He	38.355	ug/l	155443.54
Cr	52	72	1	No Gas	4.452	ug/l	182815.18
Cr	52	72	3	He	3.263	ug/l	14634.03
Mn	55	72	1	No Gas	8.999	ug/l	288190.55
Mn	55	72	3	He	8.747	ug/l	24399.98
Fe	56	72	2	H2	172.072	ug/l	2677768.82
Fe	56	72	3	He	160.601	ug/l	613208.72
Co	59	72	1	No Gas	0.268	ug/l	7493.79
Ni	60	72	1	No Gas	1.519	ug/l	9487.61
Ni	60	72	3	He	1.608	ug/l	2910.30
Cu	63	72	1	No Gas	1.811	ug/l	27731.43
Cu	63	72	3	He	1.405	ug/l	7043.62
Cu	65	72	1	No Gas	1.377	ug/l	10547.40
Zn	66	72	1	No Gas	25.959	ug/l	127947.80
Zn	66	72	3	He	28.295	ug/l	27678.58
As	75	72	1	No Gas	7.534	ug/l	55426.64
As	75	72	3	He	6.696	ug/l	5839.85
Se	78	72	2	H2	0.774	ug/l	463.00
Br	79	72	1	No Gas	10.966	ug/l	183051.22
Br	79	72	2	H2	10.059	ug/l	95009.44
Se	82	72	1	No Gas	0.625	ug/l	817.96
Kr	84	72	1	No Gas		ug/l	45187.89
Sr	88	72	1	No Gas	110.818	ug/l	4627013.12
Sr	88	72	3	He	107.244	ug/l	467470.48
Mo	95	115	1	No Gas	8.346	ug/l	78465.83
Mo	95	115	3	He	8.611	ug/l	27502.16
Mo	98	115	1	No Gas	8.281	ug/l	126762.35
Ag	107	115	1	No Gas	0.503	ug/l	13724.83
Ag	109	115	1	No Gas	0.504	ug/l	13300.26
Cd	111	115	1	No Gas	0.013	ug/l	65.48

ICPMS207-B Analytical Data

Name	Mass	ISTD	Tune Step	Tune Mode	Conc.	Units	CPS
Cd	111	115	3	He	0.009	ug/l	21.22
Cd	114	115	1	No Gas	0.021	ug/l	95.62
Cd	114	115	3	He	0.005	ug/l	29.99
Sn	118	115	1	No Gas	0.863	ug/l	16067.32
Sn	118	115	3	He	0.925	ug/l	4341.81
Sb	121	115	1	No Gas	0.634	ug/l	16185.57
Sb	121	115	3	He	0.645	ug/l	4097.34
Sb	123	115	1	No Gas	0.632	ug/l	12390.03
Sb	123	115	3	He	0.643	ug/l	3222.37
Ba	135	115	1	No Gas	3.349	ug/l	15970.90
Ba	137	115	1	No Gas	3.181	ug/l	26959.42
La	139	115	3	He	0.035	ug/l	792.25
Ce	140	115	3	He	0.085	ug/l	2081.28
Hg	201	209	1	No Gas	0.241	ug/l	877.86
Hg	202	209	1	No Gas	4.398	ug/l	35737.25
Hg	202	209	3	He	3.147	ug/l	12800.59
Tl	203	209	3	He	0.035	ug/l	933.74
Tl	205	209	1	No Gas	0.010	ug/l	2889.22
Tl	205	209	3	He	0.018	ug/l	1828.86
[Pb]	206	209	1	No Gas	0.263	ug/l	5009.86
[Pb]	207	209	1	No Gas	0.253	ug/l	4216.25
Pb	208	209	1	No Gas	0.253	ug/l	19546.83
Th	232	209	3	He	0.008	ug/l	827.03
U	238	209	1	No Gas	0.368	ug/l	25252.93

Name	Mass	Tune Step	Tune Mode	CPS	ISTD Recovery %
Sc	45	1	No Gas	4067968.80	72.1
Sc	45	2	H2	2233711.04	81.4
Sc	45	3	He	219289.27	68.9
Ge	72	1	No Gas	1224701.23	81.0
Ge	72	2	H2	858969.32	86.6
Ge	72	3	He	172674.26	77.5
In	115	1	No Gas	10612722.65	87.2
In	115	3	He	2146224.14	81.4
Tb	159	1	No Gas	15014754.12	91.9
Tb	159	3	He	6363203.14	93.1
Ho	165	1	No Gas	14848984.92	97.4
Ho	165	3	He	6142664.01	92.9
Lu	175	1	No Gas	15337763.37	98.5
Lu	175	3	He	4970290.53	92.8
Bi	209	1	No Gas	10330774.82	91.2
Bi	209	3	He	4721149.36	94.2

ICPMS207-B Analytical Data

Sample Name B22011214-001BDIL
File Name 096SMPL.d
Data Path Name D:\Agilent\ICPMH\1\DATA\220121ADoD.b
Acq Time 2022-01-22 01:55:13
Sample Type Sample
Total Dilution 5.0000
Comment ICPMS-6020-W-T
Operator CAR/SRH/JPV/AEM
Method SW6020/ SW6020B

Name	Mass	ISTD	Tune Step	Tune Mode	Conc.	Units	CPS
Li	7	45	1	No Gas	1.157	ug/l	13629.56
Be	9	45	1	No Gas	-0.284	ug/l	20.67
B	11	45	1	No Gas	92.371	ug/l	35940.89
Na	23	45	3	He	74942.735	ug/l	9214721.88
Mg	24	45	3	He	23551.040	ug/l	1593149.96
Al	27	45	1	No Gas	62.555	ug/l	211397.83
Si	28	45	2	H2	24217.937	ug/l	8384468.51
K	39	72	3	He	2191.136	ug/l	241073.72
Ca	40	72	2	H2	21759.400	ug/l	30271837.44
Ti	47	72	1	No Gas	5.858	ug/l	2659.59
V	51	72	1	No Gas	50.735	ug/l	215412.98
V	51	72	3	He	40.991	ug/l	44754.87
Cr	52	72	1	No Gas	3.070	ug/l	97704.13
Cr	52	72	3	He	3.450	ug/l	3796.07
Mn	55	72	1	No Gas	9.356	ug/l	69743.65
Mn	55	72	3	He	8.645	ug/l	5148.21
Fe	56	72	2	H2	168.714	ug/l	545286.67
Fe	56	72	3	He	158.530	ug/l	130488.47
Co	59	72	1	No Gas	0.249	ug/l	1839.80
Ni	60	72	1	No Gas	1.623	ug/l	2442.03
Ni	60	72	3	He	1.706	ug/l	710.02
Cu	63	72	1	No Gas	3.774	ug/l	13042.41
Cu	63	72	3	He	3.482	ug/l	3929.75
Cu	65	72	1	No Gas	3.346	ug/l	5761.46
Zn	66	72	1	No Gas	27.665	ug/l	29091.75
Zn	66	72	3	He	29.894	ug/l	6263.60
As	75	72	1	No Gas	8.356	ug/l	22274.47
As	75	72	3	He	6.450	ug/l	1362.24
Se	78	72	2	H2	0.756	ug/l	116.89
Br	79	72	1	No Gas	267.305	ug/l	694044.57
Br	79	72	2	H2	272.123	ug/l	394913.77
Se	82	72	1	No Gas	3.956	ug/l	907.96
Kr	84	72	1	No Gas		ug/l	23749.15
Sr	88	72	1	No Gas	110.032	ug/l	957172.68
Sr	88	72	3	He	101.920	ug/l	93101.90
Mo	95	115	1	No Gas	8.083	ug/l	16069.14
Mo	95	115	3	He	8.547	ug/l	5765.64
Mo	98	115	1	No Gas	8.120	ug/l	26286.69
Ag	107	115	1	No Gas	0.248	ug/l	2973.51
Ag	109	115	1	No Gas	0.247	ug/l	2831.43
Cd	111	115	1	No Gas	0.035	ug/l	37.19

ICPMS207-B Analytical Data

Name	Mass	ISTD	Tune Step	Tune Mode	Conc.	Units	CPS
Cd	111	115	3	He	0.008	ug/l	8.33
Cd	114	115	1	No Gas	0.081	ug/l	45.84
Cd	114	115	3	He	0.006	ug/l	17.01
Sn	118	115	1	No Gas	0.872	ug/l	5763.10
Sn	118	115	3	He	0.955	ug/l	1551.21
Sb	121	115	1	No Gas	0.578	ug/l	3800.90
Sb	121	115	3	He	0.612	ug/l	965.13
Sb	123	115	1	No Gas	0.604	ug/l	3006.96
Sb	123	115	3	He	0.577	ug/l	724.76
Ba	135	115	1	No Gas	3.128	ug/l	3197.38
Ba	137	115	1	No Gas	3.238	ug/l	5862.97
La	139	115	3	He	0.034	ug/l	180.00
Ce	140	115	3	He	0.093	ug/l	503.35
Hg	201	209	1	No Gas	0.205	ug/l	193.29
Hg	202	209	1	No Gas	3.938	ug/l	7299.55
Hg	202	209	3	He	3.003	ug/l	2582.74
Tl	203	209	3	He	-0.024	ug/l	538.23
Tl	205	209	1	No Gas	-0.046	ug/l	2185.75
Tl	205	209	3	He	-0.047	ug/l	1218.55
[Pb]	206	209	1	No Gas	0.247	ug/l	1552.33
[Pb]	207	209	1	No Gas	0.246	ug/l	1344.52
Pb	208	209	1	No Gas	0.240	ug/l	6206.17
Th	232	209	3	He	-0.037	ug/l	289.45
U	238	209	1	No Gas	0.347	ug/l	5450.38

Name	Mass	Tune Step	Tune Mode	CPS	ISTD Recovery %
Sc	45	1	No Gas	4234548.72	75.1
Sc	45	2	H2	2288994.90	83.4
Sc	45	3	He	226616.65	71.2
Ge	72	1	No Gas	1275047.07	84.3
Ge	72	2	H2	880029.04	88.7
Ge	72	3	He	180656.05	81.1
In	115	1	No Gas	11193906.86	92.0
In	115	3	He	2260246.88	85.8
Tb	159	1	No Gas	16341817.70	100.0
Tb	159	3	He	6555860.63	95.9
Ho	165	1	No Gas	15624254.33	102.5
Ho	165	3	He	6362530.69	96.2
Lu	175	1	No Gas	16112490.46	103.5
Lu	175	3	He	5126145.39	95.7
Bi	209	1	No Gas	11656881.77	103.0
Bi	209	3	He	4943367.45	98.6

ICPMS207-B Analytical Data

Sample Name B22011214-001BPDS1
File Name 097ARef.d
Data Path Name D:\Agilent\ICPMH\1\DATA\220121ADoD.b
Acq Time 2022-01-22 02:01:28
Sample Type AIRRef
Total Dilution 1.0300
Comment ICPMS-6020-W-T
Operator CAR/SRH/JPV/AEM
Method SW6020/ SW6020B

Name	Mass	ISTD	Tune Step	Tune Mode	Conc.	Units	CPS
Li	7	45	1	No Gas	1.488	ug/l	20485.29
Be	9	45	1	No Gas	37.226	ug/l	96086.48
B	11	45	1	No Gas	130.039	ug/l	209730.29
Na	23	45	3	He	74190.409	ug/l	42958782.42
Mg	24	45	3	He	23633.962	ug/l	7545594.89
Al	27	45	1	No Gas	111.796	ug/l	1648821.94
Si	28	45	2	H2	26560.828	ug/l	42297580.06
K	39	72	3	He	2437.899	ug/l	964495.06
Ca	40	72	2	H2	21877.212	ug/l	143177098.72
Ti	47	72	1	No Gas	46.282	ug/l	92617.70
V	51	72	1	No Gas	80.127	ug/l	1930568.00
V	51	72	3	He	88.530	ug/l	334816.66
Cr	52	72	1	No Gas	49.548	ug/l	1211837.14
Cr	52	72	3	He	51.340	ug/l	214789.12
Mn	55	72	1	No Gas	54.292	ug/l	1669107.72
Mn	55	72	3	He	56.891	ug/l	154164.25
Fe	56	72	2	H2	223.589	ug/l	3359159.98
Fe	56	72	3	He	214.218	ug/l	796911.77
Co	59	72	1	No Gas	45.680	ug/l	1181758.49
Ni	60	72	1	No Gas	45.674	ug/l	269262.05
Ni	60	72	3	He	51.730	ug/l	88963.03
Cu	63	72	1	No Gas	47.430	ug/l	673764.69
Cu	63	72	3	He	52.312	ug/l	237052.12
Cu	65	72	1	No Gas	46.823	ug/l	327599.70
Zn	66	72	1	No Gas	72.215	ug/l	349187.30
Zn	66	72	3	He	78.042	ug/l	74177.98
As	75	72	1	No Gas	54.337	ug/l	323397.35
As	75	72	3	He	56.584	ug/l	46556.37
Se	78	72	2	H2	52.181	ug/l	28241.56
Br	79	72	1	No Gas	13.613	ug/l	211677.74
Br	79	72	2	H2	12.942	ug/l	110839.00
Se	82	72	1	No Gas	49.350	ug/l	16811.43
Kr	84	72	1	No Gas		ug/l	58682.83
Sr	88	72	1	No Gas	162.416	ug/l	6677777.90
Sr	88	72	3	He	160.677	ug/l	683071.24
Mo	95	115	1	No Gas	56.888	ug/l	507871.06
Mo	95	115	3	He	59.430	ug/l	180860.20
Mo	98	115	1	No Gas	56.629	ug/l	823011.06
Ag	107	115	1	No Gas	20.309	ug/l	465874.12
Ag	109	115	1	No Gas	20.146	ug/l	448532.53
Cd	111	115	1	No Gas	49.791	ug/l	256677.88

ICPMS207-B Analytical Data

Name	Mass	ISTD	Tune Step	Tune Mode	Conc.	Units	CPS
Cd	111	115	3	He	51.386	ug/l	82524.68
Cd	114	115	1	No Gas	51.116	ug/l	582663.83
Cd	114	115	3	He	51.936	ug/l	204775.29
Sn	118	115	1	No Gas	51.648	ug/l	757422.80
Sn	118	115	3	He	53.462	ug/l	199881.20
Sb	121	115	1	No Gas	53.099	ug/l	1225015.30
Sb	121	115	3	He	52.215	ug/l	302908.70
Sb	123	115	1	No Gas	52.313	ug/l	928677.62
Sb	123	115	3	He	51.985	ug/l	238321.15
Ba	135	115	1	No Gas	56.367	ug/l	254474.56
Ba	137	115	1	No Gas	56.519	ug/l	453712.14
La	139	115	3	He	0.040	ug/l	855.59
Ce	140	115	3	He	56.581	ug/l	1304891.79
Hg	201	209	1	No Gas	1.275	ug/l	4540.21
Hg	202	209	1	No Gas	5.588	ug/l	45424.26
Hg	202	209	3	He	4.383	ug/l	17019.75
Tl	203	209	3	He	51.083	ug/l	509616.19
Tl	205	209	1	No Gas	52.969	ug/l	2567073.97
Tl	205	209	3	He	51.980	ug/l	1228789.29
[Pb]	206	209	1	No Gas	52.492	ug/l	893713.62
[Pb]	207	209	1	No Gas	52.508	ug/l	781336.05
Pb	208	209	1	No Gas	52.709	ug/l	3622232.31
Th	232	209	3	He	53.450	ug/l	1779449.22
U	238	209	1	No Gas	54.711	ug/l	3740424.50

Name	Mass	Tune Step	Tune Mode	CPS	ISTD Recovery %
Sc	45	1	No Gas	4017556.27	71.3
Sc	45	2	H2	2170312.76	79.1
Sc	45	3	He	220391.22	69.2
Ge	72	1	No Gas	1242318.76	82.2
Ge	72	2	H2	854884.82	86.1
Ge	72	3	He	173521.61	77.9
In	115	1	No Gas	10386823.93	85.3
In	115	3	He	2106984.15	79.9
Tb	159	1	No Gas	15402938.02	94.3
Tb	159	3	He	6238989.08	91.3
Ho	165	1	No Gas	14578895.26	95.6
Ho	165	3	He	6165230.48	93.2
Lu	175	1	No Gas	15142614.27	97.3
Lu	175	3	He	5009886.95	93.5
Bi	209	1	No Gas	10646327.56	94.0
Bi	209	3	He	4645394.15	92.7

ICPMS207-B Analytical Data

Sample Name B22011214-001BMS4
File Name 098MS4.d
Data Path Name D:\Agilent\ICPMH\1\DATA\220121ADoD.b
Acq Time 2022-01-22 02:07:43
Sample Type MS4
Total Dilution 1.0000
Comment ICPMS-6020-W-T
Operator CAR/SRH/JPV/AEM
Method SW6020/ SW6020B

Name	Mass	ISTD	Tune Step	Tune Mode	Conc.	Units	CPS
Li	7	45	1	No Gas	67.106	ug/l	449176.90
Be	9	45	1	No Gas	37.669	ug/l	104419.32
B	11	45	1	No Gas	171.168	ug/l	295120.55
Na	23	45	3	He	80803.235	ug/l	49228782.04
Mg	24	45	3	He	29298.823	ug/l	9839626.62
Al	27	45	1	No Gas	481.559	ug/l	7585575.72
Si	28	45	2	H2	28828.280	ug/l	47405729.87
K	39	72	3	He	6899.272	ug/l	2759349.70
Ca	40	72	2	H2	26962.149	ug/l	181683555.49
Ti	47	72	1	No Gas	86.395	ug/l	181120.63
V	51	72	1	No Gas	118.901	ug/l	3030992.01
V	51	72	3	He	137.063	ug/l	540924.99
Cr	52	72	1	No Gas	93.884	ug/l	2330047.62
Cr	52	72	3	He	100.233	ug/l	443015.90
Mn	55	72	1	No Gas	464.115	ug/l	14889082.01
Mn	55	72	3	He	481.977	ug/l	1380426.88
Fe	56	72	2	H2	686.960	ug/l	10607803.26
Fe	56	72	3	He	641.405	ug/l	2513504.35
Co	59	72	1	No Gas	88.202	ug/l	2392044.90
Ni	60	72	1	No Gas	88.410	ug/l	546200.38
Ni	60	72	3	He	96.270	ug/l	175105.35
Cu	63	72	1	No Gas	91.738	ug/l	1365072.81
Cu	63	72	3	He	100.853	ug/l	482861.83
Cu	65	72	1	No Gas	90.276	ug/l	661568.52
Zn	66	72	1	No Gas	115.109	ug/l	583232.51
Zn	66	72	3	He	123.980	ug/l	124522.50
As	75	72	1	No Gas	97.872	ug/l	600674.47
As	75	72	3	He	104.910	ug/l	91099.90
Se	78	72	2	H2	103.643	ug/l	57731.08
Br	79	72	1	No Gas	9.051	ug/l	166562.37
Br	79	72	2	H2	8.702	ug/l	85679.13
Se	82	72	1	No Gas	95.010	ug/l	33325.52
Kr	84	72	1	No Gas		ug/l	75668.05
Sr	88	72	1	No Gas	208.313	ug/l	8982661.58
Sr	88	72	3	He	209.270	ug/l	940966.19
Mo	95	115	1	No Gas	101.948	ug/l	941047.85
Mo	95	115	3	He	111.676	ug/l	349250.80
Mo	98	115	1	No Gas	106.184	ug/l	1596057.15
Ag	107	115	1	No Gas	9.718	ug/l	231346.36
Ag	109	115	1	No Gas	9.763	ug/l	225559.45
Cd	111	115	1	No Gas	49.469	ug/l	263731.19

ICPMS207-B Analytical Data

Name	Mass	ISTD	Tune Step	Tune Mode	Conc.	Units	CPS
Cd	111	115	3	He	51.622	ug/l	85202.92
Cd	114	115	1	No Gas	50.103	ug/l	590612.53
Cd	114	115	3	He	51.738	ug/l	209648.77
Sn	118	115	1	No Gas	105.464	ug/l	1596404.20
Sn	118	115	3	He	106.698	ug/l	409297.47
Sb	121	115	1	No Gas	104.940	ug/l	2502957.61
Sb	121	115	3	He	104.442	ug/l	622491.34
Sb	123	115	1	No Gas	105.758	ug/l	1940980.49
Sb	123	115	3	He	106.855	ug/l	503304.04
Ba	135	115	1	No Gas	102.027	ug/l	476308.23
Ba	137	115	1	No Gas	100.443	ug/l	833772.74
La	139	115	3	He	111.405	ug/l	2413905.40
Ce	140	115	3	He	113.453	ug/l	2689245.62
Hg	201	209	1	No Gas	0.250	ug/l	928.51
Hg	202	209	1	No Gas	4.579	ug/l	37998.67
Hg	202	209	3	He	3.366	ug/l	13306.66
Tl	203	209	3	He	102.270	ug/l	1037583.94
Tl	205	209	1	No Gas	105.006	ug/l	5191583.99
Tl	205	209	3	He	103.733	ug/l	2494012.63
[Pb]	206	209	1	No Gas	103.835	ug/l	1804058.24
[Pb]	207	209	1	No Gas	104.362	ug/l	1585142.30
Pb	208	209	1	No Gas	103.844	ug/l	7284149.30
Th	232	209	3	He	106.943	ug/l	3621913.35
U	238	209	1	No Gas	109.372	ug/l	7631357.81

Name	Mass	Tune Step	Tune Mode	CPS	ISTD Recovery %
Sc	45	1	No Gas	4189886.95	74.3
Sc	45	2	H2	2175667.95	79.3
Sc	45	3	He	225270.76	70.7
Ge	72	1	No Gas	1264817.94	83.7
Ge	72	2	H2	854452.94	86.1
Ge	72	3	He	178184.14	80.0
In	115	1	No Gas	10427416.57	85.7
In	115	3	He	2102218.57	79.8
Tb	159	1	No Gas	15258972.29	93.4
Tb	159	3	He	6229651.15	91.2
Ho	165	1	No Gas	14698979.19	96.4
Ho	165	3	He	6145207.59	92.9
Lu	175	1	No Gas	15037718.86	96.6
Lu	175	3	He	4996436.05	93.3
Bi	209	1	No Gas	10565208.08	93.3
Bi	209	3	He	4589597.00	91.6

ICPMS207-B Analytical Data

Sample Name B22011214-001BMSD4
File Name 099MSD4.d
Data Path Name D:\Agilent\ICPMH\1\DATA\220121ADoD.b
Acq Time 2022-01-22 02:13:58
Sample Type MSD4
Total Dilution 1.0000
Comment ICPMS-6020-W-T
Operator CAR/SRH/JPV/AEM
Method SW6020/ SW6020B

Name	Mass	ISTD	Tune Step	Tune Mode	Conc.	Units	CPS
Li	7	45	1	No Gas	72.513	ug/l	486609.01
Be	9	45	1	No Gas	39.886	ug/l	111103.22
B	11	45	1	No Gas	177.421	ug/l	307358.47
Na	23	45	3	He	77646.640	ug/l	49307489.27
Mg	24	45	3	He	28359.725	ug/l	9931390.29
Al	27	45	1	No Gas	508.007	ug/l	8045584.53
Si	28	45	2	H2	27659.167	ug/l	46874742.48
K	39	72	3	He	7049.506	ug/l	2854047.28
Ca	40	72	2	H2	25856.736	ug/l	177026570.34
Ti	47	72	1	No Gas	86.955	ug/l	183296.54
V	51	72	1	No Gas	127.750	ug/l	3272847.07
V	51	72	3	He	136.782	ug/l	546632.16
Cr	52	72	1	No Gas	94.653	ug/l	2362267.97
Cr	52	72	3	He	99.170	ug/l	443841.98
Mn	55	72	1	No Gas	471.322	ug/l	15208824.93
Mn	55	72	3	He	477.629	ug/l	1385575.09
Fe	56	72	2	H2	654.910	ug/l	10273127.14
Fe	56	72	3	He	632.144	ug/l	2508216.77
Co	59	72	1	No Gas	89.558	ug/l	2442546.35
Ni	60	72	1	No Gas	86.907	ug/l	539873.07
Ni	60	72	3	He	98.361	ug/l	181166.16
Cu	63	72	1	No Gas	90.633	ug/l	1356316.64
Cu	63	72	3	He	99.227	ug/l	481113.79
Cu	65	72	1	No Gas	90.264	ug/l	665427.75
Zn	66	72	1	No Gas	117.178	ug/l	596977.69
Zn	66	72	3	He	124.354	ug/l	126519.84
As	75	72	1	No Gas	98.529	ug/l	607899.94
As	75	72	3	He	104.576	ug/l	91970.03
Se	78	72	2	H2	101.440	ug/l	57406.70
Br	79	72	1	No Gas	8.618	ug/l	162412.10
Br	79	72	2	H2	8.383	ug/l	84913.26
Se	82	72	1	No Gas	95.124	ug/l	33554.41
Kr	84	72	1	No Gas		ug/l	73932.07
Sr	88	72	1	No Gas	204.856	ug/l	8887294.59
Sr	88	72	3	He	207.364	ug/l	944401.20
Mo	95	115	1	No Gas	107.180	ug/l	958850.78
Mo	95	115	3	He	110.301	ug/l	349074.91
Mo	98	115	1	No Gas	110.173	ug/l	1604869.45
Ag	107	115	1	No Gas	9.990	ug/l	230443.62
Ag	109	115	1	No Gas	10.038	ug/l	224716.18
Cd	111	115	1	No Gas	50.672	ug/l	261817.27

ICPMS207-B Analytical Data

Name	Mass	ISTD	Tune Step	Tune Mode	Conc.	Units	CPS
Cd	111	115	3	He	50.769	ug/l	84791.17
Cd	114	115	1	No Gas	51.847	ug/l	592336.69
Cd	114	115	3	He	50.785	ug/l	208233.43
Sn	118	115	1	No Gas	108.149	ug/l	1586594.12
Sn	118	115	3	He	104.477	ug/l	405545.57
Sb	121	115	1	No Gas	107.231	ug/l	2478748.85
Sb	121	115	3	He	102.220	ug/l	616516.67
Sb	123	115	1	No Gas	107.539	ug/l	1912838.73
Sb	123	115	3	He	105.081	ug/l	500840.64
Ba	135	115	1	No Gas	105.286	ug/l	476386.64
Ba	137	115	1	No Gas	103.433	ug/l	832138.67
La	139	115	3	He	109.544	ug/l	2401948.70
Ce	140	115	3	He	111.944	ug/l	2685081.49
Hg	201	209	1	No Gas	0.264	ug/l	962.18
Hg	202	209	1	No Gas	4.623	ug/l	37590.96
Hg	202	209	3	He	3.357	ug/l	13305.32
Tl	203	209	3	He	101.396	ug/l	1031368.38
Tl	205	209	1	No Gas	108.529	ug/l	5257085.97
Tl	205	209	3	He	103.165	ug/l	2486571.80
[Pb]	206	209	1	No Gas	105.230	ug/l	1790831.31
[Pb]	207	209	1	No Gas	106.351	ug/l	1581990.90
Pb	208	209	1	No Gas	105.389	ug/l	7239933.64
Th	232	209	3	He	105.924	ug/l	3596670.75
U	238	209	1	No Gas	110.577	ug/l	7559222.24

Name	Mass	Tune Step	Tune Mode	CPS	ISTD Recovery %
Sc	45	1	No Gas	4216758.99	74.8
Sc	45	2	H2	2242316.87	81.7
Sc	45	3	He	234754.98	73.7
Ge	72	1	No Gas	1272411.10	84.2
Ge	72	2	H2	868452.10	87.5
Ge	72	3	He	180453.82	81.0
In	115	1	No Gas	10105375.94	83.0
In	115	3	He	2127277.60	80.7
Tb	159	1	No Gas	14968961.77	91.6
Tb	159	3	He	6364282.70	93.1
Ho	165	1	No Gas	14414710.76	94.5
Ho	165	3	He	6167016.91	93.2
Lu	175	1	No Gas	15171247.28	97.5
Lu	175	3	He	4937191.24	92.2
Bi	209	1	No Gas	10335640.64	91.3
Bi	209	3	He	4601026.47	91.8

ICPMS207-B Analytical Data

Sample Name Rinse
File Name 100BLKV.d
Data Path Name D:\Agilent\ICPMH\1\DATA\220121ADoD.b
Acq Time 2022-01-22 02:20:12
Sample Type BkVrfy
Total Dilution 1.0000
Comment ICPMS-6020-W-D
Operator CAR/SRH/JPV/AEM
Method SW6020/ SW6020B

Name	Mass	ISTD	Tune Step	Tune Mode	Conc.	Units	CPS
Li	7	45	1	No Gas	-0.207	ug/l	11777.94
Be	9	45	1	No Gas	-0.045	ug/l	58.32
B	11	45	1	No Gas	2.454	ug/l	9224.54
Na	23	45	3	He	44.093	ug/l	68387.64
Mg	24	45	3	He	0.676	ug/l	1730.02
Al	27	45	1	No Gas	-0.347	ug/l	7764.27
Si	28	45	2	H2	127.435	ug/l	233844.81
K	39	72	3	He	-25.981	ug/l	61236.58
Ca	40	72	2	H2	-1.333	ug/l	83169.20
Ti	47	72	1	No Gas	-0.007	ug/l	178.51
V	51	72	1	No Gas	2.318	ug/l	11049.61
V	51	72	3	He	1.250	ug/l	18793.25
Cr	52	72	1	No Gas	-0.022	ug/l	85509.55
Cr	52	72	3	He	0.008	ug/l	800.03
Mn	55	72	1	No Gas	0.193	ug/l	16097.00
Mn	55	72	3	He	0.140	ug/l	568.57
Fe	56	72	2	H2	0.143	ug/l	11743.21
Fe	56	72	3	He	0.100	ug/l	5501.58
Co	59	72	1	No Gas	0.003	ug/l	585.52
Ni	60	72	1	No Gas	-0.009	ug/l	379.25
Ni	60	72	3	He	0.005	ug/l	94.44
Cu	63	72	1	No Gas	0.013	ug/l	2009.61
Cu	63	72	3	He	0.012	ug/l	655.22
Cu	65	72	1	No Gas	0.015	ug/l	967.09
Zn	66	72	1	No Gas	0.032	ug/l	1075.13
Zn	66	72	3	He	0.053	ug/l	254.45
As	75	72	1	No Gas	1.472	ug/l	21860.28
As	75	72	3	He	0.012	ug/l	256.27
Se	78	72	2	H2	0.010	ug/l	37.00
Br	79	72	1	No Gas	21.358	ug/l	325703.74
Br	79	72	2	H2	21.557	ug/l	180082.30
Se	82	72	1	No Gas	0.193	ug/l	726.61
Kr	84	72	1	No Gas		ug/l	18528.48
Sr	88	72	1	No Gas	0.002	ug/l	795.12
Sr	88	72	3	He	-0.007	ug/l	223.34
Mo	95	115	1	No Gas	0.018	ug/l	242.23
Mo	95	115	3	He	0.011	ug/l	57.78
Mo	98	115	1	No Gas	0.017	ug/l	385.43
Ag	107	115	1	No Gas	-0.002	ug/l	1737.48
Ag	109	115	1	No Gas	0.004	ug/l	1785.50
Cd	111	115	1	No Gas	0.006	ug/l	34.23

ICPMS207-B Analytical Data

Name	Mass	ISTD	Tune Step	Tune Mode	Conc.	Units	CPS
Cd	111	115	3	He	0.005	ug/l	15.78
Cd	114	115	1	No Gas	0.006	ug/l	-86.47
Cd	114	115	3	He	0.005	ug/l	34.08
Sn	118	115	1	No Gas	0.014	ug/l	3313.83
Sn	118	115	3	He	0.009	ug/l	832.25
Sb	121	115	1	No Gas	0.191	ug/l	6014.90
Sb	121	115	3	He	0.149	ug/l	1177.17
Sb	123	115	1	No Gas	0.192	ug/l	4625.56
Sb	123	115	3	He	0.159	ug/l	978.46
Ba	135	115	1	No Gas	0.006	ug/l	96.48
Ba	137	115	1	No Gas	0.003	ug/l	126.41
La	139	115	3	He	0.001	ug/l	35.56
Ce	140	115	3	He	0.001	ug/l	53.34
Hg	201	209	1	No Gas	0.000	ug/l	32.66
Hg	202	209	1	No Gas	0.008	ug/l	181.97
Hg	202	209	3	He	0.006	ug/l	59.99
Tl	203	209	3	He	0.183	ug/l	2716.70
Tl	205	209	1	No Gas	0.165	ug/l	12203.72
Tl	205	209	3	He	0.180	ug/l	6421.48
[Pb]	206	209	1	No Gas	0.007	ug/l	780.03
[Pb]	207	209	1	No Gas	0.012	ug/l	755.58
Pb	208	209	1	No Gas	0.009	ug/l	3302.40
Th	232	209	3	He	0.018	ug/l	1289.25
U	238	209	1	No Gas	0.002	ug/l	289.28

Name	Mass	Tune Step	Tune Mode	CPS	ISTD Recovery %
Sc	45	1	No Gas	4643552.28	82.4
Sc	45	2	H2	2362267.85	86.1
Sc	45	3	He	251550.85	79.0
Ge	72	1	No Gas	1323842.71	87.6
Ge	72	2	H2	908416.85	91.5
Ge	72	3	He	192669.60	86.5
In	115	1	No Gas	11735208.84	96.4
In	115	3	He	2345749.06	89.0
Tb	159	1	No Gas	16457359.07	100.7
Tb	159	3	He	6702678.59	98.1
Ho	165	1	No Gas	15699915.82	102.9
Ho	165	3	He	6420420.77	97.1
Lu	175	1	No Gas	16530476.98	106.2
Lu	175	3	He	5224730.43	97.6
Bi	209	1	No Gas	12154563.55	107.4
Bi	209	3	He	5189463.51	103.5

ICPMS207-B Analytical Data

Sample Name B22011227-001A
File Name 101SMPL.d
Data Path Name D:\Agilent\ICPMH\1\DATA\220121ADoD.b
Acq Time 2022-01-22 02:26:26
Sample Type Sample
Total Dilution 1.0000
Comment ICPMS-6020-W-D
Operator CAR/SRH/JPV/AEM
Method SW6020/ SW6020B

Name	Mass	ISTD	Tune Step	Tune Mode	Conc.	Units	CPS
Li	7	45	1	No Gas	-0.623	ug/l	9993.96
Be	9	45	1	No Gas	-0.047	ug/l	58.66
B	11	45	1	No Gas	58.052	ug/l	129688.04
Na	23	45	3	He	159241.119	ug/l	124388330.37
Mg	24	45	3	He	44478.677	ug/l	19161668.82
Al	27	45	1	No Gas	0.811	ug/l	31804.14
Si	28	45	2	H2	31873.347	ug/l	61628122.50
K	39	72	3	He	1930.818	ug/l	960081.90
Ca	40	72	2	H2	25884.056	ug/l	192521825.04
Ti	47	72	1	No Gas	2.009	ug/l	4830.67
V	51	72	1	No Gas	22.705	ug/l	592776.75
V	51	72	3	He	18.416	ug/l	97782.71
Cr	52	72	1	No Gas	0.400	ug/l	101008.99
Cr	52	72	3	He	2.148	ug/l	11915.99
Mn	55	72	1	No Gas	1.925	ug/l	77994.96
Mn	55	72	3	He	1.980	ug/l	6783.88
Fe	56	72	2	H2	18.477	ug/l	324442.22
Fe	56	72	3	He	17.662	ug/l	86336.12
Co	59	72	1	No Gas	0.147	ug/l	4921.08
Ni	60	72	1	No Gas	0.661	ug/l	4947.71
Ni	60	72	3	He	0.504	ug/l	1165.61
Cu	63	72	1	No Gas	1.144	ug/l	20604.81
Cu	63	72	3	He	0.354	ug/l	2622.72
Cu	65	72	1	No Gas	0.467	ug/l	4657.29
Zn	66	72	1	No Gas	3.762	ug/l	21889.06
Zn	66	72	3	He	3.921	ug/l	4816.37
As	75	72	1	No Gas	0.155	ug/l	14289.49
As	75	72	3	He	0.071	ug/l	336.87
Se	78	72	2	H2	0.243	ug/l	181.45
Br	79	72	1	No Gas	79.512	ug/l	1094181.85
Br	79	72	2	H2	77.372	ug/l	588298.69
Se	82	72	1	No Gas	1.912	ug/l	1415.49
Kr	84	72	1	No Gas		ug/l	93693.80
Sr	88	72	1	No Gas	260.491	ug/l	12357915.63
Sr	88	72	3	He	262.861	ug/l	1383441.58
Mo	95	115	1	No Gas	0.290	ug/l	3005.89
Mo	95	115	3	He	0.291	ug/l	1064.49
Mo	98	115	1	No Gas	0.292	ug/l	4928.59
Ag	107	115	1	No Gas	-0.063	ug/l	111.38
Ag	109	115	1	No Gas	-0.062	ug/l	92.70
Cd	111	115	1	No Gas	0.024	ug/l	137.52

ICPMS207-B Analytical Data

Name	Mass	ISTD	Tune Step	Tune Mode	Conc.	Units	CPS
Cd	111	115	3	He	0.018	ug/l	40.67
Cd	114	115	1	No Gas	0.034	ug/l	276.52
Cd	114	115	3	He	0.018	ug/l	93.84
Sn	118	115	1	No Gas	-0.075	ug/l	1773.27
Sn	118	115	3	He	-0.076	ug/l	483.35
Sb	121	115	1	No Gas	0.114	ug/l	3862.25
Sb	121	115	3	He	0.113	ug/l	962.46
Sb	123	115	1	No Gas	0.114	ug/l	2951.61
Sb	123	115	3	He	0.119	ug/l	792.77
Ba	135	115	1	No Gas	10.862	ug/l	55987.84
Ba	137	115	1	No Gas	10.789	ug/l	98883.33
La	139	115	3	He	0.001	ug/l	45.56
Ce	140	115	3	He	0.002	ug/l	80.00
Hg	201	209	1	No Gas	-0.001	ug/l	25.33
Hg	202	209	1	No Gas	0.001	ug/l	99.98
Hg	202	209	3	He	0.002	ug/l	38.32
Tl	203	209	3	He	0.081	ug/l	1468.68
Tl	205	209	1	No Gas	0.056	ug/l	5506.80
Tl	205	209	3	He	0.080	ug/l	3516.55
[Pb]	206	209	1	No Gas	0.010	ug/l	768.91
[Pb]	207	209	1	No Gas	0.011	ug/l	673.36
Pb	208	209	1	No Gas	0.008	ug/l	3006.82
Th	232	209	3	He	-0.004	ug/l	412.84
U	238	209	1	No Gas	0.014	ug/l	1160.49

Name	Mass	Tune Step	Tune Mode	CPS	ISTD Recovery %
Sc	45	1	No Gas	5285592.33	93.7
Sc	45	2	H2	2558149.32	93.2
Sc	45	3	He	288848.64	90.7
Ge	72	1	No Gas	1391696.69	92.1
Ge	72	2	H2	943203.38	95.0
Ge	72	3	He	208530.07	93.7
In	115	1	No Gas	11511098.21	94.6
In	115	3	He	2410159.31	91.4
Tb	159	1	No Gas	16466713.95	100.8
Tb	159	3	He	6701748.86	98.1
Ho	165	1	No Gas	15555899.10	102.0
Ho	165	3	He	6547947.40	99.0
Lu	175	1	No Gas	15864800.07	101.9
Lu	175	3	He	5353580.16	100.0
Bi	209	1	No Gas	11202632.48	98.9
Bi	209	3	He	4912194.32	98.0

ICPMS207-B Analytical Data

Sample Name CCV
File Name 102_CCV.d
Data Path Name D:\Agilent\ICPMH\1\DATA\220121ADoD.b
Acq Time 2022-01-22 02:32:41
Sample Type CCV
Total Dilution 1.0000
Comment ICPMS-6020-W-D
Operator CAR/SRH/JPV/AEM
Method SW6020/ SW6020B

Name	Mass	ISTD	Tune Step	Tune Mode	Conc.	Units	CPS
Li	7	45	1	No Gas	433.482	ug/l	3209272.13
Be	9	45	1	No Gas	37.619	ug/l	118039.76
B	11	45	1	No Gas	40.811	ug/l	83219.33
Na	23	45	3	He	12024.656	ug/l	8781891.39
Mg	24	45	3	He	11867.927	ug/l	4760228.78
Al	27	45	1	No Gas	52.160	ug/l	942577.01
Si	28	45	2	H2	264.106	ug/l	498535.99
K	39	72	3	He	11327.379	ug/l	5149313.68
Ca	40	72	2	H2	12054.540	ug/l	90741170.47
Ti	47	72	1	No Gas	46.750	ug/l	104683.08
V	51	72	1	No Gas	50.324	ug/l	1337628.07
V	51	72	3	He	49.126	ug/l	231582.89
Cr	52	72	1	No Gas	48.862	ug/l	1336448.64
Cr	52	72	3	He	48.222	ug/l	244853.80
Mn	55	72	1	No Gas	50.019	ug/l	1721788.06
Mn	55	72	3	He	48.349	ug/l	158997.91
Fe	56	72	2	H2	1338.174	ug/l	23058342.95
Fe	56	72	3	He	1245.821	ug/l	5593543.87
Co	59	72	1	No Gas	49.117	ug/l	1421931.51
Ni	60	72	1	No Gas	47.889	ug/l	315974.41
Ni	60	72	3	He	48.921	ug/l	102098.34
Cu	63	72	1	No Gas	49.077	ug/l	780365.80
Cu	63	72	3	He	50.063	ug/l	275184.34
Cu	65	72	1	No Gas	49.619	ug/l	388494.28
Zn	66	72	1	No Gas	49.453	ug/l	267906.44
Zn	66	72	3	He	50.720	ug/l	58570.77
As	75	72	1	No Gas	50.217	ug/l	335260.43
As	75	72	3	He	50.217	ug/l	50149.08
Se	78	72	2	H2	52.150	ug/l	32448.41
Br	79	72	1	No Gas	17.369	ug/l	282094.38
Br	79	72	2	H2	16.695	ug/l	153781.71
Se	82	72	1	No Gas	50.566	ug/l	19246.59
Kr	84	72	1	No Gas		ug/l	35193.01
Sr	88	72	1	No Gas	53.132	ug/l	2446016.96
Sr	88	72	3	He	51.392	ug/l	265259.60
Mo	95	115	1	No Gas	50.069	ug/l	508315.30
Mo	95	115	3	He	50.983	ug/l	183951.71
Mo	98	115	1	No Gas	50.544	ug/l	835490.37
Ag	107	115	1	No Gas	19.859	ug/l	518034.30
Ag	109	115	1	No Gas	19.752	ug/l	500130.95
Cd	111	115	1	No Gas	50.131	ug/l	293886.73

ICPMS207-B Analytical Data

Name	Mass	ISTD	Tune Step	Tune Mode	Conc.	Units	CPS
Cd	111	115	3	He	50.860	ug/l	96860.91
Cd	114	115	1	No Gas	51.206	ug/l	663766.17
Cd	114	115	3	He	50.549	ug/l	236337.18
Sn	118	115	1	No Gas	52.866	ug/l	881408.58
Sn	118	115	3	He	53.151	ug/l	235665.03
Sb	121	115	1	No Gas	54.351	ug/l	1425958.41
Sb	121	115	3	He	53.124	ug/l	365447.13
Sb	123	115	1	No Gas	53.984	ug/l	1089808.93
Sb	123	115	3	He	53.013	ug/l	288189.80
Ba	135	115	1	No Gas	51.973	ug/l	266868.55
Ba	137	115	1	No Gas	51.693	ug/l	471891.65
La	139	115	3	He	51.915	ug/l	1297981.12
Ce	140	115	3	He	51.492	ug/l	1408421.66
Hg	201	209	1	No Gas	0.995	ug/l	3868.13
Hg	202	209	1	No Gas	0.968	ug/l	8657.08
Hg	202	209	3	He	0.995	ug/l	4278.50
Tl	203	209	3	He	48.882	ug/l	536683.07
Tl	205	209	1	No Gas	50.877	ug/l	2689881.84
Tl	205	209	3	He	50.356	ug/l	1310054.63
[Pb]	206	209	1	No Gas	51.106	ug/l	949055.92
[Pb]	207	209	1	No Gas	50.469	ug/l	819189.60
Pb	208	209	1	No Gas	50.707	ug/l	3801002.44
Th	232	209	3	He	49.713	ug/l	1821035.54
U	238	209	1	No Gas	50.624	ug/l	3775154.47

Name	Mass	Tune Step	Tune Mode	CPS	ISTD Recovery %
Sc	45	1	No Gas	4742655.28	84.1
Sc	45	2	H2	2464742.30	89.8
Sc	45	3	He	268894.52	84.4
Ge	72	1	No Gas	1350040.59	89.3
Ge	72	2	H2	954034.80	96.1
Ge	72	3	He	204426.64	91.8
In	115	1	No Gas	11466043.40	94.2
In	115	3	He	2425749.35	92.0
Tb	159	1	No Gas	16373998.00	100.2
Tb	159	3	He	6733080.81	98.5
Ho	165	1	No Gas	15606737.96	102.3
Ho	165	3	He	6436387.46	97.3
Lu	175	1	No Gas	16020858.42	102.9
Lu	175	3	He	5293581.99	98.8
Bi	209	1	No Gas	11274320.79	99.6
Bi	209	3	He	4963686.80	99.0

ICPMS207-B Analytical Data

Sample Name CCB
File Name 103_CCB.d
Data Path Name D:\Agilent\ICPMH\1\DATA\220121ADoD.b
Acq Time 2022-01-22 02:38:55
Sample Type CCB
Total Dilution 1.0000
Comment ICPMS-6020-W-D
Operator CAR/SRH/JPV/AEM
Method SW6020/ SW6020B

Name	Mass	ISTD	Tune Step	Tune Mode	Conc.	Units	CPS
Li	7	45	1	No Gas	0.073	ug/l	14291.10
Be	9	45	1	No Gas	-0.047	ug/l	53.99
B	11	45	1	No Gas	1.259	ug/l	7221.97
Na	23	45	3	He	31.026	ug/l	60522.12
Mg	24	45	3	He	-0.329	ug/l	1377.34
Al	27	45	1	No Gas	-0.376	ug/l	7521.93
Si	28	45	2	H2	36.801	ug/l	73597.91
K	39	72	3	He	-19.005	ug/l	64009.57
Ca	40	72	2	H2	-1.160	ug/l	84766.73
Ti	47	72	1	No Gas	0.016	ug/l	236.91
V	51	72	1	No Gas	3.699	ug/l	53142.52
V	51	72	3	He	2.262	ug/l	22952.46
Cr	52	72	1	No Gas	0.337	ug/l	98128.52
Cr	52	72	3	He	0.032	ug/l	910.03
Mn	55	72	1	No Gas	0.079	ug/l	12733.69
Mn	55	72	3	He	0.011	ug/l	168.63
Fe	56	72	2	H2	0.050	ug/l	10253.93
Fe	56	72	3	He	0.074	ug/l	5374.74
Co	59	72	1	No Gas	-0.002	ug/l	452.44
Ni	60	72	1	No Gas	-0.007	ug/l	405.87
Ni	60	72	3	He	0.002	ug/l	90.00
Cu	63	72	1	No Gas	0.004	ug/l	1938.24
Cu	63	72	3	He	0.001	ug/l	595.23
Cu	65	72	1	No Gas	-0.005	ug/l	850.37
Zn	66	72	1	No Gas	-0.017	ug/l	851.41
Zn	66	72	3	He	-0.005	ug/l	191.11
As	75	72	1	No Gas	0.564	ug/l	16801.06
As	75	72	3	He	0.026	ug/l	268.73
Se	78	72	2	H2	0.008	ug/l	36.11
Br	79	72	1	No Gas	0.476	ug/l	71652.16
Br	79	72	2	H2	0.396	ug/l	33702.38
Se	82	72	1	No Gas	-0.113	ug/l	641.28
Kr	84	72	1	No Gas		ug/l	19424.60
Sr	88	72	1	No Gas	0.000	ug/l	718.60
Sr	88	72	3	He	-0.004	ug/l	237.78
Mo	95	115	1	No Gas	0.020	ug/l	266.67
Mo	95	115	3	He	0.014	ug/l	68.89
Mo	98	115	1	No Gas	0.022	ug/l	468.41
Ag	107	115	1	No Gas	-0.001	ug/l	1770.83
Ag	109	115	1	No Gas	-0.001	ug/l	1676.11
Cd	111	115	1	No Gas	0.001	ug/l	2.78

ICPMS207-B Analytical Data

Name	Mass	ISTD	Tune Step	Tune Mode	Conc.	Units	CPS
Cd	111	115	3	He	0.001	ug/l	7.33
Cd	114	115	1	No Gas	0.003	ug/l	-125.97
Cd	114	115	3	He	0.001	ug/l	16.11
Sn	118	115	1	No Gas	0.022	ug/l	3463.58
Sn	118	115	3	He	0.014	ug/l	860.03
Sb	121	115	1	No Gas	0.144	ug/l	4761.30
Sb	121	115	3	He	0.114	ug/l	954.47
Sb	123	115	1	No Gas	0.144	ug/l	3657.19
Sb	123	115	3	He	0.116	ug/l	764.77
Ba	135	115	1	No Gas	-0.003	ug/l	46.57
Ba	137	115	1	No Gas	0.002	ug/l	113.11
La	139	115	3	He	0.000	ug/l	15.56
Ce	140	115	3	He	0.000	ug/l	41.11
Hg	201	209	1	No Gas	0.002	ug/l	39.99
Hg	202	209	1	No Gas	0.005	ug/l	147.64
Hg	202	209	3	He	0.004	ug/l	51.99
Tl	203	209	3	He	0.110	ug/l	1832.87
Tl	205	209	1	No Gas	0.081	ug/l	7323.23
Tl	205	209	3	He	0.112	ug/l	4447.20
[Pb]	206	209	1	No Gas	0.003	ug/l	685.58
[Pb]	207	209	1	No Gas	0.005	ug/l	615.57
Pb	208	209	1	No Gas	0.003	ug/l	2813.47
Th	232	209	3	He	0.016	ug/l	1153.18
U	238	209	1	No Gas	0.003	ug/l	309.28

Name	Mass	Tune Step	Tune Mode	CPS	ISTD Recovery %
Sc	45	1	No Gas	4808560.29	85.3
Sc	45	2	H2	2413381.53	87.9
Sc	45	3	He	255853.25	80.3
Ge	72	1	No Gas	1376165.80	91.0
Ge	72	2	H2	912454.93	91.9
Ge	72	3	He	192228.16	86.3
In	115	1	No Gas	11787241.96	96.8
In	115	3	He	2367230.07	89.8
Tb	159	1	No Gas	16663944.19	102.0
Tb	159	3	He	6531270.63	95.6
Ho	165	1	No Gas	15812953.12	103.7
Ho	165	3	He	6399624.76	96.8
Lu	175	1	No Gas	15964823.95	102.6
Lu	175	3	He	5218893.66	97.5
Bi	209	1	No Gas	11984982.41	105.9
Bi	209	3	He	5053892.58	100.8

ICPMS207-B Analytical Data

Sample Name B22011227-001B
File Name 104SMPL.d
Data Path Name D:\Agilent\ICPMH\1\DATA\220121ADoD.b
Acq Time 2022-01-22 02:45:10
Sample Type Sample
Total Dilution 1.0000
Comment ICPMS-6020-W-T
Operator CAR/SRH/JPV/AEM
Method SW6020/ SW6020B

Name	Mass	ISTD	Tune Step	Tune Mode	Conc.	Units	CPS
Li	7	45	1	No Gas	0.427	ug/l	15057.48
Be	9	45	1	No Gas	-0.044	ug/l	57.99
B	11	45	1	No Gas	58.055	ug/l	104879.04
Na	23	45	3	He	157410.094	ug/l	96956238.56
Mg	24	45	3	He	43512.690	ug/l	14781520.05
Al	27	45	1	No Gas	51.372	ug/l	836772.64
Si	28	45	2	H2	31827.924	ug/l	52188572.23
K	39	72	3	He	1846.999	ug/l	763586.89
Ca	40	72	2	H2	25951.882	ug/l	165128390.91
Ti	47	72	1	No Gas	6.007	ug/l	12225.75
V	51	72	1	No Gas	21.503	ug/l	486906.47
V	51	72	3	He	25.146	ug/l	106168.16
Cr	52	72	1	No Gas	19.738	ug/l	531567.96
Cr	52	72	3	He	18.086	ug/l	78059.30
Mn	55	72	1	No Gas	3.362	ug/l	112050.98
Mn	55	72	3	He	2.846	ug/l	8024.59
Fe	56	72	2	H2	187.263	ug/l	2736566.81
Fe	56	72	3	He	169.204	ug/l	646206.78
Co	59	72	1	No Gas	0.354	ug/l	9644.15
Ni	60	72	1	No Gas	0.998	ug/l	6305.54
Ni	60	72	3	He	0.848	ug/l	1571.21
Cu	63	72	1	No Gas	2.054	ug/l	30898.97
Cu	63	72	3	He	1.186	ug/l	6030.38
Cu	65	72	1	No Gas	1.276	ug/l	9727.83
Zn	66	72	1	No Gas	9.861	ug/l	48620.61
Zn	66	72	3	He	10.576	ug/l	10461.59
As	75	72	1	No Gas	2.624	ug/l	26665.23
As	75	72	3	He	0.532	ug/l	666.67
Se	78	72	2	H2	0.317	ug/l	194.33
Br	79	72	1	No Gas	20.004	ug/l	282962.19
Br	79	72	2	H2	19.298	ug/l	146083.23
Se	82	72	1	No Gas	0.330	ug/l	710.75
Kr	84	72	1	No Gas		ug/l	84830.58
Sr	88	72	1	No Gas	263.402	ug/l	10880825.40
Sr	88	72	3	He	251.214	ug/l	1095271.18
Mo	95	115	1	No Gas	1.222	ug/l	10945.36
Mo	95	115	3	He	1.254	ug/l	3913.89
Mo	98	115	1	No Gas	1.230	ug/l	17922.87
Ag	107	115	1	No Gas	-0.054	ug/l	321.47
Ag	109	115	1	No Gas	-0.051	ug/l	328.80
Cd	111	115	1	No Gas	0.009	ug/l	44.91

ICPMS207-B Analytical Data

Name	Mass	ISTD	Tune Step	Tune Mode	Conc.	Units	CPS
Cd	111	115	3	He	0.004	ug/l	11.89
Cd	114	115	1	No Gas	0.017	ug/l	47.70
Cd	114	115	3	He	0.004	ug/l	27.91
Sn	118	115	1	No Gas	0.469	ug/l	9494.44
Sn	118	115	3	He	0.493	ug/l	2583.59
Sb	121	115	1	No Gas	0.181	ug/l	4927.03
Sb	121	115	3	He	0.177	ug/l	1214.84
Sb	123	115	1	No Gas	0.188	ug/l	3900.60
Sb	123	115	3	He	0.178	ug/l	963.80
Ba	135	115	1	No Gas	11.851	ug/l	53489.88
Ba	137	115	1	No Gas	11.461	ug/l	91943.85
La	139	115	3	He	0.026	ug/l	578.91
Ce	140	115	3	He	0.075	ug/l	1790.13
Hg	201	209	1	No Gas	0.011	ug/l	64.66
Hg	202	209	1	No Gas	0.027	ug/l	303.61
Hg	202	209	3	He	0.022	ug/l	113.65
Tl	203	209	3	He	0.077	ug/l	1312.60
Tl	205	209	1	No Gas	0.053	ug/l	4932.08
Tl	205	209	3	He	0.074	ug/l	3084.93
[Pb]	206	209	1	No Gas	0.119	ug/l	2538.04
[Pb]	207	209	1	No Gas	0.109	ug/l	2061.29
Pb	208	209	1	No Gas	0.110	ug/l	9674.78
Th	232	209	3	He	0.052	ug/l	2241.10
U	238	209	1	No Gas	0.016	ug/l	1191.82

Name	Mass	Tune Step	Tune Mode	CPS	ISTD Recovery %
Sc	45	1	No Gas	4272859.18	75.8
Sc	45	2	H2	2169582.32	79.0
Sc	45	3	He	227804.07	71.5
Ge	72	1	No Gas	1212157.55	80.2
Ge	72	2	H2	806865.21	81.3
Ge	72	3	He	172752.89	77.6
In	115	1	No Gas	10073472.66	82.8
In	115	3	He	2088325.65	79.2
Tb	159	1	No Gas	14654334.44	89.7
Tb	159	3	He	6149755.37	90.0
Ho	165	1	No Gas	14020936.27	91.9
Ho	165	3	He	6024344.13	91.1
Lu	175	1	No Gas	14498683.38	93.2
Lu	175	3	He	4876085.29	91.0
Bi	209	1	No Gas	10225725.35	90.3
Bi	209	3	He	4523518.57	90.2

ICPMS207-B Analytical Data

Sample Name B22011228-001A
File Name 105SMPL.d
Data Path Name D:\Agilent\ICPMH\1\DATA\220121ADoD.b
Acq Time 2022-01-22 02:51:25
Sample Type Sample
Total Dilution 1.0000
Comment ICPMS-6020-W-D
Operator CAR/SRH/JPV/AEM
Method SW6020/ SW6020B

Name	Mass	ISTD	Tune Step	Tune Mode	Conc.	Units	CPS
Li	7	45	1	No Gas	-0.596	ug/l	10617.97
Be	9	45	1	No Gas	-0.055	ug/l	34.66
B	11	45	1	No Gas	60.075	ug/l	139303.11
Na	23	45	3	He	36066.350	ug/l	28110976.25
Mg	24	45	3	He	8483.314	ug/l	3645017.19
Al	27	45	1	No Gas	1.047	ug/l	37898.16
Si	28	45	2	H2	23132.874	ug/l	46125676.21
K	39	72	3	He	1653.488	ug/l	832174.24
Ca	40	72	2	H2	7731.269	ug/l	58111892.34
Ti	47	72	1	No Gas	1.440	ug/l	3710.89
V	51	72	1	No Gas	20.508	ug/l	558690.72
V	51	72	3	He	17.792	ug/l	94819.53
Cr	52	72	1	No Gas	0.869	ug/l	119448.47
Cr	52	72	3	He	3.078	ug/l	16693.99
Mn	55	72	1	No Gas	-0.001	ug/l	10629.49
Mn	55	72	3	He	0.089	ug/l	445.92
Fe	56	72	2	H2	9.152	ug/l	166591.94
Fe	56	72	3	He	0.635	ug/l	8390.86
Co	59	72	1	No Gas	0.005	ug/l	691.98
Ni	60	72	1	No Gas	0.143	ug/l	1510.43
Ni	60	72	3	He	0.127	ug/l	362.23
Cu	63	72	1	No Gas	0.256	ug/l	6406.65
Cu	63	72	3	He	0.065	ug/l	1004.84
Cu	65	72	1	No Gas	0.104	ug/l	1824.85
Zn	66	72	1	No Gas	3.150	ug/l	19489.04
Zn	66	72	3	He	3.346	ug/l	4133.95
As	75	72	1	No Gas	-0.400	ug/l	11175.51
As	75	72	3	He	-0.093	ug/l	170.73
Se	78	72	2	H2	0.150	ug/l	126.00
Br	79	72	1	No Gas	17.539	ug/l	308716.89
Br	79	72	2	H2	19.146	ug/l	171244.54
Se	82	72	1	No Gas	0.467	ug/l	914.63
Kr	84	72	1	No Gas		ug/l	37287.49
Sr	88	72	1	No Gas	59.019	ug/l	2951169.43
Sr	88	72	3	He	57.939	ug/l	304681.26
Mo	95	115	1	No Gas	0.790	ug/l	8555.95
Mo	95	115	3	He	0.848	ug/l	3190.38
Mo	98	115	1	No Gas	0.810	ug/l	14292.09
Ag	107	115	1	No Gas	-0.064	ug/l	106.04
Ag	109	115	1	No Gas	-0.061	ug/l	118.72
Cd	111	115	1	No Gas	0.014	ug/l	81.00

ICPMS207-B Analytical Data

Name	Mass	ISTD	Tune Step	Tune Mode	Conc.	Units	CPS
Cd	111	115	3	He	0.014	ug/l	34.45
Cd	114	115	1	No Gas	0.027	ug/l	195.23
Cd	114	115	3	He	0.014	ug/l	79.98
Sn	118	115	1	No Gas	-0.076	ug/l	1843.15
Sn	118	115	3	He	-0.092	ug/l	428.90
Sb	121	115	1	No Gas	0.013	ug/l	1265.18
Sb	121	115	3	He	0.018	ug/l	327.37
Sb	123	115	1	No Gas	0.013	ug/l	957.80
Sb	123	115	3	He	0.016	ug/l	245.70
Ba	135	115	1	No Gas	1.951	ug/l	10679.63
Ba	137	115	1	No Gas	1.877	ug/l	18262.47
La	139	115	3	He	0.000	ug/l	16.66
Ce	140	115	3	He	0.000	ug/l	38.89
Hg	201	209	1	No Gas	0.000	ug/l	33.32
Hg	202	209	1	No Gas	0.015	ug/l	242.29
Hg	202	209	3	He	0.013	ug/l	92.65
Tl	203	209	3	He	0.032	ug/l	1001.11
Tl	205	209	1	No Gas	0.021	ug/l	4020.65
Tl	205	209	3	He	0.033	ug/l	2461.22
[Pb]	206	209	1	No Gas	0.024	ug/l	1120.06
[Pb]	207	209	1	No Gas	0.027	ug/l	1017.83
Pb	208	209	1	No Gas	0.023	ug/l	4503.67
Th	232	209	3	He	-0.008	ug/l	264.78
U	238	209	1	No Gas	0.006	ug/l	620.22

Name	Mass	Tune Step	Tune Mode	CPS	ISTD Recovery %
Sc	45	1	No Gas	5495680.86	97.5
Sc	45	2	H2	2638018.25	96.1
Sc	45	3	He	287940.85	90.4
Ge	72	1	No Gas	1466691.58	97.0
Ge	72	2	H2	952013.41	95.9
Ge	72	3	He	208211.30	93.5
In	115	1	No Gas	12153780.81	99.8
In	115	3	He	2512547.94	95.3
Tb	159	1	No Gas	16877755.91	103.3
Tb	159	3	He	6905326.90	101.1
Ho	165	1	No Gas	16370620.15	107.3
Ho	165	3	He	6694351.41	101.2
Lu	175	1	No Gas	17009135.41	109.3
Lu	175	3	He	5539614.79	103.4
Bi	209	1	No Gas	12217198.25	107.9
Bi	209	3	He	5253226.95	104.8

ICPMS207-B Analytical Data

Sample Name B22011228-001B
File Name 106SMPL.d
Data Path Name D:\Agilent\ICPMH\1\DATA\220121ADoD.b
Acq Time 2022-01-22 02:57:39
Sample Type Sample
Total Dilution 1.0000
Comment ICPMS-6020-W-T
Operator CAR/SRH/JPV/AEM
Method SW6020/ SW6020B

Name	Mass	ISTD	Tune Step	Tune Mode	Conc.	Units	CPS
Li	7	45	1	No Gas	0.129	ug/l	12988.75
Be	9	45	1	No Gas	-0.051	ug/l	36.66
B	11	45	1	No Gas	65.183	ug/l	116375.32
Na	23	45	3	He	36392.870	ug/l	22664494.66
Mg	24	45	3	He	8756.522	ug/l	3005395.61
Al	27	45	1	No Gas	5.089	ug/l	93512.25
Si	28	45	2	H2	20247.413	ug/l	34399736.43
K	39	72	3	He	1646.031	ug/l	693584.47
Ca	40	72	2	H2	7718.277	ug/l	51270774.38
Ti	47	72	1	No Gas	1.761	ug/l	3687.53
V	51	72	1	No Gas	20.811	ug/l	461381.51
V	51	72	3	He	22.437	ug/l	96865.16
Cr	52	72	1	No Gas	4.256	ug/l	176493.33
Cr	52	72	3	He	3.385	ug/l	15293.57
Mn	55	72	1	No Gas	2.090	ug/l	72969.71
Mn	55	72	3	He	1.465	ug/l	4226.77
Fe	56	72	2	H2	55.582	ug/l	853051.32
Fe	56	72	3	He	53.108	ug/l	207730.24
Co	59	72	1	No Gas	0.126	ug/l	3733.08
Ni	60	72	1	No Gas	0.286	ug/l	2089.35
Ni	60	72	3	He	0.248	ug/l	518.90
Cu	63	72	1	No Gas	0.927	ug/l	14831.52
Cu	63	72	3	He	0.750	ug/l	4041.76
Cu	65	72	1	No Gas	0.696	ug/l	5660.72
Zn	66	72	1	No Gas	11.655	ug/l	57277.29
Zn	66	72	3	He	11.924	ug/l	11876.02
As	75	72	1	No Gas	0.416	ug/l	13653.22
As	75	72	3	He	0.168	ug/l	363.67
Se	78	72	2	H2	0.198	ug/l	137.33
Br	79	72	1	No Gas	6.973	ug/l	136568.12
Br	79	72	2	H2	5.811	ug/l	65825.41
Se	82	72	1	No Gas	0.107	ug/l	639.14
Kr	84	72	1	No Gas		ug/l	34512.72
Sr	88	72	1	No Gas	64.210	ug/l	2650059.14
Sr	88	72	3	He	61.223	ug/l	269412.14
Mo	95	115	1	No Gas	0.946	ug/l	8901.71
Mo	95	115	3	He	1.014	ug/l	3272.62
Mo	98	115	1	No Gas	0.959	ug/l	14682.20
Ag	107	115	1	No Gas	-0.064	ug/l	92.04
Ag	109	115	1	No Gas	-0.062	ug/l	93.37
Cd	111	115	1	No Gas	0.005	ug/l	23.63

ICPMS207-B Analytical Data

Name	Mass	ISTD	Tune Step	Tune Mode	Conc.	Units	CPS
Cd	111	115	3	He	0.002	ug/l	9.00
Cd	114	115	1	No Gas	0.014	ug/l	21.80
Cd	114	115	3	He	0.001	ug/l	13.82
Sn	118	115	1	No Gas	0.397	ug/l	8838.63
Sn	118	115	3	He	0.458	ug/l	2529.13
Sb	121	115	1	No Gas	0.041	ug/l	1779.29
Sb	121	115	3	He	0.049	ug/l	471.39
Sb	123	115	1	No Gas	0.043	ug/l	1405.21
Sb	123	115	3	He	0.054	ug/l	394.71
Ba	135	115	1	No Gas	1.970	ug/l	9391.24
Ba	137	115	1	No Gas	1.901	ug/l	16094.17
La	139	115	3	He	0.002	ug/l	65.56
Ce	140	115	3	He	0.005	ug/l	154.45
Hg	201	209	1	No Gas	0.012	ug/l	69.66
Hg	202	209	1	No Gas	0.037	ug/l	397.26
Hg	202	209	3	He	0.033	ug/l	160.30
Tl	203	209	3	He	0.045	ug/l	1023.12
Tl	205	209	1	No Gas	0.029	ug/l	3879.49
Tl	205	209	3	He	0.048	ug/l	2541.27
[Pb]	206	209	1	No Gas	0.130	ug/l	2818.10
[Pb]	207	209	1	No Gas	0.129	ug/l	2429.13
Pb	208	209	1	No Gas	0.126	ug/l	11133.01
Th	232	209	3	He	0.012	ug/l	954.42
U	238	209	1	No Gas	0.007	ug/l	585.57

Name	Mass	Tune Step	Tune Mode	CPS	ISTD Recovery %
Sc	45	1	No Gas	4274928.85	75.8
Sc	45	2	H2	2247717.47	81.9
Sc	45	3	He	230017.23	72.2
Ge	72	1	No Gas	1218035.49	80.6
Ge	72	2	H2	841396.86	84.8
Ge	72	3	He	174251.74	78.3
In	115	1	No Gas	10646620.96	87.5
In	115	3	He	2156789.46	81.8
Tb	159	1	No Gas	15428954.66	94.4
Tb	159	3	He	6288819.48	92.0
Ho	165	1	No Gas	14817499.17	97.2
Ho	165	3	He	6051537.00	91.5
Lu	175	1	No Gas	15094520.34	97.0
Lu	175	3	He	4898721.73	91.5
Bi	209	1	No Gas	10686670.60	94.4
Bi	209	3	He	4656667.73	92.9

ICPMS207-B Analytical Data

Sample Name Rinse
File Name 107BLKV.d
Data Path Name D:\Agilent\ICPMH\1\DATA\220121ADoD.b
Acq Time 2022-01-22 03:03:53
Sample Type BlkVrfy
Total Dilution 1.0000
Comment ICPMS-6020-W-D
Operator CAR/SRH/JPV/AEM
Method SW6020/ SW6020B

Name	Mass	ISTD	Tune Step	Tune Mode	Conc.	Units	CPS
Li	7	45	1	No Gas	-0.177	ug/l	11707.86
Be	9	45	1	No Gas	-0.055	ug/l	28.66
B	11	45	1	No Gas	0.740	ug/l	5854.16
Na	23	45	3	He	38.037	ug/l	62254.79
Mg	24	45	3	He	0.003	ug/l	1430.57
Al	27	45	1	No Gas	-0.364	ug/l	7285.16
Si	28	45	2	H2	125.141	ug/l	228999.73
K	39	72	3	He	-31.460	ug/l	57388.18
Ca	40	72	2	H2	-1.458	ug/l	81948.44
Ti	47	72	1	No Gas	-0.014	ug/l	160.16
V	51	72	1	No Gas	2.604	ug/l	19486.09
V	51	72	3	He	0.637	ug/l	15811.91
Cr	52	72	1	No Gas	-0.327	ug/l	76702.26
Cr	52	72	3	He	0.014	ug/l	805.58
Mn	55	72	1	No Gas	0.186	ug/l	15634.09
Mn	55	72	3	He	0.131	ug/l	527.91
Fe	56	72	2	H2	0.093	ug/l	10876.64
Fe	56	72	3	He	0.064	ug/l	5207.85
Co	59	72	1	No Gas	-0.002	ug/l	425.83
Ni	60	72	1	No Gas	-0.010	ug/l	369.27
Ni	60	72	3	He	0.010	ug/l	102.22
Cu	63	72	1	No Gas	0.003	ug/l	1828.18
Cu	63	72	3	He	0.008	ug/l	614.22
Cu	65	72	1	No Gas	0.005	ug/l	877.04
Zn	66	72	1	No Gas	-0.003	ug/l	876.09
Zn	66	72	3	He	-0.003	ug/l	188.89
As	75	72	1	No Gas	0.997	ug/l	18585.87
As	75	72	3	He	-0.033	ug/l	208.27
Se	78	72	2	H2	-0.003	ug/l	29.56
Br	79	72	1	No Gas	17.699	ug/l	276622.43
Br	79	72	2	H2	18.224	ug/l	156390.50
Se	82	72	1	No Gas	0.081	ug/l	676.21
Kr	84	72	1	No Gas		ug/l	18168.78
Sr	88	72	1	No Gas	0.000	ug/l	705.29
Sr	88	72	3	He	-0.009	ug/l	207.78
Mo	95	115	1	No Gas	0.000	ug/l	60.00
Mo	95	115	3	He	0.005	ug/l	38.89
Mo	98	115	1	No Gas	-0.001	ug/l	79.80
Ag	107	115	1	No Gas	-0.002	ug/l	1733.47
Ag	109	115	1	No Gas	-0.002	ug/l	1637.42
Cd	111	115	1	No Gas	0.001	ug/l	5.34

ICPMS207-B Analytical Data

Name	Mass	ISTD	Tune Step	Tune Mode	Conc.	Units	CPS
Cd	111	115	3	He	0.002	ug/l	9.89
Cd	114	115	1	No Gas	0.002	ug/l	-143.63
Cd	114	115	3	He	0.002	ug/l	20.35
Sn	118	115	1	No Gas	0.002	ug/l	3094.21
Sn	118	115	3	He	-0.006	ug/l	768.92
Sb	121	115	1	No Gas	0.039	ug/l	1928.90
Sb	121	115	3	He	0.003	ug/l	205.69
Sb	123	115	1	No Gas	-0.002	ug/l	619.41
Sb	123	115	3	He	0.005	ug/l	175.02
Ba	135	115	1	No Gas	0.004	ug/l	86.49
Ba	137	115	1	No Gas	0.002	ug/l	116.43
La	139	115	3	He	0.000	ug/l	16.67
Ce	140	115	3	He	0.000	ug/l	34.44
Hg	201	209	1	No Gas	0.000	ug/l	29.99
Hg	202	209	1	No Gas	0.000	ug/l	100.31
Hg	202	209	3	He	0.002	ug/l	42.66
Tl	203	209	3	He	0.005	ug/l	677.63
Tl	205	209	1	No Gas	0.002	ug/l	2879.22
Tl	205	209	3	He	0.003	ug/l	1614.75
[Pb]	206	209	1	No Gas	0.001	ug/l	642.24
[Pb]	207	209	1	No Gas	0.001	ug/l	551.13
Pb	208	209	1	No Gas	0.000	ug/l	2519.00
Th	232	209	3	He	-0.007	ug/l	311.46
U	238	209	1	No Gas	0.000	ug/l	103.98

Name	Mass	Tune Step	Tune Mode	CPS	ISTD Recovery %
Sc	45	1	No Gas	4531190.86	80.4
Sc	45	2	H2	2354441.78	85.8
Sc	45	3	He	243607.40	76.5
Ge	72	1	No Gas	1305675.44	86.4
Ge	72	2	H2	904871.89	91.2
Ge	72	3	He	187649.88	84.3
In	115	1	No Gas	11675084.59	95.9
In	115	3	He	2351441.72	89.2
Tb	159	1	No Gas	16578861.19	101.5
Tb	159	3	He	6759015.71	98.9
Ho	165	1	No Gas	15740187.23	103.2
Ho	165	3	He	6449824.91	97.5
Lu	175	1	No Gas	16567896.79	106.5
Lu	175	3	He	5182539.54	96.8
Bi	209	1	No Gas	11899432.50	105.1
Bi	209	3	He	5225525.36	104.3

ICPMS207-B Analytical Data

Sample Name CCV
File Name 108_CCV.d
Data Path Name D:\Agilent\ICPMH\1\DATA\220121ADoD.b
Acq Time 2022-01-22 03:10:06
Sample Type CCV
Total Dilution 1.0000
Comment ICPMS-6020-W-D
Operator CAR/SRH/JPV/AEM
Method SW6020/ SW6020B

Name	Mass	ISTD	Tune Step	Tune Mode	Conc.	Units	CPS
Li	7	45	1	No Gas	441.952	ug/l	3003425.61
Be	9	45	1	No Gas	39.676	ug/l	114258.65
B	11	45	1	No Gas	41.446	ug/l	77523.41
Na	23	45	3	He	12073.499	ug/l	8187658.42
Mg	24	45	3	He	12243.562	ug/l	4561354.02
Al	27	45	1	No Gas	53.361	ug/l	884671.38
Si	28	45	2	H2	284.977	ug/l	516000.77
K	39	72	3	He	11189.460	ug/l	4765855.07
Ca	40	72	2	H2	11738.432	ug/l	85367811.47
Ti	47	72	1	No Gas	45.433	ug/l	98170.43
V	51	72	1	No Gas	49.161	ug/l	1260468.81
V	51	72	3	He	50.004	ug/l	220600.68
Cr	52	72	1	No Gas	46.774	ug/l	1237734.38
Cr	52	72	3	He	48.037	ug/l	228551.43
Mn	55	72	1	No Gas	48.737	ug/l	1618334.95
Mn	55	72	3	He	48.485	ug/l	149367.82
Fe	56	72	2	H2	1289.218	ug/l	21465423.63
Fe	56	72	3	He	1257.223	ug/l	5290582.01
Co	59	72	1	No Gas	47.228	ug/l	1318931.12
Ni	60	72	1	No Gas	46.765	ug/l	297686.98
Ni	60	72	3	He	49.659	ug/l	97137.89
Cu	63	72	1	No Gas	48.560	ug/l	744864.25
Cu	63	72	3	He	50.853	ug/l	261955.58
Cu	65	72	1	No Gas	47.741	ug/l	360628.42
Zn	66	72	1	No Gas	48.494	ug/l	253540.40
Zn	66	72	3	He	51.501	ug/l	55712.85
As	75	72	1	No Gas	50.691	ug/l	326276.25
As	75	72	3	He	51.376	ug/l	48072.35
Se	78	72	2	H2	52.243	ug/l	31404.25
Br	79	72	1	No Gas	14.970	ug/l	243117.92
Br	79	72	2	H2	15.065	ug/l	137115.54
Se	82	72	1	No Gas	51.373	ug/l	18849.90
Kr	84	72	1	No Gas		ug/l	32645.58
Sr	88	72	1	No Gas	53.275	ug/l	2366353.37
Sr	88	72	3	He	51.768	ug/l	250396.61
Mo	95	115	1	No Gas	49.943	ug/l	483993.53
Mo	95	115	3	He	50.779	ug/l	175310.15
Mo	98	115	1	No Gas	50.238	ug/l	792620.80
Ag	107	115	1	No Gas	19.960	ug/l	497052.53
Ag	109	115	1	No Gas	20.040	ug/l	484366.81
Cd	111	115	1	No Gas	50.729	ug/l	283920.63

ICPMS207-B Analytical Data

Name	Mass	ISTD	Tune Step	Tune Mode	Conc.	Units	CPS
Cd	111	115	3	He	50.753	ug/l	92481.90
Cd	114	115	1	No Gas	52.119	ug/l	644965.14
Cd	114	115	3	He	51.100	ug/l	228603.99
Sn	118	115	1	No Gas	53.994	ug/l	859262.52
Sn	118	115	3	He	51.615	ug/l	218979.72
Sb	121	115	1	No Gas	54.935	ug/l	1375907.89
Sb	121	115	3	He	53.319	ug/l	350934.86
Sb	123	115	1	No Gas	54.438	ug/l	1049127.62
Sb	123	115	3	He	52.933	ug/l	275323.55
Ba	135	115	1	No Gas	51.572	ug/l	252759.33
Ba	137	115	1	No Gas	51.566	ug/l	449373.99
La	139	115	3	He	50.780	ug/l	1214699.32
Ce	140	115	3	He	51.782	ug/l	1355207.11
Hg	201	209	1	No Gas	1.002	ug/l	3798.79
Hg	202	209	1	No Gas	1.007	ug/l	8777.80
Hg	202	209	3	He	0.967	ug/l	4101.14
Tl	203	209	3	He	48.609	ug/l	526342.37
Tl	205	209	1	No Gas	51.984	ug/l	2678133.57
Tl	205	209	3	He	49.231	ug/l	1263159.66
[Pb]	206	209	1	No Gas	51.227	ug/l	927024.91
[Pb]	207	209	1	No Gas	51.541	ug/l	815266.07
Pb	208	209	1	No Gas	50.788	ug/l	3710299.62
Th	232	209	3	He	49.507	ug/l	1788653.00
U	238	209	1	No Gas	51.628	ug/l	3751846.17

Name	Mass	Tune Step	Tune Mode	CPS	ISTD Recovery %
Sc	45	1	No Gas	4354513.01	77.2
Sc	45	2	H2	2366749.94	86.2
Sc	45	3	He	249701.35	78.4
Ge	72	1	No Gas	1302465.21	86.1
Ge	72	2	H2	921665.94	92.9
Ge	72	3	He	191518.63	86.0
In	115	1	No Gas	10947721.12	89.9
In	115	3	He	2320878.50	88.1
Tb	159	1	No Gas	15821537.02	96.8
Tb	159	3	He	6522163.65	95.4
Ho	165	1	No Gas	15109576.96	99.1
Ho	165	3	He	6320021.15	95.6
Lu	175	1	No Gas	15714012.21	101.0
Lu	175	3	He	5100945.82	95.2
Bi	209	1	No Gas	10987938.07	97.0
Bi	209	3	He	4894891.93	97.7

ICPMS207-B Analytical Data

Sample Name CCB
File Name 109_CCB.d
Data Path Name D:\Agilent\ICPMH\1\DATA\220121ADoD.b
Acq Time 2022-01-22 03:16:21
Sample Type CCB
Total Dilution 1.0000
Comment ICPMS-6020-W-D
Operator CAR/SRH/JPV/AEM
Method SW6020/ SW6020B

Name	Mass	ISTD	Tune Step	Tune Mode	Conc.	Units	CPS
Li	7	45	1	No Gas	0.223	ug/l	14687.63
Be	9	45	1	No Gas	-0.042	ug/l	66.99
B	11	45	1	No Gas	0.293	ug/l	5086.24
Na	23	45	3	He	59.507	ug/l	75556.18
Mg	24	45	3	He	-0.407	ug/l	1267.54
Al	27	45	1	No Gas	-0.388	ug/l	6958.33
Si	28	45	2	H2	46.839	ug/l	90781.25
K	39	72	3	He	-27.659	ug/l	59464.07
Ca	40	72	2	H2	-0.929	ug/l	86422.59
Ti	47	72	1	No Gas	0.015	ug/l	220.22
V	51	72	1	No Gas	0.143	ug/l	-45818.13
V	51	72	3	He	1.295	ug/l	18640.80
Cr	52	72	1	No Gas	0.054	ug/l	85470.16
Cr	52	72	3	He	0.019	ug/l	837.81
Mn	55	72	1	No Gas	0.071	ug/l	11751.45
Mn	55	72	3	He	0.004	ug/l	145.97
Fe	56	72	2	H2	0.071	ug/l	10607.87
Fe	56	72	3	He	0.029	ug/l	5107.72
Co	59	72	1	No Gas	-0.002	ug/l	422.50
Ni	60	72	1	No Gas	-0.004	ug/l	402.54
Ni	60	72	3	He	0.012	ug/l	106.67
Cu	63	72	1	No Gas	0.020	ug/l	2065.65
Cu	63	72	3	He	0.018	ug/l	671.88
Cu	65	72	1	No Gas	0.022	ug/l	1001.77
Zn	66	72	1	No Gas	-0.002	ug/l	878.91
Zn	66	72	3	He	0.036	ug/l	231.11
As	75	72	1	No Gas	-0.190	ug/l	11097.30
As	75	72	3	He	-0.004	ug/l	236.80
Se	78	72	2	H2	0.005	ug/l	34.56
Br	79	72	1	No Gas	0.371	ug/l	66079.21
Br	79	72	2	H2	0.244	ug/l	32662.24
Se	82	72	1	No Gas	-0.067	ug/l	619.94
Kr	84	72	1	No Gas		ug/l	18748.34
Sr	88	72	1	No Gas	0.000	ug/l	691.98
Sr	88	72	3	He	-0.014	ug/l	183.34
Mo	95	115	1	No Gas	0.021	ug/l	264.45
Mo	95	115	3	He	0.012	ug/l	60.00
Mo	98	115	1	No Gas	0.021	ug/l	425.57
Ag	107	115	1	No Gas	-0.003	ug/l	1666.77
Ag	109	115	1	No Gas	-0.001	ug/l	1616.75
Cd	111	115	1	No Gas	-0.004	ug/l	-22.86

ICPMS207-B Analytical Data

Name	Mass	ISTD	Tune Step	Tune Mode	Conc.	Units	CPS
Cd	111	115	3	He	0.004	ug/l	12.67
Cd	114	115	1	No Gas	-0.001	ug/l	-173.99
Cd	114	115	3	He	0.005	ug/l	33.96
Sn	118	115	1	No Gas	0.042	ug/l	3666.57
Sn	118	115	3	He	0.042	ug/l	964.49
Sb	121	115	1	No Gas	0.133	ug/l	4305.43
Sb	121	115	3	He	0.094	ug/l	805.77
Sb	123	115	1	No Gas	0.131	ug/l	3240.37
Sb	123	115	3	He	0.093	ug/l	629.08
Ba	135	115	1	No Gas	0.000	ug/l	59.88
Ba	137	115	1	No Gas	0.000	ug/l	89.82
La	139	115	3	He	0.000	ug/l	14.44
Ce	140	115	3	He	0.000	ug/l	37.78
Hg	201	209	1	No Gas	0.004	ug/l	44.32
Hg	202	209	1	No Gas	0.004	ug/l	135.30
Hg	202	209	3	He	0.005	ug/l	52.99
Tl	203	209	3	He	0.096	ug/l	1674.78
Tl	205	209	1	No Gas	0.078	ug/l	6775.15
Tl	205	209	3	He	0.097	ug/l	4040.91
[Pb]	206	209	1	No Gas	0.008	ug/l	734.47
[Pb]	207	209	1	No Gas	0.007	ug/l	617.80
Pb	208	209	1	No Gas	0.007	ug/l	2970.16
Th	232	209	3	He	0.012	ug/l	1023.12
U	238	209	1	No Gas	0.002	ug/l	272.28

Name	Mass	Tune Step	Tune Mode	CPS	ISTD Recovery %
Sc	45	1	No Gas	4581754.16	81.3
Sc	45	2	H2	2383740.31	86.8
Sc	45	3	He	240919.07	75.6
Ge	72	1	No Gas	1294502.99	85.6
Ge	72	2	H2	912280.40	91.9
Ge	72	3	He	189312.00	85.0
In	115	1	No Gas	11330135.20	93.1
In	115	3	He	2326345.53	88.3
Tb	159	1	No Gas	15804088.74	96.7
Tb	159	3	He	6437896.84	94.2
Ho	165	1	No Gas	15183993.25	99.6
Ho	165	3	He	6254169.99	94.6
Lu	175	1	No Gas	15877212.80	102.0
Lu	175	3	He	5221382.29	97.5
Bi	209	1	No Gas	11364887.02	100.4
Bi	209	3	He	5031995.04	100.4

ICPMS207-B Analytical Data

Sample Name Cal Blk
File Name 110CALB.d
Data Path Name D:\Agilent\ICPMH\1\DATA\220121ADoD.b
Acq Time 2022-01-22 03:22:35
Sample Type CalBlk
Total Dilution 1.0000
Comment ICPMS-6020-W-D
Operator CAR/SRH/JPV/AEM
Method SW6020/ SW6020B

Name	Mass	ISTD	Tune Step	Tune Mode	Conc.	Units	CPS
Li	7	45	1	No Gas	0.000	ug/l	13217.69
Be	9	45	1	No Gas	0.000	ug/l	66.99
B	11	45	1	No Gas	0.000	ug/l	3962.12
Na	23	45	3	He	0.000	ug/l	72095.94
Mg	24	45	3	He	0.000	ug/l	1377.34
Al	27	45	1	No Gas	0.000	ug/l	6735.99
Si	28	45	2	H2	0.000	ug/l	72253.14
K	39	72	3	He	0.000	ug/l	57721.58
Ca	40	72	2	H2	0.000	ug/l	84618.99
Ti	47	72	1	No Gas	0.000	ug/l	170.17
V	51	72	1	No Gas	0.000	ug/l	3882.62
V	51	72	3	He	0.000	ug/l	18300.38
Cr	52	72	1	No Gas	0.000	ug/l	80205.85
Cr	52	72	3	He	0.000	ug/l	842.25
Mn	55	72	1	No Gas	0.000	ug/l	10895.79
Mn	55	72	3	He	0.000	ug/l	129.64
Fe	56	72	2	H2	0.000	ug/l	10020.17
Fe	56	72	3	He	0.000	ug/l	4900.76
Co	59	72	1	No Gas	0.000	ug/l	432.48
Ni	60	72	1	No Gas	0.000	ug/l	479.06
Ni	60	72	3	He	0.000	ug/l	111.11
Cu	63	72	1	No Gas	0.000	ug/l	1894.22
Cu	63	72	3	He	0.000	ug/l	653.22
Cu	65	72	1	No Gas	0.000	ug/l	898.39
Zn	66	72	1	No Gas	0.000	ug/l	895.76
Zn	66	72	3	He	0.000	ug/l	237.78
As	75	72	1	No Gas	0.000	ug/l	12160.51
As	75	72	3	He	0.000	ug/l	231.33
Se	78	72	2	H2	0.000	ug/l	30.22
Br	79	72	1	No Gas	0.000	ug/l	60676.69
Br	79	72	2	H2	0.000	ug/l	30818.27
Se	82	72	1	No Gas	0.000	ug/l	536.87
Kr	84	72	1	No Gas		ug/l	18728.43
Sr	88	72	1	No Gas	0.000	ug/l	618.79
Sr	88	72	3	He	0.000	ug/l	184.45
Mo	95	115	1	No Gas	0.000	ug/l	635.19
Mo	95	115	3	He	0.000	ug/l	31.11
Mo	98	115	1	No Gas	0.000	ug/l	111.11
Ag	107	115	1	No Gas	0.000	ug/l	1669.44
Ag	109	115	1	No Gas	0.000	ug/l	1666.77
Cd	111	115	1	No Gas	0.000	ug/l	-1.95

ICPMS207-B Analytical Data

Name	Mass	ISTD	Tune Step	Tune Mode	Conc.	Units	CPS
Cd	111	115	3	He	0.000	ug/l	12.89
Cd	114	115	1	No Gas	0.000	ug/l	-119.66
Cd	114	115	3	He	0.000	ug/l	32.97
Sn	118	115	1	No Gas	0.000	ug/l	3047.64
Sn	118	115	3	He	0.000	ug/l	791.14
Sb	121	115	1	No Gas	0.000	ug/l	1477.90
Sb	121	115	3	He	0.000	ug/l	328.04
Sb	123	115	1	No Gas	0.000	ug/l	1105.16
Sb	123	115	3	He	0.000	ug/l	281.70
Ba	135	115	1	No Gas	0.000	ug/l	83.17
Ba	137	115	1	No Gas	0.000	ug/l	83.17
La	139	115	3	He	0.000	ug/l	16.67
Ce	140	115	3	He	0.000	ug/l	26.67
Hg	201	209	1	No Gas	0.000	ug/l	27.32
Hg	202	209	1	No Gas	0.000	ug/l	113.31
Hg	202	209	3	He	0.000	ug/l	33.32
Tl	203	209	3	He	0.000	ug/l	888.39
Tl	205	209	1	No Gas	0.000	ug/l	3549.39
Tl	205	209	3	He	0.000	ug/l	2179.72
[Pb]	206	209	1	No Gas	0.000	ug/l	657.80
[Pb]	207	209	1	No Gas	0.000	ug/l	567.79
Pb	208	209	1	No Gas	0.000	ug/l	2692.35
Th	232	209	3	He	0.000	ug/l	450.19
U	238	209	1	No Gas	0.000	ug/l	120.98

Name	Mass	Tune Step	Tune Mode	CPS	ISTD Recovery %
Sc	45	1	No Gas	4382641.39	100.0
Sc	45	2	H2	2354877.00	100.0
Sc	45	3	He	236454.17	100.0
Ge	72	1	No Gas	1281891.64	100.0
Ge	72	2	H2	890954.80	100.0
Ge	72	3	He	183954.66	100.0
In	115	1	No Gas	11488655.89	100.0
In	115	3	He	2330493.09	100.0
Tb	159	1	No Gas	15686910.00	100.0
Tb	159	3	He	6490432.49	100.0
Ho	165	1	No Gas	15030516.76	100.0
Ho	165	3	He	6169620.34	100.0
Lu	175	1	No Gas	15524479.14	100.0
Lu	175	3	He	5043610.15	100.0
Bi	209	1	No Gas	11313998.25	100.0
Bi	209	3	He	4960844.24	100.0

ICPMS207-B Analytical Data

Sample Name 0.025 ppb STD
File Name 111CAL5.d
Data Path Name D:\Agilent\ICPMH\1\DATA\220121ADoD.b
Acq Time 2022-01-22 03:28:57
Sample Type CalStd
Total Dilution 1.0000
Comment ICPMS-6020B-Cal
Operator CAR/SRH/JPV/AEM
Method SW6020/ SW6020B

Name	Mass	ISTD	Tune Step	Tune Mode	Conc.	Units	CPS
Li	7	45	1	No Gas	0.188	ug/l	14092.83
Be	9	45	1	No Gas	0.016	ug/l	103.98
B	11	45	1	No Gas	-0.080	ug/l	3812.69
Na	23	45	3	He	-0.236	ug/l	70153.51
Mg	24	45	3	He	7.258	ug/l	3716.52
Al	27	45	1	No Gas	0.184	ug/l	9286.24
Si	28	45	2	H2	-4.791	ug/l	63608.74
K	39	72	3	He	7.833	ug/l	59403.95
Ca	40	72	2	H2	7.505	ug/l	132037.79
Ti	47	72	1	No Gas	0.046	ug/l	250.25
V	51	72	1	No Gas	-2.078	ug/l	-49126.37
V	51	72	3	He	0.330	ug/l	19193.77
Cr	52	72	1	No Gas	0.290	ug/l	84950.15
Cr	52	72	3	He	0.030	ug/l	952.26
Mn	55	72	1	No Gas	0.055	ug/l	12354.06
Mn	55	72	3	He	0.029	ug/l	205.29
Fe	56	72	2	H2	0.821	ug/l	22897.55
Fe	56	72	3	He	0.857	ug/l	8027.66
Co	59	72	1	No Gas	0.024	ug/l	1037.98
Ni	60	72	1	No Gas	0.029	ug/l	635.42
Ni	60	72	3	He	0.044	ug/l	184.45
Cu	63	72	1	No Gas	0.037	ug/l	2361.14
Cu	63	72	3	He	0.044	ug/l	843.19
Cu	65	72	1	No Gas	0.040	ug/l	1146.51
Zn	66	72	1	No Gas	0.055	ug/l	1141.60
Zn	66	72	3	He	0.010	ug/l	242.23
As	75	72	1	No Gas	0.349	ug/l	13960.85
As	75	72	3	He	0.041	ug/l	261.80
Se	78	72	2	H2	0.022	ug/l	41.67
Br	79	72	1	No Gas	14.750	ug/l	271264.17
Br	79	72	2	H2	14.656	ug/l	153160.12
Se	82	72	1	No Gas	0.529	ug/l	700.75
Kr	84	72	1	No Gas		ug/l	17928.92
Sr	88	72	1	No Gas	0.029	ug/l	1873.08
Sr	88	72	3	He	0.029	ug/l	316.67
Mo	95	115	1	No Gas	-0.032	ug/l	313.34
Mo	95	115	3	He	0.023	ug/l	106.67
Mo	98	115	1	No Gas	0.024	ug/l	474.18
Ag	107	115	1	No Gas	0.015	ug/l	1983.60
Ag	109	115	1	No Gas	0.014	ug/l	1951.59
Cd	111	115	1	No Gas	0.019	ug/l	109.38

ICPMS207-B Analytical Data

Name	Mass	ISTD	Tune Step	Tune Mode	Conc.	Units	CPS
Cd	111	115	3	He	0.021	ug/l	50.00
Cd	114	115	1	No Gas	0.021	ug/l	154.66
Cd	114	115	3	He	0.024	ug/l	138.05
Sn	118	115	1	No Gas	0.053	ug/l	3826.28
Sn	118	115	3	He	0.067	ug/l	1060.05
Sb	121	115	1	No Gas	0.009	ug/l	1678.94
Sb	121	115	3	He	0.016	ug/l	426.72
Sb	123	115	1	No Gas	0.009	ug/l	1257.18
Sb	123	115	3	He	0.006	ug/l	310.03
Ba	135	115	1	No Gas	0.022	ug/l	196.28
Ba	137	115	1	No Gas	0.025	ug/l	306.06
La	139	115	3	He	0.023	ug/l	575.57
Ce	140	115	3	He	0.032	ug/l	887.99
Hg	201	209	1	No Gas	-0.002	ug/l	21.00
Hg	202	209	1	No Gas	0.000	ug/l	111.65
Hg	202	209	3	He	0.001	ug/l	37.32
Tl	203	209	3	He	0.006	ug/l	953.75
Tl	205	209	1	No Gas	0.009	ug/l	4048.42
Tl	205	209	3	He	0.003	ug/l	2259.10
[Pb]	206	209	1	No Gas	0.024	ug/l	1121.17
[Pb]	207	209	1	No Gas	0.023	ug/l	955.60
Pb	208	209	1	No Gas	0.023	ug/l	4450.32
Th	232	209	3	He	0.014	ug/l	978.43
U	238	209	1	No Gas	0.024	ug/l	1927.43

Name	Mass	Tune Step	Tune Mode	CPS	ISTD Recovery %
Sc	45	1	No Gas	4348013.77	99.2
Sc	45	2	H2	2330879.86	99.0
Sc	45	3	He	230525.35	97.5
Ge	72	1	No Gas	1255168.54	97.9
Ge	72	2	H2	859300.80	96.4
Ge	72	3	He	180145.68	97.9
In	115	1	No Gas	11142865.50	97.0
In	115	3	He	2281728.86	97.9
Tb	159	1	No Gas	15912347.93	101.4
Tb	159	3	He	6383034.01	98.3
Ho	165	1	No Gas	15333342.49	102.0
Ho	165	3	He	6116654.93	99.1
Lu	175	1	No Gas	15394779.66	99.2
Lu	175	3	He	4997851.32	99.1
Bi	209	1	No Gas	11397421.95	100.7
Bi	209	3	He	4945854.96	99.7

ICPMS207-B Analytical Data

Sample Name 0.05 ppb STD
File Name 112CAL5.d
Data Path Name D:\Agilent\ICPMH\1\DATA\220121ADoD.b
Acq Time 2022-01-22 03:35:18
Sample Type CalStd
Total Dilution 1.0000
Comment ICPMS-6020B-Cal
Operator CAR/SRH/JPV/AEM
Method SW6020/ SW6020B

Name	Mass	ISTD	Tune Step	Tune Mode	Conc.	Units	CPS
Li	7	45	1	No Gas	0.456	ug/l	15670.33
Be	9	45	1	No Gas	0.051	ug/l	185.96
B	11	45	1	No Gas	-0.219	ug/l	3648.58
Na	23	45	3	He	-0.083	ug/l	70327.60
Mg	24	45	3	He	15.512	ug/l	6415.34
Al	27	45	1	No Gas	0.147	ug/l	8851.54
Si	28	45	2	H2	-9.339	ug/l	54313.85
K	39	72	3	He	20.649	ug/l	62798.79
Ca	40	72	2	H2	14.899	ug/l	182915.03
Ti	47	72	1	No Gas	0.076	ug/l	303.65
V	51	72	1	No Gas	-5.494	ug/l	-134672.09
V	51	72	3	He	0.507	ug/l	19471.86
Cr	52	72	1	No Gas	0.393	ug/l	87179.12
Cr	52	72	3	He	0.079	ug/l	1134.50
Mn	55	72	1	No Gas	0.084	ug/l	13223.11
Mn	55	72	3	He	0.064	ug/l	295.94
Fe	56	72	2	H2	1.627	ug/l	36142.45
Fe	56	72	3	He	1.676	ug/l	10873.34
Co	59	72	1	No Gas	0.070	ug/l	2209.13
Ni	60	72	1	No Gas	0.069	ug/l	861.65
Ni	60	72	3	He	0.085	ug/l	248.89
Cu	63	72	1	No Gas	0.068	ug/l	2788.72
Cu	63	72	3	He	0.060	ug/l	899.18
Cu	65	72	1	No Gas	0.056	ug/l	1253.23
Zn	66	72	1	No Gas	0.044	ug/l	1088.62
Zn	66	72	3	He	0.016	ug/l	243.34
As	75	72	1	No Gas	1.342	ug/l	19731.22
As	75	72	3	He	0.079	ug/l	289.27
Se	78	72	2	H2	0.060	ug/l	63.44
Br	79	72	1	No Gas	12.451	ug/l	237978.88
Br	79	72	2	H2	12.216	ug/l	133500.18
Se	82	72	1	No Gas	0.661	ug/l	739.54
Kr	84	72	1	No Gas		ug/l	18178.78
Sr	88	72	1	No Gas	0.061	ug/l	3263.93
Sr	88	72	3	He	0.067	ug/l	482.23
Mo	95	115	1	No Gas	0.000	ug/l	604.46
Mo	95	115	3	He	0.052	ug/l	200.01
Mo	98	115	1	No Gas	0.053	ug/l	913.58
Ag	107	115	1	No Gas	0.030	ug/l	2342.48
Ag	109	115	1	No Gas	0.032	ug/l	2355.15
Cd	111	115	1	No Gas	0.062	ug/l	352.45

ICPMS207-B Analytical Data

Name	Mass	ISTD	Tune Step	Tune Mode	Conc.	Units	CPS
Cd	111	115	3	He	0.060	ug/l	115.45
Cd	114	115	1	No Gas	0.057	ug/l	602.15
Cd	114	115	3	He	0.058	ug/l	284.15
Sn	118	115	1	No Gas	0.081	ug/l	4225.63
Sn	118	115	3	He	0.063	ug/l	1023.38
Sb	121	115	1	No Gas	0.032	ug/l	2238.74
Sb	121	115	3	He	0.035	ug/l	547.73
Sb	123	115	1	No Gas	0.030	ug/l	1659.93
Sb	123	115	3	He	0.035	ug/l	454.38
Ba	135	115	1	No Gas	0.042	ug/l	296.08
Ba	137	115	1	No Gas	0.066	ug/l	655.38
La	139	115	3	He	0.056	ug/l	1378.97
Ce	140	115	3	He	0.061	ug/l	1644.55
Hg	201	209	1	No Gas	0.000	ug/l	27.99
Hg	202	209	1	No Gas	-0.001	ug/l	105.65
Hg	202	209	3	He	0.000	ug/l	34.99
Tl	203	209	3	He	0.035	ug/l	1255.90
Tl	205	209	1	No Gas	0.037	ug/l	5594.55
Tl	205	209	3	He	0.030	ug/l	2933.51
[Pb]	206	209	1	No Gas	0.059	ug/l	1772.35
[Pb]	207	209	1	No Gas	0.057	ug/l	1513.43
Pb	208	209	1	No Gas	0.054	ug/l	6845.18
Th	232	209	3	He	0.037	ug/l	1816.86
U	238	209	1	No Gas	0.057	ug/l	4451.87

Name	Mass	Tune Step	Tune Mode	CPS	ISTD Recovery %
Sc	45	1	No Gas	4395470.16	100.3
Sc	45	2	H2	2256416.37	95.8
Sc	45	3	He	230891.46	97.6
Ge	72	1	No Gas	1254511.97	97.9
Ge	72	2	H2	864874.94	97.1
Ge	72	3	He	176418.98	95.9
In	115	1	No Gas	11020111.27	95.9
In	115	3	He	2243320.08	96.3
Tb	159	1	No Gas	15725138.96	100.2
Tb	159	3	He	6540879.14	100.8
Ho	165	1	No Gas	14946991.05	99.4
Ho	165	3	He	6323696.76	102.5
Lu	175	1	No Gas	15427997.46	99.4
Lu	175	3	He	5052334.24	100.2
Bi	209	1	No Gas	11338898.69	100.2
Bi	209	3	He	4906482.67	98.9

ICPMS207-B Analytical Data

Sample Name 0.10 ppb STD
File Name 113CAL.S.d
Data Path Name D:\Agilent\ICPMH\1\DATA\220121ADoD.b
Acq Time 2022-01-22 03:41:39
Sample Type CalStd
Total Dilution 1.0000
Comment ICPMS-6020B-Cal
Operator CAR/SRH/JPV/AEM
Method SW6020/ SW6020B

Name	Mass	ISTD	Tune Step	Tune Mode	Conc.	Units	CPS
Li	7	45	1	No Gas	1.090	ug/l	18533.37
Be	9	45	1	No Gas	0.097	ug/l	287.28
B	11	45	1	No Gas	-0.216	ug/l	3557.86
Na	23	45	3	He	7.658	ug/l	75619.82
Mg	24	45	3	He	29.805	ug/l	11198.66
Al	27	45	1	No Gas	0.222	ug/l	9675.39
Si	28	45	2	H2	-12.526	ug/l	48925.26
K	39	72	3	He	31.238	ug/l	67034.86
Ca	40	72	2	H2	27.218	ug/l	264229.54
Ti	47	72	1	No Gas	0.119	ug/l	382.06
V	51	72	1	No Gas	1.455	ug/l	40838.00
V	51	72	3	He	0.506	ug/l	19586.48
Cr	52	72	1	No Gas	0.655	ug/l	92725.99
Cr	52	72	3	He	0.117	ug/l	1297.84
Mn	55	72	1	No Gas	0.138	ug/l	14854.82
Mn	55	72	3	He	0.123	ug/l	455.25
Fe	56	72	2	H2	2.885	ug/l	56138.10
Fe	56	72	3	He	3.004	ug/l	15869.58
Co	59	72	1	No Gas	0.112	ug/l	3260.58
Ni	60	72	1	No Gas	0.108	ug/l	1084.56
Ni	60	72	3	He	0.131	ug/l	328.89
Cu	63	72	1	No Gas	0.109	ug/l	3343.07
Cu	63	72	3	He	0.112	ug/l	1140.82
Cu	65	72	1	No Gas	0.104	ug/l	1575.39
Zn	66	72	1	No Gas	0.066	ug/l	1191.75
Zn	66	72	3	He	0.072	ug/l	296.67
As	75	72	1	No Gas	0.866	ug/l	16859.60
As	75	72	3	He	0.137	ug/l	340.93
Se	78	72	2	H2	0.117	ug/l	95.11
Br	79	72	1	No Gas	12.916	ug/l	244272.87
Br	79	72	2	H2	12.479	ug/l	134658.62
Se	82	72	1	No Gas	0.798	ug/l	783.42
Kr	84	72	1	No Gas		ug/l	17965.52
Sr	88	72	1	No Gas	0.113	ug/l	5493.50
Sr	88	72	3	He	0.118	ug/l	718.91
Mo	95	115	1	No Gas	0.040	ug/l	981.15
Mo	95	115	3	He	0.089	ug/l	317.78
Mo	98	115	1	No Gas	0.098	ug/l	1595.24
Ag	107	115	1	No Gas	0.052	ug/l	2877.45
Ag	109	115	1	No Gas	0.049	ug/l	2756.71
Cd	111	115	1	No Gas	0.102	ug/l	581.95

ICPMS207-B Analytical Data

Name	Mass	ISTD	Tune Step	Tune Mode	Conc.	Units	CPS
Cd	111	115	3	He	0.113	ug/l	205.11
Cd	114	115	1	No Gas	0.108	ug/l	1251.68
Cd	114	115	3	He	0.107	ug/l	490.53
Sn	118	115	1	No Gas	0.097	ug/l	4501.80
Sn	118	115	3	He	0.113	ug/l	1227.84
Sb	121	115	1	No Gas	0.074	ug/l	3336.07
Sb	121	115	3	He	0.080	ug/l	839.78
Sb	123	115	1	No Gas	0.076	ug/l	2560.16
Sb	123	115	3	He	0.073	ug/l	651.08
Ba	135	115	1	No Gas	0.094	ug/l	568.88
Ba	137	115	1	No Gas	0.107	ug/l	1021.35
La	139	115	3	He	0.107	ug/l	2581.37
Ce	140	115	3	He	0.107	ug/l	2880.32
Hg	201	209	1	No Gas	0.001	ug/l	30.32
Hg	202	209	1	No Gas	-0.001	ug/l	108.31
Hg	202	209	3	He	0.000	ug/l	34.99
Tl	203	209	3	He	0.072	ug/l	1692.12
Tl	205	209	1	No Gas	0.080	ug/l	7982.45
Tl	205	209	3	He	0.069	ug/l	4006.22
[Pb]	206	209	1	No Gas	0.105	ug/l	2668.06
[Pb]	207	209	1	No Gas	0.098	ug/l	2215.76
Pb	208	209	1	No Gas	0.101	ug/l	10486.14
Th	232	209	3	He	0.075	ug/l	3246.38
U	238	209	1	No Gas	0.103	ug/l	8022.20

Name	Mass	Tune Step	Tune Mode	CPS	ISTD Recovery %
Sc	45	1	No Gas	4280984.55	97.7
Sc	45	2	H2	2241593.82	95.2
Sc	45	3	He	232831.81	98.5
Ge	72	1	No Gas	1251175.03	97.6
Ge	72	2	H2	858477.15	96.4
Ge	72	3	He	177518.52	96.5
In	115	1	No Gas	11053516.50	96.2
In	115	3	He	2230607.93	95.7
Tb	159	1	No Gas	15336834.21	97.8
Tb	159	3	He	6320728.79	97.4
Ho	165	1	No Gas	14662053.00	97.5
Ho	165	3	He	6132366.21	99.4
Lu	175	1	No Gas	15362358.59	99.0
Lu	175	3	He	4992688.24	99.0
Bi	209	1	No Gas	11457225.43	101.3
Bi	209	3	He	4985043.43	100.5

ICPMS207-B Analytical Data

Sample Name 0.5 ppb STD
File Name 114CAL5.d
Data Path Name D:\Agilent\ICPMH\1\DATA\220121ADoD.b
Acq Time 2022-01-22 03:48:00
Sample Type CalStd
Total Dilution 1.0000
Comment ICPMS-6020B-Cal
Operator CAR/SRH/JPV/AEM
Method SW6020/ SW6020B

Name	Mass	ISTD	Tune Step	Tune Mode	Conc.	Units	CPS
Li	7	45	1	No Gas	5.721	ug/l	42348.67
Be	9	45	1	No Gas	0.480	ug/l	1160.81
B	11	45	1	No Gas	0.079	ug/l	3978.13
Na	23	45	3	He	112.542	ug/l	132979.47
Mg	24	45	3	He	131.111	ug/l	42736.48
Al	27	45	1	No Gas	0.695	ug/l	16234.41
Si	28	45	2	H2	-13.675	ug/l	47571.64
K	39	72	3	He	118.490	ug/l	98717.19
Ca	40	72	2	H2	126.360	ug/l	920481.26
Ti	47	72	1	No Gas	0.512	ug/l	1094.48
V	51	72	1	No Gas	2.728	ug/l	72526.06
V	51	72	3	He	0.368	ug/l	19068.09
Cr	52	72	1	No Gas	1.058	ug/l	101270.48
Cr	52	72	3	He	0.522	ug/l	2975.88
Mn	55	72	1	No Gas	0.518	ug/l	26324.74
Mn	55	72	3	He	0.524	ug/l	1531.45
Fe	56	72	2	H2	13.390	ug/l	223163.39
Fe	56	72	3	He	13.244	ug/l	53847.81
Co	59	72	1	No Gas	0.511	ug/l	13336.28
Ni	60	72	1	No Gas	0.701	ug/l	4435.22
Ni	60	72	3	He	0.718	ug/l	1323.40
Cu	63	72	1	No Gas	0.655	ug/l	10792.33
Cu	63	72	3	He	0.668	ug/l	3685.07
Cu	65	72	1	No Gas	0.652	ug/l	5241.06
Zn	66	72	1	No Gas	0.602	ug/l	3753.19
Zn	66	72	3	He	0.666	ug/l	848.92
As	75	72	1	No Gas	1.516	ug/l	20518.31
As	75	72	3	He	0.517	ug/l	667.53
Se	78	72	2	H2	0.531	ug/l	326.45
Br	79	72	1	No Gas	13.874	ug/l	257079.97
Br	79	72	2	H2	13.962	ug/l	145728.92
Se	82	72	1	No Gas	1.125	ug/l	887.03
Kr	84	72	1	No Gas		ug/l	18058.79
Sr	88	72	1	No Gas	0.534	ug/l	23595.97
Sr	88	72	3	He	0.523	ug/l	2566.91
Mo	95	115	1	No Gas	0.416	ug/l	4505.18
Mo	95	115	3	He	0.491	ug/l	1635.66
Mo	98	115	1	No Gas	0.462	ug/l	7124.21
Ag	107	115	1	No Gas	0.207	ug/l	6725.64
Ag	109	115	1	No Gas	0.205	ug/l	6470.75
Cd	111	115	1	No Gas	0.466	ug/l	2688.08

ICPMS207-B Analytical Data

Name	Mass	ISTD	Tune Step	Tune Mode	Conc.	Units	CPS
Cd	111	115	3	He	0.531	ug/l	921.14
Cd	114	115	1	No Gas	0.482	ug/l	6033.54
Cd	114	115	3	He	0.509	ug/l	2233.28
Sn	118	115	1	No Gas	0.520	ug/l	11398.75
Sn	118	115	3	He	0.530	ug/l	2980.34
Sb	121	115	1	No Gas	0.444	ug/l	13005.63
Sb	121	115	3	He	0.454	ug/l	3309.39
Sb	123	115	1	No Gas	0.447	ug/l	9938.19
Sb	123	115	3	He	0.447	ug/l	2612.51
Ba	135	115	1	No Gas	0.460	ug/l	2488.63
Ba	137	115	1	No Gas	0.470	ug/l	4235.60
La	139	115	3	He	0.504	ug/l	12207.65
Ce	140	115	3	He	0.502	ug/l	13449.91
Hg	201	209	1	No Gas	0.007	ug/l	55.66
Hg	202	209	1	No Gas	0.008	ug/l	184.63
Hg	202	209	3	He	0.011	ug/l	78.98
Tl	203	209	3	He	0.446	ug/l	5784.25
Tl	205	209	1	No Gas	0.474	ug/l	29350.17
Tl	205	209	3	He	0.451	ug/l	13842.09
[Pb]	206	209	1	No Gas	0.487	ug/l	9804.78
[Pb]	207	209	1	No Gas	0.474	ug/l	8420.48
Pb	208	209	1	No Gas	0.477	ug/l	38942.56
Th	232	209	3	He	0.420	ug/l	15932.05
U	238	209	1	No Gas	0.491	ug/l	37233.69

Name	Mass	Tune Step	Tune Mode	CPS	ISTD Recovery %
Sc	45	1	No Gas	4273755.00	97.5
Sc	45	2	H2	2263751.64	96.1
Sc	45	3	He	222823.77	94.2
Ge	72	1	No Gas	1246768.25	97.3
Ge	72	2	H2	849830.02	95.4
Ge	72	3	He	177550.15	96.5
In	115	1	No Gas	11100995.03	96.6
In	115	3	He	2244620.53	96.3
Tb	159	1	No Gas	15543164.49	99.1
Tb	159	3	He	6430739.94	99.1
Ho	165	1	No Gas	14904990.72	99.2
Ho	165	3	He	6239252.31	101.1
Lu	175	1	No Gas	15677086.01	101.0
Lu	175	3	He	5084212.73	100.8
Bi	209	1	No Gas	11315994.57	100.0
Bi	209	3	He	4931046.24	99.4

ICPMS207-B Analytical Data

Sample Name 1 ppb STD
File Name 115CAL5.d
Data Path Name D:\Agilent\ICPMH\1\DATA\220121ADoD.b
Acq Time 2022-01-22 03:54:21
Sample Type CalStd
Total Dilution 1.0000
Comment ICPMS-6020B-Cal
Operator CAR/SRH/JPV/AEM
Method SW6020/ SW6020B

Name	Mass	ISTD	Tune Step	Tune Mode	Conc.	Units	CPS
Li	7	45	1	No Gas	12.348	ug/l	77463.47
Be	9	45	1	No Gas	1.006	ug/l	2390.05
B	11	45	1	No Gas	0.433	ug/l	4549.86
Na	23	45	3	He	258.127	ug/l	223894.59
Mg	24	45	3	He	287.793	ug/l	95109.50
Al	27	45	1	No Gas	1.130	ug/l	22558.27
Si	28	45	2	H2	-14.047	ug/l	47339.67
K	39	72	3	He	267.081	ug/l	152941.40
Ca	40	72	2	H2	271.574	ug/l	1907601.52
Ti	47	72	1	No Gas	1.002	ug/l	1963.78
V	51	72	1	No Gas	-3.318	ug/l	-76863.42
V	51	72	3	He	1.287	ug/l	22611.96
Cr	52	72	1	No Gas	1.734	ug/l	115134.22
Cr	52	72	3	He	1.137	ug/l	5532.18
Mn	55	72	1	No Gas	1.103	ug/l	43722.33
Mn	55	72	3	He	1.095	ug/l	3071.04
Fe	56	72	2	H2	27.923	ug/l	460009.40
Fe	56	72	3	He	28.350	ug/l	110047.20
Co	59	72	1	No Gas	1.074	ug/l	27358.04
Ni	60	72	1	No Gas	1.093	ug/l	6595.11
Ni	60	72	3	He	1.158	ug/l	2070.16
Cu	63	72	1	No Gas	1.116	ug/l	16936.61
Cu	63	72	3	He	1.136	ug/l	5833.67
Cu	65	72	1	No Gas	1.100	ug/l	8170.92
Zn	66	72	1	No Gas	1.047	ug/l	5823.24
Zn	66	72	3	He	1.076	ug/l	1233.39
As	75	72	1	No Gas	1.967	ug/l	22882.98
As	75	72	3	He	1.105	ug/l	1173.69
Se	78	72	2	H2	1.098	ug/l	651.68
Br	79	72	1	No Gas	13.299	ug/l	246606.09
Br	79	72	2	H2	12.597	ug/l	135863.47
Se	82	72	1	No Gas	1.568	ug/l	1023.43
Kr	84	72	1	No Gas		ug/l	17462.61
Sr	88	72	1	No Gas	1.119	ug/l	48291.94
Sr	88	72	3	He	1.073	ug/l	5088.71
Mo	95	115	1	No Gas	0.930	ug/l	9241.93
Mo	95	115	3	He	0.989	ug/l	3252.62
Mo	98	115	1	No Gas	1.018	ug/l	15471.81
Ag	107	115	1	No Gas	0.431	ug/l	12180.13
Ag	109	115	1	No Gas	0.433	ug/l	11795.66
Cd	111	115	1	No Gas	1.016	ug/l	5816.98

ICPMS207-B Analytical Data

Name	Mass	ISTD	Tune Step	Tune Mode	Conc.	Units	CPS
Cd	111	115	3	He	1.081	ug/l	1855.56
Cd	114	115	1	No Gas	1.044	ug/l	13094.08
Cd	114	115	3	He	1.060	ug/l	4597.68
Sn	118	115	1	No Gas	1.016	ug/l	19325.00
Sn	118	115	3	He	0.993	ug/l	4893.10
Sb	121	115	1	No Gas	0.973	ug/l	26581.32
Sb	121	115	3	He	0.965	ug/l	6654.24
Sb	123	115	1	No Gas	0.977	ug/l	20299.99
Sb	123	115	3	He	0.966	ug/l	5307.54
Ba	135	115	1	No Gas	1.041	ug/l	5486.88
Ba	137	115	1	No Gas	1.048	ug/l	9291.37
La	139	115	3	He	1.039	ug/l	25007.01
Ce	140	115	3	He	1.026	ug/l	27328.09
Hg	201	209	1	No Gas	0.018	ug/l	99.65
Hg	202	209	1	No Gas	0.018	ug/l	275.61
Hg	202	209	3	He	0.021	ug/l	124.31
Tl	203	209	3	He	0.954	ug/l	11555.65
Tl	205	209	1	No Gas	0.994	ug/l	58554.96
Tl	205	209	3	He	0.961	ug/l	27513.32
[Pb]	206	209	1	No Gas	1.017	ug/l	20046.30
[Pb]	207	209	1	No Gas	1.008	ug/l	17507.15
Pb	208	209	1	No Gas	1.017	ug/l	81150.29
Th	232	209	3	He	0.929	ug/l	35237.97
U	238	209	1	No Gas	1.026	ug/l	78769.08

Name	Mass	Tune Step	Tune Mode	CPS	ISTD Recovery %
Sc	45	1	No Gas	4331786.59	98.8
Sc	45	2	H2	2282031.34	96.9
Sc	45	3	He	229775.90	97.2
Ge	72	1	No Gas	1236524.45	96.5
Ge	72	2	H2	859893.91	96.5
Ge	72	3	He	177871.46	96.7
In	115	1	No Gas	11014920.21	95.9
In	115	3	He	2234891.97	95.9
Tb	159	1	No Gas	15764011.27	100.5
Tb	159	3	He	6352351.61	97.9
Ho	165	1	No Gas	15033520.18	100.0
Ho	165	3	He	6183542.34	100.2
Lu	175	1	No Gas	15510716.94	99.9
Lu	175	3	He	5011765.81	99.4
Bi	209	1	No Gas	11482548.50	101.5
Bi	209	3	He	5012525.44	101.0

ICPMS207-B Analytical Data

Sample Name 10 ppb STD
File Name 116CAL.S.d
Data Path Name D:\Agilent\ICPMH\1\DATA\220121ADoD.b
Acq Time 2022-01-22 04:00:43
Sample Type CalStd
Total Dilution 1.0000
Comment ICPMS-6020B-Cal
Operator CAR/SRH/JPV/AEM
Method SW6020/ SW6020B

Name	Mass	ISTD	Tune Step	Tune Mode	Conc.	Units	CPS
Li	7	45	1	No Gas	120.025	ug/l	623523.42
Be	9	45	1	No Gas	10.113	ug/l	22867.12
B	11	45	1	No Gas	9.430	ug/l	17342.28
Na	23	45	3	He	2739.911	ug/l	1715289.78
Mg	24	45	3	He	2733.440	ug/l	898420.74
Al	27	45	1	No Gas	10.020	ug/l	144185.40
Si	28	45	2	H2	27.226	ug/l	112412.04
K	39	72	3	He	2443.232	ug/l	960858.73
Ca	40	72	2	H2	2425.519	ug/l	16784631.12
Ti	47	72	1	No Gas	9.987	ug/l	18428.45
V	51	72	1	No Gas	5.427	ug/l	140815.85
V	51	72	3	He	9.864	ug/l	56372.28
Cr	52	72	1	No Gas	10.502	ug/l	311495.87
Cr	52	72	3	He	10.422	ug/l	44826.07
Mn	55	72	1	No Gas	10.234	ug/l	324080.26
Mn	55	72	3	He	10.300	ug/l	28329.21
Fe	56	72	2	H2	263.173	ug/l	4360320.22
Fe	56	72	3	He	264.143	ug/l	1003516.96
Co	59	72	1	No Gas	9.957	ug/l	254451.75
Ni	60	72	1	No Gas	10.001	ug/l	57602.10
Ni	60	72	3	He	10.858	ug/l	18844.44
Cu	63	72	1	No Gas	10.560	ug/l	147316.76
Cu	63	72	3	He	10.845	ug/l	51174.93
Cu	65	72	1	No Gas	10.434	ug/l	71386.26
Zn	66	72	1	No Gas	10.113	ug/l	49685.86
Zn	66	72	3	He	10.583	ug/l	10270.33
As	75	72	1	No Gas	10.322	ug/l	71584.21
As	75	72	3	He	10.203	ug/l	9156.89
Se	78	72	2	H2	10.207	ug/l	5961.22
Br	79	72	1	No Gas	10.361	ug/l	208655.81
Br	79	72	2	H2	9.607	ug/l	113390.35
Se	82	72	1	No Gas	11.034	ug/l	4128.01
Kr	84	72	1	No Gas		ug/l	20727.12
Sr	88	72	1	No Gas	10.473	ug/l	455113.99
Sr	88	72	3	He	10.057	ug/l	47022.39
Mo	95	115	1	No Gas	9.523	ug/l	88535.25
Mo	95	115	3	He	9.707	ug/l	31759.76
Mo	98	115	1	No Gas	9.788	ug/l	147031.66
Ag	107	115	1	No Gas	4.000	ug/l	99253.06
Ag	109	115	1	No Gas	4.061	ug/l	96814.88
Cd	111	115	1	No Gas	9.670	ug/l	55094.39

ICPMS207-B Analytical Data

Name	Mass	ISTD	Tune Step	Tune Mode	Conc.	Units	CPS
Cd	111	115	3	He	10.380	ug/l	17753.16
Cd	114	115	1	No Gas	9.925	ug/l	124801.08
Cd	114	115	3	He	10.150	ug/l	43841.66
Sn	118	115	1	No Gas	9.606	ug/l	157165.76
Sn	118	115	3	He	9.559	ug/l	40657.53
Sb	121	115	1	No Gas	9.633	ug/l	249217.05
Sb	121	115	3	He	9.505	ug/l	62930.94
Sb	123	115	1	No Gas	9.653	ug/l	190114.35
Sb	123	115	3	He	9.402	ug/l	49437.33
Ba	135	115	1	No Gas	9.518	ug/l	49276.00
Ba	137	115	1	No Gas	9.820	ug/l	85903.63
La	139	115	3	He	9.863	ug/l	238050.60
Ce	140	115	3	He	9.811	ug/l	261813.47
Hg	201	209	1	No Gas	0.186	ug/l	759.20
Hg	202	209	1	No Gas	0.190	ug/l	1819.10
Hg	202	209	3	He	0.184	ug/l	824.86
Tl	203	209	3	He	9.548	ug/l	105035.31
Tl	205	209	1	No Gas	9.716	ug/l	542678.18
Tl	205	209	3	He	9.848	ug/l	255366.02
[Pb]	206	209	1	No Gas	9.777	ug/l	187637.39
[Pb]	207	209	1	No Gas	9.521	ug/l	161115.76
Pb	208	209	1	No Gas	9.676	ug/l	751683.29
Th	232	209	3	He	9.574	ug/l	350447.75
U	238	209	1	No Gas	9.873	ug/l	759407.70

Name	Mass	Tune Step	Tune Mode	CPS	ISTD Recovery %
Sc	45	1	No Gas	4223086.80	96.4
Sc	45	2	H2	2253036.12	95.7
Sc	45	3	He	231465.67	97.9
Ge	72	1	No Gas	1257358.52	98.1
Ge	72	2	H2	880704.50	98.8
Ge	72	3	He	180976.69	98.4
In	115	1	No Gas	10958928.06	95.4
In	115	3	He	2240886.04	96.2
Tb	159	1	No Gas	15389113.36	98.1
Tb	159	3	He	6342633.92	97.7
Ho	165	1	No Gas	14789042.69	98.4
Ho	165	3	He	6148121.86	99.7
Lu	175	1	No Gas	15563522.35	100.3
Lu	175	3	He	5038418.40	99.9
Bi	209	1	No Gas	11521599.60	101.8
Bi	209	3	He	4895412.35	98.7

ICPMS207-B Analytical Data

Sample Name 50 ppb STD
File Name 117CAL5.d
Data Path Name D:\Agilent\ICPMH\1\DATA\220121ADoD.b
Acq Time 2022-01-22 04:07:04
Sample Type CalStd
Total Dilution 1.0000
Comment ICPMS-6020B-Cal
Operator CAR/SRH/JPV/AEM
Method SW6020/ SW6020B

Name	Mass	ISTD	Tune Step	Tune Mode	Conc.	Units	CPS
Li	7	45	1	No Gas	574.914	ug/l	2975596.82
Be	9	45	1	No Gas	50.507	ug/l	115380.40
B	11	45	1	No Gas	50.420	ug/l	77085.36
Na	23	45	3	He	12746.428	ug/l	8103183.35
Mg	24	45	3	He	12576.221	ug/l	4332868.85
Al	27	45	1	No Gas	61.950	ug/l	868633.24
Si	28	45	2	H2	210.949	ug/l	411358.99
K	39	72	3	He	11866.756	ug/l	4644751.70
Ca	40	72	2	H2	11837.688	ug/l	83414698.42
Ti	47	72	1	No Gas	51.576	ug/l	97481.27
V	51	72	1	No Gas	47.871	ug/l	1247818.18
V	51	72	3	He	47.781	ug/l	212898.58
Cr	52	72	1	No Gas	49.145	ug/l	1206115.72
Cr	52	72	3	He	50.823	ug/l	224860.47
Mn	55	72	1	No Gas	50.618	ug/l	1610186.06
Mn	55	72	3	He	51.155	ug/l	146424.65
Fe	56	72	2	H2	1261.242	ug/l	21320514.76
Fe	56	72	3	He	1273.109	ug/l	5032634.65
Co	59	72	1	No Gas	50.226	ug/l	1322699.53
Ni	60	72	1	No Gas	50.563	ug/l	298444.02
Ni	60	72	3	He	52.462	ug/l	94627.99
Cu	63	72	1	No Gas	51.129	ug/l	728582.75
Cu	63	72	3	He	53.112	ug/l	259146.67
Cu	65	72	1	No Gas	51.170	ug/l	357719.02
Zn	66	72	1	No Gas	51.253	ug/l	256167.35
Zn	66	72	3	He	55.438	ug/l	55159.73
As	75	72	1	No Gas	50.742	ug/l	314783.68
As	75	72	3	He	51.155	ug/l	46996.83
Se	78	72	2	H2	51.978	ug/l	30904.39
Br	79	72	1	No Gas	11.536	ug/l	232803.13
Br	79	72	2	H2	11.154	ug/l	129556.00
Se	82	72	1	No Gas	52.567	ug/l	18246.61
Kr	84	72	1	No Gas		ug/l	32835.59
Sr	88	72	1	No Gas	51.587	ug/l	2310735.80
Sr	88	72	3	He	50.113	ug/l	243932.98
Mo	95	115	1	No Gas	51.425	ug/l	479383.86
Mo	95	115	3	He	52.498	ug/l	171703.80
Mo	98	115	1	No Gas	52.681	ug/l	797536.67
Ag	107	115	1	No Gas	19.946	ug/l	492661.24
Ag	109	115	1	No Gas	20.265	ug/l	480820.38
Cd	111	115	1	No Gas	49.047	ug/l	281772.59

ICPMS207-B Analytical Data

Name	Mass	ISTD	Tune Step	Tune Mode	Conc.	Units	CPS
Cd	111	115	3	He	53.262	ug/l	91098.50
Cd	114	115	1	No Gas	50.600	ug/l	641931.23
Cd	114	115	3	He	52.060	ug/l	224861.14
Sn	118	115	1	No Gas	52.124	ug/l	846791.26
Sn	118	115	3	He	52.295	ug/l	219143.82
Sb	121	115	1	No Gas	52.419	ug/l	1361069.54
Sb	121	115	3	He	52.027	ug/l	343203.64
Sb	123	115	1	No Gas	52.790	ug/l	1043562.22
Sb	123	115	3	He	52.557	ug/l	275253.49
Ba	135	115	1	No Gas	49.375	ug/l	257413.99
Ba	137	115	1	No Gas	50.155	ug/l	442172.52
La	139	115	3	He	50.013	ug/l	1207360.17
Ce	140	115	3	He	49.976	ug/l	1334129.80
Hg	201	209	1	No Gas	0.999	ug/l	3792.78
Hg	202	209	1	No Gas	0.999	ug/l	8739.78
Hg	202	209	3	He	0.984	ug/l	4157.15
Tl	203	209	3	He	49.568	ug/l	527690.21
Tl	205	209	1	No Gas	49.115	ug/l	2622299.04
Tl	205	209	3	He	50.691	ug/l	1272142.00
[Pb]	206	209	1	No Gas	51.403	ug/l	945513.94
[Pb]	207	209	1	No Gas	49.891	ug/l	808916.20
Pb	208	209	1	No Gas	50.287	ug/l	3743698.71
Th	232	209	3	He	50.350	ug/l	1794372.35
U	238	209	1	No Gas	51.322	ug/l	3793679.43

Name	Mass	Tune Step	Tune Mode	CPS	ISTD Recovery %
Sc	45	1	No Gas	4276082.63	97.6
Sc	45	2	H2	2287811.57	97.2
Sc	45	3	He	242869.15	102.7
Ge	72	1	No Gas	1297364.90	101.2
Ge	72	2	H2	900080.57	101.0
Ge	72	3	He	189051.63	102.8
In	115	1	No Gas	11048680.19	96.2
In	115	3	He	2241683.79	96.2
Tb	159	1	No Gas	15552155.05	99.1
Tb	159	3	He	6384868.34	98.4
Ho	165	1	No Gas	14930047.96	99.3
Ho	165	3	He	6244785.56	101.2
Lu	175	1	No Gas	15486442.98	99.8
Lu	175	3	He	5084396.30	100.8
Bi	209	1	No Gas	11074715.70	97.9
Bi	209	3	He	4770405.86	96.2

ICPMS207-B Analytical Data

Sample Name 100 ppb STD
File Name 118CAL.S.d
Data Path Name D:\Agilent\ICPMH\1\DATA\220121ADoD.b
Acq Time 2022-01-22 04:13:24
Sample Type CalStd
Total Dilution 1.0000
Comment ICPMS-6020B-Cal
Operator CAR/SRH/JPV/AEM
Method SW6020/ SW6020B

Name	Mass	ISTD	Tune Step	Tune Mode	Conc.	Units	CPS
Li	7	45	1	No Gas	1198.995	ug/l	6465149.66
Be	9	45	1	No Gas	100.669	ug/l	240078.62
B	11	45	1	No Gas	97.859	ug/l	152413.55
Na	23	45	3	He	25005.582	ug/l	17284563.22
Mg	24	45	3	He	25390.254	ug/l	9551814.64
Al	27	45	1	No Gas	102.178	ug/l	1491300.51
Si	28	45	2	H2	396.079	ug/l	725884.20
K	39	72	3	He	24071.020	ug/l	9878429.16
Ca	40	72	2	H2	23886.042	ug/l	171603085.37
Ti	47	72	1	No Gas	99.213	ug/l	191660.43
V	51	72	1	No Gas	96.795	ug/l	2573421.61
V	51	72	3	He	95.159	ug/l	427737.84
Cr	52	72	1	No Gas	99.975	ug/l	2423088.91
Cr	52	72	3	He	98.974	ug/l	461318.69
Mn	55	72	1	No Gas	100.480	ug/l	3259615.57
Mn	55	72	3	He	101.271	ug/l	305711.67
Fe	56	72	2	H2	2568.669	ug/l	44292191.05
Fe	56	72	3	He	2625.141	ug/l	10942474.59
Co	59	72	1	No Gas	97.872	ug/l	2635729.52
Ni	60	72	1	No Gas	100.632	ug/l	606945.67
Ni	60	72	3	He	101.737	ug/l	193554.04
Cu	63	72	1	No Gas	101.140	ug/l	1472337.65
Cu	63	72	3	He	101.528	ug/l	522015.80
Cu	65	72	1	No Gas	100.590	ug/l	718476.62
Zn	66	72	1	No Gas	101.996	ug/l	520541.35
Zn	66	72	3	He	105.460	ug/l	110460.28
As	75	72	1	No Gas	102.246	ug/l	636019.78
As	75	72	3	He	101.489	ug/l	98131.64
Se	78	72	2	H2	103.050	ug/l	62468.43
Br	79	72	1	No Gas	11.037	ug/l	230536.97
Br	79	72	2	H2	10.248	ug/l	124001.09
Se	82	72	1	No Gas	105.752	ug/l	36990.06
Kr	84	72	1	No Gas		ug/l	48959.20
Sr	88	72	1	No Gas	104.407	ug/l	4783425.36
Sr	88	72	3	He	100.165	ug/l	514317.34
Mo	95	115	1	No Gas	99.336	ug/l	938322.90
Mo	95	115	3	He	98.781	ug/l	330858.13
Mo	98	115	1	No Gas	98.681	ug/l	1514927.07
Ag	107	115	1	No Gas	40.027	ug/l	1000924.39
Ag	109	115	1	No Gas	39.861	ug/l	957579.58
Cd	111	115	1	No Gas	97.346	ug/l	567221.12

ICPMS207-B Analytical Data

Name	Mass	ISTD	Tune Step	Tune Mode	Conc.	Units	CPS
Cd	111	115	3	He	105.521	ug/l	184831.22
Cd	114	115	1	No Gas	100.338	ug/l	1291158.64
Cd	114	115	3	He	102.467	ug/l	453234.90
Sn	118	115	1	No Gas	98.977	ug/l	1628063.82
Sn	118	115	3	He	98.896	ug/l	423718.54
Sb	121	115	1	No Gas	98.828	ug/l	2601034.69
Sb	121	115	3	He	99.037	ug/l	668804.77
Sb	123	115	1	No Gas	98.640	ug/l	1976597.92
Sb	123	115	3	He	98.782	ug/l	529585.76
Ba	135	115	1	No Gas	97.828	ug/l	517119.30
Ba	137	115	1	No Gas	100.267	ug/l	896405.61
La	139	115	3	He	100.007	ug/l	2472692.15
Ce	140	115	3	He	100.031	ug/l	2734720.97
Hg	201	209	1	No Gas	2.002	ug/l	7407.24
Hg	202	209	1	No Gas	2.002	ug/l	17008.05
Hg	202	209	3	He	2.010	ug/l	8281.91
Tl	203	209	3	He	99.294	ug/l	1033887.10
Tl	205	209	1	No Gas	99.881	ug/l	5210232.63
Tl	205	209	3	He	100.949	ug/l	2477621.47
[Pb]	206	209	1	No Gas	101.206	ug/l	1819438.38
[Pb]	207	209	1	No Gas	98.819	ug/l	1566054.73
Pb	208	209	1	No Gas	99.483	ug/l	7237894.48
Th	232	209	3	He	100.422	ug/l	3502594.54
U	238	209	1	No Gas	101.687	ug/l	7349259.90

Name	Mass	Tune Step	Tune Mode	CPS	ISTD Recovery %
Sc	45	1	No Gas	4465453.58	101.9
Sc	45	2	H2	2336043.61	99.2
Sc	45	3	He	265253.80	112.2
Ge	72	1	No Gas	1327458.79	103.6
Ge	72	2	H2	918208.26	103.1
Ge	72	3	He	199434.25	108.4
In	115	1	No Gas	11209145.15	97.6
In	115	3	He	2295739.74	98.5
Tb	159	1	No Gas	15636430.67	99.7
Tb	159	3	He	6347262.66	97.8
Ho	165	1	No Gas	15079244.55	100.3
Ho	165	3	He	6218673.30	100.8
Lu	175	1	No Gas	15261186.90	98.3
Lu	175	3	He	5098839.23	101.1
Bi	209	1	No Gas	10830117.30	95.7
Bi	209	3	He	4668832.02	94.1

ICPMS207-B Analytical Data

Sample Name 1000 ppb STD
File Name 119CAL.S.d
Data Path Name D:\Agilent\ICPMH\1\DATA\220121ADoD.b
Acq Time 2022-01-22 04:19:46
Sample Type CalStd
Total Dilution 1.0000
Comment ICPMS-6020B-Cal
Operator CAR/SRH/JPV/AEM
Method SW6020/ SW6020B

Name	Mass	ISTD	Tune Step	Tune Mode	Conc.	Units	CPS
Li	7	45	1	No Gas	2538.275	ug/l	15407382.10
Be	9	45	1	No Gas	999.907	ug/l	2686108.07
B	11	45	1	No Gas	1000.200	ug/l	1713218.44
Na	23	45	3	He	49923.610	ug/l	37840823.33
Mg	24	45	3	He	49773.938	ug/l	20578702.71
Al	27	45	1	No Gas	999.184	ug/l	16362357.25
Si	28	45	2	H2	-20.941	ug/l	39633.49
K	39	72	3	He	50625.565	ug/l	22334632.16
Ca	40	72	2	H2	50726.168	ug/l	370550494.11
Ti	47	72	1	No Gas	5.655	ug/l	11726.57
V	51	72	1	No Gas	1000.476	ug/l	28090617.90
V	51	72	3	He	1000.596	ug/l	4647538.61
Cr	52	72	1	No Gas	1000.039	ug/l	24817791.10
Cr	52	72	3	He	1000.057	ug/l	5018899.89
Mn	55	72	1	No Gas	999.919	ug/l	34133028.57
Mn	55	72	3	He	999.812	ug/l	3253922.44
Fe	56	72	2	H2	6021.828	ug/l	105542417.87
Fe	56	72	3	He	5994.741	ug/l	26946721.61
Co	59	72	1	No Gas	1000.202	ug/l	28458385.00
Ni	60	72	1	No Gas	999.908	ug/l	6369842.41
Ni	60	72	3	He	999.694	ug/l	2050346.84
Cu	63	72	1	No Gas	999.824	ug/l	15354721.54
Cu	63	72	3	He	999.683	ug/l	5537057.28
Cu	65	72	1	No Gas	999.878	ug/l	7532029.39
Zn	66	72	1	No Gas	999.737	ug/l	5381559.40
Zn	66	72	3	He	999.176	ug/l	1126548.39
As	75	72	1	No Gas	999.733	ug/l	6447546.59
As	75	72	3	He	999.791	ug/l	1040345.80
Se	78	72	2	H2	999.594	ug/l	615903.75
Br	79	72	1	No Gas	11.099	ug/l	244503.51
Br	79	72	2	H2	11.728	ug/l	139668.57
Se	82	72	1	No Gas	999.285	ug/l	364169.00
Kr	84	72	1	No Gas		ug/l	313912.39
Sr	88	72	1	No Gas	999.475	ug/l	48361273.70
Sr	88	72	3	He	999.977	ug/l	5535681.27
Mo	95	115	1	No Gas	0.038	ug/l	970.04
Mo	95	115	3	He	0.067	ug/l	270.01
Mo	98	115	1	No Gas	0.098	ug/l	1599.14
Ag	107	115	1	No Gas	261.473	ug/l	6478580.07
Ag	109	115	1	No Gas	268.299	ug/l	6384499.36
Cd	111	115	1	No Gas	1000.316	ug/l	5781895.40

ICPMS207-B Analytical Data

Name	Mass	ISTD	Tune Step	Tune Mode	Conc.	Units	CPS
Cd	111	115	3	He	999.281	ug/l	1845416.49
Cd	114	115	1	No Gas	999.937	ug/l	12764824.65
Cd	114	115	3	He	999.649	ug/l	4661773.32
Sn	118	115	1	No Gas	0.241	ug/l	6871.39
Sn	118	115	3	He	0.216	ug/l	1796.80
Sb	121	115	1	No Gas	0.269	ug/l	8449.72
Sb	121	115	3	He	0.200	ug/l	1762.29
Sb	123	115	1	No Gas	0.293	ug/l	6890.39
Sb	123	115	3	He	0.200	ug/l	1421.21
Ba	135	115	1	No Gas	1000.253	ug/l	5245318.77
Ba	137	115	1	No Gas	999.967	ug/l	8868561.96
La	139	115	3	He	0.008	ug/l	236.67
Ce	140	115	3	He	0.022	ug/l	655.58
Hg	201	209	1	No Gas	0.014	ug/l	76.32
Hg	202	209	1	No Gas	0.015	ug/l	229.63
Hg	202	209	3	He	0.012	ug/l	79.65
Tl	203	209	3	He	1000.097	ug/l	10174882.05
Tl	205	209	1	No Gas	1000.059	ug/l	50049972.59
Tl	205	209	3	He	999.872	ug/l	23981566.24
[Pb]	206	209	1	No Gas	999.811	ug/l	17247372.10
[Pb]	207	209	1	No Gas	1000.128	ug/l	15210980.75
Pb	208	209	1	No Gas	1000.041	ug/l	69815562.85
Th	232	209	3	He	999.945	ug/l	34096757.92
U	238	209	1	No Gas	999.766	ug/l	69351937.31

Name	Mass	Tune Step	Tune Mode	CPS	ISTD Recovery %
Sc	45	1	No Gas	5028875.04	114.7
Sc	45	2	H2	2496551.77	106.0
Sc	45	3	He	291544.20	123.3
Ge	72	1	No Gas	1402123.38	109.4
Ge	72	2	H2	934080.73	104.8
Ge	72	3	He	215112.93	116.9
In	115	1	No Gas	11115377.08	96.8
In	115	3	He	2420638.43	103.9
Tb	159	1	No Gas	15742517.17	100.4
Tb	159	3	He	6516868.93	100.4
Ho	165	1	No Gas	15114623.99	100.6
Ho	165	3	He	6288070.82	101.9
Lu	175	1	No Gas	15374593.53	99.0
Lu	175	3	He	5255381.18	104.2
Bi	209	1	No Gas	10393070.67	91.9
Bi	209	3	He	4565066.27	92.0

ICPMS207-B Analytical Data

Sample Name 100 ppb Br STD
File Name 120CAL5.d
Data Path Name D:\Agilent\ICPMH\1\DATA\220121ADoD.b
Acq Time 2022-01-22 04:26:09
Sample Type CalStd
Total Dilution 1.0000
Comment ICPMS-6020-W-D
Operator CAR/SRH/JPV/AEM
Method SW6020/ SW6020B

Name	Mass	ISTD	Tune Step	Tune Mode	Conc.	Units	CPS
Li	7	45	1	No Gas	1.331	ug/l	23669.22
Be	9	45	1	No Gas	0.168	ug/l	536.90
B	11	45	1	No Gas	11.009	ug/l	23786.95
Na	23	45	3	He	-40.419	ug/l	54587.35
Mg	24	45	3	He	1.547	ug/l	2189.16
Al	27	45	1	No Gas	0.147	ug/l	10325.85
Si	28	45	2	H2	-22.764	ug/l	36784.46
K	39	72	3	He	601.098	ug/l	314260.41
Ca	40	72	2	H2	2.291	ug/l	106448.15
Ti	47	72	1	No Gas	0.230	ug/l	660.68
V	51	72	1	No Gas	0.220	ug/l	11207.24
V	51	72	3	He	-1.121	ug/l	15349.21
Cr	52	72	1	No Gas	0.547	ug/l	101959.93
Cr	52	72	3	He	0.022	ug/l	1035.60
Mn	55	72	1	No Gas	0.047	ug/l	13629.32
Mn	55	72	3	He	0.008	ug/l	167.64
Fe	56	72	2	H2	0.101	ug/l	12394.59
Fe	56	72	3	He	0.138	ug/l	6012.30
Co	59	72	1	No Gas	0.016	ug/l	948.15
Ni	60	72	1	No Gas	0.021	ug/l	662.04
Ni	60	72	3	He	0.020	ug/l	161.11
Cu	63	72	1	No Gas	0.170	ug/l	4707.99
Cu	63	72	3	He	0.134	ug/l	1427.45
Cu	65	72	1	No Gas	0.151	ug/l	2135.68
Zn	66	72	1	No Gas	0.054	ug/l	1275.31
Zn	66	72	3	He	-0.013	ug/l	250.00
As	75	72	1	No Gas	0.514	ug/l	16762.27
As	75	72	3	He	0.112	ug/l	366.60
Se	78	72	2	H2	0.133	ug/l	114.89
Br	79	72	1	No Gas	100.000	ug/l	1682793.44
Br	79	72	2	H2	100.000	ug/l	956883.79
Se	82	72	1	No Gas	2.835	ug/l	1632.04
Kr	84	72	1	No Gas		ug/l	19501.15
Sr	88	72	1	No Gas	0.005	ug/l	938.17
Sr	88	72	3	He	0.004	ug/l	224.45
Mo	95	115	1	No Gas	-0.044	ug/l	215.56
Mo	95	115	3	He	0.005	ug/l	51.11
Mo	98	115	1	No Gas	0.008	ug/l	249.60
Ag	107	115	1	No Gas	0.326	ug/l	10446.76
Ag	109	115	1	No Gas	0.318	ug/l	9882.80
Cd	111	115	1	No Gas	0.022	ug/l	133.92

ICPMS207-B Analytical Data

Name	Mass	ISTD	Tune Step	Tune Mode	Conc.	Units	CPS
Cd	111	115	3	He	0.013	ug/l	37.55
Cd	114	115	1	No Gas	0.017	ug/l	112.04
Cd	114	115	3	He	0.014	ug/l	98.60
Sn	118	115	1	No Gas	0.070	ug/l	4411.96
Sn	118	115	3	He	0.060	ug/l	1105.60
Sb	121	115	1	No Gas	0.035	ug/l	2528.82
Sb	121	115	3	He	0.036	ug/l	607.74
Sb	123	115	1	No Gas	0.035	ug/l	1893.66
Sb	123	115	3	He	0.033	ug/l	487.39
Ba	135	115	1	No Gas	0.004	ug/l	106.45
Ba	137	115	1	No Gas	0.010	ug/l	182.97
La	139	115	3	He	0.001	ug/l	53.34
Ce	140	115	3	He	0.000	ug/l	32.22
Hg	201	209	1	No Gas	0.005	ug/l	46.32
Hg	202	209	1	No Gas	0.004	ug/l	149.30
Hg	202	209	3	He	0.007	ug/l	63.99
Tl	203	209	3	He	0.681	ug/l	8404.04
Tl	205	209	1	No Gas	0.626	ug/l	37424.93
Tl	205	209	3	He	0.689	ug/l	20109.88
[Pb]	206	209	1	No Gas	0.072	ug/l	1997.94
[Pb]	207	209	1	No Gas	0.062	ug/l	1589.00
Pb	208	209	1	No Gas	0.065	ug/l	7605.35
Th	232	209	3	He	0.128	ug/l	5189.13
U	238	209	1	No Gas	0.030	ug/l	2349.75

Name	Mass	Tune Step	Tune Mode	CPS	ISTD Recovery %
Sc	45	1	No Gas	5122515.52	116.9
Sc	45	2	H2	2521731.97	107.1
Sc	45	3	He	272935.76	115.4
Ge	72	1	No Gas	1411887.43	110.1
Ge	72	2	H2	942845.54	105.8
Ge	72	3	He	203722.51	110.7
In	115	1	No Gas	11973253.17	104.2
In	115	3	He	2451954.47	105.2
Tb	159	1	No Gas	15985987.09	101.9
Tb	159	3	He	6661637.91	102.6
Ho	165	1	No Gas	15071307.34	100.3
Ho	165	3	He	6384970.48	103.5
Lu	175	1	No Gas	15406324.12	99.2
Lu	175	3	He	5234165.60	103.8
Bi	209	1	No Gas	11256780.74	99.5
Bi	209	3	He	4951496.85	99.8

ICPMS207-B Analytical Data

Sample Name Rinse
File Name 121BLKV.d
Data Path Name D:\Agilent\ICPMH\1\DATA\220121ADoD.b
Acq Time 2022-01-22 04:32:29
Sample Type BlkVrfy
Total Dilution 1.0000
Comment ICPMS-6020-W-D
Operator CAR/SRH/JPV/AEM
Method SW6020/ SW6020B

Name	Mass	ISTD	Tune Step	Tune Mode	Conc.	Units	CPS
Li	7	45	1	No Gas	-0.001	ug/l	15028.76
Be	9	45	1	No Gas	0.069	ug/l	259.28
B	11	45	1	No Gas	4.686	ug/l	12437.44
Na	23	45	3	He	-38.685	ug/l	53340.77
Mg	24	45	3	He	1.033	ug/l	1903.02
Al	27	45	1	No Gas	0.021	ug/l	7995.50
Si	28	45	2	H2	-25.878	ug/l	30503.21
K	39	72	3	He	14.230	ug/l	67611.79
Ca	40	72	2	H2	1.190	ug/l	95887.64
Ti	47	72	1	No Gas	0.056	ug/l	303.64
V	51	72	1	No Gas	1.533	ug/l	48487.55
V	51	72	3	He	-1.487	ug/l	13312.77
Cr	52	72	1	No Gas	-0.230	ug/l	82872.63
Cr	52	72	3	He	-0.007	ug/l	871.14
Mn	55	72	1	No Gas	0.102	ug/l	15567.35
Mn	55	72	3	He	0.134	ug/l	538.90
Fe	56	72	2	H2	0.081	ug/l	11729.88
Fe	56	72	3	He	2.108	ug/l	13912.58
Co	59	72	1	No Gas	0.000	ug/l	489.04
Ni	60	72	1	No Gas	0.009	ug/l	585.52
Ni	60	72	3	He	0.007	ug/l	132.23
Cu	63	72	1	No Gas	0.011	ug/l	2262.42
Cu	63	72	3	He	0.002	ug/l	711.54
Cu	65	72	1	No Gas	0.007	ug/l	1043.13
Zn	66	72	1	No Gas	-0.018	ug/l	892.91
Zn	66	72	3	He	-0.015	ug/l	238.89
As	75	72	1	No Gas	0.651	ug/l	17723.85
As	75	72	3	He	0.014	ug/l	261.80
Se	78	72	2	H2	0.045	ug/l	58.22
Br	79	72	1	No Gas	14.155	ug/l	296593.97
Br	79	72	2	H2	14.354	ug/l	161197.71
Se	82	72	1	No Gas	0.349	ug/l	722.48
Kr	84	72	1	No Gas		ug/l	18808.24
Sr	88	72	1	No Gas	0.002	ug/l	781.80
Sr	88	72	3	He	0.003	ug/l	215.56
Mo	95	115	1	No Gas	-0.054	ug/l	110.00
Mo	95	115	3	He	-0.001	ug/l	30.00
Mo	98	115	1	No Gas	0.001	ug/l	135.42
Ag	107	115	1	No Gas	0.023	ug/l	2279.11
Ag	109	115	1	No Gas	0.019	ug/l	2159.70
Cd	111	115	1	No Gas	0.014	ug/l	81.40

ICPMS207-B Analytical Data

Name	Mass	ISTD	Tune Step	Tune Mode	Conc.	Units	CPS
Cd	111	115	3	He	0.006	ug/l	24.56
Cd	114	115	1	No Gas	0.008	ug/l	-8.89
Cd	114	115	3	He	0.005	ug/l	57.84
Sn	118	115	1	No Gas	0.007	ug/l	3194.04
Sn	118	115	3	He	-0.001	ug/l	816.70
Sb	121	115	1	No Gas	-0.002	ug/l	1445.22
Sb	121	115	3	He	0.004	ug/l	368.71
Sb	123	115	1	No Gas	-0.001	ug/l	1095.49
Sb	123	115	3	He	0.002	ug/l	302.37
Ba	135	115	1	No Gas	0.002	ug/l	96.47
Ba	137	115	1	No Gas	0.004	ug/l	123.09
La	139	115	3	He	0.000	ug/l	17.78
Ce	140	115	3	He	0.000	ug/l	33.33
Hg	201	209	1	No Gas	0.001	ug/l	29.99
Hg	202	209	1	No Gas	0.000	ug/l	113.31
Hg	202	209	3	He	0.004	ug/l	48.99
Tl	203	209	3	He	0.240	ug/l	3545.23
Tl	205	209	1	No Gas	0.176	ug/l	12883.11
Tl	205	209	3	He	0.249	ug/l	8662.97
[Pb]	206	209	1	No Gas	0.032	ug/l	1238.95
[Pb]	207	209	1	No Gas	0.036	ug/l	1138.95
Pb	208	209	1	No Gas	0.032	ug/l	5049.30
Th	232	209	3	He	0.029	ug/l	1530.15
U	238	209	1	No Gas	0.005	ug/l	497.25

Name	Mass	Tune Step	Tune Mode	CPS	ISTD Recovery %
Sc	45	1	No Gas	4986246.13	113.8
Sc	45	2	H2	2462759.69	104.6
Sc	45	3	He	260730.62	110.3
Ge	72	1	No Gas	1416518.64	110.5
Ge	72	2	H2	919505.89	103.2
Ge	72	3	He	197184.09	107.2
In	115	1	No Gas	11616999.26	101.1
In	115	3	He	2418289.08	103.8
Tb	159	1	No Gas	15974618.74	101.8
Tb	159	3	He	6537525.06	100.7
Ho	165	1	No Gas	15194141.84	101.1
Ho	165	3	He	6382207.40	103.4
Lu	175	1	No Gas	15196381.79	97.9
Lu	175	3	He	5307439.18	105.2
Bi	209	1	No Gas	11106990.22	98.2
Bi	209	3	He	4961268.07	100.0

ICPMS207-B Analytical Data

Sample Name QCS
File Name 122_QC1.d
Data Path Name D:\Agilent\ICPMH\1\DATA\220121ADoD.b
Acq Time 2022-01-22 04:38:44
Sample Type QC1
Total Dilution 1.0000
Comment ICPMS-6020-W-D
Operator CAR/SRH/JPV/AEM
Method SW6020/ SW6020B

Name	Mass	ISTD	Tune Step	Tune Mode	Conc.	Units	CPS
Li	7	45	1	No Gas	49.196	ug/l	302850.64
Be	9	45	1	No Gas	24.752	ug/l	64299.23
B	11	45	1	No Gas	54.063	ug/l	93598.61
Na	23	45	3	He	2588.331	ug/l	1848108.93
Mg	24	45	3	He	2634.360	ug/l	985220.18
Al	27	45	1	No Gas	249.132	ug/l	3948727.58
Si	28	45	2	H2	519.570	ug/l	948155.74
K	39	72	3	He	2469.712	ug/l	1078412.19
Ca	40	72	2	H2	2521.212	ug/l	18224072.60
Ti	47	72	1	No Gas	52.707	ug/l	104173.48
V	51	72	1	No Gas	47.411	ug/l	1290680.51
V	51	72	3	He	46.345	ug/l	220241.20
Cr	52	72	1	No Gas	51.946	ug/l	1327590.24
Cr	52	72	3	He	50.755	ug/l	238871.25
Mn	55	72	1	No Gas	261.836	ug/l	8662910.13
Mn	55	72	3	He	255.784	ug/l	778129.28
Fe	56	72	2	H2	254.209	ug/l	4399061.77
Fe	56	72	3	He	253.385	ug/l	1069697.02
Co	59	72	1	No Gas	52.550	ug/l	1446772.25
Ni	60	72	1	No Gas	52.280	ug/l	322597.20
Ni	60	72	3	He	52.390	ug/l	100539.61
Cu	63	72	1	No Gas	53.606	ug/l	798498.89
Cu	63	72	3	He	53.038	ug/l	275246.73
Cu	65	72	1	No Gas	53.092	ug/l	387980.88
Zn	66	72	1	No Gas	50.776	ug/l	265374.51
Zn	66	72	3	He	53.897	ug/l	57043.66
As	75	72	1	No Gas	50.736	ug/l	329000.70
As	75	72	3	He	50.537	ug/l	49388.17
Se	78	72	2	H2	52.040	ug/l	31620.61
Br	79	72	1	No Gas	13.554	ug/l	274710.92
Br	79	72	2	H2	12.719	ug/l	146482.22
Se	82	72	1	No Gas	53.096	ug/l	19266.37
Kr	84	72	1	No Gas		ug/l	33589.08
Sr	88	72	1	No Gas	51.290	ug/l	2401841.20
Sr	88	72	3	He	49.901	ug/l	258379.26
Mo	95	115	1	No Gas	50.329	ug/l	482923.63
Mo	95	115	3	He	49.583	ug/l	170521.35
Mo	98	115	1	No Gas	50.834	ug/l	791831.24
Ag	107	115	1	No Gas	25.156	ug/l	639024.63
Ag	109	115	1	No Gas	25.555	ug/l	623536.91
Cd	111	115	1	No Gas	24.518	ug/l	144937.81

ICPMS207-B Analytical Data

Name	Mass	ISTD	Tune Step	Tune Mode	Conc.	Units	CPS
Cd	111	115	3	He	26.079	ug/l	46907.58
Cd	114	115	1	No Gas	25.062	ug/l	327078.96
Cd	114	115	3	He	25.364	ug/l	115210.49
Sn	118	115	1	No Gas	50.180	ug/l	839144.34
Sn	118	115	3	He	50.304	ug/l	221715.98
Sb	121	115	1	No Gas	49.209	ug/l	1315002.17
Sb	121	115	3	He	48.861	ug/l	338949.93
Sb	123	115	1	No Gas	49.047	ug/l	997840.09
Sb	123	115	3	He	48.733	ug/l	268369.17
Ba	135	115	1	No Gas	48.948	ug/l	262669.47
Ba	137	115	1	No Gas	50.470	ug/l	457835.19
La	139	115	3	He	51.159	ug/l	1298726.42
Ce	140	115	3	He	52.270	ug/l	1467125.52
Hg	201	209	1	No Gas	0.999	ug/l	3868.79
Hg	202	209	1	No Gas	0.986	ug/l	8803.14
Hg	202	209	3	He	0.983	ug/l	4308.50
Tl	203	209	3	He	47.398	ug/l	523622.46
Tl	205	209	1	No Gas	48.735	ug/l	2654543.33
Tl	205	209	3	He	48.663	ug/l	1267421.26
[Pb]	206	209	1	No Gas	49.142	ug/l	922172.57
[Pb]	207	209	1	No Gas	48.360	ug/l	800047.31
Pb	208	209	1	No Gas	49.220	ug/l	3738074.06
Th	232	209	3	He	49.242	ug/l	1820799.45
U	238	209	1	No Gas	53.530	ug/l	4036767.55

Name	Mass	Tune Step	Tune Mode	CPS	ISTD Recovery %
Sc	45	1	No Gas	4863704.80	111.0
Sc	45	2	H2	2382431.57	101.2
Sc	45	3	He	263337.86	111.4
Ge	72	1	No Gas	1356441.75	105.8
Ge	72	2	H2	919866.76	103.2
Ge	72	3	He	201076.18	109.3
In	115	1	No Gas	11373670.52	99.0
In	115	3	He	2357046.27	101.1
Tb	159	1	No Gas	15904584.75	101.4
Tb	159	3	He	6423939.08	99.0
Ho	165	1	No Gas	15002851.28	99.8
Ho	165	3	He	6275124.64	101.7
Lu	175	1	No Gas	15298201.83	98.5
Lu	175	3	He	5186146.54	102.8
Bi	209	1	No Gas	11296796.95	99.8
Bi	209	3	He	4949360.28	99.8

ICPMS207-B Analytical Data

Sample Name ICSA
File Name 123ICSA.d
Data Path Name D:\Agilent\ICPMH\1\DATA\220121ADoD.b
Acq Time 2022-01-22 04:44:59
Sample Type ICSA
Total Dilution 1.0000
Comment ICPMS-6020-W-D
Operator CAR/SRH/JPV/AEM
Method SW6020/ SW6020B

Name	Mass	ISTD	Tune Step	Tune Mode	Conc.	Units	CPS
Li	7	45	1	No Gas	1.090	ug/l	20711.14
Be	9	45	1	No Gas	0.029	ug/l	145.97
B	11	45	1	No Gas	3.927	ug/l	10698.10
Na	23	45	3	He	109181.007	ug/l	75582346.65
Mg	24	45	3	He	43947.471	ug/l	16618589.08
Al	27	45	1	No Gas	41640.239	ug/l	648019070.34
Si	28	45	2	H2	-23.925	ug/l	32443.85
K	39	72	3	He	42009.558	ug/l	16588011.98
Ca	40	72	2	H2	123745.067	ug/l	836305602.81
Ti	47	72	1	No Gas	847.045	ug/l	1674570.79
V	51	72	1	No Gas	2.241	ug/l	66160.50
V	51	72	3	He	-3.356	ug/l	5268.76
Cr	52	72	1	No Gas	0.236	ug/l	90648.58
Cr	52	72	3	He	0.954	ug/l	5166.49
Mn	55	72	1	No Gas	0.124	ug/l	15657.33
Mn	55	72	3	He	0.201	ug/l	721.54
Fe	56	72	2	H2	102213.106	ug/l	1657925120.05
Fe	56	72	3	He	108543.397	ug/l	436416644.60
Co	59	72	1	No Gas	0.342	ug/l	9910.40
Ni	60	72	1	No Gas	0.768	ug/l	5250.55
Ni	60	72	3	He	0.222	ug/l	523.35
Cu	63	72	1	No Gas	1.612	ug/l	26003.52
Cu	63	72	3	He	0.147	ug/l	1411.12
Cu	65	72	1	No Gas	0.615	ug/l	5445.89
Zn	66	72	1	No Gas	0.734	ug/l	4778.40
Zn	66	72	3	He	0.343	ug/l	595.57
As	75	72	1	No Gas	0.683	ug/l	17214.58
As	75	72	3	He	0.082	ug/l	318.53
Se	78	72	2	H2	0.153	ug/l	116.44
Br	79	72	1	No Gas	7.294	ug/l	177785.65
Br	79	72	2	H2	6.974	ug/l	88958.82
Se	82	72	1	No Gas	0.254	ug/l	662.21
Kr	84	72	1	No Gas		ug/l	19920.87
Sr	88	72	1	No Gas	1.251	ug/l	59287.62
Sr	88	72	3	He	1.222	ug/l	6246.95
Mo	95	115	1	No Gas	854.463	ug/l	7679643.43
Mo	95	115	3	He	830.780	ug/l	2713827.82
Mo	98	115	1	No Gas	837.449	ug/l	12238426.21
Ag	107	115	1	No Gas	0.014	ug/l	1882.22
Ag	109	115	1	No Gas	0.007	ug/l	1700.12
Cd	111	115	1	No Gas	0.052	ug/l	289.65

ICPMS207-B Analytical Data

Name	Mass	ISTD	Tune Step	Tune Mode	Conc.	Units	CPS
Cd	111	115	3	He	0.237	ug/l	417.78
Cd	114	115	1	No Gas	0.069	ug/l	736.75
Cd	114	115	3	He	0.170	ug/l	764.03
Sn	118	115	1	No Gas	0.078	ug/l	4049.24
Sn	118	115	3	He	0.080	ug/l	1094.50
Sb	121	115	1	No Gas	0.148	ug/l	5082.44
Sb	121	115	3	He	0.120	ug/l	1102.16
Sb	123	115	1	No Gas	0.187	ug/l	4575.40
Sb	123	115	3	He	0.150	ug/l	1052.61
Ba	135	115	1	No Gas	0.067	ug/l	412.52
Ba	137	115	1	No Gas	0.072	ug/l	688.66
La	139	115	3	He	0.009	ug/l	226.67
Ce	140	115	3	He	0.004	ug/l	127.78
Hg	201	209	1	No Gas	0.007	ug/l	49.99
Hg	202	209	1	No Gas	0.008	ug/l	165.97
Hg	202	209	3	He	0.010	ug/l	69.99
Tl	203	209	3	He	0.077	ug/l	1573.40
Tl	205	209	1	No Gas	0.055	ug/l	5993.64
Tl	205	209	3	He	0.071	ug/l	3661.31
[Pb]	206	209	1	No Gas	0.037	ug/l	1237.84
[Pb]	207	209	1	No Gas	0.038	ug/l	1092.28
Pb	208	209	1	No Gas	0.036	ug/l	4960.40
Th	232	209	3	He	0.038	ug/l	1672.12
U	238	209	1	No Gas	0.004	ug/l	409.26

Name	Mass	Tune Step	Tune Mode	CPS	ISTD Recovery %
Sc	45	1	No Gas	4781213.27	109.1
Sc	45	2	H2	2356964.96	100.1
Sc	45	3	He	266625.82	112.8
Ge	72	1	No Gas	1359263.53	106.0
Ge	72	2	H2	864028.42	97.0
Ge	72	3	He	192569.59	104.7
In	115	1	No Gas	10668684.45	92.9
In	115	3	He	2239420.99	96.1
Tb	159	1	No Gas	15251729.42	97.2
Tb	159	3	He	6365380.68	98.1
Ho	165	1	No Gas	14652401.89	97.5
Ho	165	3	He	6147282.38	99.6
Lu	175	1	No Gas	15454312.83	99.5
Lu	175	3	He	5046649.91	100.1
Bi	209	1	No Gas	10314578.06	91.2
Bi	209	3	He	4492598.75	90.6

ICPMS207-B Analytical Data

Sample Name ICSAB
File Name 124ICSB.d
Data Path Name D:\Agilent\ICPMH\1\DATA\220121ADoD.b
Acq Time 2022-01-22 04:51:16
Sample Type ICSAB
Total Dilution 1.0000
Comment ICPMS-6020-W-D
Operator CAR/SRH/JPV/AEM
Method SW6020/ SW6020B

Name	Mass	ISTD	Tune Step	Tune Mode	Conc.	Units	CPS
Li	7	45	1	No Gas	1.949	ug/l	26408.96
Be	9	45	1	No Gas	0.012	ug/l	106.98
B	11	45	1	No Gas	1.978	ug/l	7753.77
Na	23	45	3	He	103811.976	ug/l	72737178.92
Mg	24	45	3	He	42484.392	ug/l	16256909.51
Al	27	45	1	No Gas	40905.020	ug/l	655020265.80
Si	28	45	2	H2	-25.458	ug/l	30840.10
K	39	72	3	He	40817.066	ug/l	16967515.58
Ca	40	72	2	H2	123002.032	ug/l	873914276.83
Ti	47	72	1	No Gas	834.222	ug/l	1702699.41
V	51	72	1	No Gas	20.229	ug/l	571782.70
V	51	72	3	He	16.150	ug/l	90463.44
Cr	52	72	1	No Gas	19.588	ug/l	572342.71
Cr	52	72	3	He	21.333	ug/l	101719.83
Mn	55	72	1	No Gas	19.874	ug/l	691128.26
Mn	55	72	3	He	20.673	ug/l	63495.79
Fe	56	72	2	H2	103771.379	ug/l	1769439764.10
Fe	56	72	3	He	104840.198	ug/l	443650548.25
Co	59	72	1	No Gas	19.973	ug/l	569118.99
Ni	60	72	1	No Gas	20.292	ug/l	129851.13
Ni	60	72	3	He	20.837	ug/l	40361.13
Cu	63	72	1	No Gas	21.601	ug/l	334057.43
Cu	63	72	3	He	20.293	ug/l	106543.08
Cu	65	72	1	No Gas	20.471	ug/l	155335.92
Zn	66	72	1	No Gas	10.223	ug/l	56052.57
Zn	66	72	3	He	10.723	ug/l	11642.49
As	75	72	1	No Gas	10.943	ug/l	83789.69
As	75	72	3	He	10.371	ug/l	10413.57
Se	78	72	2	H2	10.602	ug/l	6385.40
Br	79	72	1	No Gas	18.787	ug/l	368155.79
Br	79	72	2	H2	18.080	ug/l	192421.42
Se	82	72	1	No Gas	11.078	ug/l	4621.74
Kr	84	72	1	No Gas		ug/l	20863.78
Sr	88	72	1	No Gas	1.273	ug/l	62338.16
Sr	88	72	3	He	1.277	ug/l	6858.35
Mo	95	115	1	No Gas	852.724	ug/l	8006306.27
Mo	95	115	3	He	823.181	ug/l	2819479.75
Mo	98	115	1	No Gas	844.483	ug/l	12889622.45
Ag	107	115	1	No Gas	4.938	ug/l	124212.61
Ag	109	115	1	No Gas	5.001	ug/l	120873.74
Cd	111	115	1	No Gas	9.572	ug/l	55454.37

ICPMS207-B Analytical Data

Name	Mass	ISTD	Tune Step	Tune Mode	Conc.	Units	CPS
Cd	111	115	3	He	10.373	ug/l	18592.01
Cd	114	115	1	No Gas	9.802	ug/l	125306.75
Cd	114	115	3	He	10.072	ug/l	45590.86
Sn	118	115	1	No Gas	0.049	ug/l	3763.04
Sn	118	115	3	He	0.054	ug/l	1034.49
Sb	121	115	1	No Gas	0.032	ug/l	2271.08
Sb	121	115	3	He	0.046	ug/l	649.10
Sb	123	115	1	No Gas	0.051	ug/l	2088.62
Sb	123	115	3	He	0.033	ug/l	467.06
Ba	135	115	1	No Gas	0.057	ug/l	379.25
Ba	137	115	1	No Gas	0.072	ug/l	725.25
La	139	115	3	He	0.009	ug/l	256.67
Ce	140	115	3	He	0.002	ug/l	83.33
Hg	201	209	1	No Gas	0.005	ug/l	41.32
Hg	202	209	1	No Gas	0.005	ug/l	143.97
Hg	202	209	3	He	0.003	ug/l	43.66
Tl	203	209	3	He	0.039	ug/l	1209.21
Tl	205	209	1	No Gas	0.024	ug/l	4479.69
Tl	205	209	3	He	0.039	ug/l	2924.83
[Pb]	206	209	1	No Gas	0.030	ug/l	1124.50
[Pb]	207	209	1	No Gas	0.027	ug/l	931.15
Pb	208	209	1	No Gas	0.028	ug/l	4422.54
Th	232	209	3	He	0.012	ug/l	821.02
U	238	209	1	No Gas	0.001	ug/l	202.63

Name	Mass	Tune Step	Tune Mode	CPS	ISTD Recovery %
Sc	45	1	No Gas	4920861.74	112.3
Sc	45	2	H2	2431721.76	103.3
Sc	45	3	He	269852.43	114.1
Ge	72	1	No Gas	1402875.68	109.4
Ge	72	2	H2	908334.84	102.0
Ge	72	3	He	202560.26	110.1
In	115	1	No Gas	11140514.66	97.0
In	115	3	He	2347792.26	100.7
Tb	159	1	No Gas	15508290.97	98.9
Tb	159	3	He	6437703.10	99.2
Ho	165	1	No Gas	14904581.97	99.2
Ho	165	3	He	6264301.63	101.5
Lu	175	1	No Gas	15291517.12	98.5
Lu	175	3	He	5234397.81	103.8
Bi	209	1	No Gas	10453245.23	92.4
Bi	209	3	He	4539996.93	91.5

ICPMS207-B Analytical Data

Sample Name Rinse
File Name 125BLKV.d
Data Path Name D:\Agilent\ICPMH\1\DATA\220121ADoD.b
Acq Time 2022-01-22 04:57:33
Sample Type BlkVrfy
Total Dilution 1.0000
Comment ICPMS-6020-W-D
Operator CAR/SRH/JPV/AEM
Method SW6020/ SW6020B

Name	Mass	ISTD	Tune Step	Tune Mode	Conc.	Units	CPS
Li	7	45	1	No Gas	0.783	ug/l	20815.26
Be	9	45	1	No Gas	0.011	ug/l	111.31
B	11	45	1	No Gas	0.816	ug/l	6209.78
Na	23	45	3	He	31.491	ug/l	109025.57
Mg	24	45	3	He	-1.041	ug/l	1227.62
Al	27	45	1	No Gas	0.254	ug/l	12424.09
Si	28	45	2	H2	-28.362	ug/l	27125.43
K	39	72	3	He	14.655	ug/l	71580.33
Ca	40	72	2	H2	2.021	ug/l	106019.38
Ti	47	72	1	No Gas	0.118	ug/l	447.13
V	51	72	1	No Gas	0.641	ug/l	23842.02
V	51	72	3	He	-3.594	ug/l	4630.76
Cr	52	72	1	No Gas	-1.802	ug/l	45133.37
Cr	52	72	3	He	-0.029	ug/l	814.47
Mn	55	72	1	No Gas	0.041	ug/l	13932.37
Mn	55	72	3	He	0.124	ug/l	536.90
Fe	56	72	2	H2	1.206	ug/l	32431.54
Fe	56	72	3	He	0.996	ug/l	9879.94
Co	59	72	1	No Gas	-0.001	ug/l	462.43
Ni	60	72	1	No Gas	0.033	ug/l	768.50
Ni	60	72	3	He	0.005	ug/l	135.56
Cu	63	72	1	No Gas	0.133	ug/l	4293.03
Cu	63	72	3	He	0.103	ug/l	1293.80
Cu	65	72	1	No Gas	0.134	ug/l	2084.99
Zn	66	72	1	No Gas	0.001	ug/l	1027.54
Zn	66	72	3	He	0.004	ug/l	273.34
As	75	72	1	No Gas	-0.212	ug/l	12448.18
As	75	72	3	He	-0.086	ug/l	174.80
Se	78	72	2	H2	0.005	ug/l	35.89
Br	79	72	1	No Gas	12.892	ug/l	285852.12
Br	79	72	2	H2	12.848	ug/l	153631.13
Se	82	72	1	No Gas	0.553	ug/l	824.62
Kr	84	72	1	No Gas		ug/l	21143.60
Sr	88	72	1	No Gas	-0.001	ug/l	638.75
Sr	88	72	3	He	0.009	ug/l	255.56
Mo	95	115	1	No Gas	0.179	ug/l	2495.80
Mo	95	115	3	He	0.174	ug/l	673.35
Mo	98	115	1	No Gas	0.246	ug/l	4193.08
Ag	107	115	1	No Gas	0.000	ug/l	1759.49
Ag	109	115	1	No Gas	-0.001	ug/l	1737.47
Cd	111	115	1	No Gas	-0.001	ug/l	-9.26

ICPMS207-B Analytical Data

Name	Mass	ISTD	Tune Step	Tune Mode	Conc.	Units	CPS
Cd	111	115	3	He	-0.001	ug/l	12.45
Cd	114	115	1	No Gas	-0.003	ug/l	-167.07
Cd	114	115	3	He	-0.001	ug/l	31.98
Sn	118	115	1	No Gas	-0.010	ug/l	3027.66
Sn	118	115	3	He	-0.014	ug/l	786.69
Sb	121	115	1	No Gas	-0.014	ug/l	1145.83
Sb	121	115	3	He	-0.006	ug/l	306.04
Sb	123	115	1	No Gas	-0.012	ug/l	902.79
Sb	123	115	3	He	-0.008	ug/l	258.36
Ba	135	115	1	No Gas	0.000	ug/l	89.82
Ba	137	115	1	No Gas	0.000	ug/l	89.82
La	139	115	3	He	0.000	ug/l	15.56
Ce	140	115	3	He	0.000	ug/l	38.89
Hg	201	209	1	No Gas	0.002	ug/l	33.66
Hg	202	209	1	No Gas	0.000	ug/l	113.98
Hg	202	209	3	He	0.003	ug/l	47.32
Tl	203	209	3	He	0.030	ug/l	1217.21
Tl	205	209	1	No Gas	0.019	ug/l	4488.58
Tl	205	209	3	He	0.024	ug/l	2790.75
[Pb]	206	209	1	No Gas	0.007	ug/l	768.91
[Pb]	207	209	1	No Gas	0.009	ug/l	697.80
Pb	208	209	1	No Gas	0.007	ug/l	3161.28
Th	232	209	3	He	0.001	ug/l	486.87
U	238	209	1	No Gas	0.000	ug/l	151.97

Name	Mass	Tune Step	Tune Mode	CPS	ISTD Recovery %
Sc	45	1	No Gas	5257014.86	120.0
Sc	45	2	H2	2551943.09	108.4
Sc	45	3	He	282006.57	119.3
Ge	72	1	No Gas	1466316.77	114.4
Ge	72	2	H2	956977.93	107.4
Ge	72	3	He	208259.15	113.2
In	115	1	No Gas	12094600.70	105.3
In	115	3	He	2514690.13	107.9
Tb	159	1	No Gas	15982419.36	101.9
Tb	159	3	He	6621688.64	102.0
Ho	165	1	No Gas	15140216.14	100.7
Ho	165	3	He	6249602.51	101.3
Lu	175	1	No Gas	15416549.34	99.3
Lu	175	3	He	5246476.66	104.0
Bi	209	1	No Gas	11062686.96	97.8
Bi	209	3	He	4948048.84	99.7

ICPMS207-B Analytical Data

Sample Name CCV
File Name 126_CCV.d
Data Path Name D:\Agilent\ICPMH\1\DATA\220121ADoD.b
Acq Time 2022-01-22 05:03:46
Sample Type CCV
Total Dilution 1.0000
Comment ICPMS-6020-W-D
Operator CAR/SRH/JPV/AEM
Method SW6020/ SW6020B

Name	Mass	ISTD	Tune Step	Tune Mode	Conc.	Units	CPS
Li	7	45	1	No Gas	659.733	ug/l	4072773.68
Be	9	45	1	No Gas	52.670	ug/l	143589.75
B	11	45	1	No Gas	53.830	ug/l	97900.36
Na	23	45	3	He	12928.490	ug/l	9626279.86
Mg	24	45	3	He	12929.018	ug/l	5217792.52
Al	27	45	1	No Gas	64.700	ug/l	1082340.66
Si	28	45	2	H2	207.079	ug/l	441620.28
K	39	72	3	He	12299.177	ug/l	5313429.78
Ca	40	72	2	H2	12336.960	ug/l	91756907.84
Ti	47	72	1	No Gas	55.075	ug/l	113739.93
V	51	72	1	No Gas	49.114	ug/l	1397607.01
V	51	72	3	He	47.172	ug/l	232349.69
Cr	52	72	1	No Gas	51.797	ug/l	1384025.03
Cr	52	72	3	He	52.001	ug/l	254081.71
Mn	55	72	1	No Gas	51.508	ug/l	1790162.03
Mn	55	72	3	He	52.114	ug/l	164684.80
Fe	56	72	2	H2	1287.553	ug/l	22979614.22
Fe	56	72	3	He	1305.629	ug/l	5698007.60
Co	59	72	1	No Gas	53.055	ug/l	1525876.63
Ni	60	72	1	No Gas	51.784	ug/l	333911.20
Ni	60	72	3	He	53.289	ug/l	106145.04
Cu	63	72	1	No Gas	54.227	ug/l	844126.38
Cu	63	72	3	He	53.031	ug/l	285651.86
Cu	65	72	1	No Gas	53.147	ug/l	405812.13
Zn	66	72	1	No Gas	52.394	ug/l	286024.80
Zn	66	72	3	He	54.447	ug/l	59812.48
As	75	72	1	No Gas	51.055	ug/l	345772.30
As	75	72	3	He	51.559	ug/l	52295.16
Se	78	72	2	H2	51.568	ug/l	32361.12
Br	79	72	1	No Gas	11.661	ug/l	256258.85
Br	79	72	2	H2	11.160	ug/l	136817.54
Se	82	72	1	No Gas	53.520	ug/l	20283.79
Kr	84	72	1	No Gas		ug/l	36573.73
Sr	88	72	1	No Gas	51.658	ug/l	2528284.30
Sr	88	72	3	He	50.063	ug/l	269055.85
Mo	95	115	1	No Gas	52.713	ug/l	512148.16
Mo	95	115	3	He	52.057	ug/l	181681.59
Mo	98	115	1	No Gas	54.061	ug/l	852863.67
Ag	107	115	1	No Gas	20.321	ug/l	523066.60
Ag	109	115	1	No Gas	20.567	ug/l	508567.90
Cd	111	115	1	No Gas	48.933	ug/l	292996.83

ICPMS207-B Analytical Data

Name	Mass	ISTD	Tune Step	Tune Mode	Conc.	Units	CPS
Cd	111	115	3	He	51.858	ug/l	94643.20
Cd	114	115	1	No Gas	49.847	ug/l	659122.89
Cd	114	115	3	He	50.557	ug/l	233004.88
Sn	118	115	1	No Gas	52.613	ug/l	891078.10
Sn	118	115	3	He	51.250	ug/l	229189.63
Sb	121	115	1	No Gas	52.148	ug/l	1411360.42
Sb	121	115	3	He	50.752	ug/l	357243.69
Sb	123	115	1	No Gas	51.930	ug/l	1069923.87
Sb	123	115	3	He	51.042	ug/l	285232.20
Ba	135	115	1	No Gas	48.725	ug/l	264789.87
Ba	137	115	1	No Gas	49.944	ug/l	458947.64
La	139	115	3	He	48.627	ug/l	1252683.52
Ce	140	115	3	He	48.939	ug/l	1393981.47
Hg	201	209	1	No Gas	1.000	ug/l	3691.11
Hg	202	209	1	No Gas	0.987	ug/l	8397.63
Hg	202	209	3	He	0.967	ug/l	4056.15
Tl	203	209	3	He	48.656	ug/l	514150.29
Tl	205	209	1	No Gas	49.874	ug/l	2588943.49
Tl	205	209	3	He	49.983	ug/l	1245307.76
[Pb]	206	209	1	No Gas	50.721	ug/l	907047.65
[Pb]	207	209	1	No Gas	49.994	ug/l	788206.40
Pb	208	209	1	No Gas	50.101	ug/l	3626249.68
Th	232	209	3	He	49.218	ug/l	1740890.04
U	238	209	1	No Gas	49.543	ug/l	3560628.84

Name	Mass	Tune Step	Tune Mode	CPS	ISTD Recovery %
Sc	45	1	No Gas	5103280.08	116.4
Sc	45	2	H2	2493542.90	105.9
Sc	45	3	He	284494.93	120.3
Ge	72	1	No Gas	1418127.23	110.6
Ge	72	2	H2	950306.55	106.7
Ge	72	3	He	208690.27	113.4
In	115	1	No Gas	11519085.63	100.3
In	115	3	He	2391851.36	102.6
Tb	159	1	No Gas	15889861.38	101.3
Tb	159	3	He	6379853.32	98.3
Ho	165	1	No Gas	15126814.51	100.6
Ho	165	3	He	6176404.26	100.1
Lu	175	1	No Gas	15499778.40	99.8
Lu	175	3	He	5196213.69	103.0
Bi	209	1	No Gas	10767026.71	95.2
Bi	209	3	He	4736328.56	95.5

ICPMS207-B Analytical Data

Sample Name CCB
File Name 127_CCB.d
Data Path Name D:\Agilent\ICPMH\1\DATA\220121ADoD.b
Acq Time 2022-01-22 05:10:00
Sample Type CCB
Total Dilution 1.0000
Comment ICPMS-6020-W-D
Operator CAR/SRH/JPV/AEM
Method SW6020/ SW6020B

Name	Mass	ISTD	Tune Step	Tune Mode	Conc.	Units	CPS
Li	7	45	1	No Gas	-0.583	ug/l	11720.56
Be	9	45	1	No Gas	0.031	ug/l	160.30
B	11	45	1	No Gas	1.369	ug/l	6933.71
Na	23	45	3	He	-43.172	ug/l	52481.10
Mg	24	45	3	He	-0.713	ug/l	1310.79
Al	27	45	1	No Gas	0.129	ug/l	9912.21
Si	28	45	2	H2	-29.187	ug/l	25007.66
K	39	72	3	He	19.243	ug/l	71426.26
Ca	40	72	2	H2	1.687	ug/l	99525.33
Ti	47	72	1	No Gas	0.044	ug/l	273.61
V	51	72	1	No Gas	2.156	ug/l	65100.72
V	51	72	3	He	-2.932	ug/l	7368.56
Cr	52	72	1	No Gas	-0.989	ug/l	62649.48
Cr	52	72	3	He	-0.039	ug/l	743.36
Mn	55	72	1	No Gas	-0.048	ug/l	10170.06
Mn	55	72	3	He	-0.009	ug/l	113.65
Fe	56	72	2	H2	0.390	ug/l	17087.12
Fe	56	72	3	He	0.366	ug/l	6931.97
Co	59	72	1	No Gas	0.001	ug/l	485.71
Ni	60	72	1	No Gas	0.024	ug/l	672.02
Ni	60	72	3	He	-0.001	ug/l	120.00
Cu	63	72	1	No Gas	0.066	ug/l	3055.55
Cu	63	72	3	He	0.044	ug/l	946.17
Cu	65	72	1	No Gas	0.070	ug/l	1495.35
Zn	66	72	1	No Gas	0.001	ug/l	977.25
Zn	66	72	3	He	-0.071	ug/l	186.67
As	75	72	1	No Gas	-0.668	ug/l	8908.45
As	75	72	3	He	-0.052	ug/l	203.73
Se	78	72	2	H2	0.009	ug/l	36.33
Br	79	72	1	No Gas	0.268	ug/l	70016.69
Br	79	72	2	H2	0.210	ug/l	33722.28
Se	82	72	1	No Gas	0.667	ug/l	822.89
Kr	84	72	1	No Gas		ug/l	20623.85
Sr	88	72	1	No Gas	0.000	ug/l	672.02
Sr	88	72	3	He	0.006	ug/l	235.56
Mo	95	115	1	No Gas	-0.008	ug/l	554.46
Mo	95	115	3	He	0.045	ug/l	187.78
Mo	98	115	1	No Gas	0.050	ug/l	906.36
Ag	107	115	1	No Gas	0.004	ug/l	1768.16
Ag	109	115	1	No Gas	0.000	ug/l	1671.44
Cd	111	115	1	No Gas	0.000	ug/l	-1.27

ICPMS207-B Analytical Data

Name	Mass	ISTD	Tune Step	Tune Mode	Conc.	Units	CPS
Cd	111	115	3	He	0.000	ug/l	12.33
Cd	114	115	1	No Gas	0.001	ug/l	-105.93
Cd	114	115	3	He	-0.003	ug/l	22.19
Sn	118	115	1	No Gas	0.037	ug/l	3679.86
Sn	118	115	3	He	0.031	ug/l	947.82
Sb	121	115	1	No Gas	0.108	ug/l	4401.81
Sb	121	115	3	He	0.081	ug/l	907.46
Sb	123	115	1	No Gas	0.114	ug/l	3457.45
Sb	123	115	3	He	0.079	ug/l	729.76
Ba	135	115	1	No Gas	-0.004	ug/l	63.21
Ba	137	115	1	No Gas	0.004	ug/l	116.43
La	139	115	3	He	0.000	ug/l	21.11
Ce	140	115	3	He	0.000	ug/l	27.78
Hg	201	209	1	No Gas	0.005	ug/l	43.99
Hg	202	209	1	No Gas	0.005	ug/l	152.97
Hg	202	209	3	He	0.005	ug/l	54.99
Tl	203	209	3	He	0.100	ug/l	1959.60
Tl	205	209	1	No Gas	0.073	ug/l	7403.29
Tl	205	209	3	He	0.098	ug/l	4671.37
[Pb]	206	209	1	No Gas	0.009	ug/l	805.59
[Pb]	207	209	1	No Gas	0.011	ug/l	741.14
Pb	208	209	1	No Gas	0.008	ug/l	3277.96
Th	232	209	3	He	0.015	ug/l	972.43
U	238	209	1	No Gas	0.002	ug/l	287.61

Name	Mass	Tune Step	Tune Mode	CPS	ISTD Recovery %
Sc	45	1	No Gas	5065844.90	115.6
Sc	45	2	H2	2489745.69	105.7
Sc	45	3	He	271978.86	115.0
Ge	72	1	No Gas	1388478.18	108.3
Ge	72	2	H2	920054.34	103.3
Ge	72	3	He	202314.75	110.0
In	115	1	No Gas	11527240.67	100.3
In	115	3	He	2387977.44	102.5
Tb	159	1	No Gas	15948189.92	101.7
Tb	159	3	He	6541294.29	100.8
Ho	165	1	No Gas	14952533.46	99.5
Ho	165	3	He	6286706.02	101.9
Lu	175	1	No Gas	15314949.93	98.7
Lu	175	3	He	5155727.94	102.2
Bi	209	1	No Gas	11131406.84	98.4
Bi	209	3	He	4882761.70	98.4

ICPMS207-B Analytical Data

Sample Name Rinse
File Name 128BLKV.d
Data Path Name D:\Agilent\ICPMH\1\DATA\220121ADoD.b
Acq Time 2022-01-22 11:11:16
Sample Type BlkVrfy
Total Dilution 1.0000
Comment ICPMS-200.8-W-D
Operator CAR/SRH/JPV/AEM
Method SW6020/ SW6020B

Name	Mass	ISTD	Tune Step	Tune Mode	Conc.	Units	CPS
Li	7	45	1	No Gas	-1.084	ug/l	8803.42
Be	9	45	1	No Gas	-0.011	ug/l	48.32
B	11	45	1	No Gas	0.269	ug/l	5126.94
Na	23	45	3	He	-64.317	ug/l	35854.83
Mg	24	45	3	He	-1.364	ug/l	1011.37
Al	27	45	1	No Gas	0.165	ug/l	10673.85
Si	28	45	2	H2	-27.958	ug/l	27857.35
K	39	72	3	He	13.962	ug/l	65628.61
Ca	40	72	2	H2	4.136	ug/l	114375.82
Ti	47	72	1	No Gas	-0.021	ug/l	146.82
V	51	72	1	No Gas	0.979	ug/l	32682.39
V	51	72	3	He	-3.024	ug/l	6608.19
Cr	52	72	1	No Gas	-1.142	ug/l	61419.51
Cr	52	72	3	He	-0.022	ug/l	777.80
Mn	55	72	1	No Gas	0.066	ug/l	14628.26
Mn	55	72	3	He	0.125	ug/l	498.58
Fe	56	72	2	H2	0.086	ug/l	11554.52
Fe	56	72	3	He	-0.035	ug/l	4965.86
Co	59	72	1	No Gas	-0.004	ug/l	359.29
Ni	60	72	1	No Gas	-0.014	ug/l	445.79
Ni	60	72	3	He	-0.016	ug/l	86.67
Cu	63	72	1	No Gas	-0.004	ug/l	2078.99
Cu	63	72	3	He	-0.006	ug/l	650.89
Cu	65	72	1	No Gas	-0.002	ug/l	995.10
Zn	66	72	1	No Gas	-0.030	ug/l	847.61
Zn	66	72	3	He	-0.072	ug/l	175.56
As	75	72	1	No Gas	-0.018	ug/l	13629.26
As	75	72	3	He	-0.049	ug/l	195.33
Se	78	72	2	H2	-0.002	ug/l	29.00
Br	79	72	1	No Gas	10.034	ug/l	234847.51
Br	79	72	2	H2	10.990	ug/l	127840.97
Se	82	72	1	No Gas	0.642	ug/l	846.89
Kr	84	72	1	No Gas		ug/l	18874.92
Sr	88	72	1	No Gas	0.002	ug/l	811.75
Sr	88	72	3	He	0.017	ug/l	277.78
Mo	95	115	1	No Gas	-0.059	ug/l	58.89
Mo	95	115	3	He	-0.004	ug/l	17.78
Mo	98	115	1	No Gas	-0.001	ug/l	92.09
Ag	107	115	1	No Gas	-0.002	ug/l	1640.09
Ag	109	115	1	No Gas	-0.004	ug/l	1590.07
Cd	111	115	1	No Gas	-0.009	ug/l	-54.85

ICPMS207-B Analytical Data

Name	Mass	ISTD	Tune Step	Tune Mode	Conc.	Units	CPS
Cd	111	115	3	He	-0.004	ug/l	5.56
Cd	114	115	1	No Gas	-0.007	ug/l	-212.85
Cd	114	115	3	He	-0.005	ug/l	12.65
Sn	118	115	1	No Gas	-0.005	ug/l	3017.69
Sn	118	115	3	He	-0.018	ug/l	716.69
Sb	121	115	1	No Gas	-0.035	ug/l	530.73
Sb	121	115	3	He	-0.028	ug/l	135.01
Sb	123	115	1	No Gas	-0.035	ug/l	393.71
Sb	123	115	3	He	-0.035	ug/l	92.01
Ba	135	115	1	No Gas	-0.002	ug/l	76.51
Ba	137	115	1	No Gas	0.000	ug/l	89.82
La	139	115	3	He	0.000	ug/l	16.66
Ce	140	115	3	He	0.000	ug/l	32.22
Hg	201	209	1	No Gas	-0.003	ug/l	17.00
Hg	202	209	1	No Gas	-0.005	ug/l	72.99
Hg	202	209	3	He	-0.001	ug/l	26.99
Tl	203	209	3	He	-0.018	ug/l	690.97
Tl	205	209	1	No Gas	-0.001	ug/l	3658.30
Tl	205	209	3	He	-0.022	ug/l	1610.75
[Pb]	206	209	1	No Gas	0.002	ug/l	732.25
[Pb]	207	209	1	No Gas	0.001	ug/l	611.13
Pb	208	209	1	No Gas	0.000	ug/l	2814.58
Th	232	209	3	He	-0.005	ug/l	267.44
U	238	209	1	No Gas	0.000	ug/l	91.98

Name	Mass	Tune Step	Tune Mode	CPS	ISTD Recovery %
Sc	45	1	No Gas	5152119.70	117.6
Sc	45	2	H2	2554548.87	108.5
Sc	45	3	He	259587.88	109.8
Ge	72	1	No Gas	1448049.34	113.0
Ge	72	2	H2	898221.65	100.8
Ge	72	3	He	191704.02	104.2
In	115	1	No Gas	11705235.31	101.9
In	115	3	He	2335753.74	100.2
Tb	159	1	No Gas	16187620.28	103.2
Tb	159	3	He	6375167.55	98.2
Ho	165	1	No Gas	15530235.63	103.3
Ho	165	3	He	6157427.52	99.8
Lu	175	1	No Gas	16133860.69	103.9
Lu	175	3	He	4933362.04	97.8
Bi	209	1	No Gas	11845979.10	104.7
Bi	209	3	He	4972275.80	100.2

ICPMS207-B Analytical Data

Sample Name CCV
File Name 129_CCV.d
Data Path Name D:\Agilent\ICPMH\1\DATA\220121ADoD.b
Acq Time 2022-01-22 11:17:29
Sample Type CCV
Total Dilution 1.0000
Comment ICPMS-6020-W-D
Operator CAR/SRH/JPV/AEM
Method SW6020/ SW6020B

Name	Mass	ISTD	Tune Step	Tune Mode	Conc.	Units	CPS
Li	7	45	1	No Gas	654.393	ug/l	3872923.46
Be	9	45	1	No Gas	52.982	ug/l	138471.19
B	11	45	1	No Gas	53.402	ug/l	93125.05
Na	23	45	3	He	13065.267	ug/l	9109885.56
Mg	24	45	3	He	13462.468	ug/l	5088721.70
Al	27	45	1	No Gas	61.873	ug/l	992685.98
Si	28	45	2	H2	207.590	ug/l	425060.52
K	39	72	3	He	12460.405	ug/l	5113347.15
Ca	40	72	2	H2	12196.235	ug/l	88623991.70
Ti	47	72	1	No Gas	54.942	ug/l	108690.55
V	51	72	1	No Gas	47.992	ug/l	1308017.74
V	51	72	3	He	46.680	ug/l	218624.47
Cr	52	72	1	No Gas	50.261	ug/l	1288668.06
Cr	52	72	3	He	52.862	ug/l	245363.69
Mn	55	72	1	No Gas	51.688	ug/l	1721278.55
Mn	55	72	3	He	51.324	ug/l	154075.48
Fe	56	72	2	H2	1270.226	ug/l	22138101.90
Fe	56	72	3	He	1323.030	ug/l	5484778.02
Co	59	72	1	No Gas	52.209	ug/l	1439100.82
Ni	60	72	1	No Gas	51.658	ug/l	319096.61
Ni	60	72	3	He	54.161	ug/l	102495.22
Cu	63	72	1	No Gas	52.749	ug/l	786463.55
Cu	63	72	3	He	53.742	ug/l	275016.98
Cu	65	72	1	No Gas	52.533	ug/l	384326.23
Zn	66	72	1	No Gas	50.611	ug/l	264771.27
Zn	66	72	3	He	54.493	ug/l	56869.59
As	75	72	1	No Gas	51.526	ug/l	334187.99
As	75	72	3	He	51.235	ug/l	49370.52
Se	78	72	2	H2	50.421	ug/l	30905.73
Br	79	72	1	No Gas	10.882	ug/l	233449.12
Br	79	72	2	H2	10.146	ug/l	124404.93
Se	82	72	1	No Gas	52.609	ug/l	19113.16
Kr	84	72	1	No Gas		ug/l	34136.05
Sr	88	72	1	No Gas	51.871	ug/l	2431102.47
Sr	88	72	3	He	49.524	ug/l	252873.57
Mo	95	115	1	No Gas	53.292	ug/l	492931.36
Mo	95	115	3	He	53.609	ug/l	176024.69
Mo	98	115	1	No Gas	53.783	ug/l	807827.77
Ag	107	115	1	No Gas	20.532	ug/l	503201.79
Ag	109	115	1	No Gas	20.655	ug/l	486266.66
Cd	111	115	1	No Gas	49.830	ug/l	284087.29

ICPMS207-B Analytical Data

Name	Mass	ISTD	Tune Step	Tune Mode	Conc.	Units	CPS
Cd	111	115	3	He	52.797	ug/l	90660.73
Cd	114	115	1	No Gas	50.680	ug/l	638014.21
Cd	114	115	3	He	51.994	ug/l	225460.09
Sn	118	115	1	No Gas	52.586	ug/l	847792.79
Sn	118	115	3	He	51.862	ug/l	218202.20
Sb	121	115	1	No Gas	53.526	ug/l	1379138.05
Sb	121	115	3	He	51.874	ug/l	343549.40
Sb	123	115	1	No Gas	53.140	ug/l	1042415.36
Sb	123	115	3	He	51.747	ug/l	272074.34
Ba	135	115	1	No Gas	49.030	ug/l	253711.88
Ba	137	115	1	No Gas	50.751	ug/l	443970.89
La	139	115	3	He	50.847	ug/l	1232415.09
Ce	140	115	3	He	50.394	ug/l	1350584.48
Hg	201	209	1	No Gas	0.972	ug/l	3728.11
Hg	202	209	1	No Gas	0.972	ug/l	8581.37
Hg	202	209	3	He	0.966	ug/l	4062.81
Tl	203	209	3	He	49.665	ug/l	525868.46
Tl	205	209	1	No Gas	49.940	ug/l	2692181.56
Tl	205	209	3	He	50.207	ug/l	1253266.96
[Pb]	206	209	1	No Gas	49.972	ug/l	928137.69
[Pb]	207	209	1	No Gas	49.475	ug/l	809858.19
Pb	208	209	1	No Gas	49.843	ug/l	3746140.39
Th	232	209	3	He	50.920	ug/l	1804741.56
U	238	209	1	No Gas	50.540	ug/l	3771125.52

Name	Mass	Tune Step	Tune Mode	CPS	ISTD Recovery %
Sc	45	1	No Gas	4893589.82	111.7
Sc	45	2	H2	2395500.23	101.7
Sc	45	3	He	266498.92	112.7
Ge	72	1	No Gas	1358248.51	106.0
Ge	72	2	H2	928037.42	104.2
Ge	72	3	He	198262.61	107.8
In	115	1	No Gas	10964134.47	95.4
In	115	3	He	2250428.36	96.6
Tb	159	1	No Gas	15812008.12	100.8
Tb	159	3	He	6348635.23	97.8
Ho	165	1	No Gas	15019756.62	99.9
Ho	165	3	He	6080481.78	98.6
Lu	175	1	No Gas	15641938.26	100.8
Lu	175	3	He	4964179.89	98.4
Bi	209	1	No Gas	11182647.53	98.8
Bi	209	3	He	4745405.03	95.7

ICPMS207-B Analytical Data

Sample Name CCB
File Name 130_CCB.d
Data Path Name D:\Agilent\ICPMH\1\DATA\220121ADoD.b
Acq Time 2022-01-22 11:23:44
Sample Type CCB
Total Dilution 1.0000
Comment ICPMS-6020-W-D
Operator CAR/SRH/JPV/AEM
Method SW6020/ SW6020B

Name	Mass	ISTD	Tune Step	Tune Mode	Conc.	Units	CPS
Li	7	45	1	No Gas	-0.872	ug/l	9331.95
Be	9	45	1	No Gas	0.006	ug/l	88.65
B	11	45	1	No Gas	0.207	ug/l	4624.58
Na	23	45	3	He	-70.412	ug/l	31391.63
Mg	24	45	3	He	-0.673	ug/l	1250.91
Al	27	45	1	No Gas	0.168	ug/l	9894.43
Si	28	45	2	H2	-34.384	ug/l	15098.34
K	39	72	3	He	18.805	ug/l	68014.80
Ca	40	72	2	H2	2.246	ug/l	101767.74
Ti	47	72	1	No Gas	0.003	ug/l	185.19
V	51	72	1	No Gas	-0.757	ug/l	-15493.99
V	51	72	3	He	-2.765	ug/l	7732.08
Cr	52	72	1	No Gas	-1.036	ug/l	59683.16
Cr	52	72	3	He	-0.014	ug/l	820.03
Mn	55	72	1	No Gas	-0.051	ug/l	9790.54
Mn	55	72	3	He	-0.010	ug/l	106.98
Fe	56	72	2	H2	-0.019	ug/l	9843.22
Fe	56	72	3	He	-0.081	ug/l	4818.99
Co	59	72	1	No Gas	-0.002	ug/l	392.56
Ni	60	72	1	No Gas	-0.002	ug/l	489.04
Ni	60	72	3	He	-0.010	ug/l	97.78
Cu	63	72	1	No Gas	0.014	ug/l	2200.39
Cu	63	72	3	He	-0.020	ug/l	585.23
Cu	65	72	1	No Gas	-0.019	ug/l	804.35
Zn	66	72	1	No Gas	-0.007	ug/l	907.44
Zn	66	72	3	He	-0.088	ug/l	161.11
As	75	72	1	No Gas	-0.179	ug/l	11705.10
As	75	72	3	He	-0.042	ug/l	203.67
Se	78	72	2	H2	0.007	ug/l	35.00
Br	79	72	1	No Gas	-0.646	ug/l	53870.03
Br	79	72	2	H2	-0.615	ug/l	25838.50
Se	82	72	1	No Gas	0.271	ug/l	660.21
Kr	84	72	1	No Gas		ug/l	19571.13
Sr	88	72	1	No Gas	-0.001	ug/l	618.79
Sr	88	72	3	He	0.008	ug/l	235.56
Mo	95	115	1	No Gas	-0.036	ug/l	288.89
Mo	95	115	3	He	0.016	ug/l	84.45
Mo	98	115	1	No Gas	0.022	ug/l	454.45
Ag	107	115	1	No Gas	0.002	ug/l	1710.12
Ag	109	115	1	No Gas	0.001	ug/l	1690.12
Cd	111	115	1	No Gas	0.007	ug/l	42.64

ICPMS207-B Analytical Data

Name	Mass	ISTD	Tune Step	Tune Mode	Conc.	Units	CPS
Cd	111	115	3	He	-0.003	ug/l	8.22
Cd	114	115	1	No Gas	0.002	ug/l	-98.38
Cd	114	115	3	He	-0.003	ug/l	17.85
Sn	118	115	1	No Gas	0.022	ug/l	3420.32
Sn	118	115	3	He	0.026	ug/l	894.48
Sb	121	115	1	No Gas	0.096	ug/l	4056.67
Sb	121	115	3	He	0.063	ug/l	752.09
Sb	123	115	1	No Gas	0.098	ug/l	3122.00
Sb	123	115	3	He	0.059	ug/l	599.41
Ba	135	115	1	No Gas	-0.004	ug/l	59.88
Ba	137	115	1	No Gas	0.008	ug/l	159.68
La	139	115	3	He	0.000	ug/l	16.67
Ce	140	115	3	He	0.001	ug/l	46.67
Hg	201	209	1	No Gas	0.003	ug/l	37.66
Hg	202	209	1	No Gas	0.001	ug/l	124.64
Hg	202	209	3	He	0.001	ug/l	36.32
Tl	203	209	3	He	0.019	ug/l	1091.82
Tl	205	209	1	No Gas	0.026	ug/l	5050.99
Tl	205	209	3	He	0.022	ug/l	2734.05
[Pb]	206	209	1	No Gas	0.004	ug/l	744.47
[Pb]	207	209	1	No Gas	0.007	ug/l	691.13
Pb	208	209	1	No Gas	0.003	ug/l	2986.82
Th	232	209	3	He	0.013	ug/l	930.41
U	238	209	1	No Gas	0.002	ug/l	261.62

Name	Mass	Tune Step	Tune Mode	CPS	ISTD Recovery %
Sc	45	1	No Gas	4750650.49	108.4
Sc	45	2	H2	2369884.88	100.6
Sc	45	3	He	256669.75	108.5
Ge	72	1	No Gas	1348136.99	105.2
Ge	72	2	H2	904366.06	101.5
Ge	72	3	He	193094.56	105.0
In	115	1	No Gas	11476096.91	99.9
In	115	3	He	2307196.64	99.0
Tb	159	1	No Gas	15806228.27	100.8
Tb	159	3	He	6391246.13	98.5
Ho	165	1	No Gas	15047369.65	100.1
Ho	165	3	He	6170173.08	100.0
Lu	175	1	No Gas	15792861.99	101.7
Lu	175	3	He	5057342.01	100.3
Bi	209	1	No Gas	11477909.52	101.4
Bi	209	3	He	4907355.96	98.9

ICPMS207-B Analytical Data

Sample Name Rinse
File Name 131BLKV.d
Data Path Name D:\Agilent\ICPMH\1\DATA\220121ADoD.b
Acq Time 2022-01-22 11:29:58
Sample Type BlkVrfy
Total Dilution 1.0000
Comment ICPMS-6020-W-D
Operator CAR/SRH/JPV/AEM
Method SW6020/ SW6020B

Name	Mass	ISTD	Tune Step	Tune Mode	Conc.	Units	CPS
Li	7	45	1	No Gas	-1.217	ug/l	7412.12
Be	9	45	1	No Gas	0.003	ug/l	81.32
B	11	45	1	No Gas	-0.228	ug/l	3955.45
Na	23	45	3	He	-71.681	ug/l	30910.58
Mg	24	45	3	He	-1.016	ug/l	1141.12
Al	27	45	1	No Gas	0.167	ug/l	9955.59
Si	28	45	2	H2	-34.642	ug/l	14633.69
K	39	72	3	He	16.435	ug/l	66827.16
Ca	40	72	2	H2	2.070	ug/l	99639.02
Ti	47	72	1	No Gas	-0.004	ug/l	173.51
V	51	72	1	No Gas	1.430	ug/l	44154.31
V	51	72	3	He	-2.907	ug/l	7117.31
Cr	52	72	1	No Gas	-1.156	ug/l	57955.85
Cr	52	72	3	He	-0.010	ug/l	834.47
Mn	55	72	1	No Gas	-0.070	ug/l	9344.46
Mn	55	72	3	He	-0.007	ug/l	113.98
Fe	56	72	2	H2	-0.037	ug/l	9448.05
Fe	56	72	3	He	-0.102	ug/l	4715.51
Co	59	72	1	No Gas	-0.003	ug/l	379.26
Ni	60	72	1	No Gas	-0.016	ug/l	415.85
Ni	60	72	3	He	0.003	ug/l	121.11
Cu	63	72	1	No Gas	0.009	ug/l	2171.04
Cu	63	72	3	He	-0.030	ug/l	533.24
Cu	65	72	1	No Gas	-0.026	ug/l	773.00
Zn	66	72	1	No Gas	-0.019	ug/l	860.90
Zn	66	72	3	He	-0.056	ug/l	192.23
As	75	72	1	No Gas	-0.234	ug/l	11515.26
As	75	72	3	He	-0.052	ug/l	193.27
Se	78	72	2	H2	-0.013	ug/l	22.56
Br	79	72	1	No Gas	-0.734	ug/l	53529.44
Br	79	72	2	H2	-0.578	ug/l	25935.11
Se	82	72	1	No Gas	0.082	ug/l	605.00
Kr	84	72	1	No Gas		ug/l	19208.05
Sr	88	72	1	No Gas	0.000	ug/l	675.35
Sr	88	72	3	He	0.012	ug/l	254.45
Mo	95	115	1	No Gas	-0.055	ug/l	100.00
Mo	95	115	3	He	0.002	ug/l	37.78
Mo	98	115	1	No Gas	0.002	ug/l	139.03
Ag	107	115	1	No Gas	0.005	ug/l	1760.15
Ag	109	115	1	No Gas	0.000	ug/l	1652.76
Cd	111	115	1	No Gas	0.005	ug/l	27.38

ICPMS207-B Analytical Data

Name	Mass	ISTD	Tune Step	Tune Mode	Conc.	Units	CPS
Cd	111	115	3	He	-0.004	ug/l	5.89
Cd	114	115	1	No Gas	0.002	ug/l	-97.09
Cd	114	115	3	He	-0.004	ug/l	15.56
Sn	118	115	1	No Gas	0.001	ug/l	3017.69
Sn	118	115	3	He	0.002	ug/l	790.03
Sb	121	115	1	No Gas	-0.009	ug/l	1205.51
Sb	121	115	3	He	-0.005	ug/l	287.03
Sb	123	115	1	No Gas	-0.008	ug/l	931.79
Sb	123	115	3	He	-0.011	ug/l	219.69
Ba	135	115	1	No Gas	-0.004	ug/l	63.21
Ba	137	115	1	No Gas	0.005	ug/l	123.09
La	139	115	3	He	0.000	ug/l	6.67
Ce	140	115	3	He	0.001	ug/l	41.11
Hg	201	209	1	No Gas	0.001	ug/l	30.32
Hg	202	209	1	No Gas	-0.003	ug/l	91.65
Hg	202	209	3	He	0.000	ug/l	33.32
Tl	203	209	3	He	-0.020	ug/l	661.62
Tl	205	209	1	No Gas	-0.014	ug/l	2815.87
Tl	205	209	3	He	-0.022	ug/l	1584.07
[Pb]	206	209	1	No Gas	0.002	ug/l	696.69
[Pb]	207	209	1	No Gas	0.004	ug/l	634.46
Pb	208	209	1	No Gas	0.001	ug/l	2804.58
Th	232	209	3	He	0.000	ug/l	430.18
U	238	209	1	No Gas	0.000	ug/l	113.65

Name	Mass	Tune Step	Tune Mode	CPS	ISTD Recovery %
Sc	45	1	No Gas	4784438.44	109.2
Sc	45	2	H2	2365745.68	100.5
Sc	45	3	He	259767.33	109.9
Ge	72	1	No Gas	1374650.47	107.2
Ge	72	2	H2	896338.60	100.6
Ge	72	3	He	192379.90	104.6
In	115	1	No Gas	11326059.17	98.6
In	115	3	He	2304817.19	98.9
Tb	159	1	No Gas	15779947.62	100.6
Tb	159	3	He	6327256.10	97.5
Ho	165	1	No Gas	15078570.54	100.3
Ho	165	3	He	6031219.81	97.8
Lu	175	1	No Gas	15687172.25	101.0
Lu	175	3	He	4994537.28	99.0
Bi	209	1	No Gas	11451207.40	101.2
Bi	209	3	He	4906366.74	98.9

ICPMS207-B Analytical Data

Sample Name B22011134-001BDIL
File Name 132ARef.d
Data Path Name D:\Agilent\ICPMH\1\DATA\220121ADoD.b
Acq Time 2022-01-22 11:36:13
Sample Type AIRRef
Total Dilution 5.0000
Comment ICPMS-6020-W-T
Operator CAR/SRH/JPV/AEM
Method SW6020/ SW6020B

Name	Mass	ISTD	Tune Step	Tune Mode	Conc.	Units	CPS
Li	7	45	1	No Gas	-4.378	ug/l	8996.28
Be	9	45	1	No Gas	-0.009	ug/l	65.99
B	11	45	1	No Gas	68.726	ug/l	25561.27
Na	23	45	3	He	38393.862	ug/l	5020407.39
Mg	24	45	3	He	10004.168	ug/l	705862.64
Al	27	45	1	No Gas	41.452	ug/l	130845.80
Si	28	45	2	H2	26617.540	ug/l	8812441.61
K	39	72	3	He	2281.355	ug/l	237574.75
Ca	40	72	2	H2	10055.821	ug/l	14099351.25
Ti	47	72	1	No Gas	4.624	ug/l	1955.61
V	51	72	1	No Gas	8.273	ug/l	48601.27
V	51	72	3	He	-10.398	ug/l	10442.66
Cr	52	72	1	No Gas	-2.115	ug/l	72953.39
Cr	52	72	3	He	0.469	ug/l	1288.95
Mn	55	72	1	No Gas	495.878	ug/l	3208947.89
Mn	55	72	3	He	498.052	ug/l	287286.21
Fe	56	72	2	H2	404.581	ug/l	1363363.59
Fe	56	72	3	He	408.188	ug/l	329961.92
Co	59	72	1	No Gas	0.513	ug/l	3204.00
Ni	60	72	1	No Gas	22.268	ug/l	27278.04
Ni	60	72	3	He	23.027	ug/l	8482.51
Cu	63	72	1	No Gas	92.524	ug/l	270355.88
Cu	63	72	3	He	93.949	ug/l	92843.69
Cu	65	72	1	No Gas	90.363	ug/l	129535.01
Zn	66	72	1	No Gas	102.318	ug/l	104949.20
Zn	66	72	3	He	108.765	ug/l	21967.75
As	75	72	1	No Gas	-0.505	ug/l	11973.69
As	75	72	3	He	0.924	ug/l	410.20
Se	78	72	2	H2	0.009	ug/l	31.33
Br	79	72	1	No Gas	171.785	ug/l	583575.29
Br	79	72	2	H2	169.190	ug/l	326331.62
Se	82	72	1	No Gas	5.743	ug/l	950.10
Kr	84	72	1	No Gas		ug/l	23285.88
Sr	88	72	1	No Gas	73.022	ug/l	668169.20
Sr	88	72	3	He	71.678	ug/l	70501.32
Mo	95	115	1	No Gas	0.296	ug/l	1167.84
Mo	95	115	3	He	0.589	ug/l	424.46
Mo	98	115	1	No Gas	0.615	ug/l	1980.02
Ag	107	115	1	No Gas	-0.272	ug/l	266.78
Ag	109	115	1	No Gas	-0.282	ug/l	271.45
Cd	111	115	1	No Gas	0.135	ug/l	154.20

ICPMS207-B Analytical Data

Name	Mass	ISTD	Tune Step	Tune Mode	Conc.	Units	CPS
Cd	111	115	3	He	0.078	ug/l	39.89
Cd	114	115	1	No Gas	0.155	ug/l	281.20
Cd	114	115	3	He	0.076	ug/l	99.71
Sn	118	115	1	No Gas	0.843	ug/l	5689.88
Sn	118	115	3	He	1.001	ug/l	1632.33
Sb	121	115	1	No Gas	0.063	ug/l	1755.62
Sb	121	115	3	He	0.090	ug/l	443.39
Sb	123	115	1	No Gas	0.069	ug/l	1341.87
Sb	123	115	3	He	0.073	ug/l	355.37
Ba	135	115	1	No Gas	4.242	ug/l	4525.12
Ba	137	115	1	No Gas	4.381	ug/l	7840.03
La	139	115	3	He	0.020	ug/l	114.44
Ce	140	115	3	He	0.072	ug/l	421.12
Hg	201	209	1	No Gas	0.031	ug/l	51.32
Hg	202	209	1	No Gas	0.322	ug/l	681.88
Hg	202	209	3	He	0.257	ug/l	252.62
Tl	203	209	3	He	-0.021	ug/l	827.03
Tl	205	209	1	No Gas	-0.002	ug/l	3527.16
Tl	205	209	3	He	-0.057	ug/l	1846.87
[Pb]	206	209	1	No Gas	3.593	ug/l	14153.14
[Pb]	207	209	1	No Gas	3.539	ug/l	12283.52
Pb	208	209	1	No Gas	3.539	ug/l	56490.70
Th	232	209	3	He	0.019	ug/l	578.91
U	238	209	1	No Gas	0.020	ug/l	423.92

Name	Mass	Tune Step	Tune Mode	CPS	ISTD Recovery %
Sc	45	1	No Gas	4588756.20	104.7
Sc	45	2	H2	2322352.91	98.6
Sc	45	3	He	248309.52	105.0
Ge	72	1	No Gas	1323984.60	103.3
Ge	72	2	H2	890953.02	100.0
Ge	72	3	He	190630.36	103.6
In	115	1	No Gas	11108239.67	96.7
In	115	3	He	2290241.66	98.3
Tb	159	1	No Gas	15752230.74	100.4
Tb	159	3	He	6470312.58	99.7
Ho	165	1	No Gas	15233193.18	101.3
Ho	165	3	He	6219122.13	100.8
Lu	175	1	No Gas	15262691.01	98.3
Lu	175	3	He	4985057.49	98.8
Bi	209	1	No Gas	11317060.50	100.0
Bi	209	3	He	4867702.50	98.1

ICPMS207-B Analytical Data

Sample Name B22011124-001BDIL
File Name 133ARef.d
Data Path Name D:\Agilent\ICPMH\1\DATA\220121ADoD.b
Acq Time 2022-01-22 11:42:26
Sample Type AIRRef
Total Dilution 5.0000
Comment ICPMS-6020-W-T
Operator CAR/SRH/JPV/AEM
Method SW6020/ SW6020B

Name	Mass	ISTD	Tune Step	Tune Mode	Conc.	Units	CPS
Li	7	45	1	No Gas	-5.486	ug/l	7647.00
Be	9	45	1	No Gas	-0.023	ug/l	57.99
B	11	45	1	No Gas	58.314	ug/l	21955.54
Na	23	45	3	He	37632.098	ug/l	4848179.55
Mg	24	45	3	He	10906.479	ug/l	757863.40
Al	27	45	1	No Gas	9.814	ug/l	35768.44
Si	28	45	2	H2	25069.844	ug/l	8383854.18
K	39	72	3	He	1926.520	ug/l	206280.55
Ca	40	72	2	H2	9078.758	ug/l	12837770.65
Ti	47	72	1	No Gas	2.144	ug/l	999.38
V	51	72	1	No Gas	19.570	ug/l	107907.76
V	51	72	3	He	9.923	ug/l	26607.51
Cr	52	72	1	No Gas	-0.265	ug/l	81434.83
Cr	52	72	3	He	2.293	ug/l	2862.52
Mn	55	72	1	No Gas	1.583	ug/l	21419.91
Mn	55	72	3	He	1.431	ug/l	943.18
Fe	56	72	2	H2	18.539	ug/l	72603.19
Fe	56	72	3	He	18.679	ug/l	19601.18
Co	59	72	1	No Gas	0.110	ug/l	1034.66
Ni	60	72	1	No Gas	2.193	ug/l	3127.47
Ni	60	72	3	He	2.277	ug/l	925.59
Cu	63	72	1	No Gas	1.898	ug/l	7445.55
Cu	63	72	3	He	1.478	ug/l	2090.07
Cu	65	72	1	No Gas	1.477	ug/l	3024.20
Zn	66	72	1	No Gas	8.383	ug/l	9426.15
Zn	66	72	3	He	9.290	ug/l	2064.60
As	75	72	1	No Gas	4.503	ug/l	18016.82
As	75	72	3	He	0.055	ug/l	245.40
Se	78	72	2	H2	0.153	ug/l	48.67
Br	79	72	1	No Gas	174.842	ug/l	591297.08
Br	79	72	2	H2	172.325	ug/l	334461.07
Se	82	72	1	No Gas	6.296	ug/l	986.11
Kr	84	72	1	No Gas		ug/l	23642.46
Sr	88	72	1	No Gas	67.740	ug/l	618493.58
Sr	88	72	3	He	65.831	ug/l	63630.46
Mo	95	115	1	No Gas	1.551	ug/l	3588.25
Mo	95	115	3	He	1.881	ug/l	1301.18
Mo	98	115	1	No Gas	1.852	ug/l	5862.08
Ag	107	115	1	No Gas	-0.312	ug/l	72.03
Ag	109	115	1	No Gas	-0.324	ug/l	74.70
Cd	111	115	1	No Gas	0.035	ug/l	39.72

ICPMS207-B Analytical Data

Name	Mass	ISTD	Tune Step	Tune Mode	Conc.	Units	CPS
Cd	111	115	3	He	-0.019	ug/l	6.11
Cd	114	115	1	No Gas	0.068	ug/l	58.90
Cd	114	115	3	He	-0.019	ug/l	15.47
Sn	118	115	1	No Gas	0.444	ug/l	4472.89
Sn	118	115	3	He	0.539	ug/l	1250.06
Sb	121	115	1	No Gas	-0.138	ug/l	723.42
Sb	121	115	3	He	-0.100	ug/l	189.35
Sb	123	115	1	No Gas	-0.132	ug/l	557.40
Sb	123	115	3	He	-0.106	ug/l	165.02
Ba	135	115	1	No Gas	3.261	ug/l	3570.06
Ba	137	115	1	No Gas	3.570	ug/l	6538.60
La	139	115	3	He	0.001	ug/l	22.22
Ce	140	115	3	He	0.007	ug/l	65.56
Hg	201	209	1	No Gas	0.002	ug/l	27.99
Hg	202	209	1	No Gas	0.012	ug/l	129.97
Hg	202	209	3	He	0.022	ug/l	51.32
Tl	203	209	3	He	-0.070	ug/l	716.97
Tl	205	209	1	No Gas	-0.027	ug/l	3155.96
Tl	205	209	3	He	-0.083	ug/l	1710.13
[Pb]	206	209	1	No Gas	0.116	ug/l	1060.05
[Pb]	207	209	1	No Gas	0.117	ug/l	927.82
Pb	208	209	1	No Gas	0.106	ug/l	4180.29
Th	232	209	3	He	-0.006	ug/l	400.17
U	238	209	1	No Gas	0.008	ug/l	236.62

Name	Mass	Tune Step	Tune Mode	CPS	ISTD Recovery %
Sc	45	1	No Gas	4513534.09	103.0
Sc	45	2	H2	2344558.77	99.6
Sc	45	3	He	244538.92	103.4
Ge	72	1	No Gas	1321405.18	103.1
Ge	72	2	H2	898252.36	100.8
Ge	72	3	He	187292.66	101.8
In	115	1	No Gas	11337330.28	98.7
In	115	3	He	2314039.71	99.3
Tb	159	1	No Gas	15722893.90	100.2
Tb	159	3	He	6399913.07	98.6
Ho	165	1	No Gas	15129541.40	100.7
Ho	165	3	He	6233465.22	101.0
Lu	175	1	No Gas	15666528.48	100.9
Lu	175	3	He	5032170.85	99.8
Bi	209	1	No Gas	10978996.47	97.0
Bi	209	3	He	4856273.03	97.9

ICPMS207-B Analytical Data

Sample Name CCV
File Name 134_CCV.d
Data Path Name D:\Agilent\ICPMH\1\DATA\220121ADoD.b
Acq Time 2022-01-22 11:48:40
Sample Type CCV
Total Dilution 1.0000
Comment ICPMS-6020-W-D
Operator CAR/SRH/JPV/AEM
Method SW6020/ SW6020B

Name	Mass	ISTD	Tune Step	Tune Mode	Conc.	Units	CPS
Li	7	45	1	No Gas	662.042	ug/l	3789985.57
Be	9	45	1	No Gas	54.621	ug/l	138064.01
B	11	45	1	No Gas	55.074	ug/l	92767.13
Na	23	45	3	He	13159.318	ug/l	8859907.78
Mg	24	45	3	He	13286.100	ug/l	4847724.93
Al	27	45	1	No Gas	64.666	ug/l	1003329.84
Si	28	45	2	H2	209.145	ug/l	414874.94
K	39	72	3	He	12311.741	ug/l	4948468.64
Ca	40	72	2	H2	11894.293	ug/l	84732793.98
Ti	47	72	1	No Gas	56.084	ug/l	107551.38
V	51	72	1	No Gas	48.690	ug/l	1286507.69
V	51	72	3	He	47.884	ug/l	219108.22
Cr	52	72	1	No Gas	51.951	ug/l	1288110.11
Cr	52	72	3	He	51.844	ug/l	235603.12
Mn	55	72	1	No Gas	52.442	ug/l	1692158.58
Mn	55	72	3	He	51.960	ug/l	152733.60
Fe	56	72	2	H2	1268.614	ug/l	21680683.67
Fe	56	72	3	He	1313.715	ug/l	5333515.93
Co	59	72	1	No Gas	54.350	ug/l	1451760.08
Ni	60	72	1	No Gas	54.218	ug/l	324599.86
Ni	60	72	3	He	54.069	ug/l	100168.83
Cu	63	72	1	No Gas	55.154	ug/l	797101.45
Cu	63	72	3	He	54.196	ug/l	271605.63
Cu	65	72	1	No Gas	54.409	ug/l	385772.66
Zn	66	72	1	No Gas	53.733	ug/l	272395.37
Zn	66	72	3	He	55.120	ug/l	56299.65
As	75	72	1	No Gas	53.358	ug/l	335031.85
As	75	72	3	He	51.529	ug/l	48613.86
Se	78	72	2	H2	51.411	ug/l	30900.17
Br	79	72	1	No Gas	12.795	ug/l	255116.69
Br	79	72	2	H2	11.755	ug/l	136333.29
Se	82	72	1	No Gas	54.643	ug/l	19221.90
Kr	84	72	1	No Gas		ug/l	34912.81
Sr	88	72	1	No Gas	53.221	ug/l	2418085.45
Sr	88	72	3	He	49.186	ug/l	245917.23
Mo	95	115	1	No Gas	54.046	ug/l	497862.96
Mo	95	115	3	He	53.515	ug/l	176090.43
Mo	98	115	1	No Gas	54.051	ug/l	808513.85
Ag	107	115	1	No Gas	20.951	ug/l	511274.42
Ag	109	115	1	No Gas	20.708	ug/l	485502.30
Cd	111	115	1	No Gas	50.375	ug/l	285987.45

ICPMS207-B Analytical Data

Name	Mass	ISTD	Tune Step	Tune Mode	Conc.	Units	CPS
Cd	111	115	3	He	52.633	ug/l	90553.97
Cd	114	115	1	No Gas	51.504	ug/l	645655.89
Cd	114	115	3	He	51.556	ug/l	223990.28
Sn	118	115	1	No Gas	52.396	ug/l	841091.87
Sn	118	115	3	He	51.944	ug/l	218978.13
Sb	121	115	1	No Gas	53.281	ug/l	1367063.28
Sb	121	115	3	He	51.945	ug/l	344692.77
Sb	123	115	1	No Gas	53.875	ug/l	1052286.73
Sb	123	115	3	He	51.507	ug/l	271334.78
Ba	135	115	1	No Gas	49.766	ug/l	256384.66
Ba	137	115	1	No Gas	51.932	ug/l	452447.56
La	139	115	3	He	50.896	ug/l	1235977.71
Ce	140	115	3	He	50.224	ug/l	1348402.72
Hg	201	209	1	No Gas	0.988	ug/l	3726.78
Hg	202	209	1	No Gas	0.996	ug/l	8651.40
Hg	202	209	3	He	0.977	ug/l	4097.15
Tl	203	209	3	He	49.613	ug/l	524212.55
Tl	205	209	1	No Gas	49.720	ug/l	2636137.31
Tl	205	209	3	He	50.282	ug/l	1252573.11
[Pb]	206	209	1	No Gas	51.667	ug/l	943808.83
[Pb]	207	209	1	No Gas	50.401	ug/l	811691.59
Pb	208	209	1	No Gas	50.904	ug/l	3763257.69
Th	232	209	3	He	50.128	ug/l	1772944.49
U	238	209	1	No Gas	51.028	ug/l	3745812.50

Name	Mass	Tune Step	Tune Mode	CPS	ISTD Recovery %
Sc	45	1	No Gas	4735847.18	108.1
Sc	45	2	H2	2323611.93	98.7
Sc	45	3	He	257263.98	108.8
Ge	72	1	No Gas	1316110.94	102.7
Ge	72	2	H2	909888.35	102.1
Ge	72	3	He	194208.33	105.6
In	115	1	No Gas	10918139.93	95.0
In	115	3	He	2255184.57	96.8
Tb	159	1	No Gas	15653642.67	99.8
Tb	159	3	He	6277729.07	96.7
Ho	165	1	No Gas	14955046.71	99.5
Ho	165	3	He	6025936.97	97.7
Lu	175	1	No Gas	15563645.28	100.3
Lu	175	3	He	4940986.85	98.0
Bi	209	1	No Gas	10998122.87	97.2
Bi	209	3	He	4733997.15	95.4

ICPMS207-B Analytical Data

Sample Name CCB
File Name 135_CCB.d
Data Path Name D:\Agilent\ICPMH\1\DATA\220121ADoD.b
Acq Time 2022-01-22 11:54:55
Sample Type CCB
Total Dilution 1.0000
Comment ICPMS-6020-W-D
Operator CAR/SRH/JPV/AEM
Method SW6020/ SW6020B

Name	Mass	ISTD	Tune Step	Tune Mode	Conc.	Units	CPS
Li	7	45	1	No Gas	-0.957	ug/l	8739.35
Be	9	45	1	No Gas	0.010	ug/l	97.65
B	11	45	1	No Gas	-0.047	ug/l	4166.92
Na	23	45	3	He	-67.474	ug/l	33654.20
Mg	24	45	3	He	-0.599	ug/l	1290.83
Al	27	45	1	No Gas	0.164	ug/l	9710.97
Si	28	45	2	H2	-30.862	ug/l	20639.82
K	39	72	3	He	15.991	ug/l	66814.96
Ca	40	72	2	H2	1.829	ug/l	97349.00
Ti	47	72	1	No Gas	0.004	ug/l	186.85
V	51	72	1	No Gas	0.548	ug/l	18825.75
V	51	72	3	He	-2.361	ug/l	9398.61
Cr	52	72	1	No Gas	-0.705	ug/l	67555.22
Cr	52	72	3	He	-0.016	ug/l	808.92
Mn	55	72	1	No Gas	-0.055	ug/l	9670.69
Mn	55	72	3	He	-0.008	ug/l	113.31
Fe	56	72	2	H2	-0.027	ug/l	9567.76
Fe	56	72	3	He	-0.084	ug/l	4797.29
Co	59	72	1	No Gas	0.001	ug/l	472.41
Ni	60	72	1	No Gas	-0.007	ug/l	465.75
Ni	60	72	3	He	-0.007	ug/l	103.33
Cu	63	72	1	No Gas	-0.012	ug/l	1808.84
Cu	63	72	3	He	-0.025	ug/l	559.90
Cu	65	72	1	No Gas	-0.031	ug/l	720.97
Zn	66	72	1	No Gas	-0.018	ug/l	847.39
Zn	66	72	3	He	-0.044	ug/l	204.45
As	75	72	1	No Gas	-0.046	ug/l	12588.07
As	75	72	3	He	-0.036	ug/l	208.60
Se	78	72	2	H2	-0.004	ug/l	27.89
Br	79	72	1	No Gas	-0.094	ug/l	62460.37
Br	79	72	2	H2	-0.151	ug/l	29504.80
Se	82	72	1	No Gas	0.179	ug/l	632.47
Kr	84	72	1	No Gas		ug/l	19960.89
Sr	88	72	1	No Gas	0.001	ug/l	695.31
Sr	88	72	3	He	0.011	ug/l	246.67
Mo	95	115	1	No Gas	-0.036	ug/l	280.00
Mo	95	115	3	He	0.008	ug/l	58.89
Mo	98	115	1	No Gas	0.025	ug/l	499.53
Ag	107	115	1	No Gas	0.004	ug/l	1744.81
Ag	109	115	1	No Gas	0.001	ug/l	1662.77
Cd	111	115	1	No Gas	0.001	ug/l	7.16

ICPMS207-B Analytical Data

Name	Mass	ISTD	Tune Step	Tune Mode	Conc.	Units	CPS
Cd	111	115	3	He	-0.003	ug/l	8.22
Cd	114	115	1	No Gas	-0.002	ug/l	-145.01
Cd	114	115	3	He	-0.003	ug/l	20.56
Sn	118	115	1	No Gas	0.031	ug/l	3513.47
Sn	118	115	3	He	0.041	ug/l	958.93
Sb	121	115	1	No Gas	0.101	ug/l	4140.70
Sb	121	115	3	He	0.065	ug/l	768.10
Sb	123	115	1	No Gas	0.103	ug/l	3156.68
Sb	123	115	3	He	0.060	ug/l	603.07
Ba	135	115	1	No Gas	0.000	ug/l	83.17
Ba	137	115	1	No Gas	0.000	ug/l	83.17
La	139	115	3	He	0.000	ug/l	15.56
Ce	140	115	3	He	0.000	ug/l	24.45
Hg	201	209	1	No Gas	0.003	ug/l	39.66
Hg	202	209	1	No Gas	0.003	ug/l	139.97
Hg	202	209	3	He	0.003	ug/l	46.99
Tl	203	209	3	He	0.038	ug/l	1315.27
Tl	205	209	1	No Gas	0.035	ug/l	5527.87
Tl	205	209	3	He	0.039	ug/l	3210.35
[Pb]	206	209	1	No Gas	0.004	ug/l	748.92
[Pb]	207	209	1	No Gas	0.005	ug/l	658.91
Pb	208	209	1	No Gas	0.003	ug/l	2953.48
Th	232	209	3	He	0.015	ug/l	989.77
U	238	209	1	No Gas	0.002	ug/l	289.28

Name	Mass	Tune Step	Tune Mode	CPS	ISTD Recovery %
Sc	45	1	No Gas	4691676.25	107.1
Sc	45	2	H2	2329306.04	98.9
Sc	45	3	He	259066.91	109.6
Ge	72	1	No Gas	1349568.96	105.3
Ge	72	2	H2	890853.41	100.0
Ge	72	3	He	192839.70	104.8
In	115	1	No Gas	11294947.30	98.3
In	115	3	He	2307857.32	99.0
Tb	159	1	No Gas	15735455.32	100.3
Tb	159	3	He	6339629.51	97.7
Ho	165	1	No Gas	15034103.37	100.0
Ho	165	3	He	6142383.57	99.6
Lu	175	1	No Gas	15601483.95	100.5
Lu	175	3	He	5057391.22	100.3
Bi	209	1	No Gas	11476076.26	101.4
Bi	209	3	He	4965076.16	100.1

ICPMS207-B Analytical Data

Sample Name B22011124-001B
File Name 136SMPL.d
Data Path Name D:\Agilent\ICPMH\1\DATA\220121ADoD.b
Acq Time 2022-01-22 12:01:10
Sample Type Sample
Total Dilution 1.0000
Comment ICPMS-6020-W-T
Operator CAR/SRH/JPV/AEM
Method SW6020/ SW6020B

Name	Mass	ISTD	Tune Step	Tune Mode	Conc.	Units	CPS
Li	7	45	1	No Gas	0.025	ug/l	13311.16
Be	9	45	1	No Gas	0.001	ug/l	68.99
B	11	45	1	No Gas	67.012	ug/l	103363.76
Na	23	45	3	He	38719.235	ug/l	23604145.76
Mg	24	45	3	He	11556.263	ug/l	3841523.53
Al	27	45	1	No Gas	6.185	ug/l	94654.72
Si	28	45	2	H2	26168.528	ug/l	40414693.28
K	39	72	3	He	1885.046	ug/l	740450.45
Ca	40	72	2	H2	9355.969	ug/l	60846498.52
Ti	47	72	1	No Gas	2.392	ug/l	4528.64
V	51	72	1	No Gas	18.236	ug/l	461231.90
V	51	72	3	He	19.877	ug/l	93575.20
Cr	52	72	1	No Gas	3.952	ug/l	165886.53
Cr	52	72	3	He	2.371	ug/l	10632.81
Mn	55	72	1	No Gas	1.722	ug/l	63273.51
Mn	55	72	3	He	1.339	ug/l	3722.40
Fe	56	72	2	H2	15.154	ug/l	245523.15
Fe	56	72	3	He	15.728	ug/l	63120.44
Co	59	72	1	No Gas	0.112	ug/l	3273.88
Ni	60	72	1	No Gas	1.987	ug/l	11788.14
Ni	60	72	3	He	2.082	ug/l	3634.92
Cu	63	72	1	No Gas	0.702	ug/l	11497.83
Cu	63	72	3	He	0.388	ug/l	2408.05
Cu	65	72	1	No Gas	0.455	ug/l	3944.79
Zn	66	72	1	No Gas	6.273	ug/l	31077.41
Zn	66	72	3	He	6.534	ug/l	6312.51
As	75	72	1	No Gas	-0.069	ug/l	11530.27
As	75	72	3	He	0.248	ug/l	436.13
Se	78	72	2	H2	0.219	ug/l	148.22
Br	79	72	1	No Gas	5.750	ug/l	141991.38
Br	79	72	2	H2	5.043	ug/l	69759.30
Se	82	72	1	No Gas	0.944	ug/l	832.62
Kr	84	72	1	No Gas		ug/l	36183.60
Sr	88	72	1	No Gas	67.470	ug/l	2920991.63
Sr	88	72	3	He	65.460	ug/l	299495.24
Mo	95	115	1	No Gas	1.824	ug/l	16332.78
Mo	95	115	3	He	1.879	ug/l	5790.11
Mo	98	115	1	No Gas	1.887	ug/l	26613.00
Ag	107	115	1	No Gas	-0.057	ug/l	179.41
Ag	109	115	1	No Gas	-0.060	ug/l	162.07
Cd	111	115	1	No Gas	0.008	ug/l	38.66

ICPMS207-B Analytical Data

Name	Mass	ISTD	Tune Step	Tune Mode	Conc.	Units	CPS
Cd	111	115	3	He	-0.002	ug/l	9.22
Cd	114	115	1	No Gas	0.013	ug/l	49.62
Cd	114	115	3	He	-0.004	ug/l	15.41
Sn	118	115	1	No Gas	0.432	ug/l	9214.82
Sn	118	115	3	He	0.469	ug/l	2552.47
Sb	121	115	1	No Gas	0.027	ug/l	1960.34
Sb	121	115	3	He	0.029	ug/l	476.39
Sb	123	115	1	No Gas	0.033	ug/l	1592.92
Sb	123	115	3	He	0.029	ug/l	394.05
Ba	135	115	1	No Gas	3.321	ug/l	16150.66
Ba	137	115	1	No Gas	3.428	ug/l	28129.42
La	139	115	3	He	0.001	ug/l	41.11
Ce	140	115	3	He	0.003	ug/l	106.67
Hg	201	209	1	No Gas	0.011	ug/l	63.32
Hg	202	209	1	No Gas	0.023	ug/l	287.28
Hg	202	209	3	He	0.022	ug/l	119.31
Tl	203	209	3	He	0.071	ug/l	1530.71
Tl	205	209	1	No Gas	0.080	ug/l	7252.03
Tl	205	209	3	He	0.073	ug/l	3724.02
[Pb]	206	209	1	No Gas	0.077	ug/l	1927.93
[Pb]	207	209	1	No Gas	0.074	ug/l	1645.67
Pb	208	209	1	No Gas	0.073	ug/l	7554.23
Th	232	209	3	He	0.047	ug/l	1984.95
U	238	209	1	No Gas	0.011	ug/l	843.53

Name	Mass	Tune Step	Tune Mode	CPS	ISTD Recovery %
Sc	45	1	No Gas	4369608.19	99.7
Sc	45	2	H2	2181032.05	92.6
Sc	45	3	He	234329.82	99.1
Ge	72	1	No Gas	1254244.47	97.8
Ge	72	2	H2	830514.51	93.2
Ge	72	3	He	177783.96	96.6
In	115	1	No Gas	10259472.03	89.3
In	115	3	He	2102027.27	90.2
Tb	159	1	No Gas	14758093.72	94.1
Tb	159	3	He	5973751.51	92.0
Ho	165	1	No Gas	14090055.81	93.7
Ho	165	3	He	5871753.89	95.2
Lu	175	1	No Gas	14495732.41	93.4
Lu	175	3	He	4757473.81	94.3
Bi	209	1	No Gas	10353867.82	91.5
Bi	209	3	He	4528621.80	91.3

ICPMS207-B Analytical Data

Sample Name B22011134-001B
File Name 137SMPL.d
Data Path Name D:\Agilent\ICPMH\1\DATA\220121ADoD.b
Acq Time 2022-01-22 12:07:24
Sample Type Sample
Total Dilution 1.0000
Comment ICPMS-6020-W-T
Operator CAR/SRH/JPV/AEM
Method SW6020/ SW6020B

Name	Mass	ISTD	Tune Step	Tune Mode	Conc.	Units	CPS
Li	7	45	1	No Gas	0.545	ug/l	16000.84
Be	9	45	1	No Gas	-0.002	ug/l	62.66
B	11	45	1	No Gas	68.675	ug/l	105525.44
Na	23	45	3	He	40340.037	ug/l	23954655.75
Mg	24	45	3	He	10390.872	ug/l	3365316.56
Al	27	45	1	No Gas	22.258	ug/l	322216.44
Si	28	45	2	H2	28158.326	ug/l	43226019.41
K	39	72	3	He	2067.497	ug/l	787412.48
Ca	40	72	2	H2	10049.723	ug/l	65199860.90
Ti	47	72	1	No Gas	4.019	ug/l	7486.13
V	51	72	1	No Gas	2.923	ug/l	77713.43
V	51	72	3	He	1.120	ug/l	21425.65
Cr	52	72	1	No Gas	1.561	ug/l	112829.07
Cr	52	72	3	He	0.191	ug/l	1568.99
Mn	55	72	1	No Gas	491.334	ug/l	14993709.11
Mn	55	72	3	He	516.173	ug/l	1354430.00
Fe	56	72	2	H2	405.004	ug/l	6308969.11
Fe	56	72	3	He	420.382	ug/l	1527925.27
Co	59	72	1	No Gas	0.543	ug/l	14225.43
Ni	60	72	1	No Gas	1.037	ug/l	6365.46
Ni	60	72	3	He	1.057	ug/l	1852.35
Cu	63	72	1	No Gas	1.193	ug/l	18210.69
Cu	63	72	3	He	0.827	ug/l	4310.44
Cu	65	72	1	No Gas	0.845	ug/l	6568.80
Zn	66	72	1	No Gas	1.278	ug/l	7016.71
Zn	66	72	3	He	1.422	ug/l	1516.76
As	75	72	1	No Gas	2.758	ug/l	27799.48
As	75	72	3	He	1.157	ug/l	1188.56
Se	78	72	2	H2	0.035	ug/l	47.33
Br	79	72	1	No Gas	4.470	ug/l	123358.77
Br	79	72	2	H2	4.200	ug/l	62761.31
Se	82	72	1	No Gas	0.339	ug/l	635.40
Kr	84	72	1	No Gas		ug/l	38458.44
Sr	88	72	1	No Gas	74.864	ug/l	3235841.58
Sr	88	72	3	He	73.790	ug/l	329516.54
Mo	95	115	1	No Gas	0.515	ug/l	5020.91
Mo	95	115	3	He	0.571	ug/l	1774.57
Mo	98	115	1	No Gas	0.583	ug/l	8305.80
Ag	107	115	1	No Gas	-0.046	ug/l	429.51
Ag	109	115	1	No Gas	-0.049	ug/l	414.84
Cd	111	115	1	No Gas	0.010	ug/l	51.16

ICPMS207-B Analytical Data

Name	Mass	ISTD	Tune Step	Tune Mode	Conc.	Units	CPS
Cd	111	115	3	He	0.000	ug/l	11.44
Cd	114	115	1	No Gas	0.013	ug/l	42.12
Cd	114	115	3	He	-0.001	ug/l	25.27
Sn	118	115	1	No Gas	0.474	ug/l	9870.65
Sn	118	115	3	He	0.503	ug/l	2676.94
Sb	121	115	1	No Gas	0.129	ug/l	4423.48
Sb	121	115	3	He	0.128	ug/l	1085.15
Sb	123	115	1	No Gas	0.128	ug/l	3335.07
Sb	123	115	3	He	0.127	ug/l	873.12
Ba	135	115	1	No Gas	3.917	ug/l	19058.71
Ba	137	115	1	No Gas	4.228	ug/l	34734.42
La	139	115	3	He	0.015	ug/l	347.78
Ce	140	115	3	He	0.062	ug/l	1583.43
Hg	201	209	1	No Gas	0.030	ug/l	130.64
Hg	202	209	1	No Gas	0.352	ug/l	2956.74
Hg	202	209	3	He	0.255	ug/l	1047.17
Tl	203	209	3	He	0.035	ug/l	1165.85
Tl	205	209	1	No Gas	0.043	ug/l	5385.58
Tl	205	209	3	He	0.036	ug/l	2858.79
[Pb]	206	209	1	No Gas	0.067	ug/l	1751.24
[Pb]	207	209	1	No Gas	0.062	ug/l	1461.20
Pb	208	209	1	No Gas	0.064	ug/l	6938.54
Th	232	209	3	He	0.016	ug/l	955.75
U	238	209	1	No Gas	0.017	ug/l	1312.14

Name	Mass	Tune Step	Tune Mode	CPS	ISTD Recovery %
Sc	45	1	No Gas	4356259.88	99.4
Sc	45	2	H2	2167784.54	92.1
Sc	45	3	He	228290.46	96.5
Ge	72	1	No Gas	1252281.43	97.7
Ge	72	2	H2	828609.59	93.0
Ge	72	3	He	173434.04	94.3
In	115	1	No Gas	10274532.95	89.4
In	115	3	He	2097157.75	90.0
Tb	159	1	No Gas	14806387.12	94.4
Tb	159	3	He	5985493.35	92.2
Ho	165	1	No Gas	14249956.75	94.8
Ho	165	3	He	5792902.13	93.9
Lu	175	1	No Gas	14873633.84	95.8
Lu	175	3	He	4844839.25	96.1
Bi	209	1	No Gas	10383752.05	91.8
Bi	209	3	He	4532949.05	91.4

ICPMS207-B Analytical Data

Sample Name CCV
File Name 138_CCV.d
Data Path Name D:\Agilent\ICPMH\1\DATA\220121ADoD.b
Acq Time 2022-01-22 12:13:39
Sample Type CCV
Total Dilution 1.0000
Comment ICPMS-6020-W-D
Operator CAR/SRH/JPV/AEM
Method SW6020/ SW6020B

Name	Mass	ISTD	Tune Step	Tune Mode	Conc.	Units	CPS
Li	7	45	1	No Gas	598.379	ug/l	3357751.52
Be	9	45	1	No Gas	49.918	ug/l	123681.24
B	11	45	1	No Gas	51.032	ug/l	84565.32
Na	23	45	3	He	12764.375	ug/l	8526414.67
Mg	24	45	3	He	12667.614	ug/l	4586003.52
Al	27	45	1	No Gas	61.352	ug/l	933059.68
Si	28	45	2	H2	248.804	ug/l	487499.98
K	39	72	3	He	11953.657	ug/l	4854382.32
Ca	40	72	2	H2	12058.416	ug/l	86723517.13
Ti	47	72	1	No Gas	54.813	ug/l	106708.62
V	51	72	1	No Gas	49.395	ug/l	1325092.63
V	51	72	3	He	48.118	ug/l	222274.06
Cr	52	72	1	No Gas	51.045	ug/l	1286527.37
Cr	52	72	3	He	51.716	ug/l	237503.90
Mn	55	72	1	No Gas	51.353	ug/l	1682622.61
Mn	55	72	3	He	51.062	ug/l	151635.09
Fe	56	72	2	H2	1267.489	ug/l	21869310.00
Fe	56	72	3	He	1313.540	ug/l	5386591.72
Co	59	72	1	No Gas	51.931	ug/l	1408585.68
Ni	60	72	1	No Gas	52.551	ug/l	319450.78
Ni	60	72	3	He	53.773	ug/l	100660.68
Cu	63	72	1	No Gas	53.978	ug/l	792038.07
Cu	63	72	3	He	53.102	ug/l	268813.38
Cu	65	72	1	No Gas	52.986	ug/l	381446.68
Zn	66	72	1	No Gas	51.272	ug/l	263950.88
Zn	66	72	3	He	54.519	ug/l	56280.67
As	75	72	1	No Gas	52.596	ug/l	335546.37
As	75	72	3	He	51.282	ug/l	48883.43
Se	78	72	2	H2	51.925	ug/l	31509.25
Br	79	72	1	No Gas	13.630	ug/l	271782.39
Br	79	72	2	H2	12.888	ug/l	147836.70
Se	82	72	1	No Gas	53.727	ug/l	19198.05
Kr	84	72	1	No Gas		ug/l	34749.42
Sr	88	72	1	No Gas	53.138	ug/l	2451112.53
Sr	88	72	3	He	50.287	ug/l	253977.05
Mo	95	115	1	No Gas	53.205	ug/l	507817.28
Mo	95	115	3	He	52.406	ug/l	176446.54
Mo	98	115	1	No Gas	53.555	ug/l	830338.95
Ag	107	115	1	No Gas	20.570	ug/l	520192.32
Ag	109	115	1	No Gas	20.632	ug/l	501359.98
Cd	111	115	1	No Gas	49.600	ug/l	291826.40

ICPMS207-B Analytical Data

Name	Mass	ISTD	Tune Step	Tune Mode	Conc.	Units	CPS
Cd	111	115	3	He	52.548	ug/l	92527.29
Cd	114	115	1	No Gas	50.631	ug/l	657828.91
Cd	114	115	3	He	51.508	ug/l	229030.53
Sn	118	115	1	No Gas	52.632	ug/l	875871.15
Sn	118	115	3	He	52.591	ug/l	226894.70
Sb	121	115	1	No Gas	52.510	ug/l	1396391.82
Sb	121	115	3	He	51.538	ug/l	350001.33
Sb	123	115	1	No Gas	53.075	ug/l	1074460.42
Sb	123	115	3	He	51.572	ug/l	278055.36
Ba	135	115	1	No Gas	49.207	ug/l	262687.34
Ba	137	115	1	No Gas	51.056	ug/l	461018.39
La	139	115	3	He	49.905	ug/l	1240334.28
Ce	140	115	3	He	49.680	ug/l	1365369.08
Hg	201	209	1	No Gas	0.985	ug/l	3825.79
Hg	202	209	1	No Gas	0.983	ug/l	8796.14
Hg	202	209	3	He	0.985	ug/l	4202.16
Tl	203	209	3	He	49.447	ug/l	531562.92
Tl	205	209	1	No Gas	50.278	ug/l	2746236.80
Tl	205	209	3	He	50.661	ug/l	1283813.04
[Pb]	206	209	1	No Gas	50.210	ug/l	944442.87
[Pb]	207	209	1	No Gas	49.756	ug/l	825491.62
Pb	208	209	1	No Gas	50.310	ug/l	3830808.26
Th	232	209	3	He	50.768	ug/l	1826840.03
U	238	209	1	No Gas	50.593	ug/l	3825699.77

Name	Mass	Tune Step	Tune Mode	CPS	ISTD Recovery %
Sc	45	1	No Gas	4639234.62	105.9
Sc	45	2	H2	2359487.39	100.2
Sc	45	3	He	255200.10	107.9
Ge	72	1	No Gas	1336119.66	104.2
Ge	72	2	H2	918670.62	103.1
Ge	72	3	He	196141.62	106.6
In	115	1	No Gas	11323879.63	98.6
In	115	3	He	2307647.33	99.0
Tb	159	1	No Gas	16088850.89	102.6
Tb	159	3	He	6441221.93	99.2
Ho	165	1	No Gas	15331403.15	102.0
Ho	165	3	He	6214251.48	100.7
Lu	175	1	No Gas	15705526.33	101.2
Lu	175	3	He	5072343.62	100.6
Bi	209	1	No Gas	11334626.70	100.2
Bi	209	3	He	4815744.15	97.1

ICPMS207-B Analytical Data

Sample Name CCB
File Name 139_CCB.d
Data Path Name D:\Agilent\ICPMH\1\DATA\220121ADoD.b
Acq Time 2022-01-22 12:19:53
Sample Type CCB
Total Dilution 1.0000
Comment ICPMS-6020-W-D
Operator CAR/SRH/JPV/AEM
Method SW6020/ SW6020B

Name	Mass	ISTD	Tune Step	Tune Mode	Conc.	Units	CPS
Li	7	45	1	No Gas	-0.848	ug/l	9305.25
Be	9	45	1	No Gas	-0.001	ug/l	68.32
B	11	45	1	No Gas	-0.011	ug/l	4199.61
Na	23	45	3	He	-55.673	ug/l	39891.60
Mg	24	45	3	He	-0.242	ug/l	1364.03
Al	27	45	1	No Gas	0.117	ug/l	8953.83
Si	28	45	2	H2	-12.599	ug/l	51606.51
K	39	72	3	He	8.998	ug/l	63367.94
Ca	40	72	2	H2	1.222	ug/l	95410.02
Ti	47	72	1	No Gas	0.026	ug/l	226.90
V	51	72	1	No Gas	-0.417	ug/l	-6620.36
V	51	72	3	He	-1.756	ug/l	11774.79
Cr	52	72	1	No Gas	-0.537	ug/l	70522.68
Cr	52	72	3	He	-0.014	ug/l	811.14
Mn	55	72	1	No Gas	-0.025	ug/l	10492.96
Mn	55	72	3	He	0.004	ug/l	144.64
Fe	56	72	2	H2	-0.032	ug/l	9709.68
Fe	56	72	3	He	-0.030	ug/l	4962.52
Co	59	72	1	No Gas	-0.002	ug/l	389.23
Ni	60	72	1	No Gas	0.004	ug/l	522.31
Ni	60	72	3	He	0.001	ug/l	117.78
Cu	63	72	1	No Gas	-0.007	ug/l	1864.87
Cu	63	72	3	He	-0.019	ug/l	583.89
Cu	65	72	1	No Gas	-0.014	ug/l	833.69
Zn	66	72	1	No Gas	-0.002	ug/l	916.82
Zn	66	72	3	He	0.034	ug/l	281.12
As	75	72	1	No Gas	0.230	ug/l	14028.19
As	75	72	3	He	-0.028	ug/l	213.80
Se	78	72	2	H2	0.011	ug/l	37.34
Br	79	72	1	No Gas	-0.223	ug/l	59524.41
Br	79	72	2	H2	-0.197	ug/l	29815.03
Se	82	72	1	No Gas	0.092	ug/l	590.20
Kr	84	72	1	No Gas		ug/l	19327.96
Sr	88	72	1	No Gas	0.000	ug/l	642.08
Sr	88	72	3	He	0.010	ug/l	242.22
Mo	95	115	1	No Gas	-0.033	ug/l	317.78
Mo	95	115	3	He	0.016	ug/l	83.33
Mo	98	115	1	No Gas	0.025	ug/l	510.64
Ag	107	115	1	No Gas	0.004	ug/l	1778.16
Ag	109	115	1	No Gas	0.001	ug/l	1692.78
Cd	111	115	1	No Gas	0.010	ug/l	55.27

ICPMS207-B Analytical Data

Name	Mass	ISTD	Tune Step	Tune Mode	Conc.	Units	CPS
Cd	111	115	3	He	0.000	ug/l	13.56
Cd	114	115	1	No Gas	0.005	ug/l	-55.31
Cd	114	115	3	He	-0.001	ug/l	29.42
Sn	118	115	1	No Gas	0.047	ug/l	3852.91
Sn	118	115	3	He	0.033	ug/l	926.70
Sb	121	115	1	No Gas	0.108	ug/l	4396.47
Sb	121	115	3	He	0.070	ug/l	805.44
Sb	123	115	1	No Gas	0.109	ug/l	3362.41
Sb	123	115	3	He	0.069	ug/l	650.75
Ba	135	115	1	No Gas	0.001	ug/l	89.82
Ba	137	115	1	No Gas	0.004	ug/l	116.43
La	139	115	3	He	0.000	ug/l	22.22
Ce	140	115	3	He	0.000	ug/l	37.78
Hg	201	209	1	No Gas	0.004	ug/l	44.99
Hg	202	209	1	No Gas	0.003	ug/l	144.64
Hg	202	209	3	He	0.004	ug/l	48.99
Tl	203	209	3	He	0.046	ug/l	1372.63
Tl	205	209	1	No Gas	0.039	ug/l	5800.21
Tl	205	209	3	He	0.050	ug/l	3422.49
[Pb]	206	209	1	No Gas	0.007	ug/l	804.48
[Pb]	207	209	1	No Gas	0.009	ug/l	735.58
Pb	208	209	1	No Gas	0.008	ug/l	3330.19
Th	232	209	3	He	0.015	ug/l	996.44
U	238	209	1	No Gas	0.002	ug/l	280.95

Name	Mass	Tune Step	Tune Mode	CPS	ISTD Recovery %
Sc	45	1	No Gas	4664924.13	106.4
Sc	45	2	H2	2370033.54	100.6
Sc	45	3	He	248539.95	105.1
Ge	72	1	No Gas	1328509.78	103.6
Ge	72	2	H2	912736.18	102.4
Ge	72	3	He	190830.00	103.7
In	115	1	No Gas	11534791.86	100.4
In	115	3	He	2315340.87	99.3
Tb	159	1	No Gas	15831582.90	100.9
Tb	159	3	He	6284141.06	96.8
Ho	165	1	No Gas	15209764.13	101.2
Ho	165	3	He	6155119.69	99.8
Lu	175	1	No Gas	15712196.33	101.2
Lu	175	3	He	5157319.27	102.3
Bi	209	1	No Gas	11544521.60	102.0
Bi	209	3	He	4890444.56	98.6

Energy Laboratories Inc

Standard LOG

Standard ID: ME211124 EL-MSICV-2
Standard Name: EL-MSICV-2
Date Prepared: 11/24/2021
Date Expires: 11/24/2022
Department: ME
Vendor: Inorganic Ventures
Lot Number:
Balance ID:
Comments:

Type: Primary
BY: Amanda E. McDani
Status: Open

Chemical / Solvent Used	BottleNo	Amt	Units	Exp
Multi Analyte Custom Grade Solution	14023	500	mL	11/24

Final Volume: mL

Stock Source

Base Units

Amount Added

Analvtes

CAS

Conc: **ug/mL**

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).


2.0 PRODUCT DESCRIPTION

Product Code: Multi Analyte Custom Grade Solution
 Catalog Number: EL-MSICV-2
 Lot Number: R2-MEB696849
 Matrix: 3% (v/v) HNO₃
 tr. HF
 Value / Analyte(s):
 1 000 µg/mL ea:
 Silicon,
 100 µg/mL ea:
 Tin, Titanium,
 Molybdenum, Antimony

Second Source: Whenever possible, this solution was manufactured from a second set of concentrates in our manufacturing facility.

3.0 CERTIFIED VALUES AND UNCERTAINTIES

ANALYTE	CERTIFIED VALUE	ANALYTE	CERTIFIED VALUE
Antimony, Sb	100.0 ± 0.6 µg/mL	Molybdenum, Mo	100.0 ± 0.5 µg/mL
Silicon, Si	1 000 ± 7 µg/mL	Tin, Sn	99.9 ± 0.4 µg/mL
Titanium, Ti	99.9 ± 0.6 µg/mL		

Density: 1.019 g/mL (measured at 20 ± 4 °C)

Assay Information:

ANALYTE	METHOD	NIST SRM#	SRM LOT#
Mo	ICP Assay	3134	130418
Sb	ICP Assay	3102a	140911
Si	ICP Assay	3150	130912
Sn	ICP Assay	3161a	070330
Sn	Calculated		See Sec. 4.2
Ti	ICP Assay	3162a	130925

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of $k = 2$.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{\text{CRM/RM}}$, where two or more methods of characterization are used is the weighted mean of the results:

$$X_{\text{CRM/RM}} = \sum(w_i)(X_i)$$

X_i = mean of Assay Method i with standard uncertainty $u_{\text{char } i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$$w_i = (1/u_{\text{char } i})^2 / (\sum(1/(u_{\text{char } i})^2))$$

$$\text{CRM/RM Expanded Uncertainty } (\pm) = U_{\text{CRM/RM}} = k (u_{\text{char}}^2 + u_{\text{bb}}^2 + u_{\text{ITS}}^2 + u_{\text{TS}}^2)^{1/2}$$

k = coverage factor = 2

$u_{\text{char}} = [\sum(w_i)^2 (u_{\text{char } i})^2]^{1/2}$ where $u_{\text{char } i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{ITS} = long term stability standard uncertainty (storage)

u_{TS} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{\text{CRM/RM}}$, where one method of characterization is used is the mean of individual results:

$$X_{\text{CRM/RM}} = (X_a) / (u_{\text{char } a})$$

X_a = mean of Assay Method A with

$u_{\text{char } a}$ = the standard uncertainty of characterization Method A

$$\text{CRM/RM Expanded Uncertainty } (\pm) = U_{\text{CRM/RM}} = k (u_{\text{char } a}^2 + u_{\text{bb}}^2 + u_{\text{ITS}}^2 + u_{\text{TS}}^2)^{1/2}$$

k = coverage factor = 2

$u_{\text{char } a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{ITS} = long term stability standard uncertainty (storage)

u_{TS} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES ($\mu\text{g/mL}$)

N/A

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

HF Note: This standard should not be prepared or stored in glass.

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va, 24073, USA; Telephone: 800.669.6799; 540.585.3030, Fax: 540.585.3012; inorganicventures.com; info@inorganicventures.com

11.0 CERTIFICATION, EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

September 14, 2020

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **September 14, 2024**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Michael Booth
Director, Quality Control



Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director



Energy Laboratories Inc

Standard LOG

Standard ID: ME211202 EL200.2MS
Standard Name: EL-200.2MS
Date Prepared: 12/2/2021
Date Expires: 12/2/2022
Department: ME
Vendor: Inorganic Ventures
Lot Number: P2-MEB685870
Balance ID:
Comments: Opened 8/11/2021; Expires 8/11/2022

Type: Primary
BY: Amanda E. McDani
Status: Open

Chemical / Solvent Used	BottleNo	Amt	Units	Exp
Multi Analyte Custom Grade Solution	14398	500	mL	12/2/

Final Volume: 500 mL

Stock Source

Base Units

Amount Added

Analvtes

CAS

Conc: **ug/mL**

300 Technology Drive
 Christiansburg, VA 24073 USA
 inorganicventures.com

 P: 800-669-6799/540-585-3030
 F: 540-585-3012
 info@inorganicventures.com

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).



2.0 PRODUCT DESCRIPTION

Product Code:	Multi Analyte Custom Grade Solution	
Catalog Number:	EL-200.2MS	
Lot Number:	S2-MEB702960	
Matrix:	5% (v/v) HNO ₃	
Value / Analyte(s):	5 000 µg/mL ea:	Potassium, Sodium,
	Calcium, Magnesium,	
	1 000 µg/mL ea:	
	Phosphorus,	
	500 µg/mL ea:	Iron,
	Manganese, Aluminum,	
	100 µg/mL ea:	Boron, Cobalt, Copper, Nickel, Selenium, Thallium, Zinc,
	Arsenic, Barium, Chromium, Lithium, Lead, Strontium, Vanadium,	
	50 µg/mL ea:	Beryllium,
	Cadmium,	
10 µg/mL ea:		
Silver		

ID #: 14398

Opened: _____

Multi Analyte Custom Grade Solution
Expires: 3/8/2025
Rec'd: 10/18/2021

 Energv Laboratories Inc 1120 So. 27th Street
 Billings MT 59107

3.0 CERTIFIED VALUES AND UNCERTAINTIES

ANALYTE	CERTIFIED VALUE	ANALYTE	CERTIFIED VALUE
Aluminum, Al	499.9 ± 1.9 µg/mL	Arsenic, As	100.0 ± 0.8 µg/mL
Barium, Ba	100.0 ± 0.4 µg/mL	Beryllium, Be	50.01 ± 0.30 µg/mL
Boron, B	100.0 ± 0.7 µg/mL	Cadmium, Cd	50.01 ± 0.22 µg/mL
Calcium, Ca	5 000 ± 20 µg/mL	Chromium, Cr	100.0 ± 0.7 µg/mL
Cobalt, Co	100.0 ± 0.5 µg/mL	Copper, Cu	100.0 ± 0.4 µg/mL
Iron, Fe	499.8 ± 2.1 µg/mL	Lead, Pb	100.0 ± 0.5 µg/mL
Lithium, Li	100.0 ± 0.4 µg/mL	Magnesium, Mg	5 000 ± 20 µg/mL
Manganese, Mn	500.1 ± 2.0 µg/mL	Nickel, Ni	100.0 ± 0.5 µg/mL
Phosphorus, P	1 000 ± 6 µg/mL	Potassium, K	5 000 ± 19 µg/mL
Selenium, Se	100.0 ± 0.8 µg/mL	Silver, Ag	10.00 ± 0.05 µg/mL
Sodium, Na	5 000 ± 18 µg/mL	Strontium, Sr	100.0 ± 0.4 µg/mL
Thallium, Tl	100.0 ± 0.7 µg/mL	Vanadium, V	100.0 ± 0.5 µg/mL
Zinc, Zn	100.1 ± 0.4 µg/mL		

Density: 1.097 g/mL (measured at 20 ± 4 °C)

Assay Information:

ANALYTE	METHOD	NIST SRM#	SRM LOT#
Ag	ICP Assay	3151	160729
Ag	Volhard	999c	999c
Al	ICP Assay	3101a	140903
Al	EDTA	928	928
As	ICP Assay	3103a	100818
B	ICP Assay	3107	110830
Ba	ICP Assay	3104a	140909
Ba	Gravimetric		See Sec. 4.2
Be	ICP Assay	3105a	090514
Ca	ICP Assay	3109a	130213
Ca	EDTA	928	928
Cd	ICP Assay	3108	130116
Cd	EDTA	928	928
Co	ICP Assay	3113	190630
Co	EDTA	928	928
Cr	ICP Assay	3112a	170630
Cu	ICP Assay	3114	121207
Cu	EDTA	928	928
Fe	ICP Assay	3126a	140812
Fe	EDTA	928	928
K	ICP Assay	3141a	140813
K	Gravimetric		See Sec. 4.2
Li	ICP Assay	3129a	100714
Li	Gravimetric		See Sec. 4.2
Mg	ICP Assay	3131a	140110
Mg	EDTA	928	928
Mn	ICP Assay	3132	050429
Mn	EDTA	928	928
Na	ICP Assay	3152a	120715
Na	Gravimetric		See Sec. 4.2
Ni	ICP Assay	3136	120619
Ni	EDTA	928	928
P	ICP Assay	3139a	060717
P	Acidimetric	84L	84L
Pb	ICP Assay	3128	101026
Pb	EDTA	928	928
Se	ICP Assay	3149	100901
Sr	EDTA	928	928
Sr	ICP Assay	Traceable to 3153a	K2-SR650985
Tl	ICP Assay	3158	151215
V	ICP Assay	3165	160906
V	EDTA	928	928
Zn	ICP Assay	3168a	120629
Zn	EDTA	928	928

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of $k = 2$.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{\text{CRM/RM}}$, where two or more methods of characterization are used is the weighted mean of the results:

$$X_{\text{CRM/RM}} = \sum(w_i)(X_i)$$

X_i = mean of Assay Method i with standard uncertainty $u_{\text{char } i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$$w_i = (1/u_{\text{char } i})^2 / (\sum(1/(u_{\text{char } i})^2))$$

$$\text{CRM/RM Expanded Uncertainty } (\pm) = U_{\text{CRM/RM}} = k (u_{\text{char}}^2 + u_{\text{bb}}^2 + u_{\text{Its}}^2 + u_{\text{TS}}^2)^{1/2}$$

k = coverage factor = 2

$u_{\text{char}} = [\sum(w_i)^2 (u_{\text{char } i})^2]^{1/2}$ where $u_{\text{char } i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{Its} = long term stability standard uncertainty (storage)

u_{TS} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{\text{CRM/RM}}$, where one method of characterization is used is the mean of individual results:

$$X_{\text{CRM/RM}} = (X_a) (u_{\text{char } a})$$

X_a = mean of Assay Method A with

$u_{\text{char } a}$ = the standard uncertainty of characterization Method A

$$\text{CRM/RM Expanded Uncertainty } (\pm) = U_{\text{CRM/RM}} = k (u_{\text{char } a}^2 + u_{\text{bb}}^2 + u_{\text{Its}}^2 + u_{\text{TS}}^2)^{1/2}$$

k = coverage factor = 2

$u_{\text{char } a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{Its} = long term stability standard uncertainty (storage)

u_{TS} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES ($\mu\text{g/mL}$)

N/A

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

Low Silver Note: This solution contains "LOW" levels of Silver. Please store this entire bottle inside a sealed glass jar.

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va. 24073, USA; Telephone: 800.669.6799; 540.585.3030, Fax: 540.585.3012; inorganicventures.com; info@inorganicventures.com

11.0 CERTIFICATION, EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

March 08, 2021

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- March 08, 2025

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Michael Booth
Director, Quality Control



Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director



Energy Laboratories Inc

Spike LOG

Standard ID: ME220117 AUDIGSPK

Standard Name: AUDIGSPK

Date Prepared: 1/17/2022

Date Expires: 10/25/2022

Department: ME

Vendor:

Lot Number:

Balance ID:

Comments:

Type: Secondary

BY: Amanda E. McDani

Status: Open

Final Volume: 50 mL

Stock Source

ME211202A U Stock

ME 211025 Th Sec Th Seondary Stock

ME211222 Ce 2nd Ce Secondary Stock

ME211222 La Sec La Secondary Stock

ME211229A AU 2n Au 2nd source Stock

ME211025A Te Stock

Base Units

ug/mL

ug/mL

ug/mL

ug/mL

ug/mL

ug/mL

Amount Added

5 mL

5 mL

5 mL

5 mL

15 mL

15 mL

Analvtes

CAS

Conc:

ug/mL

Energy Laboratories Inc

Standard LOG

Standard ID: ME211202A
Standard Name: U Stock
Date Prepared: 12/2/2021
Date Expires: 12/2/2022
Department: ME
Vendor: SCP Science
Lot Number: S210517021
Balance ID:
Comments:

Type: Primary
BY: Amanda E. McDani
Status: New

Chemical / Solvent Used	BottleNo	Amt	Units	Expires
ICP/ICPMS Standard Uranium	14419	500	mL	12/2/2022

Final Volume:
500 mL

Stock Source

Base Units

Amount Added

Analytes

CAS

Conc: **ug/mL**

U

1.0 DESCRIPTION:

PlasmaCAL ICP/ICPMS Standard - Uranium 1000 µg/ml
 Catalogue Number: 140-051-920/-921/-925
 Starting Material: Uranyl Nitrate 99.99%
 Lot Number: **S210517021**
 Matrix: 4% HNO₃ (See Section 3 for actual matrix)
 Expiration Date (End of month): **May 2023** (or 15 months after bottle is opened, whichever comes first)

2.0 CERTIFIED VALUES AND ASSOCIATED UNCERTAINTY:

Certified Concentration: **1004 µg/ml +/- 4 µg/ml**
985 µg/g +/- 4 µg/g
 Method of analysis: Inductively Coupled Plasma Atomic Emission Spectroscopy (ICP-AES)
 Traceability: NIST Standard Reference Material 3164 Lot: **080521**

Note: The uncertainty of the certified value has been calculated from applicable uncertainty contributors (u_i) including uncertainty established during characterization of the material (u_{char}), the between bottle variation (u_{bb}), short-term stability (u_{sts}) and long-term stability (u_{lts}) according to the model $u_c = \sqrt{(u_{char}^2 + u_{bb}^2 + u_{sts}^2 + u_{lts}^2)}$. This combined uncertainty has been further multiplied by a coverage factor (k) of 2 to provide a 95% confidence interval.

3.0 REFERENCE VALUES:

Density: **1.020 g/ml @ 24.0 °C**
 Actual Matrix: **4.0% (v/v) HNO₃**

% abundance of stable isotopes : ²³⁸U : 99.82% ; ²³⁵U : 0.18%

Note : The uranyl nitrate comes from a depleted source of uranium.

ID #: 14419

Opened: _____
 ICP/ICPMS Standard Uranium
Expires: 5/31/2023
 Rec'd: 10/20/2021
 Enerav Laboratories Inc 1120 So. 27th Street
 Billings MT 59107

Trace Metal Impurities as tested by ICP-MS:

Element	Conc. (ppm)	Element	Conc. (ppm)	Element	Conc. (ppm)	Element	Conc. (ppm)
Ag	<0.0010	Fe	<0.0018	Nd	<0.0010	Sn	<0.0010
Al	0.0252	Ga	<0.0010	Ni	<0.0010	Sr	<0.0025
As	<0.0010	Gd	<0.0010	Os	<0.0010	Ta	<0.0010
Au	<0.0010	Ge	<0.0010	P	<0.0026	Tb	<0.0010
B	<0.0015	Hf	<0.0010	Pb	<0.0010	Te	<0.0010
Ba	<0.0010	Hg	*	Pd	<0.0010	Th	<0.0010
Be	<0.0010	Ho	<0.0010	Pr	<0.0010	Ti	<0.0012
Bi	<0.0010	In	<0.0010	Pt	<0.0010	Tl	<0.0011
Ca	<0.0135	Ir	<0.0010	Rb	<0.0010	Tm	<0.0010
Cd	<0.0010	K	<0.0024	Re	<0.0010	U	N/A
Ce	<0.0010	La	<0.0010	Rh	<0.0010	V	<0.0010
Co	<0.0010	Li	<0.0010	Ru	<0.0010	W	<0.0020
Cr	<0.0010	Lu	<0.0010	S	*	Y	<0.0010
Cs	<0.0010	Mg	<0.0020	Sb	<0.0010	Yb	<0.0010
Cu	<0.0010	Mn	<0.0010	Sc	<0.0010	Zn	<0.0010
Dy	<0.0010	Mo	<0.0010	Se	<0.0010	Zr	<0.0010
Er	<0.0010	Na	<0.0010	Si	<0.1		
Eu	<0.0010	Nb	<0.0010	Sm	<0.0010		

*: Not tested

4.0 APPROVAL AND DATE OF CERTIFICATION:

Certification Approval: Yaling Sui, Chemist
 Certification Date: May 27, 2021

Yaling Sui

5.0 INTENDED USE / UTILISATION PRÉVUE:

- ICP Standards: For the calibration of, including but not limited to: ICP-AES, ICP-MS, FAAS, GFAA, XRF and DCP. / *Étalons ICP : Pour l'étalonnage d'instruments de mesure tels que: ICP-AES, ICP-MS, FAAS, GFAA, XRF et DCP.*
 - AA Standards: For the calibration of Flame (FAAS) and Graphite Furnace (GFAA) Atomic Absorption Spectrometers. / *Étalons AA : Pour l'étalonnage de spectromètres d'absorption atomique flamme (GFAA) et four au graphite (GFAA).*
 - Matrix Modifiers: For the optimization of analytical conditions to provide better Graphite Furnace Atomic Absorption (GFAA) instrument response and improved detection limits. / *Modificateur de matrice : Pour l'optimisation des conditions analytiques afin de fournir des meilleures réponses instrumentales et limites de détection pour SAA four au graphite.*
 - pH Standards: For the calibrating pH meters or for other wet chemistry applications. / *Étalons pH : Pour étalonnage de pH mètres et autres applications de chimie humide.*
 - Conductivity Standards: For electrolytic conductivity measurement as a calibration standard. / *Étalons de conductivité : Comme étalon pour les mesures de conductivité électrolytiques.*
 - IC Standards: for calibration of, but not limited to IC, HPLC, TLC, ISE, IR, NMR, MS, UV/VIS or other wet chemistry applications. / *Étalons IC : Pour étalonnage d'instruments tels que : IC, HPLC, TLC, ISE, IR, NMR, MS, UV/VIS et autres applications de chimie humide.*
- For any inquiries, please contact **SCP SCIENCE**. / *Pour toute question, veuillez contacter SCP SCIENCE.*

6.0 INSTRUCTIONS FOR USE / INSTRUCTIONS D'UTILISATION:

Handling and Storage / Manutention et entreposage: Keep product tightly capped when not in use. The solution should be opened for a minimum amount of time necessary to dispense the amount required. Do not pipet or use directly from container. Do not return unused portions back to container. Store under normal laboratory conditions. Avoid exposure to excessive sources of heat and humidity or direct sunlight. / *Garder les contenants bien fermés lorsque non utilisés. Le contenant devrait être ouvert seulement pour le temps requis afin de prélever la quantité nécessaire. Ne pas pipetter ou utiliser directement du contenant. Ne pas retourner les portions non-utilisées dans le contenant. Conserver dans des conditions normales de laboratoire. Éviter l'exposition à des sources de chaleur et d'humidité excessives ou à l'exposition solaire directe.*

Stability / Stabilité: This Standard is guaranteed to be stable and accurate to within the specified uncertainty of measurement up to the unopened expiry date, if sealed, or up to the opened expiry date (when indicated), whichever comes first, provided the solution is kept tightly capped and stored under the indicated storage conditions. Purchasers will be notified of any significant changes resulting in re-certification or withdrawal of the product prior to the expiration date. / *La stabilité et l'exactitude de cet étalon sont garanties d'être à l'intérieur de l'incertitude de mesure, jusqu'à la date d'expiration de la bouteille non-ouverte, si scellée, ou jusqu'à la date d'expiration de la bouteille ouverte (si indiquée), en presumant que le contenant est maintenu fermé et gardé dans les conditions d'entreposage indiquées. Les acheteurs seront avisés dans le cas où il y aura des changements significatifs nécessitant une re-certification ou un rappel du produit avant la date d'expiration.*

7.0 HAZARDOUS INFORMATION / INFORMATION SUR LES RISQUES POTENTIELS:

Please refer to the associated Safety Data Sheet (SDS) for information regarding this product (available at www.SCPSCIENCE.com). / *SVP vous référer à la Fiche Signalétique applicable pour de l'information sur ce produit (Disponible à www.SCPSCIENCE.com).*

8.0 HOMOGENEITY / HOMOGÉNÉITÉ:

This solution has been blended according to an in-house procedure and its homogeneity is guaranteed to be fit for purpose when a sample size sufficient for the intended method of analysis is used. / *Cette solution a été préparée selon une procédure maison et nous assurons que sa homogénéité est appropriée à l'emploi lorsqu'un échantillon suffisant pour la méthode d'analyse prévue est utilisé.*

9.0 TRACEABILITY / TRAÇABILITÉ:

This CRM (Certified Reference Material) is traceable to the NIST SRM (Standard Reference Material) indicated in section 2 through an unbroken chain of comparisons. In addition, balances used are regularly calibrated using weights which are traceable to NIST (National Institute of Standards and Technology) or NRC (National Research Council of Canada) standards. All conductivity meters used to analyze this standard have been regularly calibrated using a NIST or NRC traceable Thermometer and standards. All pH meters used to analyze this standard have been regularly calibrated using a NIST or NRC traceable thermometer and pH/MV simulator. / *Ce matériel de référence certifié est traçable au Matériel de Référence Standardisé de NIST indiqué à la section 2 par une chaîne de comparaison ininterrompue. De plus, les balances utilisées sont étalonnées régulièrement en utilisant des poids qui sont traçables au NIST (National Institute of Standards and Technology) ou au CRNC (Conseil National de Recherches Canada). Tout conductimètre utilisé afin d'analyser cet étalon a été sujet à un étalonnage périodique utilisant des thermomètres et étalons traçables au NIST ou CNRC. Tout pH mètre utilisé afin d'analyser cet étalon a été sujet à un étalonnage périodique utilisant des thermomètres et un simulateur pH/MV traçables au NIST ou au CNRC.*

10.0 PREPARATION / PRÉPARATION:

For the preparation of these solutions, 18 megohm/cm double deionized water, high-purity acids and glassware calibrated to ASTM Class A specifications are used. / *Une eau de 18 megohm/cm doublement déionisée, de l'acide de haute pureté, ainsi que de la verrerie étalonnée afin de satisfaire les spécifications Classe A de ASTM ont été utilisés pour la préparation de cet étalon.*

11.0 QUALITY SYSTEM CERTIFICATIONS / CERTIFICATIONS DE SYSTÈME QUALITÉ:

ISO 9001 Certification / Certification ISO 9001: This standard was produced in a facility which operates under a registered ISO 9001 Quality Management System. Please consult our web site for a copy of the most recent revision of our certificate of registration. / *Cet étalon a été fabriqué dans un laboratoire qui utilise un Système de Gestion de la Qualité enregistré à la norme ISO 9001. Veuillez consulter notre site web pour obtenir la version la plus récente de notre certificat d'enregistrement.*

ISO 17025 Accreditation / Accréditation ISO 17025: SCP SCIENCE (Corporate Headquarters) operates an ISO 17025 accredited laboratory. Please consult our web site for a copy of the most recent revision of our certificate and scope of accreditation. / *SCP SCIENCE (Siège social) est accréditée ISO 17025. Veuillez consulter notre site web afin d'obtenir la plus récente version de notre certificat d'accréditation ainsi que la portée de notre accréditation.*

ISO 17034 Accreditation / Accréditation ISO 17034 : SCP SCIENCE (Corporate Headquarters) is an ISO 17034 accredited Reference Material Producer. Please consult our website for a copy of our most recent certificate and scope of accreditation. / *SCP SCIENCE (Siège social) est un Fabricant de Matériaux de Référence Accrédité ISO 17034. Veuillez consulter notre site web afin d'obtenir la plus récente version de notre certificat d'accréditation ainsi que la portée de notre accréditation.*

CORPORATE HEADQUARTERS
21800 Clark Graham
Baie D'Urfé (Montréal), Quebec,
H9X 4B6 Canada
Phone: +1 (800) 361-6820
Fax: +1 (800) 253-5549

USA
3rd Party Distribution Center
348 Route 11, Champlain,
N.Y. 12919-4816
Phone: +1 (800) 361-6820
Fax: +1 (800) 253-5549

FRANCE
12 Ave. de Québec, Bat. IRIS
SILIC 642, 91965
Villebon sur Yvette, France
Phone: +33 (0) 1 69 18 71 17
Fax: +33 (0) 1 60 92 05 67

GERMANY
Alte Marktoberdorfer Straße 14, 87616
Marktoberdorf
Phone: +49 (0) 8342-89560-61
Fax: +49 (0) 8342-89560-69

Energy Laboratories Inc

Standard LOG

Standard ID: ME 211025 TH SECONDARY STOCK
Standard Name: Th Secondary Stock
Date Prepared: 10/25/2021
Date Expires: 10/25/2022
Department: ME
Vendor: Inorganic Ventures
Lot Number: S2-TH706436
Balance ID:
Comments: Opened 10/25/2021; Expires 10/25/2022

Type: Primary
BY: Stacy R. Hendricks
Status: Open

Chemical / Solvent Used	BottleNo	Amt	Units	Expires
Thorium Single Analyte Custom Grade Sol	14318	125	mL	10/25/2022

Final Volume:
500 mL

Stock Source

Base Units

Amount Added

Analytes

CAS

Conc: **ug/mL**

300 Technology Drive
 Christiansburg, VA 24073 USA
 inorganicventures.com

 P: 800-669-6799/540-585-3030
 F: 540-585-3012
 info@inorganicventures.com

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).



2.0 PRODUCT DESCRIPTION

Product Code: Single Analyte Custom Grade Solution
 Catalog Number: CGTH1
 Lot Number: S2-TH706436
 Matrix: 5% (v/v) HNO₃
 Value / Analyte(s): 1 000 µg/mL ea:
 Thorium
 Starting Material: TH(NO₃)₄·4H₂O
 Starting Material Lot#: 2250
 Starting Material Purity: 99.9905%

ID #: 14318
 Opened:
 Thorium Single Analyte Custom Grade Solution
Expires: 7/4/2025
 Rec'd: 9/24/2021
 Eneray Laboratories Inc 1120 So. 27th Street
 Billings MT 59107

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 1001 ± 4 µg/mL
Density: 1.026 g/mL (measured at 20 ± 4 °C)

Assay Information:

Assay Method #1 **1001 ± 3 µg/mL**
 EDTA NIST SRM 928 Lot Number: 928

Assay Method #2 **1001 ± 6 µg/mL**
 Calculated NIST SRM Lot Number: See Sec. 4.2

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$$X_{CRM/RM} = \sum(w_i)(X_i)$$

X_i = mean of Assay Method i with standard uncertainty $u_{char i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$$w_i = (1/u_{char i}^2) / (\sum(1/(u_{char i}^2)))$$

$$CRM/RM \text{ Expanded Uncertainty } (\pm) = U_{CRM/RM} = k (u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{1/2}$$

k = coverage factor = 2

$u_{char} = [\sum(w_i)^2 (u_{char i}^2)]^{1/2}$ where $u_{char i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$$X_{CRM/RM} = (X_a) (u_{char a})$$

X_a = mean of Assay Method A with

$u_{char a}$ = the standard uncertainty of characterization Method A

$$CRM/RM \text{ Expanded Uncertainty } (\pm) = U_{CRM/RM} = k (u^2_{char a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{1/2}$$

k = coverage factor = 2

$u_{char a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES ($\mu\text{g/mL}$)

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3 μm .

M Ag < 0.000448	M Eu < 0.000224	O Na 0.064077	M Se < 0.005827	M Zn 0.003183
O Al 0.010962	M Fe 0.012392	M Nb < 0.003138	i Si <	M Zr < 0.010310
M As < 0.038776	M Ga < 0.004931	M Nd 0.004697	M Sm 0.000871	
M Au < 0.000224	M Gd 0.000300	M Ni < 0.006724	M Sn < 0.028242	
M B < 0.021293	M Ge < 0.008965	M Os < 0.000224	M Sr 0.002582	
M Ba 0.001317	M Hf < 0.000224	i P <	M Ta < 0.001344	
M Be < 0.000224	M Hg < 0.000448	M Pb 0.003287	M Tb < 0.001793	
M Bi < 0.001793	M Ho < 0.001344	M Pd < 0.000448	M Te < 0.010086	
O Ca 0.051969	M In 0.000134	M Pr 0.001202	s Th <	
M Cd < 0.001344	M Ir < 0.000224	M Pt < 0.000224	M Ti < 0.004258	
M Ce 0.015420	O K 0.028928	M Rb < 0.005155	M Tl < 0.000224	
M Co < 0.001344	M La 0.003577	M Re < 0.000224	M Tm < 0.000224	
M Cr < 0.015465	M Li < 0.000448	M Rh < 0.000224	M U 0.006564	
M Cs < 0.013896	M Lu < 0.000224	M Ru < 0.000224	M V < 0.001793	
M Cu 0.001472	O Mg 0.027914	i S <	M W < 0.000224	
M Dy 0.000197	M Mn 0.001814	M Sb < 0.004931	M Y 0.000860	
M Er < 0.002241	M Mo < 0.000896	M Sc < 0.000672	M Yb < 0.000224	

M - Checked by ICP-MS O - Checked by ICP-OES i - Spectral Interference
n - Not Checked For s - Solution Standard Element

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit www.inorganicventures.com/TCT

Atomic Weight; Valence; Coordination Number; Chemical Form in Solution - 232.04 +4 8 Th(OH) 3+ and Th(OH)22+

Chemical Compatibility -Soluble in HCl, and HNO3. Avoid H3PO4, H2SO4 and HF although solubilities may not be a problem depending upon pH and matrix (For example: ThF4 is soluble in acids). Avoid neutral to basic media. Th4+ is stable with most metals and inorganic anions forming an insoluble carbonate, oxide, fluoride, oxalate, sulfate and phosphate in neutral to slightly acidic media.

Stability - 2-100 ppb levels stable for months in 1% HNO3 / LDPE container. 1-10,000 ppm solutions chemically stable for years in 2-5% HNO3 / LDPE container.

Th Containing Samples (Preparation and Solution) -Metal (Soluble in Aqua Regia); Oxide (The heated oxide is not soluble in acids except hot conc. H2SO4); Ores (Na2O2 fusion at 480 ± 20EC for 7 minutes, cool and treat sintered mass with 50 mL cold water and stand until disintegrated. The mass is transferred to a beaker and acidified with HCl with 25 mL excess HCl added. Any residue is collected on a Whatman No. 42 filter, dried and ignited to 1000 EC in Pt0 crucible and the ash treated with H2SO4 / HF and fumed. If residue remains, then treat it by peroxide fusion as above.)

Atomic Spectroscopic Information (ICP-OES D.L.s are given as radial/axial view):

Technique/Line	Estimated D.L.	Order	Interferences (underlined indicates severe)
ICP-MS 232 amu	1 ppt	N/A	
ICP-OES 274.716 nm	0.08 / 0.008 µg/mL	1	Ti, Ta, Fe, V
ICP-OES 283.231 nm	0.07 / 0.007 µg/mL	1	U, Mo, Ti, Fe, Cr
ICP-OES 283.730 nm	0.07 / 0.007 µg/mL	1	U, Zr

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va. 24073, USA; Telephone: 800.669.6799; 540.585.3030, Fax: 540.585.3012; inorganicventures.com; info@inorganicventures.com

11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

July 04, 2021

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- July 04, 2025

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Michael Booth
Director, Quality Control



Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director



Energy Laboratories Inc

Standard LOG

Standard ID: ME211222 CE 2ND SOURCE
Standard Name: Ce Secondary Stock
Date Prepared: 12/22/2021
Date Expires: 12/22/2022
Department: ME
Vendor: SCP Science
Lot Number: S210208003
Balance ID:
Type: Primary
BY: Amanda E. McDani
Status: Open
Comments: opened 12/22/2021, expires 12/22/2022

Chemical / Solvent Used	BottleNo	Amt	Units	Expires
Cerium PlasmaCal Standard	14327	125	mL	12/22/2022

Final Volume:
125 mL

Stock Source

Base Units

Amount Added

Analytes

CAS

Conc: **ug/mL**

A Cerium

7440-45-1

1000

Ce

1.0 DESCRIPTION: **PlasmaCAL ICP/ICPMS Standard - Cerium 1000 µg/ml**
 Catalogue Number: 140-051-580/-581/-585
 Starting Material: Cerium(III) Nitrate Hexahydrate 99.99+%
 Lot Number: **S210208003**
 Matrix: 4% HNO₃ (See Section 3 for actual matrix)
 Expiration Date (End of month): **February 2023** (or 15 months after bottle is opened, whichever comes first)

2.0 CERTIFIED VALUES AND ASSOCIATED UNCERTAINTY:
 Certified Concentration: **1003 µg/ml +/- 4 µg/ml**
982 µg/g +/- 4 µg/g
 Method of analysis: Inductively Coupled Plasma Atomic Emission Spectroscopy (ICP-AES)
 Traceability: NIST Standard Reference Material 3110 Lot: **090504**

Note: The uncertainty of the certified value has been calculated from applicable uncertainty contributors (u_i) including uncertainty established during characterization of the material (u_{char}), the between bottle variation (u_{bb}), short-term stability (u_{sts}) and long-term stability (u_{lts}) according to the model $u_c = \sqrt{(u_{char}^2 + u_{bb}^2 + u_{sts}^2 + u_{lts}^2)}$. This combined uncertainty has been further multiplied by a coverage factor (k) of 2 to provide a 95% confidence interval.

3.0 REFERENCE VALUES:
 Density: **1.021 g/ml @ 22.5 °C**
 Actual Matrix: **4.0% (v/v) HNO₃**
 Trace Metal Impurities as tested by ICP-MS:

ID #: 14327
 Opened: _____
 Cerium PlasmaCal Standard
Expires: 2/28/2023
 Rec'd: 9/29/2021
 Energy Laboratories Inc 1120 So. 27th Street
 Billings MT 59107

Element	Conc. (ppm)	Element	Conc. (ppm)	Element	Conc. (ppm)	Element	Conc. (ppm)
Ag	<0.0010	Fe	<0.0018	Nd	0.0102	Sn	<0.0010
Al	0.0148	Ga	0.0526	Ni	0.0064	Sr	<0.0025
As	<0.0010	Gd	<0.0010	Os	<0.0010	Ta	<0.0010
Au	<0.0010	Ge	<0.0010	P	<0.0132	Tb	<0.0010
B	<0.0015	Hf	<0.0010	Pb	<0.0010	Te	<0.0010
Ba	<0.0010	Hg	*	Pd	<0.0010	Th	<0.0010
Be	<0.0010	Ho	<0.0010	Pr	0.0235	Ti	<0.0012
Bi	<0.0010	In	<0.0010	Pt	<0.0010	Tl	<0.0011
Ca	0.0375	Ir	<0.0010	Rb	<0.0010	Tm	<0.0010
Cd	<0.0010	K	<0.0024	Re	<0.0010	U	<0.0010
Ce	N/A	La	<0.10	Rh	<0.0010	V	<0.0010
Co	<0.0010	Li	<0.0010	Ru	<0.0010	W	<0.0020
Cr	<0.0010	Lu	<0.0010	S	*	Y	<0.0010
Cs	<0.0010	Mg	<0.0010	Sb	<0.0010	Yb	<0.0010
Cu	0.0121	Mn	<0.0010	Sc	<0.0010	Zn	<0.0010
Dy	<0.0010	Mo	<0.0010	Se	<0.0010	Zr	<0.0010
Er	<0.0010	Na	<0.0010	Si	<0.10		
Eu	0.0035	Nb	<0.0010	Sm	<0.0010		

*: Not tested

4.0 APPROVAL AND DATE OF CERTIFICATION:
 Certification Approval: Yaling Sui, Chemist
 Certification Date: February 22, 2021

Yaling Sui

5.0 INTENDED USE / UTILISATION PRÉVUE:

- ICP Standards: For the calibration of, including but not limited to: ICP-AES, ICP-MS, FAAS, GFAA, XRF and DCP. / *Étalons ICP : Pour l'étalonnage d'instruments de mesure tels que: ICP-AES, ICP-MS, FAAS, GFAA, XRF et DCP.*
 - AA Standards: For the calibration of Flame (FAAS) and Graphite Furnace (GFAA) Atomic Absorption Spectrometers. / *Étalons AA : Pour l'étalonnage de spectromètres d'absorption atomique flamme (FAAS) et four au graphite (GFAA).*
 - Matrix Modifiers: For the optimization of analytical conditions to provide better Graphite Furnace Atomic Absorption (GFAA) instrument response and improved detection limits. / *Modificateur de matrice : Pour l'optimisation des conditions analytiques afin de fournir des meilleures réponses instrumentales et limites de détection pour SAA four au graphite.*
 - pH Standards: For the calibrating pH meters or for other wet chemistry applications. / *Étalons pH : Pour étalonnage de pH mètres et autres applications de chimie humide.*
 - Conductivity Standards: For electrolytic conductivity measurement as a calibration standard. / *Étalons de conductivité : Comme étalon pour les mesures de conductivité électrolytiques.*
 - IC Standards: for calibration of, but not limited to IC, HPLC, TLC, ISE, IR, NMR, MS, UV/VIS or other wet chemistry applications. / *Étalons IC : Pour étalonnage d'instruments tels que : IC, HPLC, TLC, ISE, IR, NMR, MS, UV/VIS et autres applications de chimie humide.*
- For any inquiries, please contact **SCP SCIENCE**. / *Pour toute question, veuillez contacter SCP SCIENCE.*

6.0 INSTRUCTIONS FOR USE / INSTRUCTIONS D'UTILISATION:

Handling and Storage / Manutention et entreposage: Keep product tightly capped when not in use. The solution should be opened for a minimum amount of time necessary to dispense the amount required. Do not pipet or use directly from container. Do not return unused portions back to container. Store under normal laboratory conditions. Avoid exposure to excessive sources of heat and humidity or direct sunlight. / *Garder les contenants bien fermés lorsque non utilisés. Le contenant devrait être ouvert seulement pour le temps requis afin de prélever la quantité nécessaire. Ne pas pipetter ou utiliser directement du contenant. Ne pas retourner les portions non-utilisées dans le contenant. Conserver dans des conditions normales de laboratoire. Éviter l'exposition à des sources de chaleur et d'humidité excessives ou à l'exposition solaire directe.*

Stability / Stabilité: This Standard is guaranteed to be stable and accurate to within the specified uncertainty of measurement up to the unopened expiry date, if sealed, or up to the opened expiry date (when indicated), whichever comes first, provided the solution is kept tightly capped and stored under the indicated storage conditions. Purchasers will be notified of any significant changes resulting in re-certification or withdrawal of the product prior to the expiration date. / *La stabilité et l'exactitude de cet étalon sont garanties d'être à l'intérieur de l'incertitude de mesure, jusqu'à la date d'expiration de la bouteille non-ouverte, si scellée, ou jusqu'à la date d'expiration de la bouteille ouverte (si indiquée), en présumant que le contenant est maintenu fermé et gardé dans les conditions d'entreposage indiquées. Les acheteurs seront avisés dans le cas où il y aura des changements significatifs nécessitant une re-certification ou un rappel du produit avant la date d'expiration.*

7.0 HAZARDOUS INFORMATION / INFORMATION SUR LES RISQUES POTENTIELS:

Please refer to the associated Safety Data Sheet (SDS) for information regarding this product (available at www.SCPSCIENCE.com). / *SVP vous référer à la Fiche Signalétique applicable pour de l'information sur ce produit (Disponible à www.SCPSCIENCE.com).*

8.0 HOMOGENEITY / HOMOGÉNÉITÉ:

This solution has been blended according to an in-house procedure and its homogeneity is guaranteed to be fit for purpose when a sample size sufficient for the intended method of analysis is used. / *Cette solution a été préparée selon une procédure maison et nous assurons que sa homogénéité est approprié à l'emploi lorsqu'un échantillon suffisant pour la méthode d'analyse prévue est utilisé.*

9.0 TRACEABILITY / TRAÇABILITÉ:

This CRM (Certified Reference Material) is traceable to the NIST SRM (Standard Reference Material) indicated in section 2 through an unbroken chain of comparisons. In addition, balances used are regularly calibrated using weights which are traceable to NIST (National Institute of Standards and Technology) or NRC (National Research Council of Canada) standards. All conductivity meters used to analyze this standard have been regularly calibrated using a NIST or NRC traceable Thermometer and standards. All pH meters used to analyze this standard have been regularly calibrated using a NIST or NRC traceable thermometer and pH/MV simulator. / *Ce matériel de référence certifié est traçable au Matériel de Référence Standardisé de NIST indiqué à la section 2 par une chaîne de comparaison ininterrompue. De plus, les balances utilisées sont étalonnées régulièrement en utilisant des poids qui sont traçables au NIST (National Institute of Standards and Technology) ou au CRNC (Conseil National de Recherches Canada). Tout conductimètre utilisé afin d'analyser cet étalon a été sujet à un étalonnage périodique utilisant des thermomètres et étalons traçables au NIST ou CNRC. Tout pH mètre utilisé afin d'analyser cet étalon a été sujet à un étalonnage périodique utilisant des thermomètres et un simulateur pH/MV traçables au NIST ou au CNRC.*

10.0 PREPARATION / PRÉPARATION:

For the preparation of these solutions, 18 megohm/cm double deionized water, high-purity acids and glassware calibrated to ASTM Class A specifications are used. / *Une eau de 18 megohm/cm doublement déionisé, de l'acide de haute pureté, ainsi que de la verrerie étalonnée afin de satisfaire les spécifications Classe A de ASTM ont été utilisés pour la préparation de cet étalon.*

11.0 QUALITY SYSTEM CERTIFICATIONS / CERTIFICATIONS DE SYSTÈME QUALITÉ:

ISO 9001 Certification / Certification ISO 9001: This standard was produced in a facility which operates under a registered ISO 9001 Quality Management System. Please consult our web site for a copy of the most recent revision of our certificate of registration. / *Cet étalon a été fabriqué dans un laboratoire qui utilise un Système de Gestion de la Qualité enregistré à la norme ISO 9001. Veuillez consulter notre site web pour obtenir la version la plus récente de notre certificat d'enregistrement.*

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CORPORATE HEADQUARTERS
21800 Clark Graham
Baie D'Urfé (Montréal), Québec,
H9X 4B6 Canada
Phone: +1 (800) 361-6820
Fax: +1 (800) 253-5549

USA
3rd Party Distribution Center
348 Route 11, Champlain,
N.Y. 12919-4816
Phone: +1 (800) 361-6820
Fax: +1 (800) 253-5549

FRANCE
12 Ave. de Québec, Bat. IRIS
SILIC 642, 91965
Villebon sur Yvette, France
Phone: +33 (0) 1 69 18 71 17
Fax: +33 (0) 1 60 92 05 67

GERMANY
Alte Marktoberdorfer Straße 14, 87616
Marktoberdorf
Phone: +49 (0) 8342-89560-61
Fax: +49 (0) 8342-89560-69

Energy Laboratories Inc

Standard LOG

Standard ID: ME211222 LA SECOND SOURCE
Standard Name: La Secondary Stock
Date Prepared: 12/22/2021
Date Expires: 12/22/2022
Department: ME
Vendor: SCP Science
Lot Number: S210803016
Balance ID:
Comments: opened 12/22/2021, expires 12/22/2022

Type: Primary
BY: Amanda E. McDani
Status: Open

Chemical / Solvent Used	BottleNo	Amt	Units	Expires
Lanthanum PlasmaCal Standard	14326	125	mL	12/22/2022

Final Volume:
mL

Stock Source

Base Units

Amount Added

Analytes

CAS

Conc: **ug/mL**

La

1.0 DESCRIPTION: **PlasmaCAL ICP/ICPMS Standard - Lanthanum 1000 µg/ml**
 Catalogue Number: 140-051-570/-571/-575
 Starting Material: Lanthanum(III) Oxide 99.99+%
 Lot Number: **S210803016**
 Matrix: 4% HNO₃ (See Section 3 for actual matrix)
 Expiration Date (End of month): **August 2023** (or 15 months after bottle is opened, whichever comes first)

2.0 CERTIFIED VALUES AND ASSOCIATED UNCERTAINTY:
 Certified Concentration: **1005 µg/ml +/- 4 µg/ml**
985 µg/g +/- 3 µg/g
 Method of analysis: Inductively Coupled Plasma Atomic Emission Spectroscopy (ICP-AES)
 Traceability: NIST Standard Reference Material 3127a Lot: **151030**

Note: The uncertainty of the certified value has been calculated from applicable uncertainty contributors (u_i) including uncertainty established during characterization of the material (u_{char}), the between bottle variation (u_{bb}), short-term stability (u_{sts}) and long-term stability (u_{lts}) according to the model $u_c = \sqrt{(u_{char}^2 + u_{bb}^2 + u_{sts}^2 + u_{lts}^2)}$. This combined uncertainty has been further multiplied by a coverage factor (k) of 2 to provide a 95% confidence interval.

3.0 REFERENCE VALUES:
 Density: **1.020 g/ml @ 23.2 °C**
 Actual Matrix: **4.0% (v/v) HNO₃**

ID #: 14326

Opened: _____

Lanthanum PlasmaCal Standard

Expires: 8/31/2023

Rec'd: 9/29/2021

Energy Laboratories Inc 1120 So. 27th Street
 Billings MT 59107

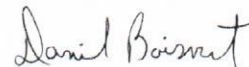
Trace Metal Impurities as tested by ICP-MS:

Element	Conc. (ppm)	Element	Conc. (ppm)	Element	Conc. (ppm)	Element	Conc. (ppm)
Ag	<0.0010	Fe	<0.0018	Nd	<0.0010	Sn	<0.0010
Al	0.0106	Ga	<0.0010	Ni	<0.0010	Sr	<0.0025
As	<0.0010	Gd	0.0889	Os	<0.0010	Ta	<0.0010
Au	<0.0010	Ge	<0.0010	P	<0.0026	Tb	<0.0010
B	<0.0015	Hf	<0.0010	Pb	<0.0010	Te	<0.0010
Ba	0.0031	Hg	*	Pd	<0.0010	Th	<0.0010
Be	<0.0010	Ho	<0.0010	Pr	<0.0010	Ti	<0.0062
Bi	<0.0010	In	<0.0010	Pt	<0.0010	Tl	<0.0011
Ca	0.0169	Ir	<0.0010	Rb	<0.0010	Tm	<0.0010
Cd	<0.0010	K	<0.0024	Re	<0.0010	U	<0.0010
Ce	0.0272	La	N/A	Rh	<0.0010	V	<0.0010
Co	<0.0010	Li	<0.0010	Ru	<0.0010	W	<0.0020
Cr	<0.0010	Lu	<0.0010	S	*	Y	0.0020
Cs	<0.0010	Mg	<0.0010	Sb	<0.0010	Yb	<0.0010
Cu	<0.0010	Mn	<0.0010	Sc	<0.0010	Zn	<0.0010
Dy	<0.0010	Mo	<0.0010	Se	<0.0010	Zr	<0.0010
Er	<0.0010	Na	0.0156	Si	<0.1		
Eu	<0.0010	Nb	<0.0010	Sm	<0.0010		

*: Not tested

4.0 APPROVAL AND DATE OF CERTIFICATION:

Certification Approval: Daniel Boisvert, Chemist
 Certification Date: August 12, 2021



5.0 INTENDED USE / UTILISATION PRÉVUE:

- ICP Standards: For the calibration of, including but not limited to: ICP-AES, ICP-MS, FAAS, GFAA, XRF and DCP. / *Étalons ICP : Pour l'étalonnage d'instruments de mesure tels que: ICP-AES, ICP-MS, FAAS, GFAA, XRF et DCP.*

- AA Standards: For the calibration of Flame (FAAS) and Graphite Furnace (GFAA) Atomic Absorption Spectrometers. / *Étalons AA : Pour l'étalonnage de spectromètres d'absorption atomique flamme (GFAA) et four au graphite (GFAA).*

- Matrix Modifiers: For the optimization of analytical conditions to provide better Graphite Furnace Atomic Absorption (GFAA) instrument response and improved detection limits. / *Modificateur de matrice : Pour l'optimisation des conditions analytiques afin de fournir des meilleures réponses instrumentales et limites de détection pour SAA four au graphite.*

- pH Standards: For the calibrating pH meters or for other wet chemistry applications. / *Étalons pH : Pour étalonnage de pH mètres et autres applications de chimie humide.*

- Conductivity Standards: For electrolytic conductivity measurement as a calibration standard. / *Étalons de conductivité : Comme étalon pour les mesures de conductivité électrolytiques.*

- IC Standards: for calibration of, but not limited to IC, HPLC, TLC, ISE, IR, NMR, MS, UV/VIS or other wet chemistry applications. / *Étalons IC : Pour étalonnage d'instruments tels que : IC, HPLC, TLC, ISE, IR, NMR, MS, UV/VIS et autres applications de chimie humide.*

For any inquiries, please contact **SCP SCIENCE**. / *Pour toute question, veuillez contacter SCP SCIENCE.*

6.0 INSTRUCTIONS FOR USE / INSTRUCTIONS D'UTILISATION:

Handling and Storage / Manutention et entreposage: Keep product tightly capped when not in use. The solution should be opened for a minimum amount of time necessary to dispense the amount required. Do not pipet or use directly from container. Do not return unused portions back to container. Store under normal laboratory conditions. Avoid exposure to excessive sources of heat and humidity or direct sunlight. / *Garder les contenants bien fermés lorsque non utilisés. Le contenant devrait être ouvert seulement pour le temps requis afin de prélever la quantité nécessaire. Ne pas pipetter ou utiliser directement du contenant. Ne pas retourner les portions non-utilisées dans le contenant. Conserver dans des conditions normales de laboratoire. Éviter l'exposition à des sources de chaleur et d'humidité excessives ou à l'exposition solaire directe.*

Stability / Stabilité: This Standard is guaranteed to be stable and accurate to within the specified uncertainty of measurement up to the unopened expiry date, if sealed, or up to the opened expiry date (when indicated), whichever comes first, provided the solution is kept tightly capped and stored under the indicated storage conditions. Purchasers will be notified of any significant changes resulting in re-certification or withdrawal of the product prior to the expiration date. / *La stabilité et l'exactitude de cet étalon sont garanties d'être à l'intérieur de l'incertitude de mesure, jusqu'à la date d'expiration de la bouteille non-ouverte, si scellée, ou jusqu'à la date d'expiration de la bouteille ouverte (si indiquée), en présumant que le contenant est maintenu fermé et gardé dans les conditions d'entreposage indiquées. Les acheteurs seront avisés dans le cas où il y aura des changements significatifs nécessitant une re-certification ou un rappel du produit avant la date d'expiration.*

7.0 HAZARDOUS INFORMATION / INFORMATION SUR LES RISQUES POTENTIELS:

Please refer to the associated Safety Data Sheet (SDS) for information regarding this product (available at www.SCPSCIENCE.com). / *SVP vous référer à la Fiche Signalétique applicable pour de l'information sur ce produit (Disponible à www.SCPSCIENCE.com).*

8.0 HOMOGENEITY / HOMOGÉNÉITÉ:

This solution has been blended according to an in-house procedure and its homogeneity is guaranteed to be fit for purpose when a sample size sufficient for the intended method of analysis is used. / *Cette solution a été préparée selon une procédure maison et nous assurons que sa homogénéité est approprié à l'emploi lorsqu'un échantillon suffisant pour la méthode d'analyse prévue est utilisé.*

9.0 TRACEABILITY / TRAÇABILITÉ:

This CRM (Certified Reference Material) is traceable to the NIST SRM (Standard Reference Material) indicated in section 2 through an unbroken chain of comparisons. In addition, balances used are regularly calibrated using weights which are traceable to NIST (National Institute of Standards and Technology) or NRC (National Research Council of Canada) standards. All conductivity meters used to analyze this standard have been regularly calibrated using a NIST or NRC traceable Thermometer and standards. All pH meters used to analyze this standard have been regularly calibrated using a NIST or NRC traceable thermometer and pH/MV simulator. / *Ce matériel de référence certifié est traçable au Matériel de Référence Standardisé de NIST indiqué à la section 2 par une chaîne de comparaison ininterrompue. De plus, les balances utilisées sont étalonnées régulièrement en utilisant des poids qui sont traçables au NIST (National Institute of Standards and Technology) ou au CRNC (Conseil National de Recherches Canada). Tout conductimètre utilisé afin d'analyser cet étalon a été sujet à un étalonnage périodique utilisant des thermomètres et étalons traçables au NIST ou au CNRC. Tout pH mètre utilisé afin d'analyser cet étalon a été sujet à un étalonnage périodique utilisant des thermomètres et un simulateur pH/MV traçables au NIST ou au CNRC.*

10.0 PREPARATION / PRÉPARATION:

For the preparation of these solutions, 18 megohm/cm double deionized water, high-purity acids and glassware calibrated to ASTM Class A specifications are used. / *Une eau de 18 megohm/cm doublement déionisé, de l'acide de haute pureté, ainsi que de la verrerie étalonnée afin de satisfaire les spécifications Classe A de ASTM ont été utilisés pour la préparation de cet étalon.*

11.0 QUALITY SYSTEM CERTIFICATIONS / CERTIFICATIONS DE SYSTÈME QUALITÉ:

ISO 9001 Certification / Certification ISO 9001: This standard was produced in a facility which operates under a registered ISO 9001 Quality Management System. Please consult our web site for a copy of the most recent revision of our certificate of registration. / *Cet étalon a été fabriqué dans un laboratoire qui utilise un Système de Gestion de la Qualité enregistré à la norme ISO 9001. Veuillez consulter notre site web pour obtenir la version la plus récente de notre certificat d'enregistrement.*

ISO 17025 Accreditation / Accréditation ISO 17025: SCP SCIENCE (Corporate Headquarters) operates an ISO 17025 accredited laboratory. Please consult our web site for a copy of the most recent revision of our certificate and scope of accreditation. / *SCP SCIENCE (Siège social) est accréditée ISO 17025. Veuillez consulter notre site web afin d'obtenir la plus récente version de notre certificat d'accréditation ainsi que la portée de notre accréditation.*

ISO 17034 Accreditation / Accréditation ISO 17034 : SCP SCIENCE (Corporate Headquarters) is an ISO 17034 accredited Reference Material Producer. Please consult our website for a copy of our most recent certificate and scope of accreditation. / *SCP SCIENCE (Siège social) est un Fabricant de Matériaux de Référence Accrédité ISO 17034. Veuillez consulter notre site web afin d'obtenir la plus récente version de notre certificat d'accréditation ainsi que la portée de notre accréditation.*

CORPORATE HEADQUARTERS
21800 Clark Graham
Baie D'Urfé (Montréal), Quebec,
H9X 4B6 Canada
Phone: +1 (800) 361-6820
Fax: +1 (800) 253-5549

USA
3rd Party Distribution Center
348 Route 11, Champlain,
N.Y. 12919-4816
Phone: +1 (800) 361-6820
Fax: +1 (800) 253-5549

FRANCE
12 Ave. de Québec, Bat. IRIS
91140, Villebon-sur-Yvette
Phone: +33 (0) 1 69 18 71 17
Fax: +33 (0) 1 60 92 05 67

GERMANY
Alte Marktberdorfer Straße 14, 87616
Marktberdorf
Phone: +49 (0) 8342-89560-61
Fax: +49 (0) 8342-89560-69

Energy Laboratories Inc

Standard LOG

Standard ID: ME211229A AU 2ND SOURCE
Standard Name: Au 2nd source Stock
Date Prepared: 12/29/2021
Date Expires: 12/29/2022
Department: ME
Vendor: SCP Science
Lot Number: S211129013
Balance ID:
Comments: opened 12/29/2021; expires 12/29/2022

Type: Primary
BY: Amanda E. McDani
Status: Open

Chemical / Solvent Used	BottleNo	Amt	Units	Expires
ICP/ICPMS Standard Gold	14710	500	mL	12/29/2022

Final Volume:
500 mL

Stock Source

Base Units

Amount Added

Analytes

CAS

Conc: **ug/mL**

ID #: 14710

Opened:

ICP/ICPMS Standard Gold

Expires: 12/31/2023

Rec'd: 12/29/2021

Eneray Laboratories Inc 1120 So. 27th Street

Billings MT 59107

SCP SCIENC

Providing Innovative Solutions to Analytical

Certificate of Analysis**Au****1.0 DESCRIPTION:****PlasmaCAL ICP/ICPMS Standard - Gold 1000 µg/ml**

Catalogue Number: 140-052-790/-791/-795

Starting Material: Gold Metal 99.99%+

Lot Number: **S211129013**

Matrix: 10% HCl (See Section 3 for actual matrix)

Expiration Date (End of month): **December 2023** (or 15 months after bottle is opened, whichever comes first)**2.0 CERTIFIED VALUES AND ASSOCIATED UNCERTAINTY:**Certified Concentration: **1001 µg/ml +/- 4 µg/ml****982 µg/g +/- 4 µg/g**

Method of analysis: Inductively Coupled Plasma Atomic Emission Spectroscopy (ICP-AES)

Traceability: NIST Standard Reference Material 3121 Lot: **991806**

Note: The uncertainty of the certified value has been calculated from applicable uncertainty contributors (u_i) including uncertainty established during characterization of the material (u_{char}), the between bottle variation (u_{bb}), short-term stability (u_{sts}) and long-term stability (u_{lts}) according to the model $u_c = \sqrt{(u_{char}^2 + u_{bb}^2 + u_{sts}^2 + u_{lts}^2)}$. This combined uncertainty has been further multiplied by a coverage factor (k) of 2 to provide a 95% confidence interval.

3.0 REFERENCE VALUES:Density: **1.019 g/ml @ 22.4 °C**Actual Matrix: **10.0% (v/v) HCl**

Trace Metal Impurities as tested by ICP-MS:

Element	Conc. (ppm)	Element	Conc. (ppm)	Element	Conc. (ppm)	Element	Conc. (ppm)
Ag	0.3851	Fe	<0.0090	Nd	<0.0010	Sn	<0.0010
Al	0.0062	Ga	<0.0010	Ni	<0.0010	Sr	<0.0025
As	<0.0010	Gd	<0.0010	Os	<0.0010	Ta	<0.0010
Au	N/A	Ge	<0.0010	P	<0.0132	Tb	<0.0010
B	<0.0015	Hf	<0.0010	Pb	<0.0010	Te	<0.0010
Ba	<0.0010	Hg	*	Pd	0.0434	Th	<0.0010
Be	<0.0010	Ho	<0.0010	Pr	<0.0010	Ti	<0.0012
Bi	<0.0010	In	<0.0010	Pt	0.0048	Tl	<0.0011
Ca	<0.0135	Ir	<0.0010	Rb	<0.0010	Tm	<0.0010
Cd	<0.0010	K	0.0362	Re	<0.0010	U	<0.0010
Ce	<0.0010	La	<0.0010	Rh	<0.0010	V	<0.0010
Co	<0.0010	Li	<0.0010	Ru	<0.0010	W	<0.0020
Cr	<0.0010	Lu	<0.0010	S	*	Y	<0.0010
Cs	0.0029	Mg	<0.0010	Sb	<0.0010	Yb	<0.0010
Cu	0.0023	Mn	<0.0010	Sc	<0.0010	Zn	<0.0010
Dy	<0.0010	Mo	<0.0010	Se	<0.01	Zr	<0.0010
Er	<0.0010	Na	0.0070	Si	<0.1		
Eu	<0.0010	Nb	<0.0010	Sm	<0.0010		

*: Not tested

4.0 APPROVAL AND DATE OF CERTIFICATION:

Certification Approval: Daniel Boisvert, Chemist

Certification Date: December 10, 2021

Daniel Boisvert

5.0 INTENDED USE / UTILISATION PRÉVUE:

- ICP Standards: For the calibration of, including but not limited to: ICP-AES, ICP-MS, FAAS, GFAA, XRF and DCP. / *Étalons ICP* : Pour l'étalonnage d'instruments de mesure tels que: ICP-AES, ICP-MS, FAAS, GFAA, XRF et DCP.
- AA Standards: For the calibration of Flame (FAAS) and Graphite Furnace (GFAA) Atomic Absorption Spectrometers. / *Étalons AA* : Pour l'étalonnage de spectromètres d'absorption atomique flamme (GFAA) et four au graphite (GFAA).
- Matrix Modifiers: For the optimization of analytical conditions to provide better Graphite Furnace Atomic Absorption (GFAA) instrument response and improved detection limits. / *Modificateur de matrice* : Pour l'optimisation des conditions analytiques afin de fournir des meilleures réponses instrumentales et limites de détection pour SAA four au graphite.
- pH Standards: For the calibrating pH meters or for other wet chemistry applications. / *Étalons pH* : Pour étalonnage de pH mètres et autres applications de chimie humide.
- Conductivity Standards: For electrolytic conductivity measurement as a calibration standard. / *Étalons de conductivité* : Comme étalon pour les mesures de conductivité électrolytiques.
- IC Standards: for calibration of, but not limited to IC, HPLC, TLC, ISE, IR, NMR, MS, UV/VIS or other wet chemistry applications. / *Étalons IC* : Pour étalonnage d'instruments tels que : IC, HPLC, TLC, ISE, IR, NMR, MS, UV/VIS et autres applications de chimie humide.
For any inquiries, please contact **SCP SCIENCE**. / *Pour toute question, veuillez contacter SCP SCIENCE.*

6.0 INSTRUCTIONS FOR USE / INSTRUCTIONS D'UTILISATION:

Handling and Storage / Manutention et entreposage: Keep product tightly capped when not in use. The solution should be opened for a minimum amount of time necessary to dispense the amount required. Do not pipet or use directly from container. Do not return unused portions back to container. Store under normal laboratory conditions. Avoid exposure to excessive sources of heat and humidity or direct sunlight. / *Garder les contenants bien fermés lorsque non utilisés. Le contenant devrait être ouvert seulement pour le temps requis afin de prélever la quantité nécessaire. Ne pas pipetter ou utiliser directement du contenant. Ne pas retourner les portions non-utilisées dans le contenant. Conserver dans des conditions normales de laboratoire. Éviter l'exposition à des sources de chaleur et d'humidité excessives ou à l'exposition solaire directe.*

Stability / Stabilité: This Standard is guaranteed to be stable and accurate to within the specified uncertainty of measurement up to the unopened expiry date, if sealed, or up to the opened expiry date (when indicated), whichever comes first, provided the solution is kept tightly capped and stored under the indicated storage conditions. Purchasers will be notified of any significant changes resulting in re-certification or withdrawal of the product prior to the expiration date. / *La stabilité et l'exactitude de cet étalon sont garanties d'être à l'intérieur de l'incertitude de mesure, jusqu'à la date d'expiration de la bouteille non-ouverte, si scellée, ou jusqu'à la date d'expiration de la bouteille ouverte (si indiquée), en présumant que le contenant est maintenu fermé et gardé dans les conditions d'entreposage indiquées. Les acheteurs seront avisés dans le cas où il y aura des changements significatifs nécessitant une re-certification ou un rappel du produit avant la date d'expiration.*

7.0 HAZARDOUS INFORMATION / INFORMATION SUR LES RISQUES POTENTIELS:

Please refer to the associated Safety Data Sheet (SDS) for information regarding this product (available at www.SCPSCIENCE.com). / *SVP vous référer à la Fiche Signalétique applicable pour de l'information sur ce produit (Disponible à www.SCPSCIENCE.com).*

8.0 HOMOGENEITY / HOMOGÉNÉITÉ:

This solution has been blended according to an in-house procedure and its homogeneity is guaranteed to be fit for purpose when a sample size sufficient for the intended method of analysis is used. / *Cette solution a été préparée selon une procédure maison et nous assurons que sa homogénéité est approprié à l'emploi lorsqu'un échantillon suffisant pour la méthode d'analyse prévue est utilisé.*

9.0 TRACEABILITY / TRAÇABILITÉ:

This CRM (Certified Reference Material) is traceable to the NIST SRM (Standard Reference Material) indicated in section 2 through an unbroken chain of comparisons. In addition, balances used are regularly calibrated using weights which are traceable to NIST (National Institute of Standards and Technology) or NRC (National Research Council of Canada) standards. All conductivity meters used to analyze this standard have been regularly calibrated using a NIST or NRC traceable Thermometer and standards. All pH meters used to analyze this standard have been regularly calibrated using a NIST or NRC traceable thermometer and pH/MV simulator. / *Ce matériel de référence certifié est traçable au Matériel de Référence Standardisé de NIST indiqué à la section 2 par une chaîne de comparaison ininterrompue. De plus, les balances utilisées sont étalonnées régulièrement en utilisant des poids qui sont traçables au NIST (National Institute of Standards and Technology) ou au CRNC (Conseil National de Recherches Canada). Tout conductimètre utilisé afin d'analyser cet étalon a été sujet à un étalonnage périodique utilisant des thermomètres et étalons traçables au NIST ou CNRC. Tout pH mètre utilisé afin d'analyser cet étalon a été sujet à un étalonnage périodique utilisant des thermomètres et un simulateur pH/MV traçables au NIST ou au CNRC.*

10.0 PREPARATION / PRÉPARATION:

For the preparation of these solutions, 18 megohm/cm double deionized water, high-purity acids and glassware calibrated to ASTM Class A specifications are used. / *Une eau de 18 megohm/cm doublement déionisée, de l'acide de haute pureté, ainsi que de la verrerie étalonnée afin de satisfaire les spécifications Classe A de ASTM ont été utilisés pour la préparation de cet étalon.*

11.0 QUALITY SYSTEM CERTIFICATIONS / CERTIFICATIONS DE SYSTÈME QUALITÉ:

ISO 9001 Certification / Certification ISO 9001: This standard was produced in a facility which operates under a registered ISO 9001 Quality Management System. Please consult our web site for a copy of the most recent revision of our certificate of registration. / *Cet étalon a été fabriqué dans un laboratoire qui utilise un Système de Gestion de la Qualité enregistré à la norme ISO 9001. Veuillez consulter notre site web pour obtenir la version la plus récente de notre certificat d'enregistrement.*

ISO 17025 Accreditation / Accréditation ISO 17025: SCP SCIENCE (Corporate Headquarters) operates an ISO 17025 accredited laboratory. Please consult our web site for a copy of the most recent revision of our certificate and scope of accreditation. / *SCP SCIENCE (Siège social) est accréditée ISO 17025. Veuillez consulter notre site web afin d'obtenir la plus récente version de notre certificat d'accréditation ainsi que la portée de notre accréditation.*

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CORPORATE HEADQUARTERS
21800 Clark Graham
Baie D'Urfé (Montréal), Quebec,
H9X 4B6 Canada
Phone: +1 (800) 361-6820
Fax: +1 (800) 253-5549

USA
3rd Party Distribution Center
348 Route 11, Champlain,
N.Y. 12919-4816
Phone: +1 (800) 361-6820
Fax: +1 (800) 253-5549

FRANCE
12 Ave. de Québec, Bat. IRIS
91140, Villebon-sur-Yvette
Phone: +33 (0) 1 69 18 71 17
Fax: +33 (0) 1 60 92 05 67

GERMANY
Alte Marktoberdorfer Straße 14, 87616
Marktoberdorf
Phone: +49 (0) 8342-89560-61
Fax: +49 (0) 8342-89560-69

Energy Laboratories Inc

Standard LOG

Standard ID: ME211025A
Standard Name: Te Stock
Date Prepared: 10/25/2021
Date Expires: 10/25/2022
Department: ME
Vendor: SCP Science
Lot Number: S200130018
Balance ID:
Comments: Opened 10/25/2021; Expires 10/25/2022

Type: Primary
BY: Stacy R. Hendricks
Status: Open

Chemical / Solvent Used	BottleNo	Amt	Units	Exp
ICP/ICPMS Standard Tellurium	14418	500	mL	10/25

Final Volume: 500 mL

Stock Source

Base Units

Amount Added

Analyses

CAS

Conc: **ug/mL**

Te

1.0 DESCRIPTION: *PlasmaCAL ICP/ICPMS Standard - Tellurium 1000 µg/ml*
 Catalogue Number: 140-051-520/-521/-525
 Starting Material: Tellurium Metal 99.99+%
 Lot Number: **S210615004**
 Matrix: 10% HNO₃ (See Section 3 for actual matrix)
 Expiration Date (End of month): **June 2023** (or 15 months after bottle is opened, whichever comes first)

2.0 CERTIFIED VALUES AND ASSOCIATED UNCERTAINTY:
 Certified Concentration: **1005 µg/ml +/- 5 µg/ml**
958 µg/g +/- 5 µg/g
 Method of analysis: Inductively Coupled Plasma Atomic Emission Spectroscopy (ICP-AES)
 Traceability: NIST Standard Reference Material 3156 Lot: **140830**

Note: The uncertainty of the certified value has been calculated from applicable uncertainty contributors (u_i) including uncertainty established during characterization of the material (u_{char}), the between bottle variation (u_{bb}), short-term stability (u_{sts}) and long-term stability (u_{lts}) according to the model $u_c = \sqrt{(u_{char}^2 + u_{bb}^2 + u_{sts}^2 + u_{lts}^2)}$. This combined uncertainty has been further multiplied by a coverage factor (k) of 2 to provide a 95% confidence interval.

3.0 REFERENCE VALUES:
 Density: **1.049 g/ml @ 25.5 °C**
 Actual Matrix: **10.0% (v/v) HNO₃**

ID #: 14418
 Opened: _____
 ICP/ICPMS Standard Tellurium
Expires: 6/30/2023
 Rec'd: 10/20/2021
 Energy Laboratories Inc 1120 So. 27th Street
 Billings MT 59107

Trace Metal Impurities as tested by ICP-AES:

Element	Conc. (ppm)	Element	Conc. (ppm)	Element	Conc. (ppm)	Element	Conc. (ppm)
Ag	<0.0010	Fe	<0.0018	Nd	0.0449	Sn	<0.0010
Al	<0.0010	Ga	<0.0010	Ni	<0.0010	Sr	<0.0025
As	<0.0010	Gd	<0.0010	Os	<0.0010	Ta	<0.0010
Au	<0.0010	Ge	<0.0010	P	0.0184	Tb	<0.0010
B	<0.0015	Hf	<0.0010	Pb	<0.0010	Te	N/A
Ba	<0.0010	Hg	*	Pd	<0.0010	Th	<0.0010
Be	<0.0010	Ho	<0.0010	Pr	0.0028	Ti	<0.0012
Bi	<0.0010	In	0.0020	Pt	<0.0010	Tl	<0.0011
Ca	<0.0135	Ir	<0.0010	Rb	<0.0010	Tm	<0.0010
Cd	<0.0010	K	<0.0024	Re	<0.0010	U	<0.0010
Ce	<0.0010	La	<0.0010	Rh	<0.0010	V	<0.0010
Co	<0.0010	Li	<0.0010	Ru	<0.0010	W	<0.0020
Cr	<0.0010	Lu	<0.0010	S	*	Y	<0.0010
Cs	<0.0010	Mg	<0.0020	Sb	<0.0010	Yb	<0.0010
Cu	<0.0010	Mn	<0.0010	Sc	<0.0010	Zn	<0.0010
Dy	<0.0010	Mo	<0.0010	Se	<0.1	Zr	<0.0010
Er	<0.0010	Na	<0.0025	Si	<0.1		
Eu	<0.0010	Nb	<0.0010	Sm	<0.0010		

*: Not tested

4.0 APPROVAL AND DATE OF CERTIFICATION:
 Certification Approval: Daniel Boisvert, Chemist
 Certification Date: June 30, 2021

Daniel Boisvert

5.0 INTENDED USE / UTILISATION PRÉVUE:

- ICP Standards: For the calibration of, including but not limited to: ICP-AES, ICP-MS, FAAS, GFAA, XRF and DCP. / Étalons ICP : Pour l'étalonnage de instruments de mesure tels que: ICP-AES, ICP-MS, FAAS, GFAA, XRF et DCP.
 - AA Standards: For the calibration of Flame (FAAS) and Graphite Furnace (GFAA) Atomic Absorption Spectrometers. / Étalons AA : Pour l'étalonnage de spectromètres d'absorption atomique flamme (FAAS) et four au graphite (GFAA).
 - Matrix Modifiers: For the optimization of analytical conditions to provide better Graphite Furnace Atomic Absorption (GFAA) instrument response and improved detection limits. / Modificateur de matrice : Pour l'optimisation des conditions analytiques afin de fournir des meilleurs réponses instrumentales et limites de détection pour SAA four au graphite.
 - pH Standards: For the calibrating pH meters or for other wet chemistry applications. / Étalons pH : Pour étalonnage de pH mètres et autres applications de chimie humide.
 - Conductivity Standards: For electrolytic conductivity measurement as a calibration standard. / Étalons de conductivité : Comme étalon pour les mesures de conductivité électrolytiques.
 - IC Standards: For calibration of, but not limited to IC, HPLC, TLC, ISE, IR, NMR, MS, UV/VIS or other wet chemistry applications. / Étalons IC : Pour étalonnage d'instruments tels que : IC, HPLC, TLC, ISE, IR, NMR, MS, UV/VIS et autres applications de chimie humide.
- For any inquiries, please contact **SCP SCIENCE**. / Pour toute question, veuillez contacter **SCP SCIENCE**.

6.0 INSTRUCTIONS FOR USE / INSTRUCTIONS D'UTILISATION:

Handling and Storage / Manutention et entreposage: Keep product tightly capped when not in use. The solution should be opened for a minimum amount of time necessary to dispense the amount required. Do not pipet or use directly from container. Do not return unused portions back to container. Store under normal laboratory conditions. Avoid exposure to excessive sources of heat and humidity or direct sunlight. / Garder les contenants bien fermés lorsque non utilisés. Le contenant devrait être ouvert seulement pour le temps requis afin de prélever la quantité nécessaire. Ne pas pipetter ou utiliser directement du contenant. Ne pas retourner les portions non-utilisées dans le contenant. Conserver dans des conditions normales de laboratoire. Éviter l'exposition à des sources de chaleur et d'humidité excessives ou à l'exposition solaire directe.

Stability / Stabilité: This Standard is guaranteed to be stable and accurate to within the specified uncertainty of measurement up to the unopened expiry date, if sealed, or up to the opened expiry date (when indicated), whichever comes first, provided the solution is kept tightly capped and stored under the indicated storage conditions. Purchasers will be notified of any significant changes resulting in re-certification or withdrawal of the product prior to the expiration date. / La stabilité et l'exactitude de cet étalon sont garanties d'être à l'intérieur de l'incertitude de mesure, jusqu'à la date d'expiration de la bouteille non-ouverte, si scellée, ou jusqu'à la date d'expiration de la bouteille ouverte (si indiquée), en presumant que le contenant est maintenu fermé et gardé dans les conditions d'entreposage indiquées. Les acheteurs seront avisés dans le cas où il y aura des changements significatifs nécessitant une re-certification ou un rappel du produit avant la date d'expiration.

7.0 HAZARDOUS INFORMATION / INFORMATION SUR LES RISQUES POTENTIELS:

Please refer to the associated Safety Data Sheet (SDS) for information regarding this product (available at www.SCPSCIENCE.com). / SVP vous référer à la Fiche Signalétique applicable pour de l'information sur ce produit (Disponible à www.SCPSCIENCE.com).

8.0 HOMOGENEITY / HOMOGÉNÉITÉ:

This solution has been blended according to an in-house procedure and its homogeneity is guaranteed to be fit for purpose when a sample size sufficient for the intended method of analysis is used. / Cette solution a été préparée selon une procédure maison et nous assurons que sa homogénéité est approprié à l'emploi lorsqu'un échantillon suffisant pour la méthode d'analyse prévue est utilisé.

9.0 TRACEABILITY / TRAÇABILITÉ:

This CRM (Certified Reference Material) is traceable to the NIST SRM (Standard Reference Material) indicated in section 2 through an unbroken chain of comparisons. In addition, balances used are regularly calibrated using weights which are traceable to NIST (National Institute of Standards and Technology) or NRC (National Research Council of Canada) standards. All conductivity meters used to analyze this standard have been regularly calibrated using a NIST or NRC traceable thermometer and standards. All pH meters used to analyze this standard have been regularly calibrated using a NIST or NRC traceable thermometer and pH/MV simulator. / Ce matériel de référence certifié est traçable au Matériel de Référence Standardisé de NIST indiqué à la section 2 par une chaîne de comparaison ininterrompue. De plus, les balances utilisées sont étalonnées régulièrement en utilisant des poids qui sont traçables au NIST (National Institute of Standards and Technology) ou au CRNC (Conseil National de Recherches Canada). Tout conductimètre utilisé afin d'analyser cet étalon a été sujet à un étalonnage périodique utilisant des thermomètres et étalons traçables au NIST ou CNRC. Tout pH mètre utilisé afin d'analyser cet étalon a été sujet à un étalonnage périodique utilisant des thermomètres et un simulateur pH/MV traçables au NIST ou au CNRC.

10.0 PREPARATION / PRÉPARATION:

For the preparation of these solutions, 18 megohm/cm double deionized water, high-purity acids and glassware calibrated to ASTM Class A specifications are used. / Une eau de 18 megohm/cm doublement déionisé, de l'acide de haute pureté, ainsi que de la verrerie étalonnée afin de satisfaire les spécifications Classe A de ASTM ont été utilisés pour la préparation de cet étalon.

11.0 QUALITY SYSTEM CERTIFICATIONS / CERTIFICATIONS DE SYSTÈME QUALITÉ:

ISO 9001 Certification / Certification ISO 9001: This standard was produced in a facility which operates under a registered ISO 9001 Quality Management System. Please consult our web site for a copy of the most recent revision of our certificate of registration. / Cet étalon a été fabriqué dans un laboratoire qui utilise un Système de Gestion de la Qualité enregistré à la norme ISO 9001. Veuillez consulter notre site web pour obtenir la version la plus récente de notre certificat d'enregistrement.

ISO 17025 Accreditation / Accréditation ISO 17025: SCP SCIENCE (Corporate Headquarters) operates an ISO 17025 accredited laboratory. Please consult our web site for a copy of the most recent revision of our certificate and scope of accreditation. / SCP SCIENCE (Siège social) est accréditée ISO 17025. Veuillez consulter notre site web afin d'obtenir la plus récente version de notre certificat d'accréditation ainsi que la portée de notre accréditation.

ISO 17034 Accreditation / Accréditation ISO 17034: SCP SCIENCE (Corporate Headquarters) is an ISO 17034 accredited Reference Material Producer. Please consult our website for a copy of our most recent certificate and scope of accreditation. / SCP SCIENCE (Siège social) est un Fabricant de Matériaux de Référence Accrédité ISO 17034. Veuillez consulter notre site web afin d'obtenir la plus récente version de notre certificat d'accréditation ainsi que la portée de notre accréditation.

CORPORATE HEADQUARTERS
21800 Clark Graham
Baie D'Urfé (Montréal), Quebec,
H9X 4B6 Canada
Phone: +1 (800) 361-6820
Fax: +1 (800) 253-5549

USA
3rd Party Distribution Center
348 Route 11, Champlain,
N.Y. 12919-4816
Phone: +1 (800) 361-6820
Fax: +1 (800) 253-5549

FRANCE
12 Ave. de Québec, Bat. IRIS
91140, Villebon-sur-Yvette
Phone: +33 (0) 1 69 18 71 17
Fax: +33 (0) 1 60 92 05 67

GERMANY
Alte Marktberdorfer Straße 14, 87616
Marktberdorf
Phone: +49 (0) 8342-89560-61
Fax: +49 (0) 8342-89560-69

Energy Laboratories Inc

Standard LOG

Standard ID: ME220114A TUNE SOLUTION
Standard Name: Tune Solution
Date Prepared: 1/14/2022
Date Expires: 12/7/2022
Department: ME
Vendor:
Lot Number:
Balance ID:

Type: Secondary
BY: Stacy R. Hendricks
Status: Open

Comments: All elements except Be at 10 ppb. Be is spiked at 210 ppb.

Chemical / Solvent Used	BottleNo	Amt	Units	Exp
Nitric Acid, 69.0-70.0%,0000282671	14178	5	mL	4/11/
Milli-Q H2O	391	493	mL	6/1/2
Multi Analyte Custom Grade Solution	13795	0.5	mL	12/7/
Beryllium Single Analyte Custom Grad	14679	0.2	mL	9/17/

Final Volume: 500 mL

Stock Source

ME220114 TUNE S Tune Solution Stock

Base Units

ug/mL

Amount Added

1 mL

Analvtes

CAS

Conc: ug/mL

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).


2.0 PRODUCT DESCRIPTION

Product Code: Multi Analyte Custom Grade Solution
 Catalog Number: 2008TS
 Lot Number: R2-MEB691898
 Matrix: 3% (v/v) HNO₃
 Value / Analyte(s): 10 µg/mL ea:
 Beryllium, Cobalt,
 Indium, Magnesium,
 Lead

ID #: 13795

Opened: _____

Multi Analyte Custom Grade Solution

Expires: 4/8/2024

Rec'd: 4/29/2021

 Energy Laboratories Inc 1120 So. 27th Street
 Billings MT 59107

3.0 CERTIFIED VALUES AND UNCERTAINTIES

ANALYTE	CERTIFIED VALUE	ANALYTE	CERTIFIED VALUE
Beryllium, Be	10.01 ± 0.06 µg/mL	Cobalt, Co	10.01 ± 0.04 µg/mL
Indium, In	10.01 ± 0.04 µg/mL	Lead, Pb	10.01 ± 0.04 µg/mL
Magnesium, Mg	10.01 ± 0.05 µg/mL		

Density: 1.014 g/mL (measured at 20 ± 4 °C)

Assay Information:

ANALYTE	METHOD	NIST SRM#	SRM LOT#
Be	ICP Assay	3105a	090514
Co	EDTA	928	928
Co	ICP Assay	traceable to 3113	M2-CO661665
Co	Calculated		See Sec. 4.2
In	ICP Assay	3124a	110516
In	EDTA	928	928
In	Calculated		See Sec. 4.2
Mg	ICP Assay	3131a	140110
Mg	EDTA	928	928
Mg	Calculated		See Sec. 4.2
Pb	ICP Assay	3128	101026
Pb	EDTA	928	928
Pb	Calculated		See Sec. 4.2

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$$X_{CRM/RM} = \sum(w_i)(X_i)$$

X_i = mean of Assay Method i with standard uncertainty $u_{char i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$$w_i = (1/u_{char i}^2) / (\sum(1/u_{char i}^2))$$

$$CRM/RM \text{ Expanded Uncertainty } (\pm) = U_{CRM/RM} = k (u_{char}^2 + u_{bb}^2 + u_{lts}^2 + u_{ts}^2)^{1/2}$$

k = coverage factor = 2

$u_{char} = [\sum((w_i)^2 (u_{char i}^2))]^{1/2}$ where $u_{char i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$$X_{CRM/RM} = (X_a) (u_{char a})$$

X_a = mean of Assay Method A with

$u_{char a}$ = the standard uncertainty of characterization Method A

$$CRM/RM \text{ Expanded Uncertainty } (\pm) = U_{CRM/RM} = k (u_{char a}^2 + u_{bb}^2 + u_{lts}^2 + u_{ts}^2)^{1/2}$$

k = coverage factor = 2

$u_{char a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES ($\mu\text{g/mL}$)

N/A

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit www.inorganicventures.com/TCT

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va. 24073, USA; Telephone: 800.669.6799; 540.585.3030, Fax: 540.585.3012; inorganicventures.com; info@inorganicventures.com

11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

April 08, 2020

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **April 08, 2024**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Michael Booth
Manager, Quality Control



Certifying Officer:

Paul Gaines
CEO, Senior Technical Director



300 Technology Drive
 Christiansburg, VA 24073 USA
 inorganicventures.com

 P: 800-669-6799/540-585-3030
 F: 540-585-3012
 info@inorganicventures.com

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).



2.0 PRODUCT DESCRIPTION

Product Code: Single Analyte Custom Grade Solution
 Catalog Number: CGBE1
 Lot Number: S2-BE708103
 Matrix: 3% (v/v) HNO₃
 Value / Analyte(s): 1 000 µg/mL ea:
 Beryllium
 Starting Material: Beryllium Acetate
 Starting Material Lot#: 2354
 Starting Material Purity: 99.9997%

ID #: 14679

Opened: _____

Beryllium Single Analyte Custom Grade Solut

Expires: 9/17/2026

Rec'd: 12/28/2021

 Energy Laboratories Inc 1120 So. 27th Street
 Billings MT 59107

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 1002 ± 5 µg/mL
Density: 1.020 g/mL (measured at 20 ± 4 °C)

Assay Information:

Assay Method #1 **1003 ± 5 µg/mL**
 ICP Assay NIST SRM 3105a Lot Number: 090514

Assay Method #2 **1002 ± 6 µg/mL**
 Calculated NIST SRM Lot Number: See Sec. 4.2

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of $k = 2$.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$$X_{CRM/RM} = \sum(w_i) (X_i)$$

X_i = mean of Assay Method i with standard uncertainty $u_{char i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$$w_i = (1/u_{char i})^2 / (\sum(1/(u_{char i})^2))$$

$$CRM/RM \text{ Expanded Uncertainty } (z) = U_{CRM/RM} = k (u_{char}^2 + u_{bb}^2 + u_{lts}^2 + u_{ts}^2)^{1/2}$$

k = coverage factor = 2

$u_{char} = (\sum((w_i)^2 (u_{char i})^2))^{1/2}$ where $u_{char i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$$X_{CRM/RM} = (X_a) (u_{char a})$$

X_a = mean of Assay Method A with

$u_{char a}$ = the standard uncertainty of characterization Method A

$$CRM/RM \text{ Expanded Uncertainty } (z) = U_{CRM/RM} = k (u_{char a}^2 + u_{bb}^2 + u_{lts}^2 + u_{ts}^2)^{1/2}$$

k = coverage factor = 2

$u_{char a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

M Ag < 0.000940	M Eu < 0.000240	O Na 0.003944	M Se < 0.018000	O Zn 0.001126
M Al 0.005019	O Fe 0.001024	M Nb < 0.000240	O Si 0.021513	M Zr < 0.000470
M As < 0.005500	M Ga < 0.000710	M Ni < 0.000240	M Sm < 0.000240	
M Au < 0.000240	M Gd < 0.000240	M Ni 0.000240	M Sn < 0.003300	
M B < 0.045000	M Ge < 0.003100	M Os 0.000240	M Sr < 0.001900	
M Ba < 0.001900	M Hf < 0.000240	O P < 0.130000	M Ta < 0.000240	
s Be < 0.003300	M Hg < 0.000470	M Pb < 0.000470	M Tb < 0.000240	
M Bi < 0.003300	M Ho < 0.000240	M Pd < 0.000470	M Te < 0.009700	
O Ca 0.002919	M In < 0.001900	M Pr < 0.000240	M Th < 0.000240	
M Cd < 0.000470	M Ir < 0.000240	M Pt < 0.000240	O Ti < 0.003600	
M Ce < 0.000240	M K 0.004968	M Rb < 0.001500	M Tl < 0.000240	
O Co < 0.002100	M La < 0.000240	M Re < 0.000240	M Tm < 0.000240	
O Cr < 0.002100	M Li < 0.002200	M Rh < 0.000240	M U < 0.000240	
M Cs 0.000133	M Lu < 0.000240	M Ru < 0.000710	M V < 0.001500	
O Cu < 0.013000	O Mg 0.000819	i S < 0.000940	M W < 0.001700	
M Dy < 0.000240	O Mn < 0.001900	M Sb < 0.000940	M Y < 0.000940	
M Er < 0.000240	M Mo < 0.001700	M Sc < 0.003600	M Yb < 0.000240	

M - Checked by ICP-MS O - Checked by ICP-OES i - Spectral Interference
n - Not Checked For s - Solution Standard Element

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.
- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.
- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit www.inorganicventures.com/TCT

Atomic Weight; Valence; Coordination Number; Chemical Form in Solution - 9.01 ; +2 ; 4 ; Be(H₂O)₄+2

Chemical Compatibility -Soluble in HCl, HNO₃, H₂SO₄ and HF aqueous matrices. Stable with all metals and inorganic anions.

Stability - 2-100 ppb levels stable for months in 1 % HNO₃ / LDPE container. 1-10,000 ppm solutions chemically stable for years in 5-10 % HNO₃ / LDPE container.

Be Containing Samples (Preparation and Solution) - Meta l(is best dissolved in diluted H₂SO₄); BeO (boiling nitric, hydrochloric, or sulfuric acids or KHSO₄ fusion); Ores (H₂SO₄/HF digestion or carbonate fusion in Pt0); Organic Matrices (sulfuric/peroxide digestion or nitric/sulfuric/perchloric acid decomposition, or dry ash and dissolution according to the BeO procedure above).

Atomic Spectroscopic Information (ICP-OES D.L.s are given as radial/axial view):

Technique/Line	Estimated D.L.	Order	Interferences (underlined indicates severe)
ICP-MS 9 amu	4 ppt	N/A	
ICP-OES 234.861 nm	0.0003/0.00016 µg/mL	1	Fe, Ta, Mo
ICP-OES 313.042 nm	0.0003/0.00009 µg/mL	1	V, Ce, U
ICP-OES 313.107 nm	0.0007/0.0005 µg/mL	1	Ce, Th, Tm

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va. 24073, USA; Telephone: 800.669.6799; 540.585.3030, Fax: 540.585.3012; inorganicventures.com; info@inorganicventures.com

11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

September 17, 2021

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **September 17, 2026**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Michael Booth
Director, Quality Control



Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director



Energy Laboratories Inc

Standard LOG

Standard ID: ME220114 TUNE STOCK
 Standard Name: Tune Solution Stock
 Date Prepared: 1/14/2022
 Date Expires: 12/22/2022
 Department: ME
 Vendor:
 Lot Number:
 Balance ID:
 Comments: Solution is 1% HNO3 preserved

Type: Secondary
 BY: Stacy R. Hendricks
 Status: Open

Chemical / Solvent Used	BottleNo	Amt	Units	Exp
Nitric Acid Instra Analyzed 000026478	13061	5	mL	5/12/
Milli-Q H2O	391	482.25	mL	6/1/2
Yittrium Single Analyte Custom Grade	14210	2.5	mL	1/25/
Cerium PlasmaCal Standard	14327	2.5	mL	12/22
Cobalt Single Analyte Custom Grade S	14683	2.5	mL	3/22/
Lithium Single Analyte Custom Grade	14687	2.5	mL	2/11/
Magnesium Single Analyte Custom Gr	14688	0.25	mL	4/23/
Thallium Single Analyte Custom Grade	14693	2.5	mL	8/5/2

Final Volume: 500 mL

Stock Source

Base Units

Amount Added

Analvtes

CAS

Conc: **ug/mL**

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

**2.0 PRODUCT DESCRIPTION**

Product Code: Single Analyte Custom Grade Solution
Catalog Number: CGY1
Lot Number: S2-Y700840
Matrix: 2% (v/v) HNO₃
Value / Analyte(s): 1 000 µg/mL ea:
Yttrium
Starting Material: Yttrium Oxide
Starting Material Lot#: 623052
Starting Material Purity: 99.9991%

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 1000 ± 4 µg/mL
Density: 1.011 g/mL (measured at 20 ± 4 °C)

Assay Information:

Assay Method #1	999 ± 3 µg/mL EDTA NIST SRM 928 Lot Number: 928
Assay Method #2	1000 ± 5 µg/mL ICP Assay NIST SRM 3167a Lot Number: 120314
Assay Method #3	1001 ± 3 µg/mL Calculated NIST SRM Lot Number: See Sec. 4.2

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

ID #: 14210

Opened: _____

Yttrium Single Analyte Custom Grade Solution

Expires: 1/25/2025

Rec'd: 8/27/2021

Eneray Laboratories Inc 1120 So. 27th Street
Billings MT 59107

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$$X_{CRM/RM} = \sum(w_i) (X_i)$$

X_i = mean of Assay Method i with standard uncertainty $u_{char i}$
 w_i = the weighting factors for each method calculated using the inverse square of the variance:
 $w_i = (1/u_{char i}^2) / (\sum(1/(u_{char i}^2)))$

$$CRM/RM \text{ Expanded Uncertainty } (\pm) = U_{CRM/RM} = k (u_{char}^2 + u_{bb}^2 + u_{Its}^2 + u_{ts}^2)^{1/2}$$

k = coverage factor = 2
 $u_{char} = [\sum((w_i)^2 (u_{char i}^2))]^{1/2}$ where $u_{char i}$ are the errors from each characterization method
 u_{bb} = bottle to bottle homogeneity standard uncertainty
 u_{Its} = long term stability standard uncertainty (storage)
 u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$$X_{CRM/RM} = (X_a) (u_{char a})$$

X_a = mean of Assay Method A with
 $u_{char a}$ = the standard uncertainty of characterization Method A

$$CRM/RM \text{ Expanded Uncertainty } (\pm) = U_{CRM/RM} = k (u_{char a}^2 + u_{bb}^2 + u_{Its}^2 + u_{ts}^2)^{1/2}$$

k = coverage factor = 2
 $u_{char a}$ = the errors from characterization
 u_{bb} = bottle to bottle homogeneity standard uncertainty
 u_{Its} = long term stability standard uncertainty (storage)
 u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an UHPA-Filtered Clean Room. An UHPA-Filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

M Ag < 0.038000	M Eu < 0.002235	O Na < 0.060000	M Se < 0.027000	O Zn < 0.002642
O Al < 0.016000	O Fe < 0.000193	M Nb < 0.000570	O Si < 0.003658	O Zr < 0.012000
M As < 0.002300	M Ga < 0.000570	M Nd < 0.000570	M Sm < 0.000570	
M Au < 0.008000	M Gd < 0.000570	M Ni < 0.004600	M Sn < 0.001800	
O B < 0.022000	M Ge < 0.001200	M Os < 0.000570	O Sr < 0.003100	
M Ba < 0.001200	M Hf < 0.000570	n P <	M Ta < 0.000570	
O Be < 0.002900	M Hg < 0.002900	M Pb < 0.000833	M Tb < 0.000570	
M Bi < 0.005600	M Ho < 0.001524	i Pd <	M Te < 0.006900	
O Ca < 0.000304	M In < 0.002500	M Pr < 0.000570	M Th < 0.000570	
M Cd < 0.000570	M Ir < 0.000570	M Pt < 0.000570	M Ti < 0.005700	
M Ce < 0.000570	O K < 0.001117	M Rb < 0.001400	M Tl < 0.000570	
M Co < 0.000570	M La < 0.000570	M Re < 0.000570	M Tm < 0.001200	
M Cr < 0.003500	O Li < 0.004200	M Rh < 0.011000	M U < 0.000570	
M Cs < 0.005700	M Lu < 0.000570	M Ru < 0.000570	O V < 0.013000	
M Cu < 0.000365	O Mg < 0.000223	n S <	M W < 0.006900	
M Dy < 0.000508	O Mn < 0.001400	M Sb < 0.000365	s Y <	
M Er < 0.000197	M Mo < 0.006200	O Sc < 0.011000	M Yb < 0.003500	

M - Checked by ICP-MS O - Checked by ICP-OES i - Spectral Interference
n - Not Checked For s - Solution Standard Element

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit www.inorganicventures.com/TCT

Atomic Weight; Valence; Coordination Number; Chemical Form in Solution - 88.91 +3 6 Y(OH)(H₂O)_{x+2}

Chemical Compatibility -Soluble in HCl, H₂SO₄ and HNO₃. Avoid HF, H₃PO₄ and neutral to basic media.

Stable with most metals and inorganic anions forming an insoluble carbonate, oxide, oxalate, and fluoride.

Avoid mixing with elements / solutions containing moderate amounts of fluoride.

Stability - 2-100 ppb levels stable for months in 1% HNO₃ / LDPE container. 1-10,000 ppm solutions chemically stable for years in 2-5% HNO₃ / LDPE container.

Y Containing Samples (Preparation and Solution) - Metal (Soluble in acids); Oxide (Dissolve by heating in H₂O/ HNO₃); Ores (Carbonate fusion in PtO followed by HCl dissolution); Organic Matrices (Dry ash and dissolve in 1:1 H₂O / HCl or HNO₃).

Atomic Spectroscopic Information (ICP-OES D.L.s are given as radial/axial view):

Technique/Line	Estimated D.L.	Order	Interferences (underlined indicates severe)
ICP-MS 89 amu	0.8 ppt	N/A	<u>73Ge16O</u> , <u>178Hf+2</u>
ICP-OES 360.073 nm	0.005 / 0.000036 µg/mL	1	Ce, Th
ICP-OES 371.030 nm	0.004 / 0.00007 µg/mL	1	Ce
ICP-OES 377.433 nm	0.005 / 0.0009 µg/mL	1	Ta, Th

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va. 24073, USA; Telephone: 800.669.6799; 540.585.3030, Fax: 540.585.3012; inorganicventures.com; info@inorganicventures.com

11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

January 25, 2021

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **January 25, 2025**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Michael Booth
Director, Quality Control



Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director



Ce

1.0 DESCRIPTION: **PlasmaCAL ICP/ICPMS Standard - Cerium 1000 µg/ml**
 Catalogue Number: 140-051-580/-581/-585
 Starting Material: Cerium(III) Nitrate Hexahydrate 99.99+%
 Lot Number: **S210208003**
 Matrix: 4% HNO₃ (See Section 3 for actual matrix)
 Expiration Date (End of month): **February 2023** (or 15 months after bottle is opened, whichever comes first)

2.0 CERTIFIED VALUES AND ASSOCIATED UNCERTAINTY:
 Certified Concentration: **1003 µg/ml +/- 4 µg/ml**
982 µg/g +/- 4 µg/g
 Method of analysis: Inductively Coupled Plasma Atomic Emission Spectroscopy (ICP-AES)
 Traceability: NIST Standard Reference Material 3110 Lot: **090504**

Note: The uncertainty of the certified value has been calculated from applicable uncertainty contributors (u_i) including uncertainty established during characterization of the material (u_{char}), the between bottle variation (u_{bb}), short-term stability (u_{sts}) and long-term stability (u_{lts}) according to the model $u_c = \sqrt{(u_{char}^2 + u_{bb}^2 + u_{sts}^2 + u_{lts}^2)}$. This combined uncertainty has been further multiplied by a coverage factor (k) of 2 to provide a 95% confidence interval.

3.0 REFERENCE VALUES:
 Density: **1.021 g/ml @ 22.5 °C**
 Actual Matrix: **4.0% (v/v) HNO₃**
 Trace Metal Impurities as tested by ICP-MS:

ID #: 14327
 Opened: _____
 Cerium PlasmaCal Standard
Expires: 2/28/2023
 Rec'd: 9/29/2021
 Energy Laboratories Inc 1120 So. 27th Street
 Billings MT 59107

Element	Conc. (ppm)	Element	Conc. (ppm)	Element	Conc. (ppm)	Element	Conc. (ppm)
Ag	<0.0010	Fe	<0.0018	Nd	0.0102	Sn	<0.0010
Al	0.0148	Ga	0.0526	Ni	0.0064	Sr	<0.0025
As	<0.0010	Gd	<0.0010	Os	<0.0010	Ta	<0.0010
Au	<0.0010	Ge	<0.0010	P	<0.0132	Tb	<0.0010
B	<0.0015	Hf	<0.0010	Pb	<0.0010	Te	<0.0010
Ba	<0.0010	Hg	*	Pd	<0.0010	Th	<0.0010
Be	<0.0010	Ho	<0.0010	Pr	0.0235	Ti	<0.0012
Bi	<0.0010	In	<0.0010	Pt	<0.0010	Tl	<0.0011
Ca	0.0375	Ir	<0.0010	Rb	<0.0010	Tm	<0.0010
Cd	<0.0010	K	<0.0024	Re	<0.0010	U	<0.0010
Ce	N/A	La	<0.10	Rh	<0.0010	V	<0.0010
Co	<0.0010	Li	<0.0010	Ru	<0.0010	W	<0.0020
Cr	<0.0010	Lu	<0.0010	S	*	Y	<0.0010
Cs	<0.0010	Mg	<0.0010	Sb	<0.0010	Yb	<0.0010
Cu	0.0121	Mn	<0.0010	Sc	<0.0010	Zn	<0.0010
Dy	<0.0010	Mo	<0.0010	Se	<0.0010	Zr	<0.0010
Er	<0.0010	Na	<0.0010	Si	<0.10		
Eu	0.0035	Nb	<0.0010	Sm	<0.0010		

*: Not tested

4.0 APPROVAL AND DATE OF CERTIFICATION:
 Certification Approval: Yaling Sui, Chemist
 Certification Date: February 22, 2021

Yaling Sui

5.0 INTENDED USE / UTILISATION PRÉVUE:

- ICP Standards: For the calibration of, including but not limited to: ICP-AES, ICP-MS, FAAS, GFAA, XRF and DCP. / *Étalons ICP : Pour l'étalonnage d'instruments de mesure tels que: ICP-AES, ICP-MS, FAAS, GFAA, XRF et DCP.*
 - AA Standards: For the calibration of Flame (FAAS) and Graphite Furnace (GFAA) Atomic Absorption Spectrometers. / *Étalons AA : Pour l'étalonnage de spectromètres d'absorption atomique flamme (FAAS) et four au graphite (GFAA).*
 - Matrix Modifiers: For the optimization of analytical conditions to provide better Graphite Furnace Atomic Absorption (GFAA) instrument response and improved detection limits. / *Modificateur de matrice : Pour l'optimisation des conditions analytiques afin de fournir des meilleures réponses instrumentales et limites de détection pour SAA four au graphite.*
 - pH Standards: For the calibrating pH meters or for other wet chemistry applications. / *Étalons pH : Pour étalonnage de pH mètres et autres applications de chimie humide.*
 - Conductivity Standards: For electrolytic conductivity measurement as a calibration standard. / *Étalons de conductivité : Comme étalon pour les mesures de conductivité électrolytiques.*
 - IC Standards: for calibration of, but not limited to IC, HPLC, TLC, ISE, IR, NMR, MS, UV/VIS or other wet chemistry applications. / *Étalons IC : Pour étalonnage d'instruments tels que : IC, HPLC, TLC, ISE, IR, NMR, MS, UV/VIS et autres applications de chimie humide.*
- For any inquiries, please contact **SCP SCIENCE**. / *Pour toute question, veuillez contacter SCP SCIENCE.*

6.0 INSTRUCTIONS FOR USE / INSTRUCTIONS D'UTILISATION:

Handling and Storage / Manutention et entreposage: Keep product tightly capped when not in use. The solution should be opened for a minimum amount of time necessary to dispense the amount required. Do not pipet or use directly from container. Do not return unused portions back to container. Store under normal laboratory conditions. Avoid exposure to excessive sources of heat and humidity or direct sunlight. / *Garder les contenants bien fermés lorsque non utilisés. Le contenant devrait être ouvert seulement pour le temps requis afin de prélever la quantité nécessaire. Ne pas pipetter ou utiliser directement du contenant. Ne pas retourner les portions non-utilisées dans le contenant. Conserver dans des conditions normales de laboratoire. Éviter l'exposition à des sources de chaleur et d'humidité excessives ou à l'exposition solaire directe.*

Stability / Stabilité: This Standard is guaranteed to be stable and accurate to within the specified uncertainty of measurement up to the unopened expiry date, if sealed, or up to the opened expiry date (when indicated), whichever comes first, provided the solution is kept tightly capped and stored under the indicated storage conditions. Purchasers will be notified of any significant changes resulting in re-certification or withdrawal of the product prior to the expiration date. / *La stabilité et l'exactitude de cet étalon sont garanties d'être à l'intérieur de l'incertitude de mesure, jusqu'à la date d'expiration de la bouteille non-ouverte, si scellée, ou jusqu'à la date d'expiration de la bouteille ouverte (si indiquée), en présumant que le contenant est maintenu fermé et gardé dans les conditions d'entreposage indiquées. Les acheteurs seront avisés dans le cas où il y aura des changements significatifs nécessitant une re-certification ou un rappel du produit avant la date d'expiration.*

7.0 HAZARDOUS INFORMATION / INFORMATION SUR LES RISQUES POTENTIELS:

Please refer to the associated Safety Data Sheet (SDS) for information regarding this product (available at www.SCPSCIENCE.com). / *SVP vous référer à la Fiche Signalétique applicable pour de l'information sur ce produit (Disponible à www.SCPSCIENCE.com).*

8.0 HOMOGENEITY / HOMOGÉNÉITÉ:

This solution has been blended according to an in-house procedure and its homogeneity is guaranteed to be fit for purpose when a sample size sufficient for the intended method of analysis is used. / *Cette solution a été préparée selon une procédure maison et nous assurons que sa homogénéité est approprié à l'emploi lorsqu'un échantillon suffisant pour la méthode d'analyse prévue est utilisé.*

9.0 TRACEABILITY / TRAÇABILITÉ:

This CRM (Certified Reference Material) is traceable to the NIST SRM (Standard Reference Material) indicated in section 2 through an unbroken chain of comparisons. In addition, balances used are regularly calibrated using weights which are traceable to NIST (National Institute of Standards and Technology) or NRC (National Research Council of Canada) standards. All conductivity meters used to analyze this standard have been regularly calibrated using a NIST or NRC traceable Thermometer and standards. All pH meters used to analyze this standard have been regularly calibrated using a NIST or NRC traceable thermometer and pH/MV simulator. / *Ce matériel de référence certifié est traçable au Matériel de Référence Standardisé de NIST indiqué à la section 2 par une chaîne de comparaison ininterrompue. De plus, les balances utilisées sont étalonnées régulièrement en utilisant des poids qui sont traçables au NIST (National Institute of Standards and Technology) ou au CRNC (Conseil National de Recherches Canada). Tout conductimètre utilisé afin d'analyser cet étalon a été sujet à un étalonnage périodique utilisant des thermomètres et étalons traçables au NIST ou au CNRC. Tout pH mètre utilisé afin d'analyser cet étalon a été sujet à un étalonnage périodique utilisant des thermomètres et un simulateur pH/MV traçables au NIST ou au CNRC.*

10.0 PREPARATION / PRÉPARATION:

For the preparation of these solutions, 18 megohm/cm double deionized water, high-purity acids and glassware calibrated to ASTM Class A specifications are used. / *Une eau de 18 megohm/cm doublement déionisé, de l'acide de haute pureté, ainsi que de la verrerie étalonnée afin de satisfaire les spécifications Classe A de ASTM ont été utilisés pour la préparation de cet étalon.*

11.0 QUALITY SYSTEM CERTIFICATIONS / CERTIFICATIONS DE SYSTÈME QUALITÉ:

ISO 9001 Certification / Certification ISO 9001: This standard was produced in a facility which operates under a registered ISO 9001 Quality Management System. Please consult our web site for a copy of the most recent revision of our certificate of registration. / *Cet étalon a été fabriqué dans un laboratoire qui utilise un Système de Gestion de la Qualité enregistré à la norme ISO 9001. Veuillez consulter notre site web pour obtenir la version la plus récente de notre certificat d'enregistrement.*

ISO 17025 Accreditation / Accréditation ISO 17025: SCP SCIENCE (Corporate Headquarters) operates an ISO 17025 accredited laboratory. Please consult our web site for a copy of the most recent revision of our certificate and scope of accreditation. / *SCP SCIENCE (Siège social) est accréditée ISO 17025. Veuillez consulter notre site web afin d'obtenir la plus récente version de notre certificat d'accréditation ainsi que la portée de notre accréditation.*

ISO 17034 Accreditation / Accréditation ISO 17034 : SCP SCIENCE (Corporate Headquarters) is an ISO 17034 accredited Reference Material Producer. Please consult our website for a copy of our most recent certificate and scope of accreditation. / *SCP SCIENCE (Siège social) est un Fabricant de Matériaux de Référence Accrédité ISO 17034. Veuillez consulter notre site web afin d'obtenir la plus récente version de notre certificat d'accréditation ainsi que la portée de notre accréditation.*

CORPORATE HEADQUARTERS
21800 Clark Graham
Baie D'Urfé (Montréal), Québec,
H9X 4B6 Canada
Phone: +1 (800) 361-6820
Fax: +1 (800) 253-5549

USA
3rd Party Distribution Center
348 Route 11, Champlain,
N.Y. 12919-4816
Phone: +1 (800) 361-6820
Fax: +1 (800) 253-5549

FRANCE
12 Ave. de Québec, Bat. IRIS
SILIC 642, 91965
Villebon sur Yvette, France
Phone: +33 (0) 1 69 18 71 17
Fax: +33 (0) 1 60 92 05 67

GERMANY
Alte Marktoberdorfer Straße 14, 87616
Marktoberdorf
Phone: +49 (0) 8342-89560-61
Fax: +49 (0) 8342-89560-69

Certificate of Analysis

300 Technology Drive
Christiansburg, VA 24073 USA
inorganicventures.com

P: 800-669-6799/540-585-3030

F: 540-585-3012

info@inorganicventures.com

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).



2.0 PRODUCT DESCRIPTION

Product Code: Single Analyte Custom Grade Solution
Catalog Number: CGCO1
Lot Number: S2-CO702699
Matrix: 3% (v/v) HNO3
Value / Analyte(s): 1 000 µg/mL ea:
Cobalt
Starting Material: Co Metal
Starting Material Lot#: 2326
Starting Material Purity: 99.9934%

ID #: 14683

Opened:

Cobalt Single Analyte Custom Grade Solution

Expires: 3/22/2025

Rec'd: 12/28/2021

Energy Laboratories Inc 1120 So. 27th Street
Billings MT 59107

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 998 ± 3 µg/mL
Density: 1.018 g/mL (measured at 20 ± 4 °C)

Assay Information:

Assay Method #1	994 ± 5 µg/mL ICP Assay NIST SRM 3113 Lot Number: 190630
Assay Method #2	997 ± 3 µg/mL EDTA NIST SRM 928 Lot Number: 928
Assay Method #3	1001 ± 3 µg/mL Calculated NIST SRM Lot Number: See Sec. 4.2

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of $k = 2$.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$$X_{CRM/RM} = \sum(w_i)(X_i)$$

X_i = mean of Assay Method i with standard uncertainty $u_{char i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$$w_i = (1/u_{char i}^2) / (\sum(1/u_{char i}^2))$$

$$CRM/RM \text{ Expanded Uncertainty } (\pm) = U_{CRM/RM} = k(u_{char}^2 + u_{bb}^2 + u_{Its}^2 + u_{ts}^2)^{1/2}$$

k = coverage factor = 2

$u_{char} = [\sum((w_i)^2 (u_{char i}^2))]^{1/2}$ where $u_{char i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{Its} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$$X_{CRM/RM} = (X_a) / (u_{char a})$$

X_a = mean of Assay Method A with

$u_{char a}$ = the standard uncertainty of characterization Method A

$$CRM/RM \text{ Expanded Uncertainty } (\pm) = U_{CRM/RM} = k(u_{char a}^2 + u_{bb}^2 + u_{Its}^2 + u_{ts}^2)^{1/2}$$

k = coverage factor = 2

$u_{char a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{Its} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES ($\mu\text{g/mL}$)

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3 μm .

M	Ag	<	0.001515	M	Eu	<	0.000590	O	Na	<	0.000778	M	Se	<	0.019000	M	Zn	<	0.000357
M	Al	<	0.024000	M	Fe	<	0.005262	M	Nb	<	0.000590	O	Si	<	0.007789	M	Zr	<	0.001200
i	As	<		M	Ga	<	0.000590	M	Nd	<	0.000590	M	Sm	<	0.000590				
M	Au	<	0.004100	M	Gd	<	0.000590	O	Ni	<	0.044207	M	Sn	<	0.001200				
M	B	<	0.031000	M	Ge	<	0.003000	M	Os	<	0.000590	O	Sr	<	0.000260				
M	Ba	<	0.000590	M	Hf	<	0.000590	n	P	<		M	Ta	<	0.001200				
O	Be	<	0.001300	M	Hg	<	0.001800	M	Pb	<	0.000336	M	Tb	<	0.000590				
M	Bi	<	0.003000	M	Ho	<	0.000590	M	Pd	<	0.000590	M	Te	<	0.005300				
O	Ca	<	0.001094	M	In	<	0.001200	M	Pr	<	0.000590	M	Th	<	0.000590				
M	Cd	<	0.004700	M	Ir	<	0.001200	M	Pt	<	0.002400	M	Ti	<	0.014000				
M	Ce	<	0.000590	O	K	<	0.000842	M	Rb	<	0.000590	M	Tl	<	0.000273				
s	Co	<		M	La	<	0.000590	M	Re	<	0.000590	M	Tm	<	0.000590				
M	Cr	<	0.021000	O	Li	<	0.000130	M	Rh	<	0.000590	M	U	<	0.000590				
M	Cs	<	0.002400	M	Lu	<	0.000590	M	Ru	<	0.007100	O	V	<	0.000880				
M	Cu	<	0.019577	O	Mg	<	0.000195	n	S	<		M	W	<	0.000590				
M	Dy	<	0.000590	M	Mn	<	0.001800	M	Sb	<	0.003600	M	Y	<	0.000590				
M	Er	<	0.000590	M	Mo	<	0.002400	O	Sc	<	0.001600	M	Yb	<	0.000590				

M - Checked by ICP-MS O - Checked by ICP-OES i - Spectral Interference
n - Not Checked For s - Solution Standard Element

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.
- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.
- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit www.inorganicventures.com/TCT

Atomic Weight; Valence; Coordination Number; Chemical Form in Solution - 58.93 +2 6 Co(H₂O)₆2+

Chemical Compatibility - Stable in HCl, HNO₃, H₂SO₄, HF, H₃PO₄. Avoid basic media. Stable with most metals and inorganic anions in acidic media.

Stability - 2-100 ppb levels stable for months in 1% HNO₃ / LDPE container. 1-10,000 ppm solutions chemically stable for years in 1-5% HNO₃ / LDPE container.

Co Containing Samples (Preparation and Solution) - Metal (soluble in HNO₃); Oxides (Soluble in HCl); Ore (dissolve in HCl / HNO₃).

Atomic Spectroscopic Information (ICP-OES D.L.s are given as radial/axial view):

Technique/Line	Estimated D.L.	Order	Interferences (underlined indicates severe)
ICP-MS 59 amu	2 ppt	n/a	42Ca16O1H , 40Ar18O1H , 36Ar23Na, 43Ca16O, 24Mg35Cl
ICP-OES 228.616 nm	0.01/0.001 µg/mL	1	
ICP-OES 237.862 nm	0.01/0.002 µg/mL	1	W, Re, Al, Ta
ICP-OES 238.892 nm	0.01/0.002 µg/mL	1	Fe, W, Ta

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va. 24073, USA; Telephone: 800.669.6799; 540.585.3030, Fax: 540.585.3012; inorganicventures.com; info@inorganicventures.com

11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).



2.0 PRODUCT DESCRIPTION

Product Code: Single Analyte Custom Grade Solution
 Catalog Number: CGLI1
 Lot Number: S2-LI701641
 Matrix: 0.1% (v/v) HNO3
 Value / Analyte(s): 1 000 µg/mL ea:
 Lithium
 Starting Material: Lithium Carbonate
 Starting Material Lot#: 1613
 Starting Material Purity: 99.9962%

ID #: 14687
 Opened:
 Lithium Single Analyte Custom Grade Solution
Expires: 2/11/2025
 Rec'd: 12/28/2021
 Energy Laboratories Inc 1120 So. 27th Street
 Billings MT 59107

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 1000 ± 3 µg/mL
Density: 1.005 g/mL (measured at 20 ± 4 °C)

Assay Information:

Assay Method #1	997 ± 4 µg/mL ICP Assay NIST SRM 3129a Lot Number: 100714
Assay Method #2	1000 ± 1 µg/mL Gravimetric NIST SRM Lot Number: See Sec. 4.2
Assay Method #3	1001 ± 3 µg/mL Calculated NIST SRM Lot Number: See Sec. 4.2

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$$X_{CRM/RM} = \sum(w_i) (X_i)$$

X_i = mean of Assay Method i with standard uncertainty $u_{char i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$$w_i = (1/u_{char i}^2) / (\sum(1/(u_{char i}^2)))$$

$$CRM/RM \text{ Expanded Uncertainty } (\pm) = U_{CRM/RM} = k (u_{char}^2 + u_{bb}^2 + u_{Its}^2 + u_{ts}^2)^{1/2}$$

k = coverage factor = 2

$u_{char} = (\sum(w_i)^2 (u_{char i}^2))^{1/2}$ where $u_{char i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{Its} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$$X_{CRM/RM} = (X_a) (u_{char a})$$

X_a = mean of Assay Method A with

$u_{char a}$ = the standard uncertainty of characterization Method A

$$CRM/RM \text{ Expanded Uncertainty } (\pm) = U_{CRM/RM} = k (u_{char a}^2 + u_{bb}^2 + u_{Its}^2 + u_{ts}^2)^{1/2}$$

k = coverage factor = 2

$u_{char a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{Its} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

M Ag <	0.000500	M Eu <	0.000500	O Na	0.018534	M Se <	0.011000	M Zn	0.003494
O Al	0.000741	O Fe	0.004342	M Nb <	0.000500	M Si	0.111204	M Zr <	0.002000
M As <	0.011000	M Ga <	0.000500	M Nd <	0.000500	M Sm <	0.000500		
M Au <	0.010000	M Gd <	0.000500	M Ni <	0.007000	M Sn <	0.001000		
O B	0.000503	M Ge <	0.004500	M Os <	0.001000	M Sr	0.000243		
O Ba	0.000381	M Hf <	0.000500	O P <	0.045000	M Ta <	0.000500		
O Be	0.000046	M Hg <	0.000500	M Pb <	0.003000	M Tb <	0.000500		
M Bi <	0.000500	M Ho <	0.000500	M Pd <	0.000500	M Te <	0.005000		
O Ca	0.058249	M In <	0.000500	M Pr <	0.000500	M Th <	0.000500		
M Cd <	0.000500	M Ir <	0.000500	M Pt <	0.000500	M Ti <	0.002500		
M Ce <	0.000500	O K	0.029124	M Rb <	0.001000	M Tl <	0.000500		
M Co <	0.000500	M La <	0.000500	M Re <	0.000500	M Tm <	0.000500		
M Cr	0.000153	s Li <		M Rh <	0.000500	M U <	0.000500		
M Cs <	0.000500	M Lu <	0.000500	M Ru <	0.000500	M V	0.000953		
M Cu <	0.002000	O Mg	0.011649	O S	0.031772	M W <	0.001000		
M Dy <	0.000500	O Mn	0.000164	M Sb <	0.003000	M Y <	0.000500		
M Er <	0.000500	M Mo <	0.000500	M Sc <	0.001500	M Yb <	0.000500		

M - Checked by ICP-MS O - Checked by ICP-OES i - Spectral Interference
n - Not Checked For s - Solution Standard Element

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.
- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.
- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit www.inorganicventures.com/TCT

Atomic Weight; Valence; Coordination Number; Chemical Form in Solution - 6.94 +1 (6) Li+(aq) large effective radius due to hydration sphere

Chemical Compatibility -Soluble in HCl, HNO₃, H₂SO₄ and HF aqueous matrices. Stable with all metals and inorganic anions.

Stability - 2-100 ppb levels stable for months in 1% HNO₃ / LDPE container. 1-10,000 ppm solutions chemically stable for years in 1-5% HNO₃ / LDPE container.

Li Containing Samples (Preparation and Solution) -Metal (Dissolves very rapidly in water); Ores (Sodium carbonate fusion in Pt0 followed by HCl dissolution-blank levels of Li in sodium carbonate critical); Organic Matrices (Sulfuric / peroxide digestion or nitric / sulfuric / perchloric acid decomposition).

Atomic Spectroscopic Information (ICP-OES D.L.s are given as radial/axial view):

Technique/Line	Estimated D.L.	Order	Interferences (underlined indicates severe)
ICP-MS 7 amu	10 ppt	n/a	
ICP-OES 323.261 nm	1.1 / 0.05 micro;g/mL	1	Sb, Th, Ni
ICP-OES 460.286 nm	0.9 / 0.04 µg/mL	1	Zr, Th
ICP-OES 670.784 nm	0.002 / 0.00002 µg/mL	1	2nd order radiation from R.E.s on some optical designs

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va. 24073, USA; Telephone: 800.669.6799; 540.585.3030, Fax: 540.585.3012; inorganicventures.com; info@inorganicventures.com

11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

February 11, 2021

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **February 11, 2025**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Michael Booth
Director, Quality Control



Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director



300 Technology Drive
 Christiansburg, VA 24073 USA
 inorganicventures.com

 P: 800-669-6799/540-585-3030
 F: 540-585-3012
 info@inorganicventures.com

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).



2.0 PRODUCT DESCRIPTION

Product Code: Single Analyte Custom Grade Solution
 Catalog Number: CGMG10
 Lot Number: S2-MG704239
 Matrix: 2% (v/v) HNO₃
 Value / Analyte(s): 10 000 µg/mL ea:
 Magnesium
 Starting Material: Magnesium Metal
 Starting Material Lot#: 2168
 Starting Material Purity: 99.9984%

ID #: 14688
 Opened:
 Magnesium Single Analyte Custom Grade Sol
Expires: 4/23/2025
 Rec'd: 12/28/2021
 Enerav Laboratories Inc 1120 So. 27th Street
 Billings MT 59107

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 10053 ± 30 µg/mL
Density: 1.053 g/mL (measured at 20 ± 4 °C)

Assay Information:

Assay Method #1	10022 ± 62 µg/mL ICP Assay NIST SRM 3131a Lot Number: 140110
Assay Method #2	10078 ± 26 µg/mL EDTA NIST SRM 928 Lot Number: 928
Assay Method #3	10033 ± 26 µg/mL Calculated NIST SRM Lot Number: See Sec. 4.2

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$$X_{CRM/RM} = \sum(w_i)(X_i)$$

X_i = mean of Assay Method i with standard uncertainty $u_{char i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$$w_i = (1/u_{char i})^2 / (\sum(1/(u_{char i})^2))$$

$$CRM/RM \text{ Expanded Uncertainty } (\pm) = U_{CRM/RM} = k (u^2_{char} + u^2_{bb} + u^2_{Its} + u^2_{ts})^{1/2}$$

k = coverage factor = 2

$u_{char} = [\sum(w_i)^2 (u_{char i})^2]^{1/2}$ where $u_{char i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{Its} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$$X_{CRM/RM} = (X_a) (u_{char a})$$

X_a = mean of Assay Method A with

$u_{char a}$ = the standard uncertainty of characterization Method A

$$CRM/RM \text{ Expanded Uncertainty } (\pm) = U_{CRM/RM} = k (u^2_{char a} + u^2_{bb} + u^2_{Its} + u^2_{ts})^{1/2}$$

k = coverage factor = 2

$u_{char a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{Its} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

O Ag	0.002106	M	Eu	<	0.000910	O Na	0.071075	O Se	<	0.048000	O Zn	0.003299		
M Al	0.003553	M	Fe		0.002538	M Nb	<	0.000460	O Si	<	0.032000	O Zr	<	0.002700
M As	<	0.001400	M Ga	<	0.000460	M Nd	<	0.000910	M Sm	<	0.000460			
M Au	<	0.001400	M Gd	<	0.000460	O Ni	<	0.001600	M Sn	<	0.002300			
O B	0.006853	M	Ge	<	0.001400	M Os	<	0.000460	O Sr		0.000279			
O Ba	0.000964	M	Hf	<	0.000460	O P		0.015230	M Ta	<	0.000460			
O Be	<	0.000120	M Hg	<	0.000460	M Pb	<	0.000460	M Tb	<	0.000460			
M Bi	<	0.000460	M Ho	<	0.000460	M Pd	<	0.003200	M Te	<	0.007300			
O Ca	0.053306	M	In	<	0.000460	M Pr	<	0.000460	M Th	<	0.000460			
O Cd	<	0.000360	M Ir	<	0.000460	M Pt	<	0.001900	O Ti	<	0.001700			
M Ce	<	0.002300	M K		0.048229	M Rb		0.002411	M Tl		0.003046			
M Co	<	0.000910	M La	<	0.002800	M Re	<	0.000460	M Tm	<	0.000460			
M Cr	<	0.002300	O Li		0.027922	M Rh	<	0.000460	M U	<	0.000460			
M Cs	0.001040	M	Lu	<	0.000460	M Ru	<	0.000460	M V	<	0.000460			
O Cu	<	0.003000	s Mg	<		O S	<	0.190000	M W	<	0.000460			
M Dy	<	0.000460	O Mn		0.015230	M Sb		0.020814	O Y	<	0.000720			
M Er	<	0.000460	M Mo	<	0.000910	O Sc	<	0.000480	M Yb	<	0.000460			

M - Checked by ICP-MS O - Checked by ICP-OES i - Spectral Interference
n - Not Checked For s - Solution Standard Element

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.
- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.
- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit www.inorganicventures.com/TCT

Atomic Weight; Valence; Coordination Number; Chemical Form in Solution - 24.31 +2 6 Mg(H₂O)₆+2
Chemical Compatibility -Soluble in HCl, HNO₃, and H₂SO₄ avoid HF, H₃PO₄ and neutral to basic media. Stable with most metals and inorganic anions forming insoluble silicates, carbonates, hydroxides, oxides, and tungstates in neutral and slightly acidic media.

Stability - 2-100 ppb levels stable for months in 1% HNO₃ / LDPE container. 1-10,000 ppm solutions chemically stable for years in 1-10% HNO₃ / LDPE container.

Mg Containing Samples (Preparation and Solution) -Metal (Best dissolved in diluted HNO₃); Oxide (Readily soluble in above compatible aqueous acidic solutions); Ores (Carbonate fusion in Pt₀ followed by HCl dissolution); Organic Matrices (Sulfuric / peroxide digestion or nitric / sulfuric / perchloric acid decomposition, or dry ash and dissolution in dilute HCl).

Atomic Spectroscopic Information (ICP-OES D.L.s are given as radial/axial view):

Technique/Line	Estimated D.L.	Order	Interferences (underlined indicates severe)
ICP-MS 24 amu	42 ppt	n/a	7Li17O, 48Ti+2 , 48Ca+2
ICP-OES 279.553 nm	0.0002 / 0.00003 µg/mL	1	Th
ICP-OES 280.270 nm	0.0003 / 0.00005 µg/mL	1	U, V
ICP-OES 285.213 nm	0.002 / 0.00003 µg/mL	1	U, Hf, Cr, Zr

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va. 24073, USA; Telephone: 800.669.6799; 540.585.3030, Fax: 540.585.3012; inorganicventures.com; info@inorganicventures.com

11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

April 23, 2021

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **April 23, 2025**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0

NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Michael Booth
Director, Quality Control



Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director



1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).



2.0 PRODUCT DESCRIPTION

Product Code: Single Analyte Custom Grade Solution
 Catalog Number: CGTL1
 Lot Number: R2-TL694852
 Matrix: 1% (v/v) HNO3
 Value / Analyte(s): 1 000 µg/mL ea:
 Thallium
 Starting Material: TINO3
 Starting Material Lot#: 2118
 Starting Material Purity: 99.9998%

ID #: 14693
 Opened:
 Thallium Single Analyte Custom Grade Solution
Expires: 8/5/2024
 Rec'd: 12/28/2021
 Energy Laboratories Inc 1120 So. 27th Street
 Billings MT 59107

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 1002 ± 5 µg/mL
Density: 1.005 g/mL (measured at 20 ± 4 °C)

Assay Information:

Assay Method #1 **1003 ± 4 µg/mL**
 ICP Assay NIST SRM 3158 Lot Number: 151215

Assay Method #2 **1000 ± 7 µg/mL**
 Calculated NIST SRM Lot Number: See Sec. 4.2

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$$X_{CRM/RM} = \sum(w_i) (X_i)$$

X_i = mean of Assay Method i with standard uncertainty $u_{char i}$
 w_i = the weighting factors for each method calculated using the inverse square of the variance:
 $w_i = (1/u_{char i}^2) / (\sum(1/u_{char i}^2))$

$$CRM/RM \text{ Expanded Uncertainty } (\pm) = U_{CRM/RM} = k (u_{char}^2 + u_{bb}^2 + u_{lts}^2 + u_{ts}^2)^{1/2}$$

k = coverage factor = 2
 $u_{char} = (\sum((w_i)^2 (u_{char i})^2))^{1/2}$ where $u_{char i}$ are the errors from each characterization method
 u_{bb} = bottle to bottle homogeneity standard uncertainty
 u_{lts} = long term stability standard uncertainty (storage)
 u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$$X_{CRM/RM} = (X_a) / (u_{char a})$$

X_a = mean of Assay Method A with
 $u_{char a}$ = the standard uncertainty of characterization Method A

$$CRM/RM \text{ Expanded Uncertainty } (\pm) = U_{CRM/RM} = k (u_{char a}^2 + u_{bb}^2 + u_{lts}^2 + u_{ts}^2)^{1/2}$$

k = coverage factor = 2
 $u_{char a}$ = the errors from characterization
 u_{bb} = bottle to bottle homogeneity standard uncertainty
 u_{lts} = long term stability standard uncertainty (storage)
 u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

M Ag < 0.000200	M Eu < 0.000200	O Na < 0.000256	M Se < 0.011019	O Zn < 0.000236
O Al < 0.004184	O Fe < 0.002824	M Nb < 0.000200	O Si < 0.000387	M Zr < 0.000200
M As < 0.002003	M Ga < 0.000200	M ⁱ Nd < 0.000200	M Sm < 0.000200	
O Au < 0.002824	M Gd < 0.000200	M ⁱ Ni < 0.000177	M Sn < 0.000601	
O B < 0.004184	M Ge < 0.000801	M ⁱ Os < 0.000198	O Sr < 0.000313	
M Ba < 0.000400	M Hf < 0.000200	O P < 0.010460	M Ta < 0.000200	
O Be < 0.000104	M Hg < 0.000794	M Pb < 0.000083	M Tb < 0.000200	
M Bi < 0.005209	M Ho < 0.000200	M Pd < 0.000400	M Te < 0.005008	
O Ca < 0.000250	M In < 0.000200	M Pr < 0.000200	M Th < 0.000200	
M Cd < 0.000135	M Ir < 0.000198	M Pt < 0.000801	O Ti < 0.001255	
M Ce < 0.000200	O K < 0.000636	M Rb < 0.000200	s Tl <	
M Co < 0.000601	M La < 0.000200	M Re < 0.000200	M Tm < 0.000200	
M Cr < 0.000801	O Li < 0.000177	M Rh < 0.000200	M U < 0.000200	
M Cs < 0.003606	M Lu < 0.000200	M Ru < 0.000397	M V < 0.002203	
M Cu < 0.001001	O Mg < 0.000054	O S < 0.015690	M W < 0.000601	
M Dy < 0.000200	M Mn < 0.000801	M Sb < 0.000400	M Y < 0.000200	
M Er < 0.000200	M Mo < 0.001202	O Sc < 0.000711	M Yb < 0.000200	

M - Checked by ICP-MS O - Checked by ICP-OES i - Spectral Interference
n - Not Checked For s - Solution Standard Element

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.
- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.
- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit www.inorganicventures.com/TCT

Atomic Weight; Valence; Coordination Number; Chemical Form in Solution - 204.38 + 16 Ti(H₂O)₆1+

Chemical Compatibility - Soluble in HCl, HNO₃, and H₂SO₄. Stable with most metals and inorganic anions. The sulfite, thiocyanate and oxalate are moderately soluble; the phosphate and arsenite are slightly soluble and the sulfide is insoluble.

Stability - 2-100 ppb levels stable for months in 1% HNO₃ / LDPE container. 1-10,000 ppm solutions chemically stable for years in 2-5% HNO₃ / LDPE container.

Ti Containing Samples (Preparation and Solution) -Metal (Best dissolved in HNO₃ which forms chiefly the Ti³⁺ ion.); Oxide (The thalious oxide is readily soluble in water. The thallic oxide requires high levels of acid); Ores (Carbonate fusion in PtO followed by HCl dissolution); Organic Matrices (Sulfuric/peroxide digestion or dry ash and dissolution in HCl).

Atomic Spectroscopic Information (ICP-OES D.L.s are given as radial/axial view):

Technique/Line	Estimated D.L.	Order	Interferences (underlined indicates severe)
ICP-MS 205 amu	2 ppt	N/A	189Os16O
ICP-OES 190.864 nm	0.04 / 0.004 µg/mL	1	V, Ti
ICP-OES 276.787 nm	0.1 / 0.01 µg/mL	1	Ta, V, Fe, Cr
ICP-OES 351.924 nm	0.2 / 0.02 µg/mL	1	Th, Ce, Zr

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va. 24073, USA; Telephone: 800.669.6799; 540.585.3030, Fax: 540.585.3012; inorganicventures.com; info@inorganicventures.com

11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

August 05, 2020

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **August 05, 2024**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Michael Booth
Director, Quality Control



Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director



Energy Laboratories Inc

Standard LOG

Standard ID: ME220112A 1000 PPB STANDARD
 Standard Name: 1000 PPB Standard
 Date Prepared: 1/12/2022
 Date Expires: 11/18/2022
 Department: ME
 Vendor:
 Lot Number:
 Balance ID:
 Comments: Made fresh daily

Type: Secondary
 BY: Cindy Rohrer
 Status: Open

Chemical / Solvent Used	BottleNo	Amt	Units	Expires
Hydrochloric Acid E1421	14721	0.25	mL	1/4/2027
Nitric Acid 69.0- 70.0% D0521	14626	0.5	mL	12/14/2026
Milli-Q H2O	391	48.25	mL	6/1/2100

Final Volume:
50 mL

<u>Stock Source</u>	<u>Base Units</u>	<u>Amount Added</u>
ME211208 MSCAL MSCAL 2B	ug/mL	0.5 mL
ME211118 MSCAL EL-MSCAL-5A	ug/mL	0.5 mL
ME211229A AU 2n Au 2nd source Stock	ug/mL	0.01 mL

<u>Analytes</u>	<u>CAS</u>	Conc:	<u>mg/L</u>
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Energy Laboratories Inc

Standard LOG

Standard ID: ME211208 MSCAL2B
Standard Name: MSCAL 2B
Date Prepared: 12/8/2021
Date Expires: 12/8/2022
Department: ME
Vendor: Inorganic Ventures
Lot Number: S2-MEB704403
Balance ID:
Comments: Opened 12/08/2021; Expires 12/08/2022

Type: Primary
BY: Stacy R. Hendricks
Status: Open

Chemical / Solvent Used	BottleNo	Amt	Units	Expires
Multi Analyte Custom Grade Solution	13793		mL	12/8/2022

Final Volume:
mL

Stock Source

Base Units

Amount Added

Analytes

CAS

Conc: **ug/mL**

300 Technology Drive
Christiansburg, VA 24073 USA
inorganicventures.com

P: 800-669-6799/540-585-3030
F: 540-585-3012
info@inorganicventures.com

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).



2.0 PRODUCT DESCRIPTION

Product Code: Multi Analyte Custom Grade Solution
Catalog Number: EL-MSCAL-2B
Lot Number: S2-MEB704403
Matrix: 5% (v/v) HNO3
Value / Analyte(s):
100 µg/mL ea:
Aluminum, Arsenic,
Boron, Barium,
Beryllium, Cadmium,
Cobalt, Chromium,
Copper, Iron,
Manganese, Nickel,
Lead, Selenium,
Strontium, Thorium,
Thallium, Uranium,
Vanadium, Zinc,
40 µg/mL ea:
Silver

3.0 CERTIFIED VALUES AND UNCERTAINTIES

ID #: 13793

Opened: _____

Multi Analyte Custom Grade Solution

Expires: 4/21/2025

Rec'd: 4/29/2021

Energy Laboratories Inc 1120 So. 27th Street
Billings MT 59107

ANALYTE	CERTIFIED VALUE	ANALYTE	CERTIFIED VALUE
Aluminum, Al	100.0 ± 0.4 µg/mL	Arsenic, As	100.0 ± 0.9 µg/mL
Barium, Ba	100.0 ± 0.5 µg/mL	Beryllium, Be	100.0 ± 0.7 µg/mL
Boron, B	100.0 ± 0.7 µg/mL	Cadmium, Cd	100.0 ± 0.5 µg/mL
Chromium, Cr	100.0 ± 0.8 µg/mL	Cobalt, Co	100.0 ± 0.6 µg/mL
Copper, Cu	100.0 ± 0.5 µg/mL	Iron, Fe	100.1 ± 0.4 µg/mL
Lead, Pb	100.0 ± 0.6 µg/mL	Manganese, Mn	100.0 ± 0.5 µg/mL
Nickel, Ni	100.0 ± 0.6 µg/mL	Selenium, Se	100.0 ± 0.7 µg/mL
Silver, Ag	39.99 ± 0.18 µg/mL	Strontium, Sr	100.0 ± 0.4 µg/mL
Thallium, Tl	100.0 ± 0.6 µg/mL	Thorium, Th	100.0 ± 0.5 µg/mL
Uranium, U	100.0 ± 0.5 µg/mL	Vanadium, V	100.0 ± 0.5 µg/mL
Zinc, Zn	100.0 ± 0.5 µg/mL		

Density: 1.033 g/mL (measured at 20 ± 4 °C)

Assay Information:

ANALYTE	METHOD	NIST SRM#	SRM LOT#
Ag	ICP Assay	3151	160729
Ag	Volhard	999c	999c
Al	ICP Assay	3101a	140903
Al	EDTA	928	928
As	ICP Assay	3103a	100818
B	ICP Assay	3107	110830
Ba	ICP Assay	3104a	140909
Ba	Gravimetric		See Sec. 4.2
Be	ICP Assay	3105a	090514
Cd	ICP Assay	3108	130116
Cd	EDTA	928	928
Co	ICP Assay	3113	190630
Co	EDTA	928	928
Cr	ICP Assay	3112a	170630
Cu	ICP Assay	3114	121207
Cu	EDTA	928	928
Fe	ICP Assay	3126a	140812
Fe	EDTA	928	928
Fe	Calculated		See Sec. 4.2
Mn	ICP Assay	3132	050429
Mn	EDTA	928	928
Ni	ICP Assay	3136	120619
Ni	EDTA	928	928
Pb	ICP Assay	3128	101026
Pb	EDTA	928	928
Se	ICP Assay	3149	100901
Se	Calculated		See Sec. 4.2
Sr	EDTA	928	928
Sr	ICP Assay	Traceable to 3153a	K2-SR650985
Sr	Calculated		See Sec. 4.2
Th	EDTA	928	928
Th	Calculated		See Sec. 4.2
Tl	ICP Assay	3158	151215
U	ICP Assay	3164	080521
U	Calculated		See Sec. 4.2
V	ICP Assay	3165	160906
V	EDTA	928	928
Zn	ICP Assay	3168a	120629
Zn	EDTA	928	928

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of $k = 2$.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$$X_{CRM/RM} = \sum (w_i) (X_i)$$

X_i = mean of Assay Method i with standard uncertainty $u_{char i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$$w_i = (1/u_{char i}^2) / (\sum (1/u_{char i}^2))$$

$$CRM/RM \text{ Expanded Uncertainty } (\pm) = U_{CRM/RM} = k (u^2_{char} + u^2_{bb} + u^2_{Its} + u^2_{ts})^{1/2}$$

k = coverage factor = 2

$u_{char} = [\sum ((w_i)^2 (u_{char i})^2)]^{1/2}$ where $u_{char i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{Its} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Certified Abundance:

IV's Certified Abundance

Isotope

Uranium 238U

Uranium 235U

Atom %

99.8 ± 0.1

0.24 ± 0.05

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$$X_{CRM/RM} = (X_a) (u_{char a})$$

X_a = mean of Assay Method A with

$u_{char a}$ = the standard uncertainty of characterization Method A

$$CRM/RM \text{ Expanded Uncertainty } (\pm) = U_{CRM/RM} = k (u^2_{char a} + u^2_{bb} + u^2_{Its} + u^2_{ts})^{1/2}$$

k = coverage factor = 2

$u_{char a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{Its} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES ($\mu\text{g/mL}$)

N/A

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit www.inorganicventures.com/TCT

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va. 24073, USA; Telephone: 800.669.6799; 540.585.3030, Fax: 540.585.3012; inorganicventures.com; info@inorganicventures.com

11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

April 21, 2021

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **April 21, 2025**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Michael Booth
Director, Quality Control



Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director



Energy Laboratories Inc

Standard LOG

Standard ID: ME211118 MSCAL-5A
Standard Name: EL-MSCAL-5A
Date Prepared: 11/18/2021
Date Expires: 11/18/2022
Department: ME
Vendor: Inorganic Ventures
Lot Number: P2-MEB687200
Balance ID:
Comments: Opened 11/18/2021; Expires 11/18/2022

Type: Primary
BY: Stacy R. Hendricks
Status: Open

Chemical / Solvent Used	BottleNo	Amt	Units	Expires
Multi Analyte Custom Grade Solution	13175	500	mL	11/18/2022

Final Volume:
500 mL

Stock Source

Base Units

Amount Added

Analytes

CAS

Conc: **ug/mL**

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).



2.0 PRODUCT DESCRIPTION

Product Code: Multi Analyte Custom Grade Solution

Catalog Number: EL-MSCAL-5A

Lot Number: P2-MEB687200

Matrix: 3% (v/v) HNO₃

Value / Analyte(s):

5 000 µg/mL ea:	Calcium,	Potassium,	Magnesium,
	Sodium,		
500 µg/mL ea:	Phosphorus,	Iron,	
250 µg/mL ea:	Lithium		

3.0 CERTIFIED VALUES AND UNCERTAINTIES

ANALYTE	CERTIFIED VALUE	ANALYTE	CERTIFIED VALUE
Calcium, Ca	5 000 ± 20 µg/mL	Iron, Fe	499.9 ± 2.1 µg/mL
Lithium, Li	250.0 ± 1.1 µg/mL	Magnesium, Mg	5 000 ± 21 µg/mL
Phosphorus, P	499.8 ± 2.5 µg/mL	Potassium, K	5 000 ± 18 µg/mL
Sodium, Na	5 000 ± 18 µg/mL		

Density: 1.076 g/mL (measured at 20 ± 4 °C)

Assay Information:

ID #: 13175

Opened: _____
 Multi Analyte Custom Grade Solution
Expires: 12/2/2023
 Rec'd: 10/12/2020
 Energy Laboratories Inc 1120 So. 27th Street
 Billings MT 59107

ANALYTE	METHOD	NIST SRM#	SRM LOT#
Ca	ICP Assay	3109a	130213
Ca	EDTA	928	928
Fe	ICP Assay	3126a	140812
Fe	EDTA	928	928
K	ICP Assay	3141a	140813
K	Gravimetric		See Sec. 4.2
Li	ICP Assay	3129a	100714
Li	Gravimetric		See Sec. 4.2
Mg	ICP Assay	3131a	140110
Mg	EDTA	928	928
Na	ICP Assay	3152a	120715
Na	Gravimetric		See Sec. 4.2
P	ICP Assay	3139a	060717
P	Acidimetric	84L	84L

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$$X_{CRM/RM} = \sum(w_i) (X_i)$$

X_i = mean of Assay Method i with standard uncertainty $u_{char i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$$w_i = (1/u_{char i})^2 / (\sum(1/(u_{char i})^2))$$

$$CRM/RM \text{ Expanded Uncertainty } (\pm) = U_{CRM/RM} = k (u_{char}^2 + u_{bb}^2 + u_{lts}^2 + u_{ts}^2)^{1/2}$$

k = coverage factor = 2

$u_{char} = \{\sum((w_i)^2 (u_{char i})^2)\}^{1/2}$ where $u_{char i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$$X_{CRM/RM} = (X_a) (u_{char a})$$

X_a = mean of Assay Method A with

$u_{char a}$ = the standard uncertainty of characterization Method A

$$CRM/RM \text{ Expanded Uncertainty } (\pm) = U_{CRM/RM} = k (u_{char a}^2 + u_{bb}^2 + u_{lts}^2 + u_{ts}^2)^{1/2}$$

k = coverage factor = 2

$u_{char a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES ($\mu\text{g/mL}$)

N/A

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed outer bag.

- While stored in the sealed outer bag, transpiration of this CRM/RM is negligible. After opening the sealed outer bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed outer bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va. 24073, USA; Telephone: 800.669.6799; 540.585.3030, Fax: 540.585.3012; inorganicventures.com; info@inorganicventures.com

11.0 CERTIFICATION, EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

December 02, 2019

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **December 02, 2023**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed outer Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Michael Booth
Manager, Quality Control



Certifying Officer:

Paul Gaines
CEO, Senior Technical Director



Energy Laboratories Inc

Standard LOG

Standard ID: ME211229A AU 2ND SOURCE
Standard Name: Au 2nd source Stock
Date Prepared: 12/29/2021
Date Expires: 12/29/2022
Department: ME
Vendor: SCP Science
Lot Number: S211129013
Balance ID:
Comments: opened 12/29/2021; expires 12/29/2022

Type: Primary
BY: Amanda E. McDani
Status: Open

Chemical / Solvent Used	BottleNo	Amt	Units	Expires
ICP/ICPMS Standard Gold	14710	500	mL	12/29/2022

Final Volume:
500 mL

Stock Source

Base Units

Amount Added

Analytes

CAS

Conc: **ug/mL**

ID #: 14710

Opened:

ICP/ICPMS Standard Gold

Expires: 12/31/2023

Rec'd: 12/29/2021

Eneray Laboratories Inc 1120 So. 27th Street

Billings MT 59107

SCP SCIENC

Providing Innovative Solutions to Analytical

Certificate of Analysis**Au****1.0 DESCRIPTION:****PlasmaCAL ICP/ICPMS Standard - Gold 1000 µg/ml**

Catalogue Number: 140-052-790/-791/-795

Starting Material: Gold Metal 99.99%+

Lot Number: **S211129013**

Matrix: 10% HCl (See Section 3 for actual matrix)

Expiration Date (End of month): **December 2023** (or 15 months after bottle is opened, whichever comes first)**2.0 CERTIFIED VALUES AND ASSOCIATED UNCERTAINTY:**Certified Concentration: **1001 µg/ml +/- 4 µg/ml****982 µg/g +/- 4 µg/g**

Method of analysis: Inductively Coupled Plasma Atomic Emission Spectroscopy (ICP-AES)

Traceability: NIST Standard Reference Material 3121 Lot: **991806**

Note: The uncertainty of the certified value has been calculated from applicable uncertainty contributors (u_i) including uncertainty established during characterization of the material (u_{char}), the between bottle variation (u_{bb}), short-term stability (u_{sts}) and long-term stability (u_{lts}) according to the model $u_c = \sqrt{(u_{char}^2 + u_{bb}^2 + u_{sts}^2 + u_{lts}^2)}$. This combined uncertainty has been further multiplied by a coverage factor (k) of 2 to provide a 95% confidence interval.

3.0 REFERENCE VALUES:Density: **1.019 g/ml @ 22.4 °C**Actual Matrix: **10.0% (v/v) HCl**

Trace Metal Impurities as tested by ICP-MS:

Element	Conc. (ppm)	Element	Conc. (ppm)	Element	Conc. (ppm)	Element	Conc. (ppm)
Ag	0.3851	Fe	<0.0090	Nd	<0.0010	Sn	<0.0010
Al	0.0062	Ga	<0.0010	Ni	<0.0010	Sr	<0.0025
As	<0.0010	Gd	<0.0010	Os	<0.0010	Ta	<0.0010
Au	N/A	Ge	<0.0010	P	<0.0132	Tb	<0.0010
B	<0.0015	Hf	<0.0010	Pb	<0.0010	Te	<0.0010
Ba	<0.0010	Hg	*	Pd	0.0434	Th	<0.0010
Be	<0.0010	Ho	<0.0010	Pr	<0.0010	Ti	<0.0012
Bi	<0.0010	In	<0.0010	Pt	0.0048	Tl	<0.0011
Ca	<0.0135	Ir	<0.0010	Rb	<0.0010	Tm	<0.0010
Cd	<0.0010	K	0.0362	Re	<0.0010	U	<0.0010
Ce	<0.0010	La	<0.0010	Rh	<0.0010	V	<0.0010
Co	<0.0010	Li	<0.0010	Ru	<0.0010	W	<0.0020
Cr	<0.0010	Lu	<0.0010	S	*	Y	<0.0010
Cs	0.0029	Mg	<0.0010	Sb	<0.0010	Yb	<0.0010
Cu	0.0023	Mn	<0.0010	Sc	<0.0010	Zn	<0.0010
Dy	<0.0010	Mo	<0.0010	Se	<0.01	Zr	<0.0010
Er	<0.0010	Na	0.0070	Si	<0.1		
Eu	<0.0010	Nb	<0.0010	Sm	<0.0010		

*: Not tested

4.0 APPROVAL AND DATE OF CERTIFICATION:

Certification Approval: Daniel Boisvert, Chemist

Certification Date: December 10, 2021

Daniel Boisvert

5.0 INTENDED USE / UTILISATION PRÉVUE:

- ICP Standards: For the calibration of, including but not limited to: ICP-AES, ICP-MS, FAAS, GFAA, XRF and DCP. / *Étalons ICP* : Pour l'étalonnage d'instruments de mesure tels que: ICP-AES, ICP-MS, FAAS, GFAA, XRF et DCP.
- AA Standards: For the calibration of Flame (FAAS) and Graphite Furnace (GFAA) Atomic Absorption Spectrometers. / *Étalons AA* : Pour l'étalonnage de spectromètres d'absorption atomique flamme (GFAA) et four au graphite (GFAA).
- Matrix Modifiers: For the optimization of analytical conditions to provide better Graphite Furnace Atomic Absorption (GFAA) instrument response and improved detection limits. / *Modificateur de matrice* : Pour l'optimisation des conditions analytiques afin de fournir des meilleures réponses instrumentales et limites de détection pour SAA four au graphite.
- pH Standards: For the calibrating pH meters or for other wet chemistry applications. / *Étalons pH* : Pour étalonnage de pH mètres et autres applications de chimie humide.
- Conductivity Standards: For electrolytic conductivity measurement as a calibration standard. / *Étalons de conductivité* : Comme étalon pour les mesures de conductivité électrolytiques.
- IC Standards: for calibration of, but not limited to IC, HPLC, TLC, ISE, IR, NMR, MS, UV/VIS or other wet chemistry applications. / *Étalons IC* : Pour étalonnage d'instruments tels que : IC, HPLC, TLC, ISE, IR, NMR, MS, UV/VIS et autres applications de chimie humide.
For any inquiries, please contact **SCP SCIENCE**. / *Pour toute question, veuillez contacter SCP SCIENCE.*

6.0 INSTRUCTIONS FOR USE / INSTRUCTIONS D'UTILISATION:

Handling and Storage / Manutention et entreposage: Keep product tightly capped when not in use. The solution should be opened for a minimum amount of time necessary to dispense the amount required. Do not pipet or use directly from container. Do not return unused portions back to container. Store under normal laboratory conditions. Avoid exposure to excessive sources of heat and humidity or direct sunlight. / *Garder les contenants bien fermés lorsque non utilisés. Le contenant devrait être ouvert seulement pour le temps requis afin de prélever la quantité nécessaire. Ne pas pipetter ou utiliser directement du contenant. Ne pas retourner les portions non-utilisées dans le contenant. Conserver dans des conditions normales de laboratoire. Éviter l'exposition à des sources de chaleur et d'humidité excessives ou à l'exposition solaire directe.*

Stability / Stabilité: This Standard is guaranteed to be stable and accurate to within the specified uncertainty of measurement up to the unopened expiry date, if sealed, or up to the opened expiry date (when indicated), whichever comes first, provided the solution is kept tightly capped and stored under the indicated storage conditions. Purchasers will be notified of any significant changes resulting in re-certification or withdrawal of the product prior to the expiration date. / *La stabilité et l'exactitude de cet étalon sont garanties d'être à l'intérieur de l'incertitude de mesure, jusqu'à la date d'expiration de la bouteille non-ouverte, si scellée, ou jusqu'à la date d'expiration de la bouteille ouverte (si indiquée), en présumant que le contenant est maintenu fermé et gardé dans les conditions d'entreposage indiquées. Les acheteurs seront avisés dans le cas où il y aura des changements significatifs nécessitant une re-certification ou un rappel du produit avant la date d'expiration.*

7.0 HAZARDOUS INFORMATION / INFORMATION SUR LES RISQUES POTENTIELS:

Please refer to the associated Safety Data Sheet (SDS) for information regarding this product (available at www.SCPSCIENCE.com). / *SVP vous référer à la Fiche Signalétique applicable pour de l'information sur ce produit (Disponible à www.SCPSCIENCE.com).*

8.0 HOMOGENEITY / HOMOGÉNÉITÉ:

This solution has been blended according to an in-house procedure and its homogeneity is guaranteed to be fit for purpose when a sample size sufficient for the intended method of analysis is used. / *Cette solution a été préparée selon une procédure maison et nous assurons que sa homogénéité est approprié à l'emploi lorsqu'un échantillon suffisant pour la méthode d'analyse prévue est utilisé.*

9.0 TRACEABILITY / TRAÇABILITÉ:

This CRM (Certified Reference Material) is traceable to the NIST SRM (Standard Reference Material) indicated in section 2 through an unbroken chain of comparisons. In addition, balances used are regularly calibrated using weights which are traceable to NIST (National Institute of Standards and Technology) or NRC (National Research Council of Canada) standards. All conductivity meters used to analyze this standard have been regularly calibrated using a NIST or NRC traceable Thermometer and standards. All pH meters used to analyze this standard have been regularly calibrated using a NIST or NRC traceable thermometer and pH/MV simulator. / *Ce matériel de référence certifié est traçable au Matériel de Référence Standardisé de NIST indiqué à la section 2 par une chaîne de comparaison ininterrompue. De plus, les balances utilisées sont étalonnées régulièrement en utilisant des poids qui sont traçables au NIST (National Institute of Standards and Technology) ou au CRNC (Conseil National de Recherches Canada). Tout conductimètre utilisé afin d'analyser cet étalon a été sujet à un étalonnage périodique utilisant des thermomètres et étalons traçables au NIST ou CNRC. Tout pH mètre utilisé afin d'analyser cet étalon a été sujet à un étalonnage périodique utilisant des thermomètres et un simulateur pH/MV traçables au NIST ou au CNRC.*

10.0 PREPARATION / PRÉPARATION:

For the preparation of these solutions, 18 meghom/cm double deionized water, high-purity acids and glassware calibrated to ASTM Class A specifications are used. / *Une eau de 18 meghom/cm doublement déionisé, de l'acide de haute pureté, ainsi que de la verrerie étalonnée afin de satisfaire les spécifications Classe A de ASTM ont été utilisés pour la préparation de cet étalon.*

11.0 QUALITY SYSTEM CERTIFICATIONS / CERTIFICATIONS DE SYSTÈME QUALITÉ:

ISO 9001 Certification / Certification ISO 9001: This standard was produced in a facility which operates under a registered ISO 9001 Quality Management System. Please consult our web site for a copy of the most recent revision of our certificate of registration. / *Cet étalon a été fabriqué dans un laboratoire qui utilise un Système de Gestion de la Qualité enregistré à la norme ISO 9001. Veuillez consulter notre site web pour obtenir la version la plus récente de notre certificat d'enregistrement.*

ISO 17025 Accreditation / Accréditation ISO 17025: SCP SCIENCE (Corporate Headquarters) operates an ISO 17025 accredited laboratory. Please consult our web site for a copy of the most recent revision of our certificate and scope of accreditation. / *SCP SCIENCE (Siège social) est accréditée ISO 17025. Veuillez consulter notre site web afin d'obtenir la plus récente version de notre certificat d'accréditation ainsi que la portée de notre accréditation.*

ISO 17034 Accreditation / Accréditation ISO 17034: SCP SCIENCE (Corporate Headquarters) is an ISO 17034 accredited Reference Material Producer. Please consult our website for a copy of our most recent certificate and scope of accreditation. / *SCP SCIENCE (Siège social) est un Fabricant de Matériaux de Référence Accrédité ISO 17034. Veuillez consulter notre site web afin d'obtenir la plus récente version de notre certificat d'accréditation ainsi que la portée de notre accréditation.*

CORPORATE HEADQUARTERS
21800 Clark Graham
Baie D'Urfé (Montréal), Quebec,
H9X 4B6 Canada
Phone: +1 (800) 361-6820
Fax: +1 (800) 253-5549

USA
3rd Party Distribution Center
348 Route 11, Champlain,
N.Y. 12919-4816
Phone: +1 (800) 361-6820
Fax: +1 (800) 253-5549

FRANCE
12 Ave. de Québec, Bat. IRIS
91140, Villebon-sur-Yvette
Phone: +33 (0) 1 69 18 71 17
Fax: +33 (0) 1 60 92 05 67

GERMANY
Alte Marktoberdorfer Straße 14, 87616
Marktoberdorf
Phone: +49 (0) 8342-89560-61
Fax: +49 (0) 8342-89560-69

Energy Laboratories Inc

Standard LOG

Standard ID: ME220112 100 PPB STANDARD
 Standard Name: 100 ppb Standard
 Date Prepared: 1/12/2022
 Date Expires: 11/18/2022
 Department: ME
 Vendor: Inorganic Ventures
 Lot Number:
 Balance ID:
 Comments: Made Fresh Daily

Type: Secondary
 BY: Cindy Rohrer
 Status: Open

Chemical / Solvent Used	BottleNo	Amt	Units	Expires
Hydrochloric Acid E1421	14721	0.25	mL	1/4/2027
Nitric Acid 69.0- 70.0% D0521	14626	0.5	mL	12/14/2026
Milli-Q H2O	391	48.335	mL	6/1/2100

Final Volume:
 50 mL

<u>Stock Source</u>	<u>Base Units</u>	<u>Amount Added</u>
ME211221 MSCAL MSCAL 3C	ug/mL	0.05 mL
ME211118 MSCAL EL-MSCAL-5A	ug/mL	0.25 mL
ME220105 HgPrim Primary Hg Stock 2 PPM	ug/mL	0.05 mL
ME211208 MSCAL MSCAL 2B	ug/mL	0.05 mL
ME211229A AU 2n Au 2nd source Stock	ug/mL	0.01 mL
ME220110 Ce, La Ce, La Primary	ug/mL	0.05 mL

<u>Analytes</u>	<u>CAS</u>	Conc:	<u>mg/L</u>
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Energy Laboratories Inc

Standard LOG

Standard ID: ME211221 MSCAL 3C
Standard Name: MSCAL 3C
Date Prepared: 12/21/2021
Date Expires: 12/21/2022
Department: ME
Vendor: Inorganic Ventures
Lot Number: S2-MEB700780
Balance ID:
Comments: Opened 12/21/21; expires 12/21/22

Type: Primary
BY: Stacy R. Hendricks
Status: Open

Chemical / Solvent Used	BottleNo	Amt	Units	Expires
Multi Analyte Custom Grade Solution	13473	250	mL	12/21/2022

Final Volume:
250 mL

Stock Source

Base Units

Amount Added

Analytes

CAS

Conc: **ug/mL**

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).


2.0 PRODUCT DESCRIPTION

Product Code: Multi Analyte Custom Grade Solution
 Catalog Number: EL-MSCAL-3C
 Lot Number: S2-MEB700780
 Matrix: 3% (v/v) HNO₃
 tr. HF
 Value / Analyte(s): 400 µg/mL ea:
 Silicon,
 100 µg/mL ea:
 Tin,
 Molybdenum,

1-6-2025

ID #: 13473

Opened: _____

Multi Analyte Custom Grade Solution

Expires: 1/6/2025

Rec'd: 1/15/2021

Energy Laboratories Inc 1120 So. 27th Street
 Billings MT 59107

Titanium,
 Antimony

3.0 CERTIFIED VALUES AND UNCERTAINTIES

ANALYTE	CERTIFIED VALUE	ANALYTE	CERTIFIED VALUE
Antimony, Sb	100.0 ± 0.8 µg/mL	Molybdenum, Mo	100.0 ± 0.6 µg/mL
Silicon, Si	399.9 ± 3.0 µg/mL	Tin, Sn	100.0 ± 0.6 µg/mL
Titanium, Ti	100.0 ± 0.7 µg/mL		

Density: 1.018 g/mL (measured at 20 ± 4 °C)

Assay Information:

ANALYTE	METHOD	NIST SRM#	SRM LOT#
Mo	ICP Assay	3134	130418
Sb	ICP Assay	3102a	140911
Si	ICP Assay	3150	130912
Sn	ICP Assay	3161a	140917
Ti	ICP Assay	3162a	130925

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{\text{CRM/RM}}$, where two or more methods of characterization are used is the weighted mean of the results:

$$X_{\text{CRM/RM}} = \sum(w_i)(X_i)$$

X_i = mean of Assay Method i with standard uncertainty $u_{\text{char } i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$$w_i = (1/u_{\text{char } i})^2 / (\sum(1/u_{\text{char } i})^2)$$

$$\text{CRM/RM Expanded Uncertainty } (\pm) = U_{\text{CRM/RM}} = k(u_{\text{char}}^2 + u_{\text{bb}}^2 + u_{\text{Its}}^2 + u_{\text{ts}}^2)^{1/2}$$

k = coverage factor = 2

$u_{\text{char}} = (\sum(w_i)^2(u_{\text{char } i})^2)^{1/2}$ where $u_{\text{char } i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{Its} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{\text{CRM/RM}}$, where one method of characterization is used is the mean of individual results:

$$X_{\text{CRM/RM}} = (X_a) / (u_{\text{char } a})$$

X_a = mean of Assay Method A with

$u_{\text{char } a}$ = the standard uncertainty of characterization Method A

$$\text{CRM/RM Expanded Uncertainty } (\pm) = U_{\text{CRM/RM}} = k(u_{\text{char } a}^2 + u_{\text{bb}}^2 + u_{\text{Its}}^2 + u_{\text{ts}}^2)^{1/2}$$

k = coverage factor = 2

$u_{\text{char } a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{Its} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES ($\mu\text{g/mL}$)

N/A

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° \pm 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit www.inorganicventures.com/TCT

HF Note: This standard should not be prepared or stored in glass.

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va. 24073, USA; Telephone: 800 669 6799; 540 585 3030, Fax: 540 585 3012; inorganicventures.com; info@inorganicventures.com

11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

January 06, 2021

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **January 06, 2025**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Michael Booth
Director, Quality Control



Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director



Energy Laboratories Inc

Standard LOG

Standard ID: ME211118 MSCAL-5A
Standard Name: EL-MSCAL-5A
Date Prepared: 11/18/2021
Date Expires: 11/18/2022
Department: ME
Vendor: Inorganic Ventures
Lot Number: P2-MEB687200
Balance ID:
Comments: Opened 11/18/2021; Expires 11/18/2022

Type: Primary
BY: Stacy R. Hendricks
Status: Open

Chemical / Solvent Used	BottleNo	Amt	Units	Expires
Multi Analyte Custom Grade Solution	13175	500	mL	11/18/2022

Final Volume:
500 mL

Stock Source

Base Units

Amount Added

Analytes

CAS

Conc: **ug/mL**

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).



2.0 PRODUCT DESCRIPTION

Product Code: Multi Analyte Custom Grade Solution

Catalog Number: EL-MSCAL-5A

Lot Number: P2-MEB687200

Matrix: 3% (v/v) HNO₃

Value / Analyte(s):

5 000 µg/mL ea:	Calcium,	Potassium,	Magnesium,
	Sodium,		
500 µg/mL ea:	Phosphorus,	Iron,	
250 µg/mL ea:	Lithium		

3.0 CERTIFIED VALUES AND UNCERTAINTIES

ANALYTE	CERTIFIED VALUE	ANALYTE	CERTIFIED VALUE
Calcium, Ca	5 000 ± 20 µg/mL	Iron, Fe	499.9 ± 2.1 µg/mL
Lithium, Li	250.0 ± 1.1 µg/mL	Magnesium, Mg	5 000 ± 21 µg/mL
Phosphorus, P	499.8 ± 2.5 µg/mL	Potassium, K	5 000 ± 18 µg/mL
Sodium, Na	5 000 ± 18 µg/mL		

Density: 1.076 g/mL (measured at 20 ± 4 °C)

Assay Information:

ID #: 13175
 Opened: _____
 Multi Analyte Custom Grade Solution
Expires: 12/2/2023
 Rec'd: 10/12/2020
 Energy Laboratories Inc 1120 So. 27th Street
 Billings MT 59107

ANALYTE	METHOD	NIST SRM#	SRM LOT#
Ca	ICP Assay	3109a	130213
Ca	EDTA	928	928
Fe	ICP Assay	3126a	140812
Fe	EDTA	928	928
K	ICP Assay	3141a	140813
K	Gravimetric		See Sec. 4.2
Li	ICP Assay	3129a	100714
Li	Gravimetric		See Sec. 4.2
Mg	ICP Assay	3131a	140110
Mg	EDTA	928	928
Na	ICP Assay	3152a	120715
Na	Gravimetric		See Sec. 4.2
P	ICP Assay	3139a	060717
P	Acidimetric	84L	84L

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of $k = 2$.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$$X_{CRM/RM} = \sum(w_i)(X_i)$$

X_i = mean of Assay Method i with standard uncertainty $u_{char i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$$w_i = (1/u_{char i}^2) / (\sum(1/u_{char i}^2))$$

$$CRM/RM \text{ Expanded Uncertainty } (\pm) = U_{CRM/RM} = k (u_{char}^2 + u_{bb}^2 + u_{lts}^2 + u_{ts}^2)^{1/2}$$

k = coverage factor = 2

$u_{char} = \{ \sum((w_i)^2 (u_{char i}^2)) \}^{1/2}$ where $u_{char i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$$X_{CRM/RM} = (X_a) / (u_{char a})$$

X_a = mean of Assay Method A with

$u_{char a}$ = the standard uncertainty of characterization Method A

$$CRM/RM \text{ Expanded Uncertainty } (\pm) = U_{CRM/RM} = k (u_{char a}^2 + u_{bb}^2 + u_{lts}^2 + u_{ts}^2)^{1/2}$$

k = coverage factor = 2

$u_{char a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES ($\mu\text{g/mL}$)

N/A

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed outer bag.

- While stored in the sealed outer bag, transpiration of this CRM/RM is negligible. After opening the sealed outer bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed outer bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va. 24073, USA; Telephone: 800.669.6799; 540.585.3030, Fax: 540.585.3012; inorganicventures.com; info@inorganicventures.com

11.0 CERTIFICATION, EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

December 02, 2019

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **December 02, 2023**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed outer Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Michael Booth
Manager, Quality Control



Certifying Officer:

Paul Gaines
CEO, Senior Technical Director



Energy Laboratories Inc

Spike LOG

Standard ID: ME220105 HGPRIMARY
Standard Name: Primary Hg Stock 2 PPM
Date Prepared: 1/5/2022
Date Expires: 12/29/2022
Department: ME
Vendor: Inorganic Ventures
Lot Number:
Balance ID:
Type: Secondary
BY: Amanda E. McDani
Status: Open
Comments: Made with different HG stock than QCS

Chemical / Solvent Used	BottleNo	Amt	Units	Expires
Nitric Acid 69.0- 70.0% D0521	14626	0.5	mL	12/14/2026
Hydrochloric Acid E1421	14721	0.25	mL	1/4/2027

Final Volume:
25 mL

Stock Source

ME220110HG HG Stock
ME211229A AU 2N Au 2nd source Stock

Base Units

ug/mL
ug/mL

Amount Added

0.05 mL
0.05 mL

Analytes

CAS

Conc: ug/mL

Energy Laboratories Inc

Standard LOG

Standard ID: ME220110HG
Standard Name: HG Stock
Date Prepared: 1/10/2022
Date Expires: 1/10/2023
Department: ME
Vendor: SCP Science
Lot Number: S210729017
Balance ID:
Comments:

Type: Primary
BY: Amanda E. McDani
Status: Open

Chemical / Solvent Used	BottleNo	Amt	Units	Expires
ICP/ICPMS Standard Mercury	14711	125	mL	1/10/2023

Final Volume:
125 mL

Stock Source

Base Units

Amount Added

Analytes

CAS

Conc: **ug/mL**

ID #: 14711

Opened: _____

ICP/ICPMS Standard Mercury

Expires: 7/31/2023

Rec'd: 12/29/2021

Energy Laboratories Inc 1120 So. 27th Street
Billings MT 59107**SCP SCIENCE**

Providing Innovative Solutions to Analytical Chemists

rtificate of Analysis**Hg****1.0 DESCRIPTION:**

PlasmaCAL ICP/ICPMS Standard - Mercury 1000 µg/ml
 Catalogue Number: 140-051-800/-801/-805
 Starting Material: Mercury(II) oxide 99.99+%
 Lot Number: **S210729017**
 Matrix: 10% HNO₃ (See Section 3 for actual matrix)
 Expiration Date (End of month): **July 2023** (or 15 months after bottle is opened, whichever comes first)

2.0 CERTIFIED VALUES AND ASSOCIATED UNCERTAINTY:

Certified Concentration: **999 µg/ml +/- 5 µg/ml**
952 µg/g +/- 5 µg/g
 Method of analysis: Inductively Coupled Plasma Atomic Emission Spectroscopy (ICP-AES)
 Traceability: NIST Standard Reference Material 3133 Lot: **160921**

Note: The uncertainty of the certified value has been calculated from applicable uncertainty contributors (u_i) including uncertainty established during characterization of the material (u_{char}), the between bottle variation (u_{bb}), short-term stability (u_{sts}) and long-term stability (u_{lts}) according to the model $u_c = \sqrt{(u_{char}^2 + u_{bb}^2 + u_{sts}^2 + u_{lts}^2)}$. This combined uncertainty has been further multiplied by a coverage factor (k) of 2 to provide a 95% confidence interval.

3.0 REFERENCE VALUES:

Density: **1.050 g/ml @ 23.6 °C**
 Actual Matrix: **10.0% (v/v) HNO₃**

Trace Metal Impurities as tested by ICP-MS:

Element	Conc. (ppm)	Element	Conc. (ppm)	Element	Conc. (ppm)	Element	Conc. (ppm)
Ag	<0.0010	Fe	0.0322	Nd	<0.0010	Sn	<0.0010
Al	0.0042	Ga	<0.0010	Ni	0.0039	Sr	<0.0025
As	<0.0010	Gd	<0.0010	Os	<0.0010	Ta	<0.0010
Au	<0.0010	Ge	<0.0010	P	<0.0132	Tb	<0.0010
B	<0.0015	Hf	<0.0010	Pb	<0.0010	Te	<0.0010
Ba	<0.0010	Hg	N/A	Pd	<0.0010	Th	<0.0010
Be	<0.0010	Ho	<0.0010	Pr	<0.0010	Ti	<0.0012
Bi	<0.0010	In	<0.0010	Pt	<0.0010	Tl	0.0117
Ca	<0.0135	Ir	<0.0010	Rb	<0.0010	Tm	<0.0010
Cd	<0.0010	K	<0.0024	Re	<0.0010	U	<0.0010
Ce	<0.0010	La	<0.0010	Rh	<0.0010	V	<0.0010
Co	<0.0010	Li	<0.0010	Ru	<0.0010	W	<0.0020
Cr	0.0112	Lu	<0.0010	S	*	Y	<0.0010
Cs	<0.0010	Mg	<0.0010	Sb	<0.0010	Yb	<0.0010
Cu	0.0060	Mn	<0.0010	Sc	<0.0010	Zn	<0.0010
Dy	<0.0010	Mo	<0.0010	Se	<0.0010	Zr	<0.0010
Er	<0.0010	Na	0.0092	Si	<0.1		
Eu	<0.0010	Nb	<0.0010	Sm	<0.0010		

*: Not tested

4.0 APPROVAL AND DATE OF CERTIFICATION:

Certification Approval: Daniel Boisvert, Chemist
 Certification Date: August 12, 2021

Daniel Boisvert

5.0 INTENDED USE / UTILISATION PRÉVUE:

- ICP Standards: For the calibration of, including but not limited to: ICP-AES, ICP-MS, FAAS, GFAA, XRF and DCP. / *Étalons ICP: Pour l'étalonnage d'instruments de mesure tels que: ICP-AES, ICP-MS, FAAS, GFAA, XRF et DCP.*
 - AA Standards: For the calibration of Flame (FAAS) and Graphite Furnace (GFAA) Atomic Absorption Spectrometers. / *Étalons AA: Pour l'étalonnage de spectromètres d'absorption atomique flamme (GFAA) et four au graphite (GFAA).*
 - Matrix Modifiers: For the optimization of analytical conditions to provide better Graphite Furnace Atomic Absorption (GFAA) instrument response and improved detection limits. / *Modificateur de matrice: Pour l'optimisation des conditions analytiques afin de fournir des meilleures réponses instrumentales et limites de détection pour SAA four au graphite.*
 - pH Standards: For the calibrating pH meters or for other wet chemistry applications. / *Étalons pH: Pour étalonnage de pH mètres et autres applications de chimie humide.*
 - Conductivity Standards: For electrolytic conductivity measurement as a calibration standard. / *Étalons de conductivité: Comme étalon pour les mesures de conductivité électrolytiques.*
 - IC Standards: for calibration of, but not limited to IC, HPLC, TLC, ISE, IR, NMR, MS, UV/VIS or other wet chemistry applications. / *Étalons IC: Pour étalonnage d'instruments tels que: IC, HPLC, TLC, ISE, IR, NMR, MS, UV/VIS et autres applications de chimie humide.*
- For any inquiries, please contact **SCP SCIENCE**. / *Pour toute question, veuillez contacter SCP SCIENCE.*

6.0 INSTRUCTIONS FOR USE / INSTRUCTIONS D'UTILISATION:

Handling and Storage / Manutention et entreposage: Keep product tightly capped when not in use. The solution should be opened for a minimum amount of time necessary to dispense the amount required. Do not pipet or use directly from container. Do not return unused portions back to container. Store under normal laboratory conditions. Avoid exposure to excessive sources of heat and humidity or direct sunlight. / *Garder les contenants bien fermés lorsque non utilisés. Le contenant devrait être ouvert seulement pour le temps requis afin de prélever la quantité nécessaire. Ne pas pipetter ou utiliser directement du contenant. Ne pas retourner les portions non-utilisées dans le contenant. Conserver dans des conditions normales de laboratoire. Éviter l'exposition à des sources de chaleur et d'humidité excessives ou à l'exposition solaire directe.*

Stability / Stabilité: This Standard is guaranteed to be stable and accurate to within the specified uncertainty of measurement up to the unopened expiry date, if sealed, or up to the opened expiry date (when indicated), whichever comes first, provided the solution is kept tightly capped and stored under the indicated storage conditions. Purchasers will be notified of any significant changes resulting in re-certification or withdrawal of the product prior to the expiration date. / *La stabilité et l'exactitude de cet étalon sont garanties d'être à l'intérieur de l'incertitude de mesure, jusqu'à la date d'expiration de la bouteille non-ouverte, si scellée, ou jusqu'à la date d'expiration de la bouteille ouverte (si indiquée), en présumant que le contenant est maintenu fermé et gardé dans les conditions d'entreposage indiquées. Les acheteurs seront avisés dans le cas où il y aura des changements significatifs nécessitant une re-certification ou un rappel du produit avant la date d'expiration.*

7.0 HAZARDOUS INFORMATION / INFORMATION SUR LES RISQUES POTENTIELS:

Please refer to the associated Safety Data Sheet (SDS) for information regarding this product (available at www.SCPSCIENCE.com). / *SVP vous référer à la Fiche Signalétique applicable pour de l'information sur ce produit (Disponible à www.SCPSCIENCE.com).*

8.0 HOMOGENEITY / HOMOGÉNÉITÉ:

This solution has been blended according to an in-house procedure and its homogeneity is guaranteed to be fit for purpose when a sample size sufficient for the intended method of analysis is used. / *Cette solution a été préparée selon une procédure maison et nous assurons que sa homogénéité est approprié à l'emploi lorsqu'un échantillon suffisant pour la méthode d'analyse prévue est utilisé.*

9.0 TRACEABILITY / TRAÇABILITÉ:

This CRM (Certified Reference Material) is traceable to the NIST SRM (Standard Reference Material) indicated in section 2 through an unbroken chain of comparisons. In addition, balances used are regularly calibrated using weights which are traceable to NIST (National Institute of Standards and Technology) or NRC (National Research Council of Canada) standards. All conductivity meters used to analyze this standard have been regularly calibrated using a NIST or NRC traceable Thermometer and standards. All pH meters used to analyze this standard have been regularly calibrated using a NIST or NRC traceable thermometer and pH/MV simulator. / *Ce matériel de référence certifié est traçable au Matériel de Référence Standardisé de NIST indiqué à la section 2 par une chaîne de comparaison ininterrompue. De plus, les balances utilisées sont étalonnées régulièrement en utilisant des poids qui sont traçables au NIST (National Institute of Standards and Technology) ou au CRNC (Conseil National de Recherches Canada). Tout conductimètre utilisé afin d'analyser cet étalon a été sujet à un étalonnage périodique utilisant des thermomètres et étalons traçables au NIST ou CNRC. Tout pH mètre utilisé afin d'analyser cet étalon a été sujet à un étalonnage périodique utilisant des thermomètres et un simulateur pH/MV traçables au NIST ou au CNRC.*

10.0 PREPARATION / PRÉPARATION:

For the preparation of these solutions, 18 megohm/cm double deionized water, high-purity acids and glassware calibrated to ASTM Class A specifications are used. / *Une eau de 18 megohm/cm doublement déionisé, de l'acide de haute pureté, ainsi que de la verrerie étalonnée afin de satisfaire les spécifications Classe A de ASTM ont été utilisés pour la préparation de cet étalon.*

11.0 QUALITY SYSTEM CERTIFICATIONS / CERTIFICATIONS DE SYSTÈME QUALITÉ:

ISO 9001 Certification / Certification ISO 9001: This standard was produced in a facility which operates under a registered ISO 9001 Quality Management System. Please consult our web site for a copy of the most recent revision of our certificate of registration. / *Cet étalon a été fabriqué dans un laboratoire qui utilise un Système de Gestion de la Qualité enregistré à la norme ISO 9001. Veuillez consulter notre site web pour obtenir la version la plus récente de notre certificat d'enregistrement.*

ISO 17025 Accreditation / Accréditation ISO 17025: SCP SCIENCE (Corporate Headquarters) operates an ISO 17025 accredited laboratory. Please consult our web site for a copy of the most recent revision of our certificate and scope of accreditation. / *SCP SCIENCE (Siège social) est accréditée ISO 17025. Veuillez consulter notre site web afin d'obtenir la plus récente version de notre certificat d'accréditation ainsi que la portée de notre accréditation.*

ISO 17034 Accreditation / Accréditation ISO 17034: SCP SCIENCE (Corporate Headquarters) is an ISO 17034 accredited Reference Material Producer. Please consult our website for a copy of our most recent certificate and scope of accreditation. / *SCP SCIENCE (Siège social) est un Fabricant de Matériaux de Référence Accrédité ISO 17034. Veuillez consulter notre site web afin d'obtenir la plus récente version de notre certificat d'accréditation ainsi que la portée de notre accréditation.*

CORPORATE HEADQUARTERS
21800 Clark Graham
Baie D'Urfé (Montréal), Quebec,
H9X 4B6 Canada
Phone: +1 (800) 361-6820
Fax: +1 (800) 253-5549

USA
3rd Party Distribution Center
348 Route 11, Champlain,
N.Y. 12919-4816
Phone: +1 (800) 361-6820
Fax: +1 (800) 253-5549

FRANCE
12 Ave. de Québec, Bat. IRIS
91140, Villebon-sur-Yvette
Phone: +33 (0) 1 69 18 71 17
Fax: +33 (0) 1 60 92 05 67

GERMANY
Alte Marktberdorfer Straße 14, 87616
Marktberdorf
Phone: +49 (0) 8342-89560-61
Fax: +49 (0) 8342-89560-69

Energy Laboratories Inc

Standard LOG

Standard ID: ME211229A AU 2ND SOURCE
Standard Name: Au 2nd source Stock
Date Prepared: 12/29/2021
Date Expires: 12/29/2022
Department: ME
Vendor: SCP Science
Lot Number: S211129013
Balance ID:
Comments: opened 12/29/2021; expires 12/29/2022

Type: Primary
BY: Amanda E. McDani
Status: Open

Chemical / Solvent Used	BottleNo	Amt	Units	Expires
ICP/ICPMS Standard Gold	14710	500	mL	12/29/2022

Final Volume:
500 mL

Stock Source

Base Units

Amount Added

Analytes

CAS

Conc: **ug/mL**

ID #: 14710

Opened:

ICP/ICPMS Standard Gold

Expires: 12/31/2023

Rec'd: 12/29/2021

Eneray Laboratories Inc 1120 So. 27th Street

Billings MT 59107

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Providing Innovative Solutions to Analytical

Certificate of Analysis**Au****1.0 DESCRIPTION:****PlasmaCAL ICP/ICPMS Standard - Gold 1000 µg/ml**

Catalogue Number: 140-052-790/-791/-795

Starting Material: Gold Metal 99.99+%

Lot Number: **S211129013**

Matrix: 10% HCl (See Section 3 for actual matrix)

Expiration Date (End of month): **December 2023** (or 15 months after bottle is opened, whichever comes first)**2.0 CERTIFIED VALUES AND ASSOCIATED UNCERTAINTY:**Certified Concentration: **1001 µg/ml +/- 4 µg/ml****982 µg/g +/- 4 µg/g**

Method of analysis: Inductively Coupled Plasma Atomic Emission Spectroscopy (ICP-AES)

Traceability: NIST Standard Reference Material 3121 Lot: **991806**

Note: The uncertainty of the certified value has been calculated from applicable uncertainty contributors (u_i) including uncertainty established during characterization of the material (u_{char}), the between bottle variation (u_{bb}), short-term stability (u_{sts}) and long-term stability (u_{lts}) according to the model $u_c = \sqrt{(u_{char}^2 + u_{bb}^2 + u_{sts}^2 + u_{lts}^2)}$. This combined uncertainty has been further multiplied by a coverage factor (k) of 2 to provide a 95% confidence interval.

3.0 REFERENCE VALUES:Density: **1.019 g/ml @ 22.4 °C**Actual Matrix: **10.0% (v/v) HCl**

Trace Metal Impurities as tested by ICP-MS:

Element	Conc. (ppm)	Element	Conc. (ppm)	Element	Conc. (ppm)	Element	Conc. (ppm)
Ag	0.3851	Fe	<0.0090	Nd	<0.0010	Sn	<0.0010
Al	0.0062	Ga	<0.0010	Ni	<0.0010	Sr	<0.0025
As	<0.0010	Gd	<0.0010	Os	<0.0010	Ta	<0.0010
Au	N/A	Ge	<0.0010	P	<0.0132	Tb	<0.0010
B	<0.0015	Hf	<0.0010	Pb	<0.0010	Te	<0.0010
Ba	<0.0010	Hg	*	Pd	0.0434	Th	<0.0010
Be	<0.0010	Ho	<0.0010	Pr	<0.0010	Ti	<0.0012
Bi	<0.0010	In	<0.0010	Pt	0.0048	Tl	<0.0011
Ca	<0.0135	Ir	<0.0010	Rb	<0.0010	Tm	<0.0010
Cd	<0.0010	K	0.0362	Re	<0.0010	U	<0.0010
Ce	<0.0010	La	<0.0010	Rh	<0.0010	V	<0.0010
Co	<0.0010	Li	<0.0010	Ru	<0.0010	W	<0.0020
Cr	<0.0010	Lu	<0.0010	S	*	Y	<0.0010
Cs	0.0029	Mg	<0.0010	Sb	<0.0010	Yb	<0.0010
Cu	0.0023	Mn	<0.0010	Sc	<0.0010	Zn	<0.0010
Dy	<0.0010	Mo	<0.0010	Se	<0.01	Zr	<0.0010
Er	<0.0010	Na	0.0070	Si	<0.1		
Eu	<0.0010	Nb	<0.0010	Sm	<0.0010		

*: Not tested

4.0 APPROVAL AND DATE OF CERTIFICATION:

Certification Approval: Daniel Boisvert, Chemist

Certification Date: December 10, 2021

Daniel Boisvert

5.0 INTENDED USE / UTILISATION PRÉVUE:

- ICP Standards: For the calibration of, including but not limited to: ICP-AES, ICP-MS, FAAS, GFAA, XRF and DCP. / *Étalons ICP* : Pour l'étalonnage d'instruments de mesure tels que: ICP-AES, ICP-MS, FAAS, GFAA, XRF et DCP.
- AA Standards: For the calibration of Flame (FAAS) and Graphite Furnace (GFAA) Atomic Absorption Spectrometers. / *Étalons AA* : Pour l'étalonnage de spectromètres d'absorption atomique flamme (GFAA) et four au graphite (GFAA).
- Matrix Modifiers: For the optimization of analytical conditions to provide better Graphite Furnace Atomic Absorption (GFAA) instrument response and improved detection limits. / *Modificateur de matrice* : Pour l'optimisation des conditions analytiques afin de fournir des meilleures réponses instrumentales et limites de détection pour SAA four au graphite.
- pH Standards: For the calibrating pH meters or for other wet chemistry applications. / *Étalons pH* : Pour étalonnage de pH mètres et autres applications de chimie humide.
- Conductivity Standards: For electrolytic conductivity measurement as a calibration standard. / *Étalons de conductivité* : Comme étalon pour les mesures de conductivité électrolytiques.
- IC Standards: for calibration of, but not limited to IC, HPLC, TLC, ISE, IR, NMR, MS, UV/VIS or other wet chemistry applications. / *Étalons IC* : Pour étalonnage d'instruments tels que : IC, HPLC, TLC, ISE, IR, NMR, MS, UV/VIS et autres applications de chimie humide.
For any inquiries, please contact **SCP SCIENCE**. / *Pour toute question, veuillez contacter SCP SCIENCE.*

6.0 INSTRUCTIONS FOR USE / INSTRUCTIONS D'UTILISATION:

Handling and Storage / Manutention et entreposage: Keep product tightly capped when not in use. The solution should be opened for a minimum amount of time necessary to dispense the amount required. Do not pipet or use directly from container. Do not return unused portions back to container. Store under normal laboratory conditions. Avoid exposure to excessive sources of heat and humidity or direct sunlight. / *Garder les contenants bien fermés lorsque non utilisés. Le contenant devrait être ouvert seulement pour le temps requis afin de prélever la quantité nécessaire. Ne pas pipetter ou utiliser directement du contenant. Ne pas retourner les portions non-utilisées dans le contenant. Conserver dans des conditions normales de laboratoire. Éviter l'exposition à des sources de chaleur et d'humidité excessives ou à l'exposition solaire directe.*

Stability / Stabilité: This Standard is guaranteed to be stable and accurate to within the specified uncertainty of measurement up to the unopened expiry date, if sealed, or up to the opened expiry date (when indicated), whichever comes first, provided the solution is kept tightly capped and stored under the indicated storage conditions. Purchasers will be notified of any significant changes resulting in re-certification or withdrawal of the product prior to the expiration date. / *La stabilité et l'exactitude de cet étalon sont garanties d'être à l'intérieur de l'incertitude de mesure, jusqu'à la date d'expiration de la bouteille non-ouverte, si scellée, ou jusqu'à la date d'expiration de la bouteille ouverte (si indiquée), en présumant que le contenant est maintenu fermé et gardé dans les conditions d'entreposage indiquées. Les acheteurs seront avisés dans le cas où il y aura des changements significatifs nécessitant une re-certification ou un rappel du produit avant la date d'expiration.*

7.0 HAZARDOUS INFORMATION / INFORMATION SUR LES RISQUES POTENTIELS:

Please refer to the associated Safety Data Sheet (SDS) for information regarding this product (available at www.SCPSCIENCE.com). / *SVP vous référer à la Fiche Signalétique applicable pour de l'information sur ce produit (Disponible à www.SCPSCIENCE.com).*

8.0 HOMOGENEITY / HOMOGÉNÉITÉ:

This solution has been blended according to an in-house procedure and its homogeneity is guaranteed to be fit for purpose when a sample size sufficient for the intended method of analysis is used. / *Cette solution a été préparée selon une procédure maison et nous assurons que sa homogénéité est approprié à l'emploi lorsqu'un échantillon suffisant pour la méthode d'analyse prévue est utilisé.*

9.0 TRACEABILITY / TRAÇABILITÉ:

This CRM (Certified Reference Material) is traceable to the NIST SRM (Standard Reference Material) indicated in section 2 through an unbroken chain of comparisons. In addition, balances used are regularly calibrated using weights which are traceable to NIST (National Institute of Standards and Technology) or NRC (National Research Council of Canada) standards. All conductivity meters used to analyze this standard have been regularly calibrated using a NIST or NRC traceable Thermometer and standards. All pH meters used to analyze this standard have been regularly calibrated using a NIST or NRC traceable thermometer and pH/MV simulator. / *Ce matériel de référence certifié est traçable au Matériel de Référence Standardisé de NIST indiqué à la section 2 par une chaîne de comparaison ininterrompue. De plus, les balances utilisées sont étalonnées régulièrement en utilisant des poids qui sont traçables au NIST (National Institute of Standards and Technology) ou au CRNC (Conseil National de Recherches Canada). Tout conductimètre utilisé afin d'analyser cet étalon a été sujet à un étalonnage périodique utilisant des thermomètres et étalons traçables au NIST ou CNRC. Tout pH mètre utilisé afin d'analyser cet étalon a été sujet à un étalonnage périodique utilisant des thermomètres et un simulateur pH/MV traçables au NIST ou au CNRC.*

10.0 PREPARATION / PRÉPARATION:

For the preparation of these solutions, 18 meghom/cm double deionized water, high-purity acids and glassware calibrated to ASTM Class A specifications are used. / *Une eau de 18 meghom/cm doublement déionisé, de l'acide de haute pureté, ainsi que de la verrerie étalonnée afin de satisfaire les spécifications Classe A de ASTM ont été utilisés pour la préparation de cet étalon.*

11.0 QUALITY SYSTEM CERTIFICATIONS / CERTIFICATIONS DE SYSTÈME QUALITÉ:

ISO 9001 Certification / Certification ISO 9001: This standard was produced in a facility which operates under a registered ISO 9001 Quality Management System. Please consult our web site for a copy of the most recent revision of our certificate of registration. / *Cet étalon a été fabriqué dans un laboratoire qui utilise un Système de Gestion de la Qualité enregistré à la norme ISO 9001. Veuillez consulter notre site web pour obtenir la version la plus récente de notre certificat d'enregistrement.*

ISO 17025 Accreditation / Accréditation ISO 17025: SCP SCIENCE (Corporate Headquarters) operates an ISO 17025 accredited laboratory. Please consult our web site for a copy of the most recent revision of our certificate and scope of accreditation. / *SCP SCIENCE (Siège social) est accréditée ISO 17025. Veuillez consulter notre site web afin d'obtenir la plus récente version de notre certificat d'accréditation ainsi que la portée de notre accréditation.*

ISO 17034 Accreditation / Accréditation ISO 17034: SCP SCIENCE (Corporate Headquarters) is an ISO 17034 accredited Reference Material Producer. Please consult our website for a copy of our most recent certificate and scope of accreditation. / *SCP SCIENCE (Siège social) est un Fabricant de Matériaux de Référence Accrédité ISO 17034. Veuillez consulter notre site web afin d'obtenir la plus récente version de notre certificat d'accréditation ainsi que la portée de notre accréditation.*

CORPORATE HEADQUARTERS
21800 Clark Graham
Baie D'Urfé (Montréal), Quebec,
H9X 4B6 Canada
Phone: +1 (800) 361-6820
Fax: +1 (800) 253-5549

USA
3rd Party Distribution Center
348 Route 11, Champlain,
N.Y. 12919-4816
Phone: +1 (800) 361-6820
Fax: +1 (800) 253-5549

FRANCE
12 Ave. de Québec, Bat. IRIS
91140, Villebon-sur-Yvette
Phone: +33 (0) 1 69 18 71 17
Fax: +33 (0) 1 60 92 05 67

GERMANY
Alte Marktoberdorfer Straße 14, 87616
Marktoberdorf
Phone: +49 (0) 8342-89560-61
Fax: +49 (0) 8342-89560-69

Energy Laboratories Inc

Standard LOG

Standard ID: ME211208 MSCAL2B
Standard Name: MSCAL 2B
Date Prepared: 12/8/2021
Date Expires: 12/8/2022
Department: ME
Vendor: Inorganic Ventures
Lot Number: S2-MEB704403
Balance ID:
Comments: Opened 12/08/2021; Expires 12/08/2022

Type: Primary
BY: Stacy R. Hendricks
Status: Open

Chemical / Solvent Used	BottleNo	Amt	Units	Expires
Multi Analyte Custom Grade Solution	13793		mL	12/8/2022

Final Volume:
mL

Stock Source

Base Units

Amount Added

Analytes

CAS

Conc: **ug/mL**

300 Technology Drive
Christiansburg, VA 24073 USA
inorganicventures.com

P: 800-669-6799/540-585-3030
F: 540-585-3012
info@inorganicventures.com

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).



2.0 PRODUCT DESCRIPTION

Product Code: Multi Analyte Custom Grade Solution
Catalog Number: EL-MSCAL-2B
Lot Number: S2-MEB704403
Matrix: 5% (v/v) HNO3
Value / Analyte(s):
100 µg/mL ea:
Aluminum, Arsenic,
Boron, Barium,
Beryllium, Cadmium,
Cobalt, Chromium,
Copper, Iron,
Manganese, Nickel,
Lead, Selenium,
Strontium, Thorium,
Thallium, Uranium,
Vanadium, Zinc,
40 µg/mL ea:
Silver

3.0 CERTIFIED VALUES AND UNCERTAINTIES

ID #: 13793

Opened: _____

Multi Analyte Custom Grade Solution

Expires: 4/21/2025

Rec'd: 4/29/2021

Energy Laboratories Inc 1120 So. 27th Street
Billings MT 59107

ANALYTE	CERTIFIED VALUE	ANALYTE	CERTIFIED VALUE
Aluminum, Al	100.0 ± 0.4 µg/mL	Arsenic, As	100.0 ± 0.9 µg/mL
Barium, Ba	100.0 ± 0.5 µg/mL	Beryllium, Be	100.0 ± 0.7 µg/mL
Boron, B	100.0 ± 0.7 µg/mL	Cadmium, Cd	100.0 ± 0.5 µg/mL
Chromium, Cr	100.0 ± 0.8 µg/mL	Cobalt, Co	100.0 ± 0.6 µg/mL
Copper, Cu	100.0 ± 0.5 µg/mL	Iron, Fe	100.1 ± 0.4 µg/mL
Lead, Pb	100.0 ± 0.6 µg/mL	Manganese, Mn	100.0 ± 0.5 µg/mL
Nickel, Ni	100.0 ± 0.6 µg/mL	Selenium, Se	100.0 ± 0.7 µg/mL
Silver, Ag	39.99 ± 0.18 µg/mL	Strontium, Sr	100.0 ± 0.4 µg/mL
Thallium, Tl	100.0 ± 0.6 µg/mL	Thorium, Th	100.0 ± 0.5 µg/mL
Uranium, U	100.0 ± 0.5 µg/mL	Vanadium, V	100.0 ± 0.5 µg/mL
Zinc, Zn	100.0 ± 0.5 µg/mL		

Density: 1.033 g/mL (measured at 20 ± 4 °C)

Assay Information:

ANALYTE	METHOD	NIST SRM#	SRM LOT#
Ag	ICP Assay	3151	160729
Ag	Volhard	999c	999c
Al	ICP Assay	3101a	140903
Al	EDTA	928	928
As	ICP Assay	3103a	100818
B	ICP Assay	3107	110830
Ba	ICP Assay	3104a	140909
Ba	Gravimetric		See Sec. 4.2
Be	ICP Assay	3105a	090514
Cd	ICP Assay	3108	130116
Cd	EDTA	928	928
Co	ICP Assay	3113	190630
Co	EDTA	928	928
Cr	ICP Assay	3112a	170630
Cu	ICP Assay	3114	121207
Cu	EDTA	928	928
Fe	ICP Assay	3126a	140812
Fe	EDTA	928	928
Fe	Calculated		See Sec. 4.2
Mn	ICP Assay	3132	050429
Mn	EDTA	928	928
Ni	ICP Assay	3136	120619
Ni	EDTA	928	928
Pb	ICP Assay	3128	101026
Pb	EDTA	928	928
Se	ICP Assay	3149	100901
Se	Calculated		See Sec. 4.2
Sr	EDTA	928	928
Sr	ICP Assay	Traceable to 3153a	K2-SR650985
Sr	Calculated		See Sec. 4.2
Th	EDTA	928	928
Th	Calculated		See Sec. 4.2
Tl	ICP Assay	3158	151215
U	ICP Assay	3164	080521
U	Calculated		See Sec. 4.2
V	ICP Assay	3165	160906
V	EDTA	928	928
Zn	ICP Assay	3168a	120629
Zn	EDTA	928	928

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of $k = 2$.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$$X_{CRM/RM} = \sum (w_i) (X_i)$$

X_i = mean of Assay Method i with standard uncertainty $u_{char i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$$w_i = (1/u_{char i}^2) / (\sum (1/u_{char i}^2))$$

$$CRM/RM \text{ Expanded Uncertainty } (\pm) = U_{CRM/RM} = k (u_{char}^2 + u_{bb}^2 + u_{Its}^2 + u_{ts}^2)^{1/2}$$

k = coverage factor = 2

$u_{char} = [\sum ((w_i)^2 (u_{char i}^2))]^{1/2}$ where $u_{char i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{Its} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Certified Abundance:

IV's Certified Abundance

Isotope

Uranium 238U

Uranium 235U

Atom %

99.8 ± 0.1

0.24 ± 0.05

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$$X_{CRM/RM} = (X_a) (u_{char a})$$

X_a = mean of Assay Method A with

$u_{char a}$ = the standard uncertainty of characterization Method A

$$CRM/RM \text{ Expanded Uncertainty } (\pm) = U_{CRM/RM} = k (u_{char a}^2 + u_{bb}^2 + u_{Its}^2 + u_{ts}^2)^{1/2}$$

k = coverage factor = 2

$u_{char a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{Its} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

N/A

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit www.inorganicventures.com/TCT

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va. 24073, USA; Telephone: 800.669.6799; 540.585.3030, Fax: 540.585.3012; inorganicventures.com; info@inorganicventures.com

11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

April 21, 2021

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **April 21, 2025**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Michael Booth
Director, Quality Control



Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director



Energy Laboratories Inc

Standard LOG

Standard ID: ME211229A AU 2ND SOURCE
Standard Name: Au 2nd source Stock
Date Prepared: 12/29/2021
Date Expires: 12/29/2022
Department: ME
Vendor: SCP Science
Lot Number: S211129013
Balance ID:
Comments: opened 12/29/2021; expires 12/29/2022

Type: Primary
BY: Amanda E. McDani
Status: Open

Chemical / Solvent Used	BottleNo	Amt	Units	Expires
ICP/ICPMS Standard Gold	14710	500	mL	12/29/2022

Final Volume:
500 mL

Stock Source

Base Units

Amount Added

Analytes

CAS

Conc: **ug/mL**

ID #: 14710

Opened:

ICP/ICPMS Standard Gold

Expires: 12/31/2023

Rec'd: 12/29/2021

Eneray Laboratories Inc 1120 So. 27th Street

Billings MT 59107

SCP SCIENC

Providing Innovative Solutions to Analytical

Certificate of Analysis**Au****1.0 DESCRIPTION:****PlasmaCAL ICP/ICPMS Standard - Gold 1000 µg/ml**

Catalogue Number: 140-052-790/-791/-795

Starting Material: Gold Metal 99.99%+

Lot Number: **S211129013**

Matrix: 10% HCl (See Section 3 for actual matrix)

Expiration Date (End of month): **December 2023** (or 15 months after bottle is opened, whichever comes first)**2.0 CERTIFIED VALUES AND ASSOCIATED UNCERTAINTY:**Certified Concentration: **1001 µg/ml +/- 4 µg/ml****982 µg/g +/- 4 µg/g**

Method of analysis: Inductively Coupled Plasma Atomic Emission Spectroscopy (ICP-AES)

Traceability: NIST Standard Reference Material 3121 Lot: **991806**

Note: The uncertainty of the certified value has been calculated from applicable uncertainty contributors (u_i) including uncertainty established during characterization of the material (u_{char}), the between bottle variation (u_{bb}), short-term stability (u_{sts}) and long-term stability (u_{lts}) according to the model $u_c = \sqrt{(u_{char}^2 + u_{bb}^2 + u_{sts}^2 + u_{lts}^2)}$. This combined uncertainty has been further multiplied by a coverage factor (k) of 2 to provide a 95% confidence interval.

3.0 REFERENCE VALUES:Density: **1.019 g/ml @ 22.4 °C**Actual Matrix: **10.0% (v/v) HCl**

Trace Metal Impurities as tested by ICP-MS:

Element	Conc. (ppm)	Element	Conc. (ppm)	Element	Conc. (ppm)	Element	Conc. (ppm)
Ag	0.3851	Fe	<0.0090	Nd	<0.0010	Sn	<0.0010
Al	0.0062	Ga	<0.0010	Ni	<0.0010	Sr	<0.0025
As	<0.0010	Gd	<0.0010	Os	<0.0010	Ta	<0.0010
Au	N/A	Ge	<0.0010	P	<0.0132	Tb	<0.0010
B	<0.0015	Hf	<0.0010	Pb	<0.0010	Te	<0.0010
Ba	<0.0010	Hg	*	Pd	0.0434	Th	<0.0010
Be	<0.0010	Ho	<0.0010	Pr	<0.0010	Ti	<0.0012
Bi	<0.0010	In	<0.0010	Pt	0.0048	Tl	<0.0011
Ca	<0.0135	Ir	<0.0010	Rb	<0.0010	Tm	<0.0010
Cd	<0.0010	K	0.0362	Re	<0.0010	U	<0.0010
Ce	<0.0010	La	<0.0010	Rh	<0.0010	V	<0.0010
Co	<0.0010	Li	<0.0010	Ru	<0.0010	W	<0.0020
Cr	<0.0010	Lu	<0.0010	S	*	Y	<0.0010
Cs	0.0029	Mg	<0.0010	Sb	<0.0010	Yb	<0.0010
Cu	0.0023	Mn	<0.0010	Sc	<0.0010	Zn	<0.0010
Dy	<0.0010	Mo	<0.0010	Se	<0.01	Zr	<0.0010
Er	<0.0010	Na	0.0070	Si	<0.1		
Eu	<0.0010	Nb	<0.0010	Sm	<0.0010		

*: Not tested

4.0 APPROVAL AND DATE OF CERTIFICATION:

Certification Approval: Daniel Boisvert, Chemist

Certification Date: December 10, 2021

Daniel Boisvert

5.0 INTENDED USE / UTILISATION PRÉVUE:

- ICP Standards: For the calibration of, including but not limited to: ICP-AES, ICP-MS, FAAS, GFAA, XRF and DCP. / *Étalons ICP* : Pour l'étalonnage d'instruments de mesure tels que: ICP-AES, ICP-MS, FAAS, GFAA, XRF et DCP.
- AA Standards: For the calibration of Flame (FAAS) and Graphite Furnace (GFAA) Atomic Absorption Spectrometers. / *Étalons AA* : Pour l'étalonnage de spectromètres d'absorption atomique flamme (GFAA) et four au graphite (GFAA).
- Matrix Modifiers: For the optimization of analytical conditions to provide better Graphite Furnace Atomic Absorption (GFAA) instrument response and improved detection limits. / *Modificateur de matrice* : Pour l'optimisation des conditions analytiques afin de fournir des meilleures réponses instrumentales et limites de détection pour SAA four au graphite.
- pH Standards: For the calibrating pH meters or for other wet chemistry applications. / *Étalons pH* : Pour étalonnage de pH mètres et autres applications de chimie humide.
- Conductivity Standards: For electrolytic conductivity measurement as a calibration standard. / *Étalons de conductivité* : Comme étalon pour les mesures de conductivité électrolytiques.
- IC Standards: for calibration of, but not limited to IC, HPLC, TLC, ISE, IR, NMR, MS, UV/VIS or other wet chemistry applications. / *Étalons IC* : Pour étalonnage d'instruments tels que : IC, HPLC, TLC, ISE, IR, NMR, MS, UV/VIS et autres applications de chimie humide.
For any inquiries, please contact **SCP SCIENCE**. / *Pour toute question, veuillez contacter SCP SCIENCE.*

6.0 INSTRUCTIONS FOR USE / INSTRUCTIONS D'UTILISATION:

Handling and Storage / Manutention et entreposage: Keep product tightly capped when not in use. The solution should be opened for a minimum amount of time necessary to dispense the amount required. Do not pipet or use directly from container. Do not return unused portions back to container. Store under normal laboratory conditions. Avoid exposure to excessive sources of heat and humidity or direct sunlight. / *Garder les contenants bien fermés lorsque non utilisés. Le contenant devrait être ouvert seulement pour le temps requis afin de prélever la quantité nécessaire. Ne pas pipetter ou utiliser directement du contenant. Ne pas retourner les portions non-utilisées dans le contenant. Conserver dans des conditions normales de laboratoire. Éviter l'exposition à des sources de chaleur et d'humidité excessives ou à l'exposition solaire directe.*

Stability / Stabilité: This Standard is guaranteed to be stable and accurate to within the specified uncertainty of measurement up to the unopened expiry date, if sealed, or up to the opened expiry date (when indicated), whichever comes first, provided the solution is kept tightly capped and stored under the indicated storage conditions. Purchasers will be notified of any significant changes resulting in re-certification or withdrawal of the product prior to the expiration date. / *La stabilité et l'exactitude de cet étalon sont garanties d'être à l'intérieur de l'incertitude de mesure, jusqu'à la date d'expiration de la bouteille non-ouverte, si scellée, ou jusqu'à la date d'expiration de la bouteille ouverte (si indiquée), en présumant que le contenant est maintenu fermé et gardé dans les conditions d'entreposage indiquées. Les acheteurs seront avisés dans le cas où il y aura des changements significatifs nécessitant une re-certification ou un rappel du produit avant la date d'expiration.*

7.0 HAZARDOUS INFORMATION / INFORMATION SUR LES RISQUES POTENTIELS:

Please refer to the associated Safety Data Sheet (SDS) for information regarding this product (available at www.SCPSCIENCE.com). / *SVP vous référer à la Fiche Signalétique applicable pour de l'information sur ce produit (Disponible à www.SCPSCIENCE.com).*

8.0 HOMOGENEITY / HOMOGÉNÉITÉ:

This solution has been blended according to an in-house procedure and its homogeneity is guaranteed to be fit for purpose when a sample size sufficient for the intended method of analysis is used. / *Cette solution a été préparée selon une procédure maison et nous assurons que sa homogénéité est approprié à l'emploi lorsqu'un échantillon suffisant pour la méthode d'analyse prévue est utilisé.*

9.0 TRACEABILITY / TRAÇABILITÉ:

This CRM (Certified Reference Material) is traceable to the NIST SRM (Standard Reference Material) indicated in section 2 through an unbroken chain of comparisons. In addition, balances used are regularly calibrated using weights which are traceable to NIST (National Institute of Standards and Technology) or NRC (National Research Council of Canada) standards. All conductivity meters used to analyze this standard have been regularly calibrated using a NIST or NRC traceable Thermometer and standards. All pH meters used to analyze this standard have been regularly calibrated using a NIST or NRC traceable thermometer and pH/MV simulator. / *Ce matériel de référence certifié est traçable au Matériel de Référence Standardisé de NIST indiqué à la section 2 par une chaîne de comparaison ininterrompue. De plus, les balances utilisées sont étalonnées régulièrement en utilisant des poids qui sont traçables au NIST (National Institute of Standards and Technology) ou au CRNC (Conseil National de Recherches Canada). Tout conductimètre utilisé afin d'analyser cet étalon a été sujet à un étalonnage périodique utilisant des thermomètres et étalons traçables au NIST ou CNRC. Tout pH mètre utilisé afin d'analyser cet étalon a été sujet à un étalonnage périodique utilisant des thermomètres et un simulateur pH/MV traçables au NIST ou au CNRC.*

10.0 PREPARATION / PRÉPARATION:

For the preparation of these solutions, 18 meghom/cm double deionized water, high-purity acids and glassware calibrated to ASTM Class A specifications are used. / *Une eau de 18 meghom/cm doublement déionisé, de l'acide de haute pureté, ainsi que de la verrerie étalonnée afin de satisfaire les spécifications Classe A de ASTM ont été utilisés pour la préparation de cet étalon.*

11.0 QUALITY SYSTEM CERTIFICATIONS / CERTIFICATIONS DE SYSTÈME QUALITÉ:

ISO 9001 Certification / Certification ISO 9001: This standard was produced in a facility which operates under a registered ISO 9001 Quality Management System. Please consult our web site for a copy of the most recent revision of our certificate of registration. / *Cet étalon a été fabriqué dans un laboratoire qui utilise un Système de Gestion de la Qualité enregistré à la norme ISO 9001. Veuillez consulter notre site web pour obtenir la version la plus récente de notre certificat d'enregistrement.*

ISO 17025 Accreditation / Accréditation ISO 17025: SCP SCIENCE (Corporate Headquarters) operates an ISO 17025 accredited laboratory. Please consult our web site for a copy of the most recent revision of our certificate and scope of accreditation. / *SCP SCIENCE (Siège social) est accréditée ISO 17025. Veuillez consulter notre site web afin d'obtenir la plus récente version de notre certificat d'accréditation ainsi que la portée de notre accréditation.*

ISO 17034 Accreditation / Accréditation ISO 17034: SCP SCIENCE (Corporate Headquarters) is an ISO 17034 accredited Reference Material Producer. Please consult our website for a copy of our most recent certificate and scope of accreditation. / *SCP SCIENCE (Siège social) est un Fabricant de Matériaux de Référence Accrédité ISO 17034. Veuillez consulter notre site web afin d'obtenir la plus récente version de notre certificat d'accréditation ainsi que la portée de notre accréditation.*

CORPORATE HEADQUARTERS
21800 Clark Graham
Baie D'Urfé (Montréal), Quebec,
H9X 4B6 Canada
Phone: +1 (800) 361-6820
Fax: +1 (800) 253-5549

USA
3rd Party Distribution Center
348 Route 11, Champlain,
N.Y. 12919-4816
Phone: +1 (800) 361-6820
Fax: +1 (800) 253-5549

FRANCE
12 Ave. de Québec, Bat. IRIS
91140, Villebon-sur-Yvette
Phone: +33 (0) 1 69 18 71 17
Fax: +33 (0) 1 60 92 05 67

GERMANY
Alte Marktoberdorfer Straße 14, 87616
Marktoberdorf
Phone: +49 (0) 8342-89560-61
Fax: +49 (0) 8342-89560-69

Energy Laboratories Inc

Standard LOG

Standard ID: ME220110 CE, LA PRIMARY
Standard Name: Ce, La Primary Type: Secondary
Date Prepared: 1/10/2022 BY: Amanda E. McDani
Date Expires: 1/6/2023
Department: ME Status: Open
Vendor: Inorganic Ventures
Lot Number: M2-CE657768/M2-
Balance ID:
Comments: Used to make standards and spiking solutions; No primary La available

Chemical / Solvent Used	BottleNo	Amt	Units	Expires
Nitric Acid 69.0- 70.0% D0521	14626	0.5	mL	12/14/2026
Milli-Q H2O	391	39.5	mL	6/1/2100

Final Volume:
50 mL

Stock Source

ME220106-CE Ce Primary Stock

Base Units

ug/mL

Amount Added

5 mL

Analytes

CAS

Conc: ug/mL

Energy Laboratories Inc

Standard LOG

Standard ID: ME220112 50 PPB STANDARD_CCV
 Standard Name: 50 ppb Standard/CCV
 Date Prepared: 1/12/2022
 Date Expires: 11/18/2022
 Department: ME
 Vendor: Inorganic Ventures
 Lot Number:
 Balance ID:
 Comments: Made Fresh Daily

Type: Secondary
 BY: Cindy Rohrer
 Status: Open

Chemical / Solvent Used	BottleNo	Amt	Units	Expires
Hydrochloric Acid E1421	14721	0.25	mL	1/4/2027
Nitric Acid 69.0- 70.0% D0521	14626	0.5	mL	12/14/2026
Milli-Q H2O	391	48.335	mL	6/1/2100

Final Volume:
100 mL

Stock Source

ME211221 MSCAL MSCAL 3C
 ME211118 MSCAL EL-MSCAL-5A
 ME220105 HgPrim Primary Hg Stock 2 PPM
 ME211208 MSCAL MSCAL 2B
 ME211229A AU 2n Au 2nd source Stock
 ME220110 Ce, La Ce, La Primary

Base Units

ug/mL
 ug/mL
 ug/mL
 ug/mL
 ug/mL
 ug/mL

Amount Added

0.05 mL
 0.25 mL
 0.05 mL
 0.05 mL
 0.01 mL
 0.05 mL

Analytes

CAS

Conc: **mg/L**

Energy Laboratories Inc

Standard LOG

Standard ID: ME211221 MSCAL 3C
Standard Name: MSCAL 3C
Date Prepared: 12/21/2021
Date Expires: 12/21/2022
Department: ME
Vendor: Inorganic Ventures
Lot Number: S2-MEB700780
Balance ID:
Comments: Opened 12/21/21; expires 12/21/22

Type: Primary
BY: Stacy R. Hendricks
Status: Open

Chemical / Solvent Used	BottleNo	Amt	Units	Expires
Multi Analyte Custom Grade Solution	13473	250	mL	12/21/2022

Final Volume:
250 mL

Stock Source

Base Units

Amount Added

Analytes

CAS

Conc: **ug/mL**

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).


2.0 PRODUCT DESCRIPTION

Product Code: Multi Analyte Custom Grade Solution
 Catalog Number: EL-MSCAL-3C
 Lot Number: S2-MEB700780
 Matrix: 3% (v/v) HNO₃
 tr. HF
 Value / Analyte(s): 400 µg/mL ea:
 Silicon,
 100 µg/mL ea:
 Tin,
 Molybdenum,

1-6-2025

ID #: 13473
 Opened: _____
 Multi Analyte Custom Grade Solution
Expires: 1/6/2025
 Rec'd: 1/15/2021
 Energy Laboratories Inc 1120 So. 27th Street
 Billings MT 59107

Titanium,
 Antimony

3.0 CERTIFIED VALUES AND UNCERTAINTIES

ANALYTE	CERTIFIED VALUE	ANALYTE	CERTIFIED VALUE
Antimony, Sb	100.0 ± 0.8 µg/mL	Molybdenum, Mo	100.0 ± 0.6 µg/mL
Silicon, Si	399.9 ± 3.0 µg/mL	Tin, Sn	100.0 ± 0.6 µg/mL
Titanium, Ti	100.0 ± 0.7 µg/mL		

Density: 1.018 g/mL (measured at 20 ± 4 °C)

Assay Information:

ANALYTE	METHOD	NIST SRM#	SRM LOT#
Mo	ICP Assay	3134	130418
Sb	ICP Assay	3102a	140911
Si	ICP Assay	3150	130912
Sn	ICP Assay	3161a	140917
Ti	ICP Assay	3162a	130925

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$$X_{CRM/RM} = \sum(w_i)(X_i)$$

X_i = mean of Assay Method i with standard uncertainty $u_{char i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$$w_i = (1/u_{char i}^2) / (\sum(1/u_{char i}^2))$$

$$CRM/RM \text{ Expanded Uncertainty } (\pm) = U_{CRM/RM} = k (u_{char}^2 + u_{bb}^2 + u_{Its}^2 + u_{ts}^2)^{1/2}$$

k = coverage factor = 2

$u_{char} = (\sum((w_i)^2 (u_{char i}^2)))^{1/2}$ where $u_{char i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{Its} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$$X_{CRM/RM} = (X_a) / (u_{char a})$$

X_a = mean of Assay Method A with

$u_{char a}$ = the standard uncertainty of characterization Method A

$$CRM/RM \text{ Expanded Uncertainty } (\pm) = U_{CRM/RM} = k (u_{char a}^2 + u_{bb}^2 + u_{Its}^2 + u_{ts}^2)^{1/2}$$

k = coverage factor = 2

$u_{char a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{Its} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES ($\mu\text{g/mL}$)

N/A

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit www.inorganicventures.com/TCT

HF Note: This standard should not be prepared or stored in glass.

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va. 24073, USA; Telephone: 800 669 6799; 540 585 3030, Fax: 540 585 3012; inorganicventures.com; info@inorganicventures.com

11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

January 06, 2021

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **January 06, 2025**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Michael Booth
Director, Quality Control



Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director



Energy Laboratories Inc

Standard LOG

Standard ID: ME211118 MSCAL-5A
Standard Name: EL-MSCAL-5A
Date Prepared: 11/18/2021
Date Expires: 11/18/2022
Department: ME
Vendor: Inorganic Ventures
Lot Number: P2-MEB687200
Balance ID:
Comments: Opened 11/18/2021; Expires 11/18/2022

Type: Primary
BY: Stacy R. Hendricks
Status: Open

Chemical / Solvent Used	BottleNo	Amt	Units	Expires
Multi Analyte Custom Grade Solution	13175	500	mL	11/18/2022

Final Volume:
500 mL

Stock Source

Base Units

Amount Added

Analytes

CAS

Conc: **ug/mL**

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).



2.0 PRODUCT DESCRIPTION

Product Code: Multi Analyte Custom Grade Solution

Catalog Number: EL-MSCAL-5A

Lot Number: P2-MEB687200

Matrix: 3% (v/v) HNO₃

Value / Analyte(s):

5 000 µg/mL ea:	Calcium,	Potassium,	Magnesium,
	Sodium,		
500 µg/mL ea:	Phosphorus,	Iron,	
250 µg/mL ea:	Lithium		

3.0 CERTIFIED VALUES AND UNCERTAINTIES

ANALYTE	CERTIFIED VALUE	ANALYTE	CERTIFIED VALUE
Calcium, Ca	5 000 ± 20 µg/mL	Iron, Fe	499.9 ± 2.1 µg/mL
Lithium, Li	250.0 ± 1.1 µg/mL	Magnesium, Mg	5 000 ± 21 µg/mL
Phosphorus, P	499.8 ± 2.5 µg/mL	Potassium, K	5 000 ± 18 µg/mL
Sodium, Na	5 000 ± 18 µg/mL		

Density: 1.076 g/mL (measured at 20 ± 4 °C)

Assay Information:

ID #: 13175
 Opened: _____
 Multi Analyte Custom Grade Solution
Expires: 12/2/2023
 Rec'd: 10/12/2020
 Energy Laboratories Inc 1120 So. 27th Street
 Billings MT 59107

ANALYTE	METHOD	NIST SRM#	SRM LOT#
Ca	ICP Assay	3109a	130213
Ca	EDTA	928	928
Fe	ICP Assay	3126a	140812
Fe	EDTA	928	928
K	ICP Assay	3141a	140813
K	Gravimetric		See Sec. 4.2
Li	ICP Assay	3129a	100714
Li	Gravimetric		See Sec. 4.2
Mg	ICP Assay	3131a	140110
Mg	EDTA	928	928
Na	ICP Assay	3152a	120715
Na	Gravimetric		See Sec. 4.2
P	ICP Assay	3139a	060717
P	Acidimetric	84L	84L

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of $k = 2$.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$$X_{CRM/RM} = \sum(w_i) (X_i)$$

X_i = mean of Assay Method i with standard uncertainty $u_{char i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$$w_i = (1/u_{char i}^2) / (\sum(1/u_{char i}^2))$$

$$CRM/RM \text{ Expanded Uncertainty } (\pm) = U_{CRM/RM} = k (u_{char}^2 + u_{bb}^2 + u_{lts}^2 + u_{ts}^2)^{1/2}$$

k = coverage factor = 2

$u_{char} = \{ \sum((w_i)^2 (u_{char i}^2)) \}^{1/2}$ where $u_{char i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$$X_{CRM/RM} = (X_a) / (u_{char a})$$

X_a = mean of Assay Method A with

$u_{char a}$ = the standard uncertainty of characterization Method A

$$CRM/RM \text{ Expanded Uncertainty } (\pm) = U_{CRM/RM} = k (u_{char a}^2 + u_{bb}^2 + u_{lts}^2 + u_{ts}^2)^{1/2}$$

k = coverage factor = 2

$u_{char a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES ($\mu\text{g/mL}$)

N/A

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed outer bag.

- While stored in the sealed outer bag, transpiration of this CRM/RM is negligible. After opening the sealed outer bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed outer bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va. 24073, USA; Telephone: 800.669.6799; 540.585.3030, Fax: 540.585.3012; inorganicventures.com; info@inorganicventures.com

11.0 CERTIFICATION, EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

December 02, 2019

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **December 02, 2023**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed outer Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Michael Booth
Manager, Quality Control



Certifying Officer:

Paul Gaines
CEO, Senior Technical Director



Energy Laboratories Inc

Spike LOG

Standard ID: ME220105 HGPRIMARY
Standard Name: Primary Hg Stock 2 PPM
Date Prepared: 1/5/2022
Date Expires: 12/29/2022
Department: ME
Vendor: Inorganic Ventures
Lot Number:
Balance ID:
Type: Secondary
BY: Amanda E. McDani
Status: Open
Comments: Made with different HG stock than QCS

Chemical / Solvent Used	BottleNo	Amt	Units	Expires
Nitric Acid 69.0- 70.0% D0521	14626	0.5	mL	12/14/2026
Hydrochloric Acid E1421	14721	0.25	mL	1/4/2027

Final Volume:
25 mL

Stock Source

ME220110HG HG Stock
ME211229A AU 2N Au 2nd source Stock

Base Units

ug/mL
ug/mL

Amount Added

0.05 mL
0.05 mL

Analytes

CAS

Conc: ug/mL

Energy Laboratories Inc

Standard LOG

Standard ID: ME220110HG
Standard Name: HG Stock
Date Prepared: 1/10/2022
Date Expires: 1/10/2023
Department: ME
Vendor: SCP Science
Lot Number: S210729017
Balance ID:
Comments:

Type: Primary
BY: Amanda E. McDani
Status: Open

Chemical / Solvent Used	BottleNo	Amt	Units	Expires
ICP/ICPMS Standard Mercury	14711	125	mL	1/10/2023

Final Volume:
125 mL

Stock Source

Base Units

Amount Added

Analytes

CAS

Conc: **ug/mL**

ID #: 14711

Opened: _____

ICP/ICPMS Standard Mercury

Expires: 7/31/2023

Rec'd: 12/29/2021

Energy Laboratories Inc 1120 So. 27th Street
Billings MT 59107

SCP SCIENCE

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rtificate of Analysis

Hg

1.0 DESCRIPTION:

PlasmaCAL ICP/ICPMS Standard - Mercury 1000 µg/ml
 Catalogue Number: 140-051-800/-801/-805
 Starting Material: Mercury(II) oxide 99.99+%
 Lot Number: **S210729017**
 Matrix: 10% HNO₃ (See Section 3 for actual matrix)
 Expiration Date (End of month): **July 2023** (or 15 months after bottle is opened, whichever comes first)

2.0 CERTIFIED VALUES AND ASSOCIATED UNCERTAINTY:

Certified Concentration: **999 µg/ml +/- 5 µg/ml**
952 µg/g +/- 5 µg/g
 Method of analysis: Inductively Coupled Plasma Atomic Emission Spectroscopy (ICP-AES)
 Traceability: NIST Standard Reference Material 3133 Lot: **160921**

Note: The uncertainty of the certified value has been calculated from applicable uncertainty contributors (u_i) including uncertainty established during characterization of the material (u_{char}), the between bottle variation (u_{bb}), short-term stability (u_{sts}) and long-term stability (u_{lts}) according to the model $u_c = \sqrt{(u_{char}^2 + u_{bb}^2 + u_{sts}^2 + u_{lts}^2)}$. This combined uncertainty has been further multiplied by a coverage factor (k) of 2 to provide a 95% confidence interval.

3.0 REFERENCE VALUES:

Density: **1.050 g/ml @ 23.6 °C**
 Actual Matrix: **10.0% (v/v) HNO₃**

Trace Metal Impurities as tested by ICP-MS:

Element	Conc. (ppm)	Element	Conc. (ppm)	Element	Conc. (ppm)	Element	Conc. (ppm)
Ag	<0.0010	Fe	0.0322	Nd	<0.0010	Sn	<0.0010
Al	0.0042	Ga	<0.0010	Ni	0.0039	Sr	<0.0025
As	<0.0010	Gd	<0.0010	Os	<0.0010	Ta	<0.0010
Au	<0.0010	Ge	<0.0010	P	<0.0132	Tb	<0.0010
B	<0.0015	Hf	<0.0010	Pb	<0.0010	Te	<0.0010
Ba	<0.0010	Hg	N/A	Pd	<0.0010	Th	<0.0010
Be	<0.0010	Ho	<0.0010	Pr	<0.0010	Ti	<0.0012
Bi	<0.0010	In	<0.0010	Pt	<0.0010	Tl	0.0117
Ca	<0.0135	Ir	<0.0010	Rb	<0.0010	Tm	<0.0010
Cd	<0.0010	K	<0.0024	Re	<0.0010	U	<0.0010
Ce	<0.0010	La	<0.0010	Rh	<0.0010	V	<0.0010
Co	<0.0010	Li	<0.0010	Ru	<0.0010	W	<0.0020
Cr	0.0112	Lu	<0.0010	S	*	Y	<0.0010
Cs	<0.0010	Mg	<0.0010	Sb	<0.0010	Yb	<0.0010
Cu	0.0060	Mn	<0.0010	Sc	<0.0010	Zn	<0.0010
Dy	<0.0010	Mo	<0.0010	Se	<0.0010	Zr	<0.0010
Er	<0.0010	Na	0.0092	Si	<0.1		
Eu	<0.0010	Nb	<0.0010	Sm	<0.0010		

*: Not tested

4.0 APPROVAL AND DATE OF CERTIFICATION:

Certification Approval: Daniel Boisvert, Chemist
 Certification Date: August 12, 2021

5.0 INTENDED USE / UTILISATION PRÉVUE:

- ICP Standards: For the calibration of, including but not limited to: ICP-AES, ICP-MS, FAAS, GFAA, XRF and DCP. / *Étalons ICP: Pour l'étalonnage d'instruments de mesure tels que: ICP-AES, ICP-MS, FAAS, GFAA, XRF et DCP.*
 - AA Standards: For the calibration of Flame (FAAS) and Graphite Furnace (GFAA) Atomic Absorption Spectrometers. / *Étalons AA: Pour l'étalonnage de spectromètres d'absorption atomique flamme (GFAA) et four au graphite (GFAA).*
 - Matrix Modifiers: For the optimization of analytical conditions to provide better Graphite Furnace Atomic Absorption (GFAA) instrument response and improved detection limits. / *Modificateur de matrice: Pour l'optimisation des conditions analytiques afin de fournir des meilleures réponses instrumentales et limites de détection pour SAA four au graphite.*
 - pH Standards: For the calibrating pH meters or for other wet chemistry applications. / *Étalons pH: Pour étalonnage de pH mètres et autres applications de chimie humide.*
 - Conductivity Standards: For electrolytic conductivity measurement as a calibration standard. / *Étalons de conductivité: Comme étalon pour les mesures de conductivité électrolytiques.*
 - IC Standards: for calibration of, but not limited to IC, HPLC, TLC, ISE, IR, NMR, MS, UV/VIS or other wet chemistry applications. / *Étalons IC: Pour étalonnage d'instruments tels que: IC, HPLC, TLC, ISE, IR, NMR, MS, UV/VIS et autres applications de chimie humide.*
- For any inquiries, please contact **SCP SCIENCE**. / *Pour toute question, veuillez contacter SCP SCIENCE.*

6.0 INSTRUCTIONS FOR USE / INSTRUCTIONS D'UTILISATION:

Handling and Storage / Manutention et entreposage: Keep product tightly capped when not in use. The solution should be opened for a minimum amount of time necessary to dispense the amount required. Do not pipet or use directly from container. Do not return unused portions back to container. Store under normal laboratory conditions. Avoid exposure to excessive sources of heat and humidity or direct sunlight. / *Garder les contenants bien fermés lorsque non utilisés. Le contenant devrait être ouvert seulement pour le temps requis afin de prélever la quantité nécessaire. Ne pas pipetter ou utiliser directement du contenant. Ne pas retourner les portions non-utilisées dans le contenant. Conserver dans des conditions normales de laboratoire. Éviter l'exposition à des sources de chaleur et d'humidité excessives ou à l'exposition solaire directe.*

Stability / Stabilité: This Standard is guaranteed to be stable and accurate to within the specified uncertainty of measurement up to the unopened expiry date, if sealed, or up to the opened expiry date (when indicated), whichever comes first, provided the solution is kept tightly capped and stored under the indicated storage conditions. Purchasers will be notified of any significant changes resulting in re-certification or withdrawal of the product prior to the expiration date. / *La stabilité et l'exactitude de cet étalon sont garanties d'être à l'intérieur de l'incertitude de mesure, jusqu'à la date d'expiration de la bouteille non-ouverte, si scellée, ou jusqu'à la date d'expiration de la bouteille ouverte (si indiquée), en présumant que le contenant est maintenu fermé et gardé dans les conditions d'entreposage indiquées. Les acheteurs seront avisés dans le cas où il y aura des changements significatifs nécessitant une re-certification ou un rappel du produit avant la date d'expiration.*

7.0 HAZARDOUS INFORMATION / INFORMATION SUR LES RISQUES POTENTIELS:

Please refer to the associated Safety Data Sheet (SDS) for information regarding this product (available at www.SCPSCIENCE.com). / *SVP vous référer à la Fiche Signalétique applicable pour de l'information sur ce produit (Disponible à www.SCPSCIENCE.com).*

8.0 HOMOGENEITY / HOMOGÉNÉITÉ:

This solution has been blended according to an in-house procedure and its homogeneity is guaranteed to be fit for purpose when a sample size sufficient for the intended method of analysis is used. / *Cette solution a été préparée selon une procédure maison et nous assurons que sa homogénéité est approprié à l'emploi lorsqu'un échantillon suffisant pour la méthode d'analyse prévue est utilisé.*

9.0 TRACEABILITY / TRAÇABILITÉ:

This CRM (Certified Reference Material) is traceable to the NIST SRM (Standard Reference Material) indicated in section 2 through an unbroken chain of comparisons. In addition, balances used are regularly calibrated using weights which are traceable to NIST (National Institute of Standards and Technology) or NRC (National Research Council of Canada) standards. All conductivity meters used to analyze this standard have been regularly calibrated using a NIST or NRC traceable Thermometer and standards. All pH meters used to analyze this standard have been regularly calibrated using a NIST or NRC traceable thermometer and pH/MV simulator. / *Ce matériel de référence certifié est traçable au Matériel de Référence Standardisé de NIST indiqué à la section 2 par une chaîne de comparaison ininterrompue. De plus, les balances utilisées sont étalonnées régulièrement en utilisant des poids qui sont traçables au NIST (National Institute of Standards and Technology) ou au CRNC (Conseil National de Recherches Canada). Tout conductimètre utilisé afin d'analyser cet étalon a été sujet à un étalonnage périodique utilisant des thermomètres et étalons traçables au NIST ou CNRC. Tout pH mètre utilisé afin d'analyser cet étalon a été sujet à un étalonnage périodique utilisant des thermomètres et un simulateur pH/MV traçables au NIST ou au CNRC.*

10.0 PREPARATION / PRÉPARATION:

For the preparation of these solutions, 18 megohm/cm double deionized water, high-purity acids and glassware calibrated to ASTM Class A specifications are used. / *Une eau de 18 megohm/cm doublement déionisé, de l'acide de haute pureté, ainsi que de la verrerie étalonnée afin de satisfaire les spécifications Classe A de ASTM ont été utilisés pour la préparation de cet étalon.*

11.0 QUALITY SYSTEM CERTIFICATIONS / CERTIFICATIONS DE SYSTÈME QUALITÉ:

ISO 9001 Certification / Certification ISO 9001: This standard was produced in a facility which operates under a registered ISO 9001 Quality Management System. Please consult our web site for a copy of the most recent revision of our certificate of registration. / *Cet étalon a été fabriqué dans un laboratoire qui utilise un Système de Gestion de la Qualité enregistré à la norme ISO 9001. Veuillez consulter notre site web pour obtenir la version la plus récente de notre certificat d'enregistrement.*

ISO 17025 Accreditation / Accréditation ISO 17025: SCP SCIENCE (Corporate Headquarters) operates an ISO 17025 accredited laboratory. Please consult our web site for a copy of the most recent revision of our certificate and scope of accreditation. / *SCP SCIENCE (Siège social) est accréditée ISO 17025. Veuillez consulter notre site web afin d'obtenir la plus récente version de notre certificat d'accréditation ainsi que la portée de notre accréditation.*

ISO 17034 Accreditation / Accréditation ISO 17034: SCP SCIENCE (Corporate Headquarters) is an ISO 17034 accredited Reference Material Producer. Please consult our website for a copy of our most recent certificate and scope of accreditation. / *SCP SCIENCE (Siège social) est un Fabricant de Matériaux de Référence Accrédité ISO 17034. Veuillez consulter notre site web afin d'obtenir la plus récente version de notre certificat d'accréditation ainsi que la portée de notre accréditation.*

CORPORATE HEADQUARTERS
21800 Clark Graham
Baie D'Urfé (Montréal), Quebec,
H9X 4B6 Canada
Phone: +1 (800) 361-6820
Fax: +1 (800) 253-5549

USA
3rd Party Distribution Center
348 Route 11, Champlain,
N.Y. 12919-4816
Phone: +1 (800) 361-6820
Fax: +1 (800) 253-5549

FRANCE
12 Ave. de Québec, Bat. IRIS
91140, Villebon-sur-Yvette
Phone: +33 (0) 1 69 18 71 17
Fax: +33 (0) 1 60 92 05 67

GERMANY
Alte Marktberdorfer Straße 14, 87616
Marktberdorf
Phone: +49 (0) 8342-89560-61
Fax: +49 (0) 8342-89560-69

Energy Laboratories Inc

Standard LOG

Standard ID: ME211229A AU 2ND SOURCE
Standard Name: Au 2nd source Stock
Date Prepared: 12/29/2021
Date Expires: 12/29/2022
Department: ME
Vendor: SCP Science
Lot Number: S211129013
Balance ID:
Comments: opened 12/29/2021; expires 12/29/2022

Type: Primary
BY: Amanda E. McDani
Status: Open

Chemical / Solvent Used	BottleNo	Amt	Units	Expires
ICP/ICPMS Standard Gold	14710	500	mL	12/29/2022

Final Volume:
500 mL

Stock Source

Base Units

Amount Added

Analytes

CAS

Conc: **ug/mL**

ID #: 14710

Opened:

ICP/ICPMS Standard Gold

Expires: 12/31/2023

Rec'd: 12/29/2021

Eneray Laboratories Inc 1120 So. 27th Street

Billings MT 59107

SCP SCIENC

Providing Innovative Solutions to Analytical

Certificate of Analysis**Au****1.0 DESCRIPTION:****PlasmaCAL ICP/ICPMS Standard - Gold 1000 µg/ml**

Catalogue Number: 140-052-790/-791/-795

Starting Material: Gold Metal 99.99%+

Lot Number: **S211129013**

Matrix: 10% HCl (See Section 3 for actual matrix)

Expiration Date (End of month): **December 2023** (or 15 months after bottle is opened, whichever comes first)**2.0 CERTIFIED VALUES AND ASSOCIATED UNCERTAINTY:**Certified Concentration: **1001 µg/ml +/- 4 µg/ml****982 µg/g +/- 4 µg/g**

Method of analysis: Inductively Coupled Plasma Atomic Emission Spectroscopy (ICP-AES)

Traceability: NIST Standard Reference Material 3121 Lot: **991806**

Note: The uncertainty of the certified value has been calculated from applicable uncertainty contributors (u_i) including uncertainty established during characterization of the material (u_{char}), the between bottle variation (u_{bb}), short-term stability (u_{sts}) and long-term stability (u_{lts}) according to the model $u_c = \sqrt{(u_{char}^2 + u_{bb}^2 + u_{sts}^2 + u_{lts}^2)}$. This combined uncertainty has been further multiplied by a coverage factor (k) of 2 to provide a 95% confidence interval.

3.0 REFERENCE VALUES:Density: **1.019 g/ml @ 22.4 °C**Actual Matrix: **10.0% (v/v) HCl**

Trace Metal Impurities as tested by ICP-MS:

Element	Conc. (ppm)	Element	Conc. (ppm)	Element	Conc. (ppm)	Element	Conc. (ppm)
Ag	0.3851	Fe	<0.0090	Nd	<0.0010	Sn	<0.0010
Al	0.0062	Ga	<0.0010	Ni	<0.0010	Sr	<0.0025
As	<0.0010	Gd	<0.0010	Os	<0.0010	Ta	<0.0010
Au	N/A	Ge	<0.0010	P	<0.0132	Tb	<0.0010
B	<0.0015	Hf	<0.0010	Pb	<0.0010	Te	<0.0010
Ba	<0.0010	Hg	*	Pd	0.0434	Th	<0.0010
Be	<0.0010	Ho	<0.0010	Pr	<0.0010	Ti	<0.0012
Bi	<0.0010	In	<0.0010	Pt	0.0048	Tl	<0.0011
Ca	<0.0135	Ir	<0.0010	Rb	<0.0010	Tm	<0.0010
Cd	<0.0010	K	0.0362	Re	<0.0010	U	<0.0010
Ce	<0.0010	La	<0.0010	Rh	<0.0010	V	<0.0010
Co	<0.0010	Li	<0.0010	Ru	<0.0010	W	<0.0020
Cr	<0.0010	Lu	<0.0010	S	*	Y	<0.0010
Cs	0.0029	Mg	<0.0010	Sb	<0.0010	Yb	<0.0010
Cu	0.0023	Mn	<0.0010	Sc	<0.0010	Zn	<0.0010
Dy	<0.0010	Mo	<0.0010	Se	<0.01	Zr	<0.0010
Er	<0.0010	Na	0.0070	Si	<0.1		
Eu	<0.0010	Nb	<0.0010	Sm	<0.0010		

*: Not tested

4.0 APPROVAL AND DATE OF CERTIFICATION:

Certification Approval: Daniel Boisvert, Chemist

Certification Date: December 10, 2021

Daniel Boisvert

5.0 INTENDED USE / UTILISATION PRÉVUE:

- ICP Standards: For the calibration of, including but not limited to: ICP-AES, ICP-MS, FAAS, GFAA, XRF and DCP. / *Étalons ICP* : Pour l'étalonnage d'instruments de mesure tels que: ICP-AES, ICP-MS, FAAS, GFAA, XRF et DCP.
 - AA Standards: For the calibration of Flame (FAAS) and Graphite Furnace (GFAA) Atomic Absorption Spectrometers. / *Étalons AA* : Pour l'étalonnage de spectromètres d'absorption atomique flamme (GFAA) et four au graphite (GFAA).
 - Matrix Modifiers: For the optimization of analytical conditions to provide better Graphite Furnace Atomic Absorption (GFAA) instrument response and improved detection limits. / *Modificateur de matrice* : Pour l'optimisation des conditions analytiques afin de fournir des meilleures réponses instrumentales et limites de détection pour SAA four au graphite.
 - pH Standards: For the calibrating pH meters or for other wet chemistry applications. / *Étalons pH* : Pour étalonnage de pH mètres et autres applications de chimie humide.
 - Conductivity Standards: For electrolytic conductivity measurement as a calibration standard. / *Étalons de conductivité* : Comme étalon pour les mesures de conductivité électrolytiques.
 - IC Standards: for calibration of, but not limited to IC, HPLC, TLC, ISE, IR, NMR, MS, UV/VIS or other wet chemistry applications. / *Étalons IC* : Pour étalonnage d'instruments tels que : IC, HPLC, TLC, ISE, IR, NMR, MS, UV/VIS et autres applications de chimie humide.
- For any inquiries, please contact **SCP SCIENCE**. / *Pour toute question, veuillez contacter SCP SCIENCE.*

6.0 INSTRUCTIONS FOR USE / INSTRUCTIONS D'UTILISATION:

Handling and Storage / Manutention et entreposage: Keep product tightly capped when not in use. The solution should be opened for a minimum amount of time necessary to dispense the amount required. Do not pipet or use directly from container. Do not return unused portions back to container. Store under normal laboratory conditions. Avoid exposure to excessive sources of heat and humidity or direct sunlight. / *Garder les contenants bien fermés lorsque non utilisés. Le contenant devrait être ouvert seulement pour le temps requis afin de prélever la quantité nécessaire. Ne pas pipetter ou utiliser directement du contenant. Ne pas retourner les portions non-utilisées dans le contenant. Conserver dans des conditions normales de laboratoire. Éviter l'exposition à des sources de chaleur et d'humidité excessives ou à l'exposition solaire directe.*

Stability / Stabilité: This Standard is guaranteed to be stable and accurate to within the specified uncertainty of measurement up to the unopened expiry date, if sealed, or up to the opened expiry date (when indicated), whichever comes first, provided the solution is kept tightly capped and stored under the indicated storage conditions. Purchasers will be notified of any significant changes resulting in re-certification or withdrawal of the product prior to the expiration date. / *La stabilité et l'exactitude de cet étalon sont garanties d'être à l'intérieur de l'incertitude de mesure, jusqu'à la date d'expiration de la bouteille non-ouverte, si scellée, ou jusqu'à la date d'expiration de la bouteille ouverte (si indiquée), en présumant que le contenant est maintenu fermé et gardé dans les conditions d'entreposage indiquées. Les acheteurs seront avisés dans le cas où il y aura des changements significatifs nécessitant une re-certification ou un rappel du produit avant la date d'expiration.*

7.0 HAZARDOUS INFORMATION / INFORMATION SUR LES RISQUES POTENTIELS:

Please refer to the associated Safety Data Sheet (SDS) for information regarding this product (available at www.SCPSCIENCE.com). / *SVP vous référer à la Fiche Signalétique applicable pour de l'information sur ce produit (Disponible à www.SCPSCIENCE.com).*

8.0 HOMOGENEITY / HOMOGÉNÉITÉ:

This solution has been blended according to an in-house procedure and its homogeneity is guaranteed to be fit for purpose when a sample size sufficient for the intended method of analysis is used. / *Cette solution a été préparée selon une procédure maison et nous assurons que sa homogénéité est approprié à l'emploi lorsqu'un échantillon suffisant pour la méthode d'analyse prévue est utilisé.*

9.0 TRACEABILITY / TRAÇABILITÉ:

This CRM (Certified Reference Material) is traceable to the NIST SRM (Standard Reference Material) indicated in section 2 through an unbroken chain of comparisons. In addition, balances used are regularly calibrated using weights which are traceable to NIST (National Institute of Standards and Technology) or NRC (National Research Council of Canada) standards. All conductivity meters used to analyze this standard have been regularly calibrated using a NIST or NRC traceable thermometer and standards. All pH meters used to analyze this standard have been regularly calibrated using a NIST or NRC traceable thermometer and pH/MV simulator. / *Ce matériel de référence certifié est traçable au Matériel de Référence Standardisé de NIST indiqué à la section 2 par une chaîne de comparaison ininterrompue. De plus, les balances utilisées sont étalonnées régulièrement en utilisant des poids qui sont traçables au NIST (National Institute of Standards and Technology) ou au CRNC (Conseil National de Recherches Canada). Tout conductimètre utilisé afin d'analyser cet étalon a été sujet à un étalonnage périodique utilisant des thermomètres et étalons traçables au NIST ou CNRC. Tout pH mètre utilisé afin d'analyser cet étalon a été sujet à un étalonnage périodique utilisant des thermomètres et un simulateur pH/MV traçables au NIST ou au CNRC.*

10.0 PREPARATION / PRÉPARATION:

For the preparation of these solutions, 18 megohm/cm double deionized water, high-purity acids and glassware calibrated to ASTM Class A specifications are used. / *Une eau de 18 megohm/cm doublement déionisée, de l'acide de haute pureté, ainsi que de la verrerie étalonnée afin de satisfaire les spécifications Classe A de ASTM ont été utilisés pour la préparation de cet étalon.*

11.0 QUALITY SYSTEM CERTIFICATIONS / CERTIFICATIONS DE SYSTÈME QUALITÉ:

ISO 9001 Certification / Certification ISO 9001: This standard was produced in a facility which operates under a registered ISO 9001 Quality Management System. Please consult our web site for a copy of the most recent revision of our certificate of registration. / *Cet étalon a été fabriqué dans un laboratoire qui utilise un Système de Gestion de la Qualité enregistré à la norme ISO 9001. Veuillez consulter notre site web pour obtenir la version la plus récente de notre certificat d'enregistrement.*

ISO 17025 Accreditation / Accréditation ISO 17025: SCP SCIENCE (Corporate Headquarters) operates an ISO 17025 accredited laboratory. Please consult our web site for a copy of the most recent revision of our certificate and scope of accreditation. / *SCP SCIENCE (Siège social) est accréditée ISO 17025. Veuillez consulter notre site web afin d'obtenir la plus récente version de notre certificat d'accréditation ainsi que la portée de notre accréditation.*

ISO 17034 Accreditation / Accréditation ISO 17034: SCP SCIENCE (Corporate Headquarters) is an ISO 17034 accredited Reference Material Producer. Please consult our website for a copy of our most recent certificate and scope of accreditation. / *SCP SCIENCE (Siège social) est un Fabricant de Matériaux de Référence Accrédité ISO 17034. Veuillez consulter notre site web afin d'obtenir la plus récente version de notre certificat d'accréditation ainsi que la portée de notre accréditation.*

CORPORATE HEADQUARTERS
21800 Clark Graham
Baie D'Urfé (Montréal), Quebec,
H9X 4B6 Canada
Phone: +1 (800) 361-6820
Fax: +1 (800) 253-5549

USA
3rd Party Distribution Center
348 Route 11, Champlain,
N.Y. 12919-4816
Phone: +1 (800) 361-6820
Fax: +1 (800) 253-5549

FRANCE
12 Ave. de Québec, Bat. IRIS
91140, Villebon-sur-Yvette
Phone: +33 (0) 1 69 18 71 17
Fax: +33 (0) 1 60 92 05 67

GERMANY
Alte Marktoberdorfer Straße 14, 87616
Marktoberdorf
Phone: +49 (0) 8342-89560-61
Fax: +49 (0) 8342-89560-69

Energy Laboratories Inc

Standard LOG

Standard ID: ME211208 MSCAL2B
Standard Name: MSCAL 2B
Date Prepared: 12/8/2021
Date Expires: 12/8/2022
Department: ME
Vendor: Inorganic Ventures
Lot Number: S2-MEB704403
Balance ID:
Comments: Opened 12/08/2021; Expires 12/08/2022

Type: Primary
BY: Stacy R. Hendricks
Status: Open

Chemical / Solvent Used	BottleNo	Amt	Units	Expires
Multi Analyte Custom Grade Solution	13793		mL	12/8/2022

Final Volume:
mL

Stock Source

Base Units

Amount Added

Analytes

CAS

Conc: **ug/mL**

300 Technology Drive
Christiansburg, VA 24073 USA
inorganicventures.com

P: 800-669-6799/540-585-3030
F: 540-585-3012
info@inorganicventures.com

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).



2.0 PRODUCT DESCRIPTION

Product Code: Multi Analyte Custom Grade Solution
Catalog Number: EL-MSCAL-2B
Lot Number: S2-MEB704403
Matrix: 5% (v/v) HNO3
Value / Analyte(s):
100 µg/mL ea:
Aluminum, Arsenic,
Boron, Barium,
Beryllium, Cadmium,
Cobalt, Chromium,
Copper, Iron,
Manganese, Nickel,
Lead, Selenium,
Strontium, Thorium,
Thallium, Uranium,
Vanadium, Zinc,
40 µg/mL ea:
Silver

3.0 CERTIFIED VALUES AND UNCERTAINTIES

ID #: 13793

Opened: _____

Multi Analyte Custom Grade Solution

Expires: 4/21/2025

Rec'd: 4/29/2021

Energy Laboratories Inc 1120 So. 27th Street
Billings MT 59107

ANALYTE	CERTIFIED VALUE	ANALYTE	CERTIFIED VALUE
Aluminum, Al	100.0 ± 0.4 µg/mL	Arsenic, As	100.0 ± 0.9 µg/mL
Barium, Ba	100.0 ± 0.5 µg/mL	Beryllium, Be	100.0 ± 0.7 µg/mL
Boron, B	100.0 ± 0.7 µg/mL	Cadmium, Cd	100.0 ± 0.5 µg/mL
Chromium, Cr	100.0 ± 0.8 µg/mL	Cobalt, Co	100.0 ± 0.6 µg/mL
Copper, Cu	100.0 ± 0.5 µg/mL	Iron, Fe	100.1 ± 0.4 µg/mL
Lead, Pb	100.0 ± 0.6 µg/mL	Manganese, Mn	100.0 ± 0.5 µg/mL
Nickel, Ni	100.0 ± 0.6 µg/mL	Selenium, Se	100.0 ± 0.7 µg/mL
Silver, Ag	39.99 ± 0.18 µg/mL	Strontium, Sr	100.0 ± 0.4 µg/mL
Thallium, Tl	100.0 ± 0.6 µg/mL	Thorium, Th	100.0 ± 0.5 µg/mL
Uranium, U	100.0 ± 0.5 µg/mL	Vanadium, V	100.0 ± 0.5 µg/mL
Zinc, Zn	100.0 ± 0.5 µg/mL		

Density: 1.033 g/mL (measured at 20 ± 4 °C)

Assay Information:

ANALYTE	METHOD	NIST SRM#	SRM LOT#
Ag	ICP Assay	3151	160729
Ag	Volhard	999c	999c
Al	ICP Assay	3101a	140903
Al	EDTA	928	928
As	ICP Assay	3103a	100818
B	ICP Assay	3107	110830
Ba	ICP Assay	3104a	140909
Ba	Gravimetric		See Sec. 4.2
Be	ICP Assay	3105a	090514
Cd	ICP Assay	3108	130116
Cd	EDTA	928	928
Co	ICP Assay	3113	190630
Co	EDTA	928	928
Cr	ICP Assay	3112a	170630
Cu	ICP Assay	3114	121207
Cu	EDTA	928	928
Fe	ICP Assay	3126a	140812
Fe	EDTA	928	928
Fe	Calculated		See Sec. 4.2
Mn	ICP Assay	3132	050429
Mn	EDTA	928	928
Ni	ICP Assay	3136	120619
Ni	EDTA	928	928
Pb	ICP Assay	3128	101026
Pb	EDTA	928	928
Se	ICP Assay	3149	100901
Se	Calculated		See Sec. 4.2
Sr	EDTA	928	928
Sr	ICP Assay	Traceable to 3153a	K2-SR650985
Sr	Calculated		See Sec. 4.2
Th	EDTA	928	928
Th	Calculated		See Sec. 4.2
Tl	ICP Assay	3158	151215
U	ICP Assay	3164	080521
U	Calculated		See Sec. 4.2
V	ICP Assay	3165	160906
V	EDTA	928	928
Zn	ICP Assay	3168a	120629
Zn	EDTA	928	928

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of $k = 2$.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$$X_{CRM/RM} = \sum(w_i)(X_i)$$

X_i = mean of Assay Method i with standard uncertainty $u_{char i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$$w_i = (1/u_{char i}^2) / (\sum(1/u_{char i}^2))$$

$$CRM/RM \text{ Expanded Uncertainty } (\pm) = U_{CRM/RM} = k (u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{1/2}$$

k = coverage factor = 2

$u_{char} = [\sum((w_i)^2 (u_{char i})^2)]^{1/2}$ where $u_{char i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Certified Abundance:

IV's Certified Abundance

Isotope

Uranium 238U

Uranium 235U

Atom %

99.8 ± 0.1

0.24 ± 0.05

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$$X_{CRM/RM} = (X_a) / (u_{char a})$$

X_a = mean of Assay Method A with

$u_{char a}$ = the standard uncertainty of characterization Method A

$$CRM/RM \text{ Expanded Uncertainty } (\pm) = U_{CRM/RM} = k (u^2_{char a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{1/2}$$

k = coverage factor = 2

$u_{char a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES ($\mu\text{g/mL}$)

N/A

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit www.inorganicventures.com/TCT

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va. 24073, USA; Telephone: 800.669.6799; 540.585.3030, Fax: 540.585.3012; inorganicventures.com; info@inorganicventures.com

11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

April 21, 2021

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **April 21, 2025**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Michael Booth
Director, Quality Control



Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director



Energy Laboratories Inc

Standard LOG

Standard ID: ME211229A AU 2ND SOURCE
Standard Name: Au 2nd source Stock
Date Prepared: 12/29/2021
Date Expires: 12/29/2022
Department: ME
Vendor: SCP Science
Lot Number: S211129013
Balance ID:
Comments: opened 12/29/2021; expires 12/29/2022

Type: Primary
BY: Amanda E. McDani
Status: Open

Chemical / Solvent Used	BottleNo	Amt	Units	Expires
ICP/ICPMS Standard Gold	14710	500	mL	12/29/2022

Final Volume:
500 mL

Stock Source

Base Units

Amount Added

Analytes

CAS

Conc: **ug/mL**

ID #: 14710

Opened:

ICP/ICPMS Standard Gold

Expires: 12/31/2023

Rec'd: 12/29/2021

Eneray Laboratories Inc 1120 So. 27th Street

Billings MT 59107

SCP SCIENC

Providing Innovative Solutions to Analytical

Certificate of Analysis**Au****1.0 DESCRIPTION:****PlasmaCAL ICP/ICPMS Standard - Gold 1000 µg/ml**

Catalogue Number: 140-052-790/-791/-795

Starting Material: Gold Metal 99.99%+

Lot Number: **S211129013**

Matrix: 10% HCl (See Section 3 for actual matrix)

Expiration Date (End of month): **December 2023** (or 15 months after bottle is opened, whichever comes first)**2.0 CERTIFIED VALUES AND ASSOCIATED UNCERTAINTY:**Certified Concentration: **1001 µg/ml +/- 4 µg/ml****982 µg/g +/- 4 µg/g**

Method of analysis: Inductively Coupled Plasma Atomic Emission Spectroscopy (ICP-AES)

Traceability: NIST Standard Reference Material 3121 Lot: **991806**

Note: The uncertainty of the certified value has been calculated from applicable uncertainty contributors (u_i) including uncertainty established during characterization of the material (u_{char}), the between bottle variation (u_{bb}), short-term stability (u_{sts}) and long-term stability (u_{lts}) according to the model $u_c = \sqrt{(u_{char}^2 + u_{bb}^2 + u_{sts}^2 + u_{lts}^2)}$. This combined uncertainty has been further multiplied by a coverage factor (k) of 2 to provide a 95% confidence interval.

3.0 REFERENCE VALUES:Density: **1.019 g/ml @ 22.4 °C**Actual Matrix: **10.0% (v/v) HCl**

Trace Metal Impurities as tested by ICP-MS:

Element	Conc. (ppm)	Element	Conc. (ppm)	Element	Conc. (ppm)	Element	Conc. (ppm)
Ag	0.3851	Fe	<0.0090	Nd	<0.0010	Sn	<0.0010
Al	0.0062	Ga	<0.0010	Ni	<0.0010	Sr	<0.0025
As	<0.0010	Gd	<0.0010	Os	<0.0010	Ta	<0.0010
Au	N/A	Ge	<0.0010	P	<0.0132	Tb	<0.0010
B	<0.0015	Hf	<0.0010	Pb	<0.0010	Te	<0.0010
Ba	<0.0010	Hg	*	Pd	0.0434	Th	<0.0010
Be	<0.0010	Ho	<0.0010	Pr	<0.0010	Ti	<0.0012
Bi	<0.0010	In	<0.0010	Pt	0.0048	Tl	<0.0011
Ca	<0.0135	Ir	<0.0010	Rb	<0.0010	Tm	<0.0010
Cd	<0.0010	K	0.0362	Re	<0.0010	U	<0.0010
Ce	<0.0010	La	<0.0010	Rh	<0.0010	V	<0.0010
Co	<0.0010	Li	<0.0010	Ru	<0.0010	W	<0.0020
Cr	<0.0010	Lu	<0.0010	S	*	Y	<0.0010
Cs	0.0029	Mg	<0.0010	Sb	<0.0010	Yb	<0.0010
Cu	0.0023	Mn	<0.0010	Sc	<0.0010	Zn	<0.0010
Dy	<0.0010	Mo	<0.0010	Se	<0.01	Zr	<0.0010
Er	<0.0010	Na	0.0070	Si	<0.1		
Eu	<0.0010	Nb	<0.0010	Sm	<0.0010		

*: Not tested

4.0 APPROVAL AND DATE OF CERTIFICATION:

Certification Approval: Daniel Boisvert, Chemist

Certification Date: December 10, 2021

Daniel Boisvert

5.0 INTENDED USE / UTILISATION PRÉVUE:

- ICP Standards: For the calibration of, including but not limited to: ICP-AES, ICP-MS, FAAS, GFAA, XRF and DCP. / *Étalons ICP : Pour l'étalonnage d'instruments de mesure tels que: ICP-AES, ICP-MS, FAAS, GFAA, XRF et DCP.*
 - AA Standards: For the calibration of Flame (FAAS) and Graphite Furnace (GFAA) Atomic Absorption Spectrometers. / *Étalons AA : Pour l'étalonnage de spectromètres d'absorption atomique flamme (GFAA) et four au graphite (GFAA).*
 - Matrix Modifiers: For the optimization of analytical conditions to provide better Graphite Furnace Atomic Absorption (GFAA) instrument response and improved detection limits. / *Modificateur de matrice : Pour l'optimisation des conditions analytiques afin de fournir des meilleures réponses instrumentales et limites de détection pour SAA four au graphite.*
 - pH Standards: For the calibrating pH meters or for other wet chemistry applications. / *Étalons pH : Pour étalonnage de pH mètres et autres applications de chimie humide.*
 - Conductivity Standards: For electrolytic conductivity measurement as a calibration standard. / *Étalons de conductivité : Comme étalon pour les mesures de conductivité électrolytiques.*
 - IC Standards: for calibration of, but not limited to IC, HPLC, TLC, ISE, IR, NMR, MS, UV/VIS or other wet chemistry applications. / *Étalons IC : Pour étalonnage d'instruments tels que : IC, HPLC, TLC, ISE, IR, NMR, MS, UV/VIS et autres applications de chimie humide.*
- For any inquiries, please contact **SCP SCIENCE**. / *Pour toute question, veuillez contacter SCP SCIENCE.*

6.0 INSTRUCTIONS FOR USE / INSTRUCTIONS D'UTILISATION:

Handling and Storage / Manutention et entreposage: Keep product tightly capped when not in use. The solution should be opened for a minimum amount of time necessary to dispense the amount required. Do not pipet or use directly from container. Do not return unused portions back to container. Store under normal laboratory conditions. Avoid exposure to excessive sources of heat and humidity or direct sunlight. / *Garder les contenants bien fermés lorsque non utilisés. Le contenant devrait être ouvert seulement pour le temps requis afin de prélever la quantité nécessaire. Ne pas pipetter ou utiliser directement du contenant. Ne pas retourner les portions non-utilisées dans le contenant. Conserver dans des conditions normales de laboratoire. Éviter l'exposition à des sources de chaleur et d'humidité excessives ou à l'exposition solaire directe.*

Stability / Stabilité: This Standard is guaranteed to be stable and accurate to within the specified uncertainty of measurement up to the unopened expiry date, if sealed, or up to the opened expiry date (when indicated), whichever comes first, provided the solution is kept tightly capped and stored under the indicated storage conditions. Purchasers will be notified of any significant changes resulting in re-certification or withdrawal of the product prior to the expiration date. / *La stabilité et l'exactitude de cet étalon sont garanties d'être à l'intérieur de l'incertitude de mesure, jusqu'à la date d'expiration de la bouteille non-ouverte, si scellée, ou jusqu'à la date d'expiration de la bouteille ouverte (si indiquée), en présumant que le contenant est maintenu fermé et gardé dans les conditions d'entreposage indiquées. Les acheteurs seront avisés dans le cas où il y aura des changements significatifs nécessitant une re-certification ou un rappel du produit avant la date d'expiration.*

7.0 HAZARDOUS INFORMATION / INFORMATION SUR LES RISQUES POTENTIELS:

Please refer to the associated Safety Data Sheet (SDS) for information regarding this product (available at www.SCPSCIENCE.com). / *SVP vous référer à la Fiche Signalétique applicable pour de l'information sur ce produit (Disponible à www.SCPSCIENCE.com).*

8.0 HOMOGENEITY / HOMOGÉNÉITÉ:

This solution has been blended according to an in-house procedure and its homogeneity is guaranteed to be fit for purpose when a sample size sufficient for the intended method of analysis is used. / *Cette solution a été préparée selon une procédure maison et nous assurons que sa homogénéité est approprié à l'emploi lorsqu'un échantillon suffisant pour la méthode d'analyse prévue est utilisé.*

9.0 TRACEABILITY / TRAÇABILITÉ:

This CRM (Certified Reference Material) is traceable to the NIST SRM (Standard Reference Material) indicated in section 2 through an unbroken chain of comparisons. In addition, balances used are regularly calibrated using weights which are traceable to NIST (National Institute of Standards and Technology) or NRC (National Research Council of Canada) standards. All conductivity meters used to analyze this standard have been regularly calibrated using a NIST or NRC traceable Thermometer and standards. All pH meters used to analyze this standard have been regularly calibrated using a NIST or NRC traceable thermometer and pH/MV simulator. / *Ce matériel de référence certifié est traçable au Matériel de Référence Standardisé de NIST indiqué à la section 2 par une chaîne de comparaison ininterrompue. De plus, les balances utilisées sont étalonnées régulièrement en utilisant des poids qui sont traçables au NIST (National Institute of Standards and Technology) ou au CRNC (Conseil National de Recherches Canada). Tout conductimètre utilisé afin d'analyser cet étalon a été sujet à un étalonnage périodique utilisant des thermomètres et étalons traçables au NIST ou CNRC. Tout pH mètre utilisé afin d'analyser cet étalon a été sujet à un étalonnage périodique utilisant des thermomètres et un simulateur pH/MV traçables au NIST ou au CNRC.*

10.0 PREPARATION / PRÉPARATION:

For the preparation of these solutions, 18 meghom/cm double deionized water, high-purity acids and glassware calibrated to ASTM Class A specifications are used. / *Une eau de 18 meghom/cm doublement déionisé, de l'acide de haute pureté, ainsi que de la verrerie étalonnée afin de satisfaire les spécifications Classe A de ASTM ont été utilisés pour la préparation de cet étalon.*

11.0 QUALITY SYSTEM CERTIFICATIONS / CERTIFICATIONS DE SYSTÈME QUALITÉ:

ISO 9001 Certification / Certification ISO 9001: This standard was produced in a facility which operates under a registered ISO 9001 Quality Management System. Please consult our web site for a copy of the most recent revision of our certificate of registration. / *Cet étalon a été fabriqué dans un laboratoire qui utilise un Système de Gestion de la Qualité enregistré à la norme ISO 9001. Veuillez consulter notre site web pour obtenir la version la plus récente de notre certificat d'enregistrement.*

ISO 17025 Accreditation / Accréditation ISO 17025: SCP SCIENCE (Corporate Headquarters) operates an ISO 17025 accredited laboratory. Please consult our web site for a copy of the most recent revision of our certificate and scope of accreditation. / *SCP SCIENCE (Siège social) est accréditée ISO 17025. Veuillez consulter notre site web afin d'obtenir la plus récente version de notre certificat d'accréditation ainsi que la portée de notre accréditation.*

ISO 17034 Accreditation / Accréditation ISO 17034: SCP SCIENCE (Corporate Headquarters) is an ISO 17034 accredited Reference Material Producer. Please consult our website for a copy of our most recent certificate and scope of accreditation. / *SCP SCIENCE (Siège social) est un Fabricant de Matériaux de Référence Accrédité ISO 17034. Veuillez consulter notre site web afin d'obtenir la plus récente version de notre certificat d'accréditation ainsi que la portée de notre accréditation.*

CORPORATE HEADQUARTERS
21800 Clark Graham
Baie D'Urfé (Montréal), Quebec,
H9X 4B6 Canada
Phone: +1 (800) 361-6820
Fax: +1 (800) 253-5549

USA
3rd Party Distribution Center
348 Route 11, Champlain,
N.Y. 12919-4816
Phone: +1 (800) 361-6820
Fax: +1 (800) 253-5549

FRANCE
12 Ave. de Québec, Bat. IRIS
91140, Villebon-sur-Yvette
Phone: +33 (0) 1 69 18 71 17
Fax: +33 (0) 1 60 92 05 67

GERMANY
Alte Marktoberdorfer Straße 14, 87616
Marktoberdorf
Phone: +49 (0) 8342-89560-61
Fax: +49 (0) 8342-89560-69

Energy Laboratories Inc

Standard LOG

Standard ID: ME220110 CE, LA PRIMARY
Standard Name: Ce, La Primary Type: Secondary
Date Prepared: 1/10/2022 BY: Amanda E. McDani
Date Expires: 1/6/2023
Department: ME Status: Open
Vendor: Inorganic Ventures
Lot Number: M2-CE657768/M2-
Balance ID:
Comments: Used to make standards and spiking solutions; No primary La available

Chemical / Solvent Used	BottleNo	Amt	Units	Expires
Nitric Acid 69.0- 70.0% D0521	14626	0.5	mL	12/14/2026
Milli-Q H2O	391	39.5	mL	6/1/2100

Final Volume:
50 mL

Stock Source

ME220106-CE Ce Primary Stock

Base Units

ug/mL

Amount Added

5 mL

Analytes

CAS

Conc: ug/mL

Energy Laboratories Inc

Standard LOG

Standard ID: ME220112 10 PPB STANDARD
Standard Name: 10 ppb Standard
Date Prepared: 1/12/2022
Date Expires: 11/18/2022
Department: ME
Vendor: Inorganic Ventures
Lot Number:
Balance ID:
Comments: Made Fresh Daily

Type: Secondary
BY: Cindy Rohrer
Status: Open

Chemical / Solvent Used	BottleNo	Amt	Units	Expires
Hydrochloric Acid E1421	14721	0.25	mL	1/4/2027
Nitric Acid 69.0- 70.0% D0521	14626	0.5	mL	12/14/2026
Milli-Q H2O	391	48.335	mL	6/1/2100

Final Volume:
50 mL

Stock Source
ME220112 100 PP 100 ppb Standard

Base Units
ug/mL

Amount Added
5 mL

Analytes

CAS

Conc: **mg/L**

Energy Laboratories Inc

Standard LOG

Standard ID: ME220112 1 PPB STANDARD
Standard Name: 1 ppb Standard
Date Prepared: 1/12/2022
Date Expires: 11/18/2022
Department: ME
Vendor: Inorganic Ventures
Lot Number:
Balance ID:
Comments: Made Fresh Daily

Type: Secondary
BY: Cindy Rohrer
Status: Open

Chemical / Solvent Used	BottleNo	Amt	Units	Expires
Hydrochloric Acid E1421	14721	0.25	mL	1/4/2027
Nitric Acid 69.0- 70.0% D0521	14626	0.5	mL	12/14/2026
Milli-Q H2O	391	48.335	mL	6/1/2100

Final Volume:
50 mL

Stock Source
ME220112 10 PPB 10 ppb Standard

Base Units
ug/mL

Amount Added
5 mL

Analytes

CAS

Conc: **mg/L**

Energy Laboratories Inc

Standard LOG

Standard ID: ME220112 0.5 PPB STANDARD
Standard Name: 0.5 ppb Standard
Date Prepared: 1/12/2022
Date Expires: 11/18/2022
Department: ME
Vendor: Inorganic Ventures
Lot Number:
Balance ID:
Comments: Made Fresh Daily

Type: Secondary
BY: Cindy Rohrer
Status: Open

Chemical / Solvent Used	BottleNo	Amt	Units	Expires
Hydrochloric Acid E1421	14721	0.25	mL	1/4/2027
Nitric Acid 69.0- 70.0% D0521	14626	0.5	mL	12/14/2026
Milli-Q H2O	391	48.335	mL	6/1/2100

Final Volume:
50 mL

Stock Source
ME220112 10 PPB 10 ppb Standard

Base Units
ug/mL

Amount Added
2.5 mL

Analytes

CAS

Conc: **mg/L**

Energy Laboratories Inc

Standard LOG

Standard ID: ME220112 0.1 PPB STANDARD
Standard Name: 0.1 ppb Standard
Date Prepared: 1/12/2022
Date Expires: 11/18/2022
Department: ME
Vendor: Inorganic Ventures
Lot Number:
Balance ID:
Comments: Made Fresh Daily

Type: Secondary
BY: Cindy Rohrer
Status: Open

Chemical / Solvent Used	BottleNo	Amt	Units	Expires
Hydrochloric Acid E1421	14721	0.25	mL	1/4/2027
Nitric Acid 69.0- 70.0% D0521	14626	0.5	mL	12/14/2026
Milli-Q H2O	391	48.335	mL	6/1/2100

Final Volume:
50 mL

Stock Source

ME220112 1 PPB 1 ppb Standard

Base Units

ug/mL

Amount Added

5 mL

Analytes

CAS

Conc: **mg/L**

Energy Laboratories Inc

Standard LOG

Standard ID: ME220112 0.05 PPB STANDARD
Standard Name: 0.5 ppb Standard
Date Prepared: 1/12/2022
Date Expires: 11/18/2022
Department: ME
Vendor: Inorganic Ventures
Lot Number:
Balance ID:
Comments: Made Fresh Daily

Type: Secondary
BY: Cindy Rohrer
Status: Open

Chemical / Solvent Used	BottleNo	Amt	Units	Expires
Hydrochloric Acid E1421	14721	0.25	mL	1/4/2027
Nitric Acid 69.0- 70.0% D0521	14626	0.5	mL	12/14/2026
Milli-Q H2O	391	48.335	mL	6/1/2100

Final Volume:
50 mL

Stock Source
ME220112 0.5 PP 0.5 ppb Standard

Base Units
ug/mL

Amount Added
5 mL

Analytes

CAS

Conc: **mg/L**

Energy Laboratories Inc

Standard LOG

Standard ID: ME220112 0.025 PPB STANDARD
Standard Name: 0.025 ppb Standard
Date Prepared: 1/12/2022
Date Expires: 11/18/2022
Department: ME
Vendor: Inorganic Ventures
Lot Number:
Balance ID:
Comments: Made Fresh Daily

Type: Secondary
BY: Cindy Rohrer
Status: Open

Chemical / Solvent Used	BottleNo	Amt	Units	Expires
Hydrochloric Acid E1421	14721	0.25	mL	1/4/2027
Nitric Acid 69.0- 70.0% D0521	14626	0.5	mL	12/14/2026
Milli-Q H2O	391	48.335	mL	6/1/2100

Final Volume:
50 mL

Stock Source
ME220112 0.5 PP 0.5 ppb Standard

Base Units
ug/mL

Amount Added
2.5 mL

Analytes

CAS

Conc: **mg/L**

Energy Laboratories Inc

Standard LOG

Standard ID: ME211206 ICV STANDARD
 Standard Name: ICV for ICPMS Standards
 Date Prepared: 12/6/2021
 Date Expires: 4/30/2022
 Department:
 Vendor:
 Lot Number:
 Balance ID:
 Comments: Made fresh daily

Type: Secondary
 BY: Stacy R. Hendricks
 Status: Open

Chemical / Solvent Used	BottleNo	Amt	Units	Exp
Hydrochloric Acid Instra Analyzed 000	14028	1	mL	3/29/
Nitric Acid Instra Analyzed 000028856	14572	2	mL	6/28/
Milli-Q H2O	391		mL	6/1/2

Final Volume: 100 mL

<u>Stock Source</u>	Base Units	Amount Added
ME210211 U Seco U 2' QCS	ug/mL	0.05 mL
ME211206 Th QC Th QCS Stock	ug/mL	0.05 mL
ME210901 Hg Sec Secondary Hg Stock 2 PPM	ug/mL	0.05 mL
ME211124 EL-MSI EL-MSICV-2	ug/mL	0.05 mL
ME210817 ICV-1A EL-MSICV-1A	ug/mL	0.05 mL
ME210903 Ce, La Ce, La Secondary solution	ug/mL	0.05 mL

Analvtes **CAS** Conc: **mg/L**

Energy Laboratories Inc

Spike LOG

Standard ID: ME210211 U SECOND SOURCE
Standard Name: U 2' QCS
Date Prepared: 2/11/2021
Date Expires: 4/30/2022
Department: ME
Vendor:
Lot Number:
Balance ID:
Comments:

Type: Secondary
BY: Alyssa A. Olson
Status: Open

Chemical / Solvent Used	BottleNo	Amt	Units	Expires
Nitric Acid Instra Analyzed 0000264786	13061	0.25	mL	5/12/2025
Milli-Q H2O	391	22.25	mL	6/1/2100

Final Volume:
25 mL

Stock Source

ME200624A U Stock

Base Units

ug/mL

Amount Added

2.5 mL

Analytes

CAS

Conc: ug/mL

Energy Laboratories Inc

Standard LOG

Standard ID: ME200624A
Standard Name: U Stock
Date Prepared: 6/24/2020
Date Expires: 4/30/2022
Department: ME
Vendor: SCP Science
Lot Number: S200422002
Balance ID:

Type: Primary
BY: Ron Hunt
Status: Empty/Disposed

Comments:

Chemical / Solvent Used	BottleNo	Amt	Units	Exp
PlasmaCal Standard Uranium	12767	500	mL	4/30/

Final Volume: 500 mL

Stock Source

Base Units

Amount Added

Analvtes

CAS

Conc: **ug/mL**

A Uranium

7440-61-1

1000

U

1.0 DESCRIPTION: **PlasmaCAL ICP/ICPMS Standard - Uranium 1000 µg/ml**
 Catalogue Number: 140-051-920/-921/-925
 Starting Material: Uranyl Nitrate 99.99%
 Lot Number: **S200422002**
 Matrix: 4% HNO₃ (See Section 3 for actual matrix)
 Expiration Date (End of month): **April 2022** (or 15 months after bottle is opened, whichever comes first)

2.0 CERTIFIED VALUES AND ASSOCIATED UNCERTAINTY:
 Certified Concentration: **1003 µg/ml +/- 4 µg/ml**
983 µg/g +/- 4 µg/g
 Method of analysis: Inductively Coupled Plasma Atomic Emission Spectroscopy (ICP-AES)
 Traceability: NIST Standard Reference Material 3164 Lot: **080521**

Note: The uncertainty of the certified value has been calculated from applicable uncertainty contributors (u) including uncertainty established during characterization of the material (u_{char}), the between bottle variation (u_{bb}), short-term stability (u_{sts}) and long-term stability (u_{lts}) according to the model $u_c = \sqrt{(u_{char}^2 + u_{bb}^2 + u_{sts}^2 + u_{lts}^2)}$. This combined uncertainty has been further multiplied by a coverage factor (k) of 2 to provide a 95% confidence interval.

3.0 REFERENCE VALUES:
 Density: **1.020 g/ml @ 21.7 °C**
 Actual Matrix: **4.0% (v/v) HNO₃**

ID #: 12767
 Opened: _____
 PlasmaCAL Standard Uranium
Expires: 4/30/2022
 Rec'd: 6/15/2020
 Energy Laboratories Inc 1120 So. 27th Street
 Billings MT 59107

% abundance of stable isotopes : ²³⁸U : 99.79% ; ²³⁵U : 0.21%
 Note : The uranyl nitrate comes from a depleted source of uranium.

Trace Metal Impurities as tested by ICP-MS:

Element	Conc. (ppm)	Element	Conc. (ppm)	Element	Conc. (ppm)	Element	Conc. (ppm)
Ag	<0.0010	Fe	<0.0018	Nd	<0.0010	Sn	<0.0010
Al	0.0073	Ga	<0.0010	Ni	0.0038	Sr	<0.0025
As	<0.0010	Gd	<0.0010	Os	*	Ta	<0.0010
Au	<0.0010	Ge	<0.0010	P	<0.0026	Tb	<0.0010
B	<0.0015	Hf	<0.0010	Pb	<0.0010	Te	<0.0031
Ba	<0.0010	Hg	*	Pd	<0.0010	Th	0.0020
Be	<0.0010	Ho	<0.0010	Pr	<0.0010	Ti	<0.0012
Bi	<0.0010	In	<0.0010	Pt	<0.0010	Tl	<0.0011
Ca	0.0340	Ir	<0.0010	Rb	<0.0010	Tm	<0.0010
Cd	<0.0010	K	<0.0024	Re	<0.0010	U	N/A
Ce	<0.0010	La	*	Rh	<0.0010	V	<0.0010
Co	<0.0010	Li	<0.0010	Ru	<0.0010	W	<0.0020
Cr	<0.0010	Lu	<0.0010	S	<1.0000	Y	0.0049
Cs	<0.0010	Mg	<0.0010	Sb	<0.0010	Yb	<0.0010
Cu	<0.0010	Mn	<0.0010	Sc	<0.0010	Zn	<0.0010
Dy	<0.0010	Mo	<0.0010	Se	*	Zr	<0.0010
Er	<0.0010	Na	<0.0010	Si	<1.0000		
Eu	<0.0010	Nb	<0.0010	Sm	<0.0010		

4.0 APPROVAL AND DATE OF CERTIFICATION:
 Certification Approval: Daniel Boisvert, Chemist
 Certification Date: April 28, 2020

Daniel Boisvert

5.0 INTENDED USE / UTILISATION PRÉVUE:

- ICP Standards: For the calibration of, including but not limited to: ICP-AES, ICP-MS, FAAS, GFAA, XRF and DCP. / *Étalons ICP : Pour l'étalonnage d'instruments de mesure tels que: ICP-AES, ICP-MS, FAAS, GFAA, XRF et DCP.*
 - AA Standards: For the calibration of Flame (FAAS) and Graphite Furnace (GFAA) Atomic Absorption Spectrometers. / *Étalons AA : Pour l'étalonnage de spectromètres d'absorption atomique flamme (GFAA) et four au graphite (GFAA).*
 - Matrix Modifiers: For the optimization of analytical conditions to provide better Graphite Furnace Atomic Absorption (GFAA) instrument response and improved detection limits. / *Modificateur de matrice : Pour l'optimisation des conditions analytiques afin de fournir des meilleurs réponses instrumentales et limites de détection pour SAA four au graphite.*
 - pH Standards: For the calibrating pH meters or for other wet chemistry applications. / *Étalons pH : Pour étalonnage de pH mètres et autres applications de chimie humide.*
 - Conductivity Standards: For electrolytic conductivity measurement as a calibration standard. / *Étalons de conductivité : Comme étalon pour les mesures de conductivité électrolytiques.*
 - IC Standards: for calibration of, but not limited to IC, HPLC, TLC, ISE, IR, NMR, MS, UV/VIS or other wet chemistry applications. / *Étalons IC : Pour étalonnage d'instruments tels que : IC, HPLC, TLC, ISE, IR, NMR, MS, UV/VIS et autres applications de chimie humide.*
- For any inquiries, please contact **SCP SCIENCE**. / *Pour toute question, veuillez contacter SCP SCIENCE.*

6.0 INSTRUCTIONS FOR USE / INSTRUCTIONS D'UTILISATION:

Handling and Storage / Manutention et entreposage: Keep product tightly capped when not in use. The solution should be opened for a minimum amount of time necessary to dispense the amount required. Do not pipet or use directly from container. Do not return unused portions back to container. Store under normal laboratory conditions. Avoid exposure to excessive sources of heat and humidity or direct sunlight. / *Garder les contenants bien fermés lorsque non utilisés. Le contenant devrait être ouvert seulement pour le temps requis afin de prélever la quantité nécessaire. Ne pas pipetter ou utiliser directement du contenant. Ne pas retourner les portions non-utilisées dans le contenant. Conserver dans des conditions normales de laboratoire. Éviter l'exposition à des sources de chaleur et d'humidité excessives ou à l'exposition solaire directe.*

Stability / Stabilité: This Standard is guaranteed to be stable and accurate to within the specified uncertainty of measurement up to the unopened expiry date, if sealed, or up to the opened expiry date (when indicated), whichever comes first, provided the solution is kept tightly capped and stored under the indicated storage conditions. Purchasers will be notified of any significant changes resulting in re-certification or withdrawal of the product prior to the expiration date. / *La stabilité et l'exactitude de cet étalon sont garanties d'être à l'intérieur de l'incertitude de mesure, jusqu'à la date d'expiration de la bouteille non-ouverte, si scellée, ou jusqu'à la date d'expiration de la bouteille ouverte (si indiquée), en presumant que le contenant est maintenu fermé et gardé dans les conditions d'entreposage indiquées. Les acheteurs seront avisés dans le cas où il y aura des changements significatifs nécessitant une re-certification ou un rappel du produit avant la date d'expiration.*

7.0 HAZARDOUS INFORMATION / INFORMATION SUR LES RISQUES POTENTIELS:

Please refer to the associated Safety Data Sheet (SDS) for information regarding this product (available at www.SCPSCIENCE.com). / *SVP vous référer à la Fiche Signalétique applicable pour de l'information sur ce produit (Disponible à www.SCPSCIENCE.com).*

8.0 HOMOGENEITY / HOMOGÉNÉITÉ:

This solution has been blended according to an in-house procedure and its homogeneity is guaranteed to be fit for purpose when a sample size sufficient for the intended method of analysis is used. / *Cette solution a été préparée selon une procédure maison et nous assurons que sa homogénéité est approprié à l'emploi lorsqu'un échantillon suffisant pour la méthode d'analyse prévue est utilisé.*

9.0 TRACEABILITY / TRAÇABILITÉ:

This CRM (Certified Reference Material) is traceable to the NIST SRM (Standard Reference Material) indicated in section 2 through an unbroken chain of comparisons. In addition, balances used are regularly calibrated using weights which are traceable to NIST (National Institute of Standards and Technology) or NRC (National Research Council of Canada) standards. All conductivity meters used to analyze this standard have been regularly calibrated using a NIST or NRC traceable Thermometer and standards. All pH meters used to analyze this standard have been regularly calibrated using a NIST or NRC traceable thermometer and pH/MV simulator. / *Ce matériel de référence certifié est traçable au Matériel de Référence Standardisé de NIST indiqué à la section 2 par une chaîne de comparaison ininterrompue. De plus, les balances utilisées sont étalonnées régulièrement en utilisant des poids qui sont traçables au NIST (National Institute of Standards and Technology) ou au CRNC (Conseil National de Recherches Canada). Tout conductimètre utilisé afin d'analyser cet étalon a été sujet à un étalonnage périodique utilisant des thermomètres et étalons traçables au NIST ou CNRC. Tout pH mètre utilisé afin d'analyser cet étalon a été sujet à un étalonnage périodique utilisant des thermomètres et un simulateur pH/MV traçables au NIST ou au CNRC.*

10.0 PREPARATION / PRÉPARATION:

For the preparation of these solutions, 18 megohm/cm double deionized water, high-purity acids and glassware calibrated to ASTM Class A specifications are used. / *Une eau de 18 megohm/cm doublement déionisée, de l'acide de haute pureté, ainsi que de la verrerie étalonnée afin de satisfaire les spécifications Classe A de ASTM ont été utilisés pour la préparation de cet étalon.*

11.0 QUALITY SYSTEM CERTIFICATIONS / CERTIFICATIONS DE SYSTÈME QUALITÉ:

ISO 9001 Certification / Certification ISO 9001: This standard was produced in a facility which operates under a registered ISO 9001 Quality Management System. Please consult our web site for a copy of the most recent revision of our certificate of registration. / *Cet étalon a été fabriqué dans un laboratoire qui utilise un Système de Gestion de la Qualité enregistré à la norme ISO 9001. Veuillez consulter notre site web pour obtenir la version la plus récente de notre certificat d'enregistrement.*

ISO 17025 Accreditation / Accréditation ISO 17025: SCP SCIENCE (Corporate Headquarters) operates an ISO 17025 accredited laboratory. Please consult our web site for a copy of the most recent revision of our certificate and scope of accreditation. / *SCP SCIENCE (Siège social) est accréditée ISO 17025. Veuillez consulter notre site web afin d'obtenir la plus récente version de notre certificat d'accréditation ainsi que la portée de notre accréditation.*

ISO 17034 Accreditation / Accréditation ISO 17034 : SCP SCIENCE (Corporate Headquarters) is an ISO 17034 accredited Reference Material Producer. Please consult our website for a copy of our most recent certificate and scope of accreditation. / *SCP SCIENCE (Siège social) est un Fabricant de Matériaux de Référence Accrédité ISO 17034. Veuillez consulter notre site web afin d'obtenir la plus récente version de notre certificat d'accréditation ainsi que la portée de notre accréditation.*

CORPORATE HEADQUARTERS
21800 Clark Graham
Baie D'Urfé (Montréal), Quebec,
H9X 4B6 Canada
Phone: +1 (800) 361-6820
Fax: +1 (800) 253-5549

USA
3rd Party Distribution Center
348 Route 11, Champlain,
N.Y. 12919-4816
Phone: +1 (800) 361-6820
Fax: +1 (800) 253-5549

FRANCE
12 Ave. de Québec, Bat. IRIS
SILIC 642, 91965
Villebon sur Yvette, France
Phone: +33 (0) 1 69 16 71 17
Fax: +33 (0) 1 60 92 05 67

GERMANY
Alte Marktoberdorfer Straße 14, 87616
Marktobendorf
Phone: +49 (0) 8342-89560-61
Fax: +49 (0) 8342-89560-69

Energy Laboratories Inc

Spike LOG

Standard ID: ME211206 TH QCS STOCK
Standard Name: Th QCS Stock
Date Prepared: 12/6/2021
Date Expires: 10/25/2022
Department: ME
Vendor:
Lot Number:
Balance ID:
Comments:

Type: Secondary
BY: Stacy R. Hendricks
Status: Open

Chemical / Solvent Used	BottleNo	Amt	Units	Exp
Nitric Acid Instra Analyzed 000028856	14572	0.25	mL	6/28/
Milli-Q H2O	391	22.25	mL	6/1/2

Final Volume: 25 mL

Stock Source
ME 211025 Th Sec Th Secondary Stock

Base Units
ug/mL

Amount Added
2.5 mL

Analvtes

CAS

Conc: **ug/mL**

Energy Laboratories Inc

Standard LOG

Standard ID: ME 211025 TH SECONDARY STOCK
Standard Name: Th Secondary Stock
Date Prepared: 10/25/2021
Date Expires: 10/25/2022
Department: ME
Vendor: Inorganic Ventures
Lot Number: S2-TH706436
Balance ID:
Comments: Opened 10/25/2021; Expires 10/25/2022

Type: Primary
BY: Stacy R. Hendricks
Status: Open

Chemical / Solvent Used	BottleNo	Amt	Units	Expires
Thorium Single Analyte Custom Grade Sol	14318	125	mL	10/25/2022

Final Volume:
500 mL

Stock Source

Base Units

Amount Added

Analytes

CAS

Conc: **ug/mL**

300 Technology Drive
 Christiansburg, VA 24073 USA
 inorganicventures.com

 P: 800-669-6799/540-585-3030
 F: 540-585-3012
 info@inorganicventures.com

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).



2.0 PRODUCT DESCRIPTION

Product Code: Single Analyte Custom Grade Solution
 Catalog Number: CGTH1
 Lot Number: S2-TH706436
 Matrix: 5% (v/v) HNO₃
 Value / Analyte(s): 1 000 µg/mL ea:
 Thorium
 Starting Material: TH(NO₃)₄·4H₂O
 Starting Material Lot#: 2250
 Starting Material Purity: 99.9905%

ID #: 14318
 Opened:
 Thorium Single Analyte Custom Grade Solution
Expires: 7/4/2025
 Rec'd: 9/24/2021
 Eneray Laboratories Inc 1120 So. 27th Street
 Billings MT 59107

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 1001 ± 4 µg/mL
Density: 1.026 g/mL (measured at 20 ± 4 °C)

Assay Information:

Assay Method #1 **1001 ± 3 µg/mL**
 EDTA NIST SRM 928 Lot Number: 928

Assay Method #2 **1001 ± 6 µg/mL**
 Calculated NIST SRM Lot Number: See Sec. 4.2

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$$X_{CRM/RM} = \sum(w_i)(X_i)$$

X_i = mean of Assay Method i with standard uncertainty $u_{char i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$$w_i = (1/u_{char i}^2) / (\sum(1/(u_{char i}^2)))$$

$$CRM/RM \text{ Expanded Uncertainty } (\pm) = U_{CRM/RM} = k (u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{1/2}$$

k = coverage factor = 2

$u_{char} = [\sum(w_i)^2 (u_{char i}^2)]^{1/2}$ where $u_{char i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$$X_{CRM/RM} = (X_a) (u_{char a})$$

X_a = mean of Assay Method A with

$u_{char a}$ = the standard uncertainty of characterization Method A

$$CRM/RM \text{ Expanded Uncertainty } (\pm) = U_{CRM/RM} = k (u^2_{char a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{1/2}$$

k = coverage factor = 2

$u_{char a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES ($\mu\text{g/mL}$)

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3 μm .

M Ag <	0.000448	M Eu <	0.000224	O Na	0.064077	M Se <	0.005827	M Zn	0.003183
O Al	0.010962	M Fe	0.012392	M Nb <	0.003138	i Si <		M Zr <	0.010310
M As <	0.038776	M Ga <	0.004931	M Nd	0.004697	M Sm	0.000871		
M Au <	0.000224	M Gd	0.000300	M Ni <	0.006724	M Sn <	0.028242		
M B <	0.021293	M Ge <	0.008965	M Os <	0.000224	M Sr	0.002582		
M Ba	0.001317	M Hf <	0.000224	i P <		M Ta <	0.001344		
M Be <	0.000224	M Hg <	0.000448	M Pb	0.003287	M Tb <	0.001793		
M Bi <	0.001793	M Ho <	0.001344	M Pd <	0.000448	M Te <	0.010086		
O Ca	0.051969	M In	0.000134	M Pr	0.001202	s Th <			
M Cd <	0.001344	M Ir <	0.000224	M Pt <	0.000224	M Ti <	0.004258		
M Ce	0.015420	O K	0.028928	M Rb <	0.005155	M Tl <	0.000224		
M Co <	0.001344	M La	0.003577	M Re <	0.000224	M Tm <	0.000224		
M Cr <	0.015465	M Li <	0.000448	M Rh <	0.000224	M U	0.006564		
M Cs <	0.013896	M Lu <	0.000224	M Ru <	0.000224	M V <	0.001793		
M Cu	0.001472	O Mg	0.027914	i S <		M W <	0.000224		
M Dy	0.000197	M Mn	0.001814	M Sb <	0.004931	M Y	0.000860		
M Er <	0.002241	M Mo <	0.000896	M Sc <	0.000672	M Yb <	0.000224		

M - Checked by ICP-MS O - Checked by ICP-OES i - Spectral Interference
n - Not Checked For s - Solution Standard Element

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit www.inorganicventures.com/TCT

Atomic Weight; Valence; Coordination Number; Chemical Form in Solution - 232.04 +4 8 Th(OH) 3+ and Th(OH)22+

Chemical Compatibility -Soluble in HCl, and HNO3. Avoid H3PO4, H2SO4 and HF although solubilities may not be a problem depending upon pH and matrix (For example: ThF4 is soluble in acids). Avoid neutral to basic media. Th4+ is stable with most metals and inorganic anions forming an insoluble carbonate, oxide, fluoride, oxalate, sulfate and phosphate in neutral to slightly acidic media.

Stability - 2-100 ppb levels stable for months in 1% HNO3 / LDPE container. 1-10,000 ppm solutions chemically stable for years in 2-5% HNO3 / LDPE container.

Th Containing Samples (Preparation and Solution) -Metal (Soluble in Aqua Regia); Oxide (The heated oxide is not soluble in acids except hot conc. H2SO4); Ores (Na2O2 fusion at 480 ± 20EC for 7 minutes, cool and treat sintered mass with 50 mL cold water and stand until disintegrated. The mass is transferred to a beaker and acidified with HCl with 25 mL excess HCl added. Any residue is collected on a Whatman No. 42 filter, dried and ignited to 1000 EC in Pt0 crucible and the ash treated with H2SO4 / HF and fumed. If residue remains, then treat it by peroxide fusion as above.)

Atomic Spectroscopic Information (ICP-OES D.L.s are given as radial/axial view):

Technique/Line	Estimated D.L.	Order	Interferences (underlined indicates severe)
ICP-MS 232 amu	1 ppt	N/A	
ICP-OES 274.716 nm	0.08 / 0.008 µg/mL	1	Ti, Ta, Fe, V
ICP-OES 283.231 nm	0.07 / 0.007 µg/mL	1	U, Mo, Ti, Fe, Cr
ICP-OES 283.730 nm	0.07 / 0.007 µg/mL	1	U, Zr

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va. 24073, USA; Telephone: 800.669.6799; 540.585.3030, Fax: 540.585.3012; inorganicventures.com; info@inorganicventures.com

11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

July 04, 2021

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- July 04, 2025

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Michael Booth
Director, Quality Control



Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director



Energy Laboratories Inc

Spike LOG

Standard ID: ME210901 HG SECOND SOURCE
Standard Name: Secondary Hg Stock 2 PPM
Date Prepared: 9/1/2021
Date Expires: 7/26/2022
Department: ME
Vendor: Inorganic Ventures
Lot Number:
Balance ID:
Comments:

Type: Secondary
BY: Alyssa A. espinoza
Status: Open

Chemical / Solvent Used	BottleNo	Amt	Units	Exp
Nitric Acid, 69.0-70.0%,0000282671	14178	0.1	mL	4/11/
Hydrochloric Acid Instra Analyzed 000	14028	0.05	mL	3/29/

Final Volume: 50 mL

Stock Source
ME210726 Hg Secondary Source

Base Units
ug/mL

Amount Added
0.1 mL

Analvtes

CAS

Conc: **ug/mL**

Energy Laboratories Inc

Spike LOG

Standard ID: ME210726
Standard Name: Hg Secondary Source
Date Prepared: 7/26/2021
Date Expires: 7/26/2022
Department: _____
Vendor: _____
Lot Number: _____
Balance ID: _____
Comments: _____

Type: _____
BY: Jordan A. Gjerde
Status: New

Chemical / Solvent Used	BottleNo	Amt	Units	Exp
Mercury Single Analyte Custom Grade	13979	120	mL	7/26/

Final Volume: mL

Stock Source

Base Units

Amount Added

Analvtes

CAS

Conc: ug/mL

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).



2.0 PRODUCT DESCRIPTION

Product Code: Single Analyte Custom Grade Solution
 Catalog Number: CGHG1
 Lot Number: R2-HG696409
 Matrix: 5% (v/v) HNO3
 Value / Analyte(s): 1 000 µg/mL ea:
 Mercury
 Starting Material: Hg metal
 Starting Material Lot#: 1959
 Starting Material Purity: 99.9994%

ID #: 13979
 Opened:
 Mercury Single Analyte Custom Grade Solution
Expires: 9/15/2024
 Rec'd: 6/23/2021
 Energy Laboratories Inc 1120 So. 27th Street
 Billings MT 59107

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 1002 ± 3 µg/mL
Density: 1.026 g/mL (measured at 20 ± 4 °C)

Assay Information:

- Assay Method #1** **1004 ± 8 µg/mL**
 ICP Assay NIST SRM 3133 Lot Number: 160921
- Assay Method #2** **1003 ± 3 µg/mL**
 EDTA NIST SRM 928 Lot Number: 928
- Assay Method #3** **1001 ± 3 µg/mL**
 Calculated NIST SRM Lot Number: See Sec. 4.2

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$$X_{CRM/RM} = \sum(w_i) (X_i)$$

X_i = mean of Assay Method i with standard uncertainty $u_{char i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$$w_i = (1/u_{char i}^2) / (\sum(1/u_{char i}^2))$$

$$CRM/RM \text{ Expanded Uncertainty } (\pm) = U_{CRM/RM} = k (u_{char}^2 + u_{bb}^2 + u_{Its}^2 + u_{ts}^2)^{1/2}$$

k = coverage factor = 2

$u_{char} = [\sum((w_i)^2 (u_{char i})^2)]^{1/2}$ where $u_{char i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{Its} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$$X_{CRM/RM} = (X_a) (u_{char a})$$

X_a = mean of Assay Method A with

$u_{char a}$ = the standard uncertainty of characterization Method A

$$CRM/RM \text{ Expanded Uncertainty } (\pm) = U_{CRM/RM} = k (u_{char a}^2 + u_{bb}^2 + u_{Its}^2 + u_{ts}^2)^{1/2}$$

k = coverage factor = 2

$u_{char a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{Its} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

O	Ag	0.001159	M	Eu	<	0.000201	O	Na	0.000435	M	Se	<	0.015915	O	Zn	<	0.001510
O	Al	0.000090	O	Fe	0.000113	M	Nb	<	0.000201	O	Si	0.000525	M	Zr	<	0.000201	
M	As	<	0.000402	M	Ga	<	0.000201	M	Nd	<	0.000201	M	Sm	<	0.000201		
M	Au	<	0.003631	M	Gd	<	0.000201	M	Ni	<	0.000402	M	Sn	<	0.001007		
M	B	<	0.001208	M	Ge	<	0.000201	M	Os	<	0.000605	M	Sr	<	0.000201		
M	Ba	<	0.000201	M	Hf	<	0.000201	O	P	<	0.032370	M	Ta	<	0.000201		
M	Be	<	0.000201	s	Hg	<		M	Pb	<	0.000201	M	Tb	<	0.000201		
M	Bi	<	0.000201	M	Ho	<	0.000201	M	Pd	<	0.000403	M	Te	<	0.002216		
O	Ca	0.000746	M	In	<	0.000201	M	Pr	<	0.000201	M	Th	<	0.000201			
M	Cd	<	0.000201	M	Ir	<	0.000201	M	Pt	<	0.000402	M	Ti	<	0.000402		
M	Ce	<	0.000201	O	K	0.002007	M	Rb	<	0.000201	O	Tl	<	0.016508			
M	Co	<	0.000201	M	La	<	0.000201	M	Re	<	0.000201	M	Tm	<	0.000201		
O	Cr	<	0.003021	O	Li	<	0.000107	M	Rh	<	0.000201	M	U	<	0.008058		
M	Cs	<	0.001208	M	Lu	<	0.000201	M	Ru	<	0.000201	M	V	<	0.000201		
M	Cu	<	0.000402	O	Mg	0.000096	O	S	<	0.053950	M	W	<	0.000604			
M	Dy	<	0.000201	M	Mn	<	0.000604	M	Sb	<	0.001208	M	Y	<	0.000201		
M	Er	<	0.000201	M	Mo	0.000971	M	Sc	<	0.000201	M	Yb	<	0.000201			

M - Checked by ICP-MS O - Checked by ICP-OES i - Spectral Interference
n - Not Checked For s - Solution Standard Element

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit www.inorganicventures.com/TCT

Atomic Weight; Valence; Coordination Number; Chemical Form in Solution - 200.59 +2 4 Hg(OH)(aq) 1+
Chemical Compatibility - Stable in HNO₃. Avoid basic media forming insoluble carbonate. The sulfide, basic carbonate, oxalate, phosphate, arsenite, arsenate and iodide are insoluble in water.

Stability - 2-100 ppb levels not stable in 1% HNO₃ / LDPE container, stable in 10% HNO₃ packaged in borosilicate glass. 1-100 ppm levels stable in 7% HNO₃ packaged in borosilicate glass. 1000-10,000 ppm solutions are chemically stable for years in 5-10% HNO₃ / LDPE container.

Hg Containing Samples (Preparation and Solution) - Metal (soluble in HNO₃); Oxide (Soluble in HNO₃); Ores and Organic based (The literature has more references to the preparation of Hg containing samples than any other element. Please consult the literature for your specific sample type, since such preparations are prone to error. Or e-mail our technical staff and we will contact you to discuss your particular sample preparation questions in further detail.).

Atomic Spectroscopic Information (ICP-OES D.L.s are given as radial/axial view):

Technique/Line	Estimated D.L.	Order	Interferences (underlined indicates severe)
ICP-MS 202 amu	9 ppt	n/a	186W16O
ICP-OES 184.950 nm	0.03 / 0.005 µg/mL	1	
ICP-OES 194.227 nm	0.03 / 0.005 µg/mL	1	V
ICP-OES 253.652 nm	0.1 / 0.03 µg/mL	1	Ta, Co, Th, Rh, Fe, U

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va. 24073, USA; Telephone: 800.669.6799; 540.585.3030, Fax: 540.585.3012; inorganicventures.com; info@inorganicventures.com

11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

September 15, 2020

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **September 15, 2024**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Michael Booth
Director, Quality Control



Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director



Energy Laboratories Inc

Standard LOG

Standard ID: ME211124 EL-MSICV-2
Standard Name: EL-MSICV-2
Date Prepared: 11/24/2021
Date Expires: 11/24/2022
Department: ME
Vendor: Inorganic Ventures
Lot Number:
Balance ID:
Comments:

Type: Primary
BY: Amanda E. McDani
Status: Open

Chemical / Solvent Used	BottleNo	Amt	Units	Exp
Multi Analyte Custom Grade Solution	14023	500	mL	11/24

Final Volume: mL

Stock Source

Base Units

Amount Added

Analvtes

CAS

Conc: **ug/mL**

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).


2.0 PRODUCT DESCRIPTION

Product Code: Multi Analyte Custom Grade Solution
 Catalog Number: EL-MSICV-2
 Lot Number: R2-MEB696849
 Matrix: 3% (v/v) HNO₃
 tr. HF
 Value / Analyte(s):
 1 000 µg/mL ea:
 Silicon,
 100 µg/mL ea:
 Tin, Titanium,
 Molybdenum, Antimony

Second Source: Whenever possible, this solution was manufactured from a second set of concentrates in our manufacturing facility.

3.0 CERTIFIED VALUES AND UNCERTAINTIES

ANALYTE	CERTIFIED VALUE	ANALYTE	CERTIFIED VALUE
Antimony, Sb	100.0 ± 0.6 µg/mL	Molybdenum, Mo	100.0 ± 0.5 µg/mL
Silicon, Si	1 000 ± 7 µg/mL	Tin, Sn	99.9 ± 0.4 µg/mL
Titanium, Ti	99.9 ± 0.6 µg/mL		

Density: 1.019 g/mL (measured at 20 ± 4 °C)

Assay Information:

ANALYTE	METHOD	NIST SRM#	SRM LOT#
Mo	ICP Assay	3134	130418
Sb	ICP Assay	3102a	140911
Si	ICP Assay	3150	130912
Sn	ICP Assay	3161a	070330
Sn	Calculated		See Sec. 4.2
Ti	ICP Assay	3162a	130925

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$$X_{CRM/RM} = \sum(w_i)(X_i)$$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$
 w_i = the weighting factors for each method calculated using the inverse square of the variance:
 $w_i = (1/u_{char\ i})^2 / (\sum(1/(u_{char\ i})^2))$

CRM/RM Expanded Uncertainty (\pm) = $U_{CRM/RM} = k (u_{char}^2 + u_{bb}^2 + u_{lts}^2 + u_{ts}^2)^{1/2}$
 k = coverage factor = 2
 $u_{char} = [\sum((w_i)^2 (u_{char\ i})^2)]^{1/2}$ where $u_{char\ i}$ are the errors from each characterization method
 u_{bb} = bottle to bottle homogeneity standard uncertainty
 u_{lts} = long term stability standard uncertainty (storage)
 u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$$X_{CRM/RM} = (X_a) / (u_{char\ a})$$

X_a = mean of Assay Method A with
 $u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (\pm) = $U_{CRM/RM} = k (u_{char\ a}^2 + u_{bb}^2 + u_{lts}^2 + u_{ts}^2)^{1/2}$
 k = coverage factor = 2
 $u_{char\ a}$ = the errors from characterization
 u_{bb} = bottle to bottle homogeneity standard uncertainty
 u_{lts} = long term stability standard uncertainty (storage)
 u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES ($\mu\text{g/mL}$)

N/A

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.
- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.
- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

HF Note: This standard should not be prepared or stored in glass.

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va, 24073, USA; Telephone: 800.669.6799; 540.585.3030, Fax: 540.585.3012; inorganicventures.com; info@inorganicventures.com

11.0 CERTIFICATION, EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

September 14, 2020

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **September 14, 2024**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Michael Booth
Director, Quality Control



Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director



Energy Laboratories Inc

Standard LOG

Standard ID: ME210817 ICV-1A
Standard Name: EL-MSICV-1A
Date Prepared: 8/17/2021
Date Expires: 8/17/2022
Department: ME
Vendor: Inorganic Ventures
Lot Number: R2-MEB688457
Balance ID:
Comments: Opened 8/17/2021; Expires 8/17/2022

Type: Primary
BY: Alyssa A. espinoza
Status: Open

Chemical / Solvent Used	BottleNo	Amt	Units	Exp
Multi Analyte Custom Grade Solution	13475	500	mL	8/17/

Final Volume: 500 mL

Stock Source

Base Units

Amount Added

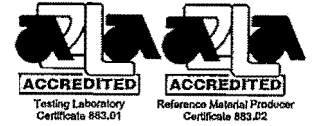
Analvtes

CAS

Conc: **ug/mL**

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).


2.0 PRODUCT DESCRIPTION

Product Code: Multi Analyte Custom Grade Solution

Catalog Number: EL-MSICV-1A

Lot Number: R2-MEB688457

Matrix: 5% (v/v) HNO₃

Value / Analyte(s):

5 000 µg/mL ea:	Calcium,	Potassium,	Magnesium,
	Sodium,		
1 000 µg/mL ea:	Phosphorus,		
500 µg/mL ea:	Manganese,	Iron,	Aluminum,
100 µg/mL ea:	Arsenic,	Boron,	Barium,
	Cobalt,	Chromium,	Copper,
	Lithium,	Nickel,	Lead,
	Selenium,	Strontium,	Thallium,
	Vanadium,	Zinc,	
50 µg/mL ea:	Silver,	Cadmium,	Beryllium

ID #: 13475

Opened: _____

Multi Analyte Custom Grade Solution

Expires: 1/10/2024

Rec'd: 1/15/2021

 Energy Laboratories Inc 1120 So. 27th Street
 Billings MT 59107

Second Source: Whenever possible, this solution was manufactured from a second set of concentrates in our manufacturing facility.

3.0 CERTIFIED VALUES AND UNCERTAINTIES

ANALYTE	CERTIFIED VALUE	ANALYTE	CERTIFIED VALUE
Aluminum, Al	500.3 ± 1.8 µg/mL	Arsenic, As	100.0 ± 0.8 µg/mL
Barium, Ba	99.9 ± 0.4 µg/mL	Beryllium, Be	49.96 ± 0.33 µg/mL
Boron, B	100.0 ± 0.6 µg/mL	Cadmium, Cd	50.10 ± 0.22 µg/mL
Calcium, Ca	5 001 ± 20 µg/mL	Chromium, Cr	100.0 ± 0.6 µg/mL
Cobalt, Co	100.0 ± 0.5 µg/mL	Copper, Cu	100.1 ± 0.4 µg/mL
Iron, Fe	499.7 ± 2.1 µg/mL	Lead, Pb	100.1 ± 0.4 µg/mL
Lithium, Li	100.0 ± 0.4 µg/mL	Magnesium, Mg	5 000 ± 21 µg/mL
Manganese, Mn	499.8 ± 1.9 µg/mL	Nickel, Ni	100.1 ± 0.4 µg/mL
Phosphorus, P	1 000 ± 5 µg/mL	Potassium, K	5 000 ± 18 µg/mL
Selenium, Se	100.1 ± 0.8 µg/mL	Silver, Ag	50.02 ± 0.22 µg/mL
Sodium, Na	5 000 ± 18 µg/mL	Strontium, Sr	100.1 ± 0.4 µg/mL
Thallium, Tl	100.0 ± 0.7 µg/mL	Vanadium, V	99.9 ± 0.5 µg/mL
Zinc, Zn	100.0 ± 0.4 µg/mL		

Density: 1.098 g/mL (measured at 20 ± 4 °C)

Assay Information:

1.098 g/mL
measured at 20 ± 4 °C

ANALYTE	METHOD	NIST SRM#	SRM LOT#
Ag	ICP Assay	3151	160729
Ag	Volhard	999c	999c
Al	ICP Assay	3101a	140903
Al	EDTA	928	928
As	ICP Assay	3103a	100818
B	ICP Assay	3107	110830
Ba	ICP Assay	3104a	140909
Ba	Gravimetric		See Sec. 4.2
Be	ICP Assay	3105a	090514
Ca	ICP Assay	3109a	130213
Ca	EDTA	928	928
Cd	ICP Assay	3108	130116
Cd	EDTA	928	928
Co	EDTA	928	928
Co	ICP Assay	traceable to 3113	M2-CO661665
Cr	ICP Assay	3112a	170630
Cu	ICP Assay	3114	121207
Cu	EDTA	928	928
Fe	ICP Assay	3126a	140812
Fe	EDTA	928	928
K	ICP Assay	3141a	140813
K	Gravimetric		See Sec. 4.2
Li	ICP Assay	3129a	100714
Li	Gravimetric		See Sec. 4.2
Mg	ICP Assay	3131a	140110
Mg	EDTA	928	928
Mn	ICP Assay	3132	050429
Mn	EDTA	928	928
Na	ICP Assay	3152a	120715
Na	Gravimetric		See Sec. 4.2
Ni	ICP Assay	3136	120619
Ni	EDTA	928	928
P	ICP Assay	3139a	060717
P	Acidimetric	84L	84L
Pb	ICP Assay	3128	101026
Pb	EDTA	928	928
Se	ICP Assay	3149	100901
Sr	EDTA	928	928
Sr	ICP Assay	3153a	990906
Tl	ICP Assay	3158	993012
V	ICP Assay	3165	160906
V	EDTA	928	928
Zn	ICP Assay	3168a	120629
Zn	EDTA	928	928

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of $k = 2$.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{\text{CRM/RM}}$, where two or more methods of characterization are used is the weighted mean of the results:

$$X_{\text{CRM/RM}} = \sum(w_i) (X_i)$$

X_i = mean of Assay Method i with standard uncertainty $u_{\text{char } i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$$w_i = (1/u_{\text{char } i}^2) / (\sum(1/(u_{\text{char } i}^2)))$$

$$\text{CRM/RM Expanded Uncertainty } (\pm) = U_{\text{CRM/RM}} = k (u_{\text{char}}^2 + u_{\text{bb}}^2 + u_{\text{its}}^2 + u_{\text{ts}}^2)^{1/2}$$

k = coverage factor = 2

$u_{\text{char}} = (\sum(w_i)^2 (u_{\text{char } i}^2))^{1/2}$ where $u_{\text{char } i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{its} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{\text{CRM/RM}}$, where one method of characterization is used is the mean of individual results:

$$X_{\text{CRM/RM}} = (\sum X_n) / (u_{\text{char } a})$$

X_n = mean of Assay Method A with

$u_{\text{char } a}$ = the standard uncertainty of characterization Method A

$$\text{CRM/RM Expanded Uncertainty } (\pm) = U_{\text{CRM/RM}} = k (u_{\text{char } a}^2 + u_{\text{bb}}^2 + u_{\text{its}}^2 + u_{\text{ts}}^2)^{1/2}$$

k = coverage factor = 2

$u_{\text{char } a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{its} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES ($\mu\text{g/mL}$)

N/A

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed outer bag.

- While stored in the sealed outer bag, transpiration of this CRM/RM is negligible. After opening the sealed outer bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed outer bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va, 24073, USA; Telephone: 800.669.6799; 540.585.3030, Fax: 540.585.3012; Inorganicventures.com; Info@inorganicventures.com

11.0 CERTIFICATION, EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

January 10, 2020

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **January 10, 2024**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed outer Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Michael Booth
Manager, Quality Control



Certifying Officer:

Paul Gaines
CEO, Senior Technical Director



Energy Laboratories Inc

Standard LOG

Standard ID: ME210903 CE, LA SECONDARY
Standard Name: Ce, La Secondary solution
Date Prepared: 9/3/2021
Date Expires: 5/25/2022
Department: ME
Vendor:
Lot Number:
Balance ID:
Comments: Second Source Stock Solution

Type: Secondary
BY: Parker A. Pearsall
Status: Open

Chemical / Solvent Used	BottleNo	Amt	Units	Exp
Nitric Acid Instra Analyzed 000020579	10902	0.5	mL	7/1/2
Milli-Q H2O	391	39.5	mL	6/1/2

Final Volume: 50 mL

Stock Source

ME210903 La Sec La Secondary Stock
ME210525 Ce 2nd Ce Secondary Stock

Base Units

ug/mL
ug/mL

Amount Added

5 mL
5 mL

Analvtes

CAS

Conc: ug/mL

Energy Laboratories Inc

Standard LOG

Standard ID: ME210903 LA SECOND SOURCE
Standard Name: La Secondary Stock
Date Prepared: 9/3/2021
Date Expires: 9/3/2022
Department: ME
Vendor: SCP Science
Lot Number: S201029004
Balance ID:
Comments: Opened 9/3/2021; Expires 9/3/2022

Type: Primary
BY: Alyssa A. espinoza
Status: Open

Chemical / Solvent Used	BottleNo	Amt	Units	Expires
Lanthanum PlasmaCal Standard	14019	125	mL	9/3/2022

Final Volume:
mL

Stock Source

Base Units

Amount Added

Analytes

CAS

Conc: **ug/mL**

La

1.0 DESCRIPTION:

PlasmaCAL ICP/ICPMS Standard - Lanthanum 1000 µg/ml
 Catalogue Number: 140-051-570/-571/-575
 Starting Material: Lanthanum(III) Oxide 99.99+%
 Lot Number: **S201029004**
 Matrix: 4% HNO₃ (See Section 3 for actual matrix)
 Expiration Date (End of month): **November 2022** (or 15 months after bottle is opened, whichever comes first)

2.0 CERTIFIED VALUES AND ASSOCIATED UNCERTAINTY:

Certified Concentration: **1005 µg/ml +/- 4 µg/ml**
985 µg/g +/- 4 µg/g
 Method of analysis: Inductively Coupled Plasma Atomic Emission Spectroscopy (ICP-AES)
 Traceability: NIST Standard Reference Material 3127a Lot: **151030**

Note: The uncertainty of the certified value has been calculated from applicable uncertainty contributors (u_i) including uncertainty established during characterization of the material (u_{char}), the between bottle variation (u_{bb}), short-term stability (u_{sts}) and long-term stability (u_{lts}) according to the model $u_c = \sqrt{(u_{char}^2 + u_{bb}^2 + u_{sts}^2 + u_{lts}^2)}$. This combined uncertainty has been further multiplied by a coverage factor (k) of 2 to provide a 95% confidence interval.

ID #: 14019

Opened: _____
 Lanthanum PlasmaCal Standard
Expires: 11/30/2022
 Rec'd: 7/6/2021
 Energv Laboratories Inc 1120 So. 27th Street
 Billings MT 59107

3.0 REFERENCE VALUES:

Density: **1.020 g/ml @ 23.4 °C**
 Actual Matrix: **4.0% (v/v) HNO₃**

Trace Metal Impurities as tested by ICP-AES:

Element	Conc. (ppm)	Element	Conc. (ppm)	Element	Conc. (ppm)	Element	Conc. (ppm)
Ag	<0.0049	Fe	<0.0102	Nd	<0.1595	Sn	<0.0307
Al	<0.0280	Ga	<0.0260	Ni	<0.0139	Sr	<0.0004
As	<0.0525	Gd	<0.0685	Os	*	Ta	<0.0635
Au	<0.0085	Ge	<0.0548	P	<0.0104	Tb	<0.0146
B	<0.2535	Hf	<0.0339	Pb	<0.2460	Te	<0.4025
Ba	<0.0025	Hg	*	Pd	<0.1410	Th	<0.0471
Be	<0.0022	Ho	<0.0065	Pr	<0.0274	Ti	<0.0013
Bi	<0.0780	In	<0.0105	Pt	<0.0533	Tl	<0.5600
Ca	0.0164	Ir	<0.0243	Rb	*	Tm	<0.0105
Cd	<0.0048	K	<0.0128	Re	<0.0076	U	<0.2490
Ce	<0.0393	La	N/A	Rh	<0.0163	V	<0.0049
Co	<0.0224	Li	<0.0006	Ru	<0.0304	W	<0.0443
Cr	<0.0063	Lu	<0.0021	S	<0.0515	Y	<0.0033
Cs	*	Mg	<0.0045	Sb	<0.0197	Yb	<0.0057
Cu	<0.0040	Mn	<0.0018	Sc	<0.0055	Zn	<0.0045
Dy	<0.0043	Mo	<0.0229	Se	<0.0249	Zr	<0.0061
Er	<0.0070	Na	<0.0038	Si	<0.0455		
Eu	<0.0086	Nb	<0.0112	Sm	<0.1105		

*: Not tested

4.0 APPROVAL AND DATE OF CERTIFICATION:

Certification Approval: Daniel Boisvert, Chemist
 Certification Date: November 04, 2020

Daniel Boisvert

5.0 INTENDED USE / UTILISATION PRÉVUE:

- ICP Standards: For the calibration of, including but not limited to: ICP-AES, ICP-MS, FAAS, GFAA, XRF and DCP. / *Étalons ICP : Pour l'étalonnage d'instruments de mesure tels que: ICP-AES, ICP-MS, FAAS, GFAA, XRF et DCP.*
 - AA Standards: For the calibration of Flame (FAAS) and Graphite Furnace (GFAA) Atomic Absorption Spectrometers. / *Étalons AA : Pour l'étalonnage de spectromètres d'absorption atomique flamme (FAAS) et four au graphite (GFAA).*
 - Matrix Modifiers: For the optimization of analytical conditions to provide better Graphite Furnace Atomic Absorption (GFAA) instrument response and improved detection limits. / *Modificateur de matrice : Pour l'optimisation des conditions analytiques afin de fournir des meilleures réponses instrumentales et limites de détection pour SAA four au graphite.*
 - pH Standards: For the calibrating pH meters or for other wet chemistry applications. / *Étalons pH : Pour étalonnage de pH mètres et autres applications de chimie humide.*
 - Conductivity Standards: For electrolytic conductivity measurement as a calibration standard. / *Étalons de conductivité : Comme étalon pour les mesures de conductivité électrolytiques.*
 - IC Standards: for calibration of, but not limited to IC, HPLC, TLC, ISE, IR, NMR, MS, UV/VIS or other wet chemistry applications. / *Étalons IC : Pour étalonnage d'instruments tels que : IC, HPLC, TLC, ISE, IR, NMR, MS, UV/VIS et autres applications de chimie humide.*
- For any inquiries, please contact **SCP SCIENCE**. / *Pour toute question, veuillez contacter SCP SCIENCE.*

6.0 INSTRUCTIONS FOR USE / INSTRUCTIONS D'UTILISATION:

Handling and Storage / Manutention et entreposage: Keep product tightly capped when not in use. The solution should be opened for a minimum amount of time necessary to dispense the amount required. Do not pipet or use directly from container. Do not return unused portions back to container. Store under normal laboratory conditions. Avoid exposure to excessive sources of heat and humidity or direct sunlight. / *Garder les contenants bien fermés lorsque non utilisés. Le contenant devrait être ouvert seulement pour le temps requis afin de prélever la quantité nécessaire. Ne pas pipetter ou utiliser directement du contenant. Ne pas retourner les portions non-utilisées dans le contenant. Conserver dans des conditions normales de laboratoire. Éviter l'exposition à des sources de chaleur et d'humidité excessives ou à l'exposition solaire directe.*

Stability / Stabilité: This Standard is guaranteed to be stable and accurate to within the specified uncertainty of measurement up to the unopened expiry date, if sealed, or up to the opened expiry date (when indicated), whichever comes first, provided the solution is kept tightly capped and stored under the indicated storage conditions. Purchasers will be notified of any significant changes resulting in re-certification or withdrawal of the product prior to the expiration date. / *La stabilité et l'exactitude de cet étalon sont garanties d'être à l'intérieur de l'incertitude de mesure, jusqu'à la date d'expiration de la bouteille non-ouverte, si scellée, ou jusqu'à la date d'expiration de la bouteille ouverte (si indiquée), en présupmant que le contenant est maintenu fermé et gardé dans les conditions d'entreposage indiquées. Les acheteurs seront avisés dans le cas où il y aura des changements significatifs nécessitant une re-certification ou un rappel du produit avant la date d'expiration.*

7.0 HAZARDOUS INFORMATION / INFORMATION SUR LES RISQUES POTENTIELS:

Please refer to the associated Safety Data Sheet (SDS) for information regarding this product (available at www.SCPSCIENCE.com). / *SVP vous référer à la Fiche Signalétique applicable pour de l'information sur ce produit (Disponible à www.SCPSCIENCE.com).*

8.0 HOMOGENEITY / HOMOGÉNÉITÉ:

This solution has been blended according to an in-house procedure and its homogeneity is guaranteed to be fit for purpose when a sample size sufficient for the intended method of analysis is used. / *Cette solution a été préparée selon une procédure maison et nous assurons que sa homogénéité est approprié à l'emploi lorsqu'un échantillon suffisant pour la méthode d'analyse prévue est utilisé.*

9.0 TRACEABILITY / TRAÇABILITÉ:

This CRM (Certified Reference Material) is traceable to the NIST SRM (Standard Reference Material) indicated in section 2 through an unbroken chain of comparisons. In addition, balances used are regularly calibrated using weights which are traceable to NIST (National Institute of Standards and Technology) or NRC (National Research Council of Canada) standards. All conductivity meters used to analyze this standard have been regularly calibrated using a NIST or NRC traceable Thermometer and standards. All pH meters used to analyze this standard have been regularly calibrated using a NIST or NRC traceable thermometer and pH/MV simulator. / *Ce matériel de référence certifié est traçable au Matériel de Référence Standardisé de NIST indiqué à la section 2 par une chaîne de comparaison ininterrompue. De plus, les balances utilisées sont étalonnées régulièrement en utilisant des poids qui sont traçables au NIST (National Institute of Standards and Technology) ou au CRNC (Conseil National de Recherches Canada). Tout conductimètre utilisé afin d'analyser cet étalon a été sujet à un étalonnage périodique utilisant des thermomètres et étalons traçables au NIST ou CNRC. Tout pH mètre utilisé afin d'analyser cet étalon a été sujet à un étalonnage périodique utilisant des thermomètres et un simulateur pH/MV traçables au NIST ou au CNRC.*

10.0 PREPARATION / PRÉPARATION:

For the preparation of these solutions, 18 megohm/cm double deionized water, high-purity acids and glassware calibrated to ASTM Class A specifications are used. / *Une eau de 18 megohm/cm doublement déionisé, de l'acide de haute pureté, ainsi que de la verrerie étalonnée afin de satisfaire les spécifications Classe A de ASTM ont été utilisés pour la préparation de cet étalon.*

11.0 QUALITY SYSTEM CERTIFICATIONS / CERTIFICATIONS DE SYSTÈME QUALITÉ:

ISO 9001 Certification / Certification ISO 9001: This standard was produced in a facility which operates under a registered ISO 9001 Quality Management System. Please consult our web site for a copy of the most recent revision of our certificate of registration. / *Cet étalon a été fabriqué dans un laboratoire qui utilise un Système de Gestion de la Qualité enregistré à la norme ISO 9001. Veuillez consulter notre site web pour obtenir la version la plus récente de notre certificat d'enregistrement.*

ISO 17025 Accreditation / Accréditation ISO 17025: SCP SCIENCE (Corporate Headquarters) operates an ISO 17025 accredited laboratory. Please consult our web site for a copy of the most recent revision of our certificate and scope of accreditation. / *SCP SCIENCE (Siège social) est accréditée ISO 17025. Veuillez consulter notre site web afin d'obtenir la plus récente version de notre certificat d'accréditation ainsi que la portée de notre accréditation.*

ISO 17034 Accreditation / Accréditation ISO 17034 : SCP SCIENCE (Corporate Headquarters) is an ISO 17034 accredited Reference Material Producer. Please consult our website for a copy of our most recent certificate and scope of accreditation. / *SCP SCIENCE (Siège social) est un Fabricant de Matériaux de Référence Accrédité ISO 17034. Veuillez consulter notre site web afin d'obtenir la plus récente version de notre certificat d'accréditation ainsi que la portée de notre accréditation.*

CORPORATE HEADQUARTERS
21800 Clark Graham
Baie D'Urfé (Montréal), Quebec,
H9X 4B6 Canada
Phone: +1 (800) 361-6820
Fax: +1 (800) 253-5549

USA
3rd Party Distribution Center
348 Route 11, Champlain,
N.Y. 12919-4816
Phone: +1 (800) 361-6820
Fax: +1 (800) 253-5549

FRANCE
12 Ave. de Québec, Bat. IRIS
SILIC 642, 91965
Villebon sur Yvette, France
Phone: +33 (0) 1 69 18 71 17
Fax: +33 (0) 1 60 92 05 67

GERMANY
Alte Marktoberdorfer Straße 14, 87616
Marktoberdorf
Phone: +49 (0) 8342-89560-61
Fax: +49 (0) 8342-89560-69

Energy Laboratories Inc

Standard LOG

Standard ID: ME210525 CE 2ND SOURCE
Standard Name: Ce Secondary Stock
Date Prepared: 5/25/2021
Date Expires: 5/25/2022
Department: ME
Vendor: SCP Science
Lot Number: S210208003
Balance ID:
Comments: opened 5/25/2021, expires 5/25/2022

Type: Primary
BY: Stacy R. Hendricks
Status: Empty/Disposed

Chemical / Solvent Used	BottleNo	Amt	Units	Expires
ICP/ICPMS Standard Cerium	13642	125	mL	5/25/2022

Final Volume:
125 mL

Stock Source

Base Units

Amount Added

Analytes

CAS

Conc: **ug/mL**

Ce

1.0 DESCRIPTION: *PlasmaCAL ICP/ICPMS Standard - Cerium 1000 µg/ml*
 Catalogue Number: 140-051-580/-581/-585
 Starting Material: Cerium(III) Nitrate Hexahydrate 99.99+%
 Lot Number: **S210208003**
 Matrix: 4% HNO₃ (See Section 3 for actual matrix)
 Expiration Date (End of month): **February 2023** (or 15 months after bottle is opened, whichever comes first)

2.0 CERTIFIED VALUES AND ASSOCIATED UNCERTAINTY:
 Certified Concentration: **1003 µg/ml +/- 4 µg/ml**
982 µg/g +/- 4 µg/g
 Method of analysis: Inductively Coupled Plasma Atomic Emission Spectroscopy (ICP-AES)
 Traceability: NIST Standard Reference Material 3110 Lot: **090504**

Note: The uncertainty of the certified value has been calculated from applicable uncertainty contributors (u_i) including uncertainty established during characterization of the material (u_{char}), the between bottle variation (u_{bb}), short-term stability (u_{sts}) and long-term stability (u_{lts}) according to the model $u_c = \sqrt{(u_{char}^2 + u_{bb}^2 + u_{sts}^2 + u_{lts}^2)}$. This combined uncertainty has been further multiplied by a coverage factor (k) of 2 to provide a 95% confidence interval.

3.0 REFERENCE VALUES:
 Density: **1.021 g/ml @ 22.5 °C**
 Actual Matrix: **4.0% (v/v) HNO₃**

Trace Metal Impurities as tested by ICP-MS:

ID #: 13642
 Opened: _____
 ICP/ICPMS Standard Cerium
Expires: 2/28/2023
 Rec'd: 3/16/2021
 Energy Laboratories Inc 1120 So. 27th Street
 Billings MT 59107

Element	Conc. (ppm)	Element	Conc. (ppm)	Element	Conc. (ppm)	Element	Conc. (ppm)
Ag	<0.0010	Fe	<0.0018	Nd	0.0102	Sn	<0.0010
Al	0.0148	Ga	0.0526	Ni	0.0064	Sr	<0.0025
As	<0.0010	Gd	<0.0010	Os	<0.0010	Ta	<0.0010
Au	<0.0010	Ge	<0.0010	P	<0.0132	Tb	<0.0010
B	<0.0015	Hf	<0.0010	Pb	<0.0010	Te	<0.0010
Ba	<0.0010	Hg	*	Pd	<0.0010	Th	<0.0010
Be	<0.0010	Ho	<0.0010	Pr	0.0235	Ti	<0.0012
Bi	<0.0010	In	<0.0010	Pt	<0.0010	Tl	<0.0011
Ca	0.0375	Ir	<0.0010	Rb	<0.0010	Tm	<0.0010
Cd	<0.0010	K	<0.0024	Re	<0.0010	U	<0.0010
Ce	N/A	La	<0.10	Rh	<0.0010	V	<0.0010
Co	<0.0010	Li	<0.0010	Ru	<0.0010	W	<0.0020
Cr	<0.0010	Lu	<0.0010	S	*	Y	<0.0010
Cs	<0.0010	Mg	<0.0010	Sb	<0.0010	Yb	<0.0010
Cu	0.0121	Mn	<0.0010	Sc	<0.0010	Zn	<0.0010
Dy	<0.0010	Mo	<0.0010	Se	<0.0010	Zr	<0.0010
Er	<0.0010	Na	<0.0010	Si	<0.10		
Eu	0.0035	Nb	<0.0010	Sm	<0.0010		

*: Not tested

4.0 APPROVAL AND DATE OF CERTIFICATION:
 Certification Approval: Yaling Sui, Chemist
 Certification Date: February 22, 2021

Yaling Sui

5.0 INTENDED USE / UTILISATION PRÉVUE:

- ICP Standards: For the calibration of, including but not limited to: ICP-AES, ICP-MS, FAAS, GFAA, XRF and DCP. / *Étalons ICP : Pour l'étalonnage d'instruments de mesure tels que: ICP-AES, ICP-MS, FAAS, GFAA, XRF et DCP.*
 - AA Standards: For the calibration of Flame (FAAS) and Graphite Furnace (GFAA) Atomic Absorption Spectrometers. / *Étalons AA : Pour l'étalonnage de spectromètres d'absorption atomique flamme (GFAA) et four au graphite (GFAA).*
 - Matrix Modifiers: For the optimization of analytical conditions to provide better Graphite Furnace Atomic Absorption (GFAA) instrument response and improved detection limits. / *Modificateur de matrice : Pour l'optimisation des conditions analytiques afin de fournir des meilleures réponses instrumentales et limites de détection pour SAA four au graphite.*
 - pH Standards: For the calibrating pH meters or for other wet chemistry applications. / *Étalons pH : Pour étalonnage de pH mètres et autres applications de chimie humide.*
 - Conductivity Standards: For electrolytic conductivity measurement as a calibration standard. / *Étalons de conductivité : Comme étalon pour les mesures de conductivité électrolytiques.*
 - IC Standards: for calibration of, but not limited to IC, HPLC, TLC, ISE, IR, NMR, MS, UV/VIS or other wet chemistry applications. / *Étalons IC : Pour étalonnage d'instruments tels que : IC, HPLC, TLC, ISE, IR, NMR, MS, UV/VIS et autres applications de chimie humide.*
- For any inquiries, please contact SCP SCIENCE. / *Pour toute question, veuillez contacter SCP SCIENCE.*

6.0 INSTRUCTIONS FOR USE / INSTRUCTIONS D'UTILISATION:

Handling and Storage / Manutention et entreposage: Keep product tightly capped when not in use. The solution should be opened for a minimum amount of time necessary to dispense the amount required. Do not pipet or use directly from container. Do not return unused portions back to container. Store under normal laboratory conditions. Avoid exposure to excessive sources of heat and humidity or direct sunlight. / *Garder les contenants bien fermés lorsque non utilisés. Le contenant devrait être ouvert seulement pour le temps requis afin de prélever la quantité nécessaire. Ne pas pipetter ou utiliser directement du contenant. Ne pas retourner les portions non-utilisées dans le contenant. Conserver dans des conditions normales de laboratoire. Éviter l'exposition à des sources de chaleur et d'humidité excessives ou à l'exposition solaire directe.*

Stability / Stabilité: This Standard is guaranteed to be stable and accurate to within the specified uncertainty of measurement up to the unopened expiry date, if sealed, or up to the opened expiry date (when indicated), whichever comes first, provided the solution is kept tightly capped and stored under the indicated storage conditions. Purchasers will be notified of any significant changes resulting in re-certification or withdrawal of the product prior to the expiration date. / *La stabilité et l'exactitude de cet étalon sont garanties d'être à l'intérieur de l'incertitude de mesure, jusqu'à la date d'expiration de la bouteille non-ouverte, si scellée, ou jusqu'à la date d'expiration de la bouteille ouverte (si indiquée), en présumant que le contenant est maintenu fermé et gardé dans les conditions d'entreposage indiquées. Les acheteurs seront avisés dans le cas où il y aura des changements significatifs nécessitant une re-certification ou un rappel du produit avant la date d'expiration.*

7.0 HAZARDOUS INFORMATION / INFORMATION SUR LES RISQUES POTENTIELS:

Please refer to the associated Safety Data Sheet (SDS) for information regarding this product (available at www.SCPSCIENCE.com). / *SVP vous référer à la Fiche Signalétique applicable pour de l'information sur ce produit (Disponible à www.SCPSCIENCE.com).*

8.0 HOMOGENEITY / HOMOGÉNÉITÉ:

This solution has been blended according to an in-house procedure and its homogeneity is guaranteed to be fit for purpose when a sample size sufficient for the intended method of analysis is used. / *Cette solution a été préparée selon une procédure maison et nous assurons que sa homogénéité est approprié à l'emploi lorsqu'un échantillon suffisant pour la méthode d'analyse prévue est utilisé.*

9.0 TRACEABILITY / TRAÇABILITÉ:

This CRM (Certified Reference Material) is traceable to the NIST SRM (Standard Reference Material) indicated in section 2 through an unbroken chain of comparisons. In addition, balances used are regularly calibrated using weights which are traceable to NIST (National Institute of Standards and Technology) or NRC (National Research Council of Canada) standards. All conductivity meters used to analyze this standard have been regularly calibrated using a NIST or NRC traceable Thermometer and standards. All pH meters used to analyze this standard have been regularly calibrated using a NIST or NRC traceable thermometer and pH/MV simulator. / *Ce matériel de référence certifié est traçable au Matériel de Référence Standardisé de NIST indiqué à la section 2 par une chaîne de comparaison ininterrompue. De plus, les balances utilisées sont étalonnées régulièrement en utilisant des poids qui sont traçables au NIST (National Institute of Standards and Technology) ou au CRNC (Conseil National de Recherches Canada). Tout conductimètre utilisé afin d'analyser cet étalon a été sujet à un étalonnage périodique utilisant des thermomètres et étalons traçables au NIST ou CNRC. Tout pH mètre utilisé afin d'analyser cet étalon a été sujet à un étalonnage périodique utilisant des thermomètres et un simulateur pH/MV traçables au NIST ou au CNRC.*

10.0 PREPARATION / PRÉPARATION:

For the preparation of these solutions, 18 meghom/cm double deionized water, high-purity acids and glassware calibrated to ASTM Class A specifications are used. / *Une eau de 18 meghom/cm doublement déionisée, de l'acide de haute pureté, ainsi que de la verrerie étalonnée afin de satisfaire les spécifications Classe A de ASTM ont été utilisés pour la préparation de cet étalon.*

11.0 QUALITY SYSTEM CERTIFICATIONS / CERTIFICATIONS DE SYSTÈME QUALITÉ:

ISO 9001 Certification / Certification ISO 9001: This standard was produced in a facility which operates under a registered ISO 9001 Quality Management System. Please consult our web site for a copy of the most recent revision of our certificate of registration. / *Cet étalon a été fabriqué dans un laboratoire qui utilise un Système de Gestion de la Qualité enregistré à la norme ISO 9001. Veuillez consulter notre site web pour obtenir la version la plus récente de notre certificat d'enregistrement.*

ISO 17025 Accreditation / Accréditation ISO 17025: SCP SCIENCE (Corporate Headquarters) operates an ISO 17025 accredited laboratory. Please consult our web site for a copy of the most recent revision of our certificate and scope of accreditation. / *SCP SCIENCE (Siège social) est accréditée ISO 17025. Veuillez consulter notre site web afin d'obtenir la plus récente version de notre certificat d'accréditation ainsi que la portée de notre accréditation.*

ISO 17034 Accreditation / Accréditation ISO 17034: SCP SCIENCE (Corporate Headquarters) is an ISO 17034 accredited Reference Material Producer. Please consult our website for a copy of our most recent certificate and scope of accreditation. / *SCP SCIENCE (Siège social) est un Fabricant de Matériaux de Référence Accrédité ISO 17034. Veuillez consulter notre site web afin d'obtenir la plus récente version de notre certificat d'accréditation ainsi que la portée de notre accréditation.*

CORPORATE HEADQUARTERS
21800 Clark Graham
Baie D'Urfé (Montréal), Quebec,
H9X 4B6 Canada
Phone: +1 (800) 361-6820
Fax: +1 (800) 253-5549

USA
3rd Party Distribution Center
348 Route 11, Champlain,
N.Y. 12919-4816
Phone: +1 (800) 361-6820
Fax: +1 (800) 253-5549

FRANCE
12 Ave. de Québec, Bat. IRIS
SILIC 642, 91965
Villebon sur Yvette, France
Phone: +33 (0) 1 69 18 71 17
Fax: +33 (0) 1 60 92 05 67

GERMANY
Alte Marktoberdorfer Straße 14, 87616
Marktoberdorf
Phone: +49 (0) 8342-89560-61
Fax: +49 (0) 8342-89560-69

Energy Laboratories Inc

Standard LOG

Standard ID: ME210901 ICSAB
 Standard Name: ICSAB
 Date Prepared: 9/1/2021
 Date Expires: 9/1/2022
 Department: ME
 Vendor:
 Lot Number:
 Balance ID:

Type: Secondary
 BY: Cindy Rohrer

Status: Open

Comments: Made fresh every Monday, Wednesday, and Friday

Chemical / Solvent Used	BottleNo	Amt	Units	Exp
Nitric Acid, 69.0-70.0%,0000282671	14178	1	mL	4/11/
Milli-Q H2O	391	46.45	mL	6/1/2
Hydrochloric Acid Instra Analyzed 000	14028	0.5	mL	3/29/

Final Volume: 50 mL

Stock Source

ME210901 6020IC 6020ICS-8A
 ME 210901 6020IC 6020ICS-9B

Base Units

ug/mL
 ug/mL

Amount Added

2 mL
 0.05 mL

Analvtes

CAS

Conc: **mg/L**

Energy Laboratories Inc

Standard LOG

Standard ID: ME 210901 6020ICS-9B
Standard Name: 6020ICS-9B
Date Prepared: 9/1/2021
Date Expires: 9/1/2022
Department: ME
Vendor: Inorganic Ventures
Lot Number: P2-MEB678862
Balance ID:
Comments: Opened 9/1/2021; Expires 9/1/2022

Type: Primary
BY: Alyssa A. espinoza
Status: Open

Chemical / Solvent Used	BottleNo	Amt	Units	Expires
Multi Analyte Custom Grade Solution	13478	125	mL	9/1/2022

Final Volume:
125 mL

Stock Source

Base Units

Amount Added

Analytes

CAS

Conc: **mg/L**

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).


2.0 PRODUCT DESCRIPTION

Product Code: Multi Analyte Custom Grade Solution
 Catalog Number: 6020ICS-9B
 Lot Number: P2-MEB678862
 Matrix: 3% (v/v) HNO₃
 Value / Analyte(s):
 20 µg/mL ea:
 Cobalt, Chromium,
 Manganese, Nickel, Copper,
 10 µg/mL ea: Vanadium,
 Zinc, Arsenic, Cadmium,
 Selenium,
 5 µg/mL ea:
 Silver

ID #: 13478
 Opened: _____
 Multi Analyte Custom Grade Solution
 Expires: 5/17/2023
 Rec'd: 1/15/2021
 Energy Laboratories Inc 1120 So. 27th Street
 Billings MT 59107

3.0 CERTIFIED VALUES AND UNCERTAINTIES

ANALYTE	CERTIFIED VALUE	ANALYTE	CERTIFIED VALUE
Arsenic, As	10.01 ± 0.05 µg/mL	Cadmium, Cd	10.01 ± 0.04 µg/mL
Chromium, Cr	20.02 ± 0.12 µg/mL	Cobalt, Co	20.01 ± 0.10 µg/mL
Copper, Cu	20.02 ± 0.08 µg/mL	Manganese, Mn	20.02 ± 0.09 µg/mL
Nickel, Ni	20.02 ± 0.09 µg/mL	Selenium, Se	10.01 ± 0.06 µg/mL
Silver, Ag	5.005 ± 0.022 µg/mL	Vanadium, V	20.02 ± 0.08 µg/mL
Zinc, Zn	10.01 ± 0.04 µg/mL		

Density: 1.015 g/mL (measured at 20 ± 4 °C)

Assay Information:

ANALYTE	METHOD	NIST SRM#	SRM LOT#
Ag	ICP Assay	3151	160729
Ag	Volhard	999c	999c
As	ICP Assay	3103a	100818
As	Calculated		See Sec. 4.2
Cd	ICP Assay	3108	130116
Cd	EDTA	928	928
Co	EDTA	928	928
Co	ICP Assay	traceable to 3113	M2-CO661665
Cr	ICP Assay	3112a	170630
Cu	ICP Assay	3114	121207
Cu	EDTA	928	928
Mn	EDTA	928	928
Mn	ICP Assay	Traceable to 3132	N2-MN665236
Mn	Calculated		See Sec. 4.2
Ni	ICP Assay	3136	120619
Ni	EDTA	928	928
Se	ICP Assay	3149	100901
Se	Calculated		See Sec. 4.2
V	EDTA	928	928
V	ICP Assay	3165	992706
Zn	ICP Assay	3168a	120629
Zn	EDTA	928	928

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$$X_{CRM/RM} = \sum(w_i) (X_i)$$

X_i = mean of Assay Method I with standard uncertainty $u_{char i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$$w_i = (1/u_{char i})^2 / (\sum(1/(u_{char i})^2))$$

$$CRM/RM \text{ Expanded Uncertainty } (\pm) = U_{CRM/RM} = k (u_{char}^2 + u_{bb}^2 + u_{lts}^2 + u_{ts}^2)^{1/2}$$

k = coverage factor = 2

$u_{char} = [\sum(w_i)^2 (u_{char i})^2]^{1/2}$ where $u_{char i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$$X_{CRM/RM} = (X_a) (u_{char a})$$

X_a = mean of Assay Method A with

$u_{char a}$ = the standard uncertainty of characterization Method A

$$CRM/RM \text{ Expanded Uncertainty } (\pm) = U_{CRM/RM} = k (u_{char a}^2 + u_{bb}^2 + u_{lts}^2 + u_{ts}^2)^{1/2}$$

k = coverage factor = 2

$u_{char a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

N/A

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit www.inorganicventures.com/TCT

Low Silver Note: This solution contains "LOW" levels of Silver. Please store this entire bottle inside a sealed glass jar.

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va. 24073, USA; Telephone: 800.669.6799; 540.585.3030, Fax: 540.585.3012; inorganicventures.com; Info@inorganicventures.com

11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

May 17, 2019

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **May 17, 2023**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

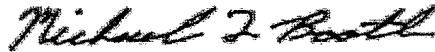
- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Michael Booth
Supervisor, Quality Control



Certifying Officer:

Paul Gaines
CEO, Senior Technical Director



Energy Laboratories Inc

Standard LOG

Standard ID: ME220112 SS1
Standard Name: SS1 ICPMS Spiking Solution
Date Prepared: 1/12/2022
Date Expires: 12/8/2022
Department: ME
Vendor: Inorganic Ventures
Lot Number:
Balance ID:
Comments:

Type: Secondary
BY: Stacy R. Hendricks
Status: Open

Chemical / Solvent Used	BottleNo	Amt	Units	Expires
Nitric Acid, 69.0-70.0%,0000277202	13781	0.8	mL	1/14/2026
Hydrochloric Acid, 36.5-38.0% 000027567	13784	2	mL	12/15/2025
Milli-Q H2O	391	28.8	mL	6/1/2100

Final Volume:
40 mL

Stock Source

ME220105 HgPrim Primary Hg Stock 2 PPM
ME211208 MSCAL MSCAL 2B
ME211221 MSCAL MSCAL 3C
ME220110 Ce, La Ce, La Primary

Base Units

ug/mL
ug/mL
ug/mL
ug/mL

Amount Added

2 mL
2 mL
2 mL
2 mL

Analytes

CAS

Conc: **mg/L**

Energy Laboratories Inc

Spike LOG

Standard ID: ME220105 HGPRIMARY
Standard Name: Primary Hg Stock 2 PPM
Date Prepared: 1/5/2022
Date Expires: 12/29/2022
Department: ME
Vendor: Inorganic Ventures
Lot Number:
Balance ID:
Type: Secondary
BY: Amanda E. McDani
Status: Open
Comments: Made with different HG stock than QCS

Chemical / Solvent Used	BottleNo	Amt	Units	Expires
Nitric Acid 69.0- 70.0% D0521	14626	0.5	mL	12/14/2026
Hydrochloric Acid E1421	14721	0.25	mL	1/4/2027

Final Volume:
25 mL

Stock Source

ME220110HG HG Stock
ME211229A AU 2N Au 2nd source Stock

Base Units

ug/mL
ug/mL

Amount Added

0.05 mL
0.05 mL

Analytes

CAS

Conc: ug/mL

Energy Laboratories Inc

Standard LOG

Standard ID: ME220110HG
Standard Name: HG Stock
Date Prepared: 1/10/2022
Date Expires: 1/10/2023
Department: ME
Vendor: SCP Science
Lot Number: S210729017
Balance ID:

Type: Primary
BY: Amanda E. McDani
Status: Open

Comments:

Chemical / Solvent Used	BottleNo	Amt	Units	Expires
ICP/ICPMS Standard Mercury	14711	125	mL	1/10/2023

Final Volume:
125 mL

Stock Source

Base Units

Amount Added

Analytes

CAS

Conc: **ug/mL**

ID #: 14711

Opened: _____

ICP/ICPMS Standard Mercury

Expires: 7/31/2023

Rec'd: 12/29/2021

Energy Laboratories Inc 1120 So. 27th Street
Billings MT 59107**SCP SCIENCE**

Providing Innovative Solutions to Analytical Chemists

rtificate of Analysis**Hg****1.0 DESCRIPTION:**

PlasmaCAL ICP/ICPMS Standard - Mercury 1000 µg/ml
 Catalogue Number: 140-051-800/-801/-805
 Starting Material: Mercury(II) oxide 99.99+%
 Lot Number: **S210729017**
 Matrix: 10% HNO₃ (See Section 3 for actual matrix)
 Expiration Date (End of month): **July 2023** (or 15 months after bottle is opened, whichever comes first)

2.0 CERTIFIED VALUES AND ASSOCIATED UNCERTAINTY:

Certified Concentration: **999 µg/ml +/- 5 µg/ml**
952 µg/g +/- 5 µg/g
 Method of analysis: Inductively Coupled Plasma Atomic Emission Spectroscopy (ICP-AES)
 Traceability: NIST Standard Reference Material 3133 Lot: **160921**

Note: The uncertainty of the certified value has been calculated from applicable uncertainty contributors (u_i) including uncertainty established during characterization of the material (u_{char}), the between bottle variation (u_{bb}), short-term stability (u_{sts}) and long-term stability (u_{lts}) according to the model $u_c = \sqrt{(u_{char}^2 + u_{bb}^2 + u_{sts}^2 + u_{lts}^2)}$. This combined uncertainty has been further multiplied by a coverage factor (k) of 2 to provide a 95% confidence interval.

3.0 REFERENCE VALUES:

Density: **1.050 g/ml @ 23.6 °C**
 Actual Matrix: **10.0% (v/v) HNO₃**

Trace Metal Impurities as tested by ICP-MS:

Element	Conc. (ppm)	Element	Conc. (ppm)	Element	Conc. (ppm)	Element	Conc. (ppm)
Ag	<0.0010	Fe	0.0322	Nd	<0.0010	Sn	<0.0010
Al	0.0042	Ga	<0.0010	Ni	0.0039	Sr	<0.0025
As	<0.0010	Gd	<0.0010	Os	<0.0010	Ta	<0.0010
Au	<0.0010	Ge	<0.0010	P	<0.0132	Tb	<0.0010
B	<0.0015	Hf	<0.0010	Pb	<0.0010	Te	<0.0010
Ba	<0.0010	Hg	N/A	Pd	<0.0010	Th	<0.0010
Be	<0.0010	Ho	<0.0010	Pr	<0.0010	Ti	<0.0012
Bi	<0.0010	In	<0.0010	Pt	<0.0010	Tl	0.0117
Ca	<0.0135	Ir	<0.0010	Rb	<0.0010	Tm	<0.0010
Cd	<0.0010	K	<0.0024	Re	<0.0010	U	<0.0010
Ce	<0.0010	La	<0.0010	Rh	<0.0010	V	<0.0010
Co	<0.0010	Li	<0.0010	Ru	<0.0010	W	<0.0020
Cr	0.0112	Lu	<0.0010	S	*	Y	<0.0010
Cs	<0.0010	Mg	<0.0010	Sb	<0.0010	Yb	<0.0010
Cu	0.0060	Mn	<0.0010	Sc	<0.0010	Zn	<0.0010
Dy	<0.0010	Mo	<0.0010	Se	<0.0010	Zr	<0.0010
Er	<0.0010	Na	0.0092	Si	<0.1		
Eu	<0.0010	Nb	<0.0010	Sm	<0.0010		

*: Not tested

4.0 APPROVAL AND DATE OF CERTIFICATION:

Certification Approval: Daniel Boisvert, Chemist
 Certification Date: August 12, 2021

Daniel Boisvert

5.0 INTENDED USE / UTILISATION PRÉVUE:

- ICP Standards: For the calibration of, including but not limited to: ICP-AES, ICP-MS, FAAS, GFAA, XRF and DCP. / *Étalons ICP: Pour l'étalonnage d'instruments de mesure tels que: ICP-AES, ICP-MS, FAAS, GFAA, XRF et DCP.*
 - AA Standards: For the calibration of Flame (FAAS) and Graphite Furnace (GFAA) Atomic Absorption Spectrometers. / *Étalons AA: Pour l'étalonnage de spectromètres d'absorption atomique flamme (GFAA) et four au graphite (GFAA).*
 - Matrix Modifiers: For the optimization of analytical conditions to provide better Graphite Furnace Atomic Absorption (GFAA) instrument response and improved detection limits. / *Modificateur de matrice: Pour l'optimisation des conditions analytiques afin de fournir des meilleures réponses instrumentales et limites de détection pour SAA four au graphite.*
 - pH Standards: For the calibrating pH meters or for other wet chemistry applications. / *Étalons pH: Pour étalonnage de pH mètres et autres applications de chimie humide.*
 - Conductivity Standards: For electrolytic conductivity measurement as a calibration standard. / *Étalons de conductivité: Comme étalon pour les mesures de conductivité électrolytiques.*
 - IC Standards: for calibration of, but not limited to IC, HPLC, TLC, ISE, IR, NMR, MS, UV/VIS or other wet chemistry applications. / *Étalons IC: Pour étalonnage d'instruments tels que: IC, HPLC, TLC, ISE, IR, NMR, MS, UV/VIS et autres applications de chimie humide.*
- For any inquiries, please contact **SCP SCIENCE**. / *Pour toute question, veuillez contacter SCP SCIENCE.*

6.0 INSTRUCTIONS FOR USE / INSTRUCTIONS D'UTILISATION:

Handling and Storage / Manutention et entreposage: Keep product tightly capped when not in use. The solution should be opened for a minimum amount of time necessary to dispense the amount required. Do not pipet or use directly from container. Do not return unused portions back to container. Store under normal laboratory conditions. Avoid exposure to excessive sources of heat and humidity or direct sunlight. / *Garder les contenants bien fermés lorsque non utilisés. Le contenant devrait être ouvert seulement pour le temps requis afin de prélever la quantité nécessaire. Ne pas pipetter ou utiliser directement du contenant. Ne pas retourner les portions non-utilisées dans le contenant. Conserver dans des conditions normales de laboratoire. Éviter l'exposition à des sources de chaleur et d'humidité excessives ou à l'exposition solaire directe.*

Stability / Stabilité: This Standard is guaranteed to be stable and accurate to within the specified uncertainty of measurement up to the unopened expiry date, if sealed, or up to the opened expiry date (when indicated), whichever comes first, provided the solution is kept tightly capped and stored under the indicated storage conditions. Purchasers will be notified of any significant changes resulting in re-certification or withdrawal of the product prior to the expiration date. / *La stabilité et l'exactitude de cet étalon sont garanties d'être à l'intérieur de l'incertitude de mesure, jusqu'à la date d'expiration de la bouteille non-ouverte, si scellée, ou jusqu'à la date d'expiration de la bouteille ouverte (si indiquée), en présumant que le contenant est maintenu fermé et gardé dans les conditions d'entreposage indiquées. Les acheteurs seront avisés dans le cas où il y aura des changements significatifs nécessitant une re-certification ou un rappel du produit avant la date d'expiration.*

7.0 HAZARDOUS INFORMATION / INFORMATION SUR LES RISQUES POTENTIELS:

Please refer to the associated Safety Data Sheet (SDS) for information regarding this product (available at www.SCPSCIENCE.com). / *SVP vous référer à la Fiche Signalétique applicable pour de l'information sur ce produit (Disponible à www.SCPSCIENCE.com).*

8.0 HOMOGENEITY / HOMOGÉNÉITÉ:

This solution has been blended according to an in-house procedure and its homogeneity is guaranteed to be fit for purpose when a sample size sufficient for the intended method of analysis is used. / *Cette solution a été préparée selon une procédure maison et nous assurons que sa homogénéité est approprié à l'emploi lorsqu'un échantillon suffisant pour la méthode d'analyse prévue est utilisé.*

9.0 TRACEABILITY / TRAÇABILITÉ:

This CRM (Certified Reference Material) is traceable to the NIST SRM (Standard Reference Material) indicated in section 2 through an unbroken chain of comparisons. In addition, balances used are regularly calibrated using weights which are traceable to NIST (National Institute of Standards and Technology) or NRC (National Research Council of Canada) standards. All conductivity meters used to analyze this standard have been regularly calibrated using a NIST or NRC traceable Thermometer and standards. All pH meters used to analyze this standard have been regularly calibrated using a NIST or NRC traceable thermometer and pH/MV simulator. / *Ce matériel de référence certifié est traçable au Matériel de Référence Standardisé de NIST indiqué à la section 2 par une chaîne de comparaison ininterrompue. De plus, les balances utilisées sont étalonnées régulièrement en utilisant des poids qui sont traçables au NIST (National Institute of Standards and Technology) ou au CRNC (Conseil National de Recherches Canada). Tout conductimètre utilisé afin d'analyser cet étalon a été sujet à un étalonnage périodique utilisant des thermomètres et étalons traçables au NIST ou CNRC. Tout pH mètre utilisé afin d'analyser cet étalon a été sujet à un étalonnage périodique utilisant des thermomètres et un simulateur pH/MV traçables au NIST ou au CNRC.*

10.0 PREPARATION / PRÉPARATION:

For the preparation of these solutions, 18 megohm/cm double deionized water, high-purity acids and glassware calibrated to ASTM Class A specifications are used. / *Une eau de 18 megohm/cm doublement déionisé, de l'acide de haute pureté, ainsi que de la verrerie étalonnée afin de satisfaire les spécifications Classe A de ASTM ont été utilisés pour la préparation de cet étalon.*

11.0 QUALITY SYSTEM CERTIFICATIONS / CERTIFICATIONS DE SYSTÈME QUALITÉ:

ISO 9001 Certification / Certification ISO 9001: This standard was produced in a facility which operates under a registered ISO 9001 Quality Management System. Please consult our web site for a copy of the most recent revision of our certificate of registration. / *Cet étalon a été fabriqué dans un laboratoire qui utilise un Système de Gestion de la Qualité enregistré à la norme ISO 9001. Veuillez consulter notre site web pour obtenir la version la plus récente de notre certificat d'enregistrement.*

ISO 17025 Accreditation / Accréditation ISO 17025: SCP SCIENCE (Corporate Headquarters) operates an ISO 17025 accredited laboratory. Please consult our web site for a copy of the most recent revision of our certificate and scope of accreditation. / *SCP SCIENCE (Siège social) est accréditée ISO 17025. Veuillez consulter notre site web afin d'obtenir la plus récente version de notre certificat d'accréditation ainsi que la portée de notre accréditation.*

ISO 17034 Accreditation / Accréditation ISO 17034: SCP SCIENCE (Corporate Headquarters) is an ISO 17034 accredited Reference Material Producer. Please consult our website for a copy of our most recent certificate and scope of accreditation. / *SCP SCIENCE (Siège social) est un Fabricant de Matériaux de Référence Accrédité ISO 17034. Veuillez consulter notre site web afin d'obtenir la plus récente version de notre certificat d'accréditation ainsi que la portée de notre accréditation.*

CORPORATE HEADQUARTERS
21800 Clark Graham
Baie D'Urfé (Montréal), Quebec,
H9X 4B6 Canada
Phone: +1 (800) 361-6820
Fax: +1 (800) 253-5549

USA
3rd Party Distribution Center
348 Route 11, Champlain,
N.Y. 12919-4816
Phone: +1 (800) 361-6820
Fax: +1 (800) 253-5549

FRANCE
12 Ave. de Québec, Bat. IRIS
91140, Villebon-sur-Yvette
Phone: +33 (0) 1 69 18 71 17
Fax: +33 (0) 1 60 92 05 67

GERMANY
Alte Marktberdorfer Straße 14, 87616
Marktberdorf
Phone: +49 (0) 8342-89560-61
Fax: +49 (0) 8342-89560-69

Energy Laboratories Inc

Standard LOG

Standard ID: ME211229A AU 2ND SOURCE
Standard Name: Au 2nd source Stock
Date Prepared: 12/29/2021
Date Expires: 12/29/2022
Department: ME
Vendor: SCP Science
Lot Number: S211129013
Balance ID:
Comments: opened 12/29/2021; expires 12/29/2022

Type: Primary
BY: Amanda E. McDani
Status: Open

Chemical / Solvent Used	BottleNo	Amt	Units	Expires
ICP/ICPMS Standard Gold	14710	500	mL	12/29/2022

Final Volume:
500 mL

Stock Source

Base Units

Amount Added

Analytes

CAS

Conc: **ug/mL**

ID #: 14710

Opened:

ICP/ICPMS Standard Gold

Expires: 12/31/2023

Rec'd: 12/29/2021

Eneray Laboratories Inc 1120 So. 27th Street

Billings MT 59107

SCP SCIENCE

Providing Innovative Solutions to Analytical

Certificate of Analysis**Au****1.0 DESCRIPTION:****PlasmaCAL ICP/ICPMS Standard - Gold 1000 µg/ml**

Catalogue Number: 140-052-790/-791/-795

Starting Material: Gold Metal 99.99+%

Lot Number: **S211129013**

Matrix: 10% HCl (See Section 3 for actual matrix)

Expiration Date (End of month): **December 2023** (or 15 months after bottle is opened, whichever comes first)**2.0 CERTIFIED VALUES AND ASSOCIATED UNCERTAINTY:**Certified Concentration: **1001 µg/ml +/- 4 µg/ml****982 µg/g +/- 4 µg/g**

Method of analysis: Inductively Coupled Plasma Atomic Emission Spectroscopy (ICP-AES)

Traceability: NIST Standard Reference Material 3121 Lot: **991806**

Note: The uncertainty of the certified value has been calculated from applicable uncertainty contributors (u_i) including uncertainty established during characterization of the material (u_{char}), the between bottle variation (u_{bb}), short-term stability (u_{sts}) and long-term stability (u_{lts}) according to the model $u_c = \sqrt{(u_{char}^2 + u_{bb}^2 + u_{sts}^2 + u_{lts}^2)}$. This combined uncertainty has been further multiplied by a coverage factor (k) of 2 to provide a 95% confidence interval.

3.0 REFERENCE VALUES:Density: **1.019 g/ml @ 22.4 °C**Actual Matrix: **10.0% (v/v) HCl**

Trace Metal Impurities as tested by ICP-MS:

Element	Conc. (ppm)	Element	Conc. (ppm)	Element	Conc. (ppm)	Element	Conc. (ppm)
Ag	0.3851	Fe	<0.0090	Nd	<0.0010	Sn	<0.0010
Al	0.0062	Ga	<0.0010	Ni	<0.0010	Sr	<0.0025
As	<0.0010	Gd	<0.0010	Os	<0.0010	Ta	<0.0010
Au	N/A	Ge	<0.0010	P	<0.0132	Tb	<0.0010
B	<0.0015	Hf	<0.0010	Pb	<0.0010	Te	<0.0010
Ba	<0.0010	Hg	*	Pd	0.0434	Th	<0.0010
Be	<0.0010	Ho	<0.0010	Pr	<0.0010	Ti	<0.0012
Bi	<0.0010	In	<0.0010	Pt	0.0048	Tl	<0.0011
Ca	<0.0135	Ir	<0.0010	Rb	<0.0010	Tm	<0.0010
Cd	<0.0010	K	0.0362	Re	<0.0010	U	<0.0010
Ce	<0.0010	La	<0.0010	Rh	<0.0010	V	<0.0010
Co	<0.0010	Li	<0.0010	Ru	<0.0010	W	<0.0020
Cr	<0.0010	Lu	<0.0010	S	*	Y	<0.0010
Cs	0.0029	Mg	<0.0010	Sb	<0.0010	Yb	<0.0010
Cu	0.0023	Mn	<0.0010	Sc	<0.0010	Zn	<0.0010
Dy	<0.0010	Mo	<0.0010	Se	<0.01	Zr	<0.0010
Er	<0.0010	Na	0.0070	Si	<0.1		
Eu	<0.0010	Nb	<0.0010	Sm	<0.0010		

*: Not tested

4.0 APPROVAL AND DATE OF CERTIFICATION:

Certification Approval: Daniel Boisvert, Chemist

Certification Date: December 10, 2021

Daniel Boisvert

5.0 INTENDED USE / UTILISATION PRÉVUE:

- ICP Standards: For the calibration of, including but not limited to: ICP-AES, ICP-MS, FAAS, GFAA, XRF and DCP. / *Étalons ICP* : Pour l'étalonnage d'instruments de mesure tels que: ICP-AES, ICP-MS, FAAS, GFAA, XRF et DCP.
 - AA Standards: For the calibration of Flame (FAAS) and Graphite Furnace (GFAA) Atomic Absorption Spectrometers. / *Étalons AA* : Pour l'étalonnage de spectromètres d'absorption atomique flamme (GFAA) et four au graphite (GFAA).
 - Matrix Modifiers: For the optimization of analytical conditions to provide better Graphite Furnace Atomic Absorption (GFAA) instrument response and improved detection limits. / *Modificateur de matrice* : Pour l'optimisation des conditions analytiques afin de fournir des meilleures réponses instrumentales et limites de détection pour SAA four au graphite.
 - pH Standards: For the calibrating pH meters or for other wet chemistry applications. / *Étalons pH* : Pour étalonnage de pH mètres et autres applications de chimie humide.
 - Conductivity Standards: For electrolytic conductivity measurement as a calibration standard. / *Étalons de conductivité* : Comme étalon pour les mesures de conductivité électrolytiques.
 - IC Standards: for calibration of, but not limited to IC, HPLC, TLC, ISE, IR, NMR, MS, UV/VIS or other wet chemistry applications. / *Étalons IC* : Pour étalonnage d'instruments tels que : IC, HPLC, TLC, ISE, IR, NMR, MS, UV/VIS et autres applications de chimie humide.
 For any inquiries, please contact **SCP SCIENCE**. / *Pour toute question, veuillez contacter SCP SCIENCE.*

6.0 INSTRUCTIONS FOR USE / INSTRUCTIONS D'UTILISATION:

Handling and Storage / Manutention et entreposage: Keep product tightly capped when not in use. The solution should be opened for a minimum amount of time necessary to dispense the amount required. Do not pipet or use directly from container. Do not return unused portions back to container. Store under normal laboratory conditions. Avoid exposure to excessive sources of heat and humidity or direct sunlight. / *Garder les contenants bien fermés lorsque non utilisés. Le contenant devrait être ouvert seulement pour le temps requis afin de prélever la quantité nécessaire. Ne pas pipetter ou utiliser directement du contenant. Ne pas retourner les portions non-utilisées dans le contenant. Conserver dans des conditions normales de laboratoire. Éviter l'exposition à des sources de chaleur et d'humidité excessives ou à l'exposition solaire directe.*

Stability / Stabilité: This Standard is guaranteed to be stable and accurate to within the specified uncertainty of measurement up to the unopened expiry date, if sealed, or up to the opened expiry date (when indicated), whichever comes first, provided the solution is kept tightly capped and stored under the indicated storage conditions. Purchasers will be notified of any significant changes resulting in re-certification or withdrawal of the product prior to the expiration date. / *La stabilité et l'exactitude de cet étalon sont garanties d'être à l'intérieur de l'incertitude de mesure, jusqu'à la date d'expiration de la bouteille non-ouverte, si scellée, ou jusqu'à la date d'expiration de la bouteille ouverte (si indiquée), en présumant que le contenant est maintenu fermé et gardé dans les conditions d'entreposage indiquées. Les acheteurs seront avisés dans le cas où il y aura des changements significatifs nécessitant une re-certification ou un rappel du produit avant la date d'expiration.*

7.0 HAZARDOUS INFORMATION / INFORMATION SUR LES RISQUES POTENTIELS:

Please refer to the associated Safety Data Sheet (SDS) for information regarding this product (available at www.SCPSCIENCE.com). / *SVP vous référer à la Fiche Signalétique applicable pour de l'information sur ce produit (Disponible à www.SCPSCIENCE.com).*

8.0 HOMOGENEITY / HOMOGÉNÉITÉ:

This solution has been blended according to an in-house procedure and its homogeneity is guaranteed to be fit for purpose when a sample size sufficient for the intended method of analysis is used. / *Cette solution a été préparée selon une procédure maison et nous assurons que sa homogénéité est approprié à l'emploi lorsqu'un échantillon suffisant pour la méthode d'analyse prévue est utilisé.*

9.0 TRACEABILITY / TRAÇABILITÉ:

This CRM (Certified Reference Material) is traceable to the NIST SRM (Standard Reference Material) indicated in section 2 through an unbroken chain of comparisons. In addition, balances used are regularly calibrated using weights which are traceable to NIST (National Institute of Standards and Technology) or NRC (National Research Council of Canada) standards. All conductivity meters used to analyze this standard have been regularly calibrated using a NIST or NRC traceable Thermometer and standards. All pH meters used to analyze this standard have been regularly calibrated using a NIST or NRC traceable thermometer and pH/MV simulator. / *Ce matériel de référence certifié est traçable au Matériel de Référence Standardisé de NIST indiqué à la section 2 par une chaîne de comparaison ininterrompue. De plus, les balances utilisées sont étalonnées régulièrement en utilisant des poids qui sont traçables au NIST (National Institute of Standards and Technology) ou au CRNC (Conseil National de Recherches Canada). Tout conductimètre utilisé afin d'analyser cet étalon a été sujet à un étalonnage périodique utilisant des thermomètres et étalons traçables au NIST ou CNRC. Tout pH mètre utilisé afin d'analyser cet étalon a été sujet à un étalonnage périodique utilisant des thermomètres et un simulateur pH/MV traçables au NIST ou au CNRC.*

10.0 PREPARATION / PRÉPARATION:

For the preparation of these solutions, 18 megohm/cm double deionized water, high-purity acids and glassware calibrated to ASTM Class A specifications are used. / *Une eau de 18 megohm/cm doublement déionisée, de l'acide de haute pureté, ainsi que de la verrerie étalonnée afin de satisfaire les spécifications Classe A de ASTM ont été utilisés pour la préparation de cet étalon.*

11.0 QUALITY SYSTEM CERTIFICATIONS / CERTIFICATIONS DE SYSTÈME QUALITÉ:

ISO 9001 Certification / Certification ISO 9001: This standard was produced in a facility which operates under a registered ISO 9001 Quality Management System. Please consult our web site for a copy of the most recent revision of our certificate of registration. / *Cet étalon a été fabriqué dans un laboratoire qui utilise un Système de Gestion de la Qualité enregistré à la norme ISO 9001. Veuillez consulter notre site web pour obtenir la version la plus récente de notre certificat d'enregistrement.*

ISO 17025 Accreditation / Accréditation ISO 17025: SCP SCIENCE (Corporate Headquarters) operates an ISO 17025 accredited laboratory. Please consult our web site for a copy of the most recent revision of our certificate and scope of accreditation. / *SCP SCIENCE (Siège social) est accréditée ISO 17025. Veuillez consulter notre site web afin d'obtenir la plus récente version de notre certificat d'accréditation ainsi que la portée de notre accréditation.*

ISO 17034 Accreditation / Accréditation ISO 17034: SCP SCIENCE (Corporate Headquarters) is an ISO 17034 accredited Reference Material Producer. Please consult our website for a copy of our most recent certificate and scope of accreditation. / *SCP SCIENCE (Siège social) est un Fabricant de Matériaux de Référence Accrédité ISO 17034. Veuillez consulter notre site web afin d'obtenir la plus récente version de notre certificat d'accréditation ainsi que la portée de notre accréditation.*

CORPORATE HEADQUARTERS
21800 Clark Graham
Baie D'Urfé (Montréal), Quebec,
H9X 4B6 Canada
Phone: +1 (800) 361-6820
Fax: +1 (800) 253-5549

USA
3rd Party Distribution Center
348 Route 11, Champlain,
N.Y. 12919-4816
Phone: +1 (800) 361-6820
Fax: +1 (800) 253-5549

FRANCE
12 Ave. de Québec, Bat. IRIS
91140, Villebon-sur-Yvette
Phone: +33 (0) 1 69 18 71 17
Fax: +33 (0) 1 60 92 05 67

GERMANY
Alte Marktoberdorfer Straße 14, 87616
Marktoberdorf
Phone: +49 (0) 8342-89560-61
Fax: +49 (0) 8342-89560-69

Energy Laboratories Inc

Standard LOG

Standard ID: ME211208 MSCAL2B
Standard Name: MSCAL 2B
Date Prepared: 12/8/2021
Date Expires: 12/8/2022
Department: ME
Vendor: Inorganic Ventures
Lot Number: S2-MEB704403
Balance ID:
Comments: Opened 12/08/2021; Expires 12/08/2022

Type: Primary
BY: Stacy R. Hendricks
Status: Open

Chemical / Solvent Used	BottleNo	Amt	Units	Expires
Multi Analyte Custom Grade Solution	13793		mL	12/8/2022

Final Volume:
mL

Stock Source

Base Units

Amount Added

Analytes

CAS

Conc: **ug/mL**

300 Technology Drive
Christiansburg, VA 24073 USA
inorganicventures.com

P: 800-669-6799/540-585-3030
F: 540-585-3012
info@inorganicventures.com

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).



2.0 PRODUCT DESCRIPTION

Product Code: Multi Analyte Custom Grade Solution
Catalog Number: EL-MSCAL-2B
Lot Number: S2-MEB704403
Matrix: 5% (v/v) HNO₃
Value / Analyte(s):
100 µg/mL ea:
Aluminum, Arsenic,
Boron, Barium,
Beryllium, Cadmium,
Cobalt, Chromium,
Copper, Iron,
Manganese, Nickel,
Lead, Selenium,
Strontium, Thorium,
Thallium, Uranium,
Vanadium, Zinc,
40 µg/mL ea:
Silver

3.0 CERTIFIED VALUES AND UNCERTAINTIES

ID #: 13793

Opened: _____

Multi Analyte Custom Grade Solution

Expires: 4/21/2025

Rec'd: 4/29/2021

Energy Laboratories Inc 1120 So. 27th Street
Billings MT 59107

ANALYTE	CERTIFIED VALUE	ANALYTE	CERTIFIED VALUE
Aluminum, Al	100.0 ± 0.4 µg/mL	Arsenic, As	100.0 ± 0.9 µg/mL
Barium, Ba	100.0 ± 0.5 µg/mL	Beryllium, Be	100.0 ± 0.7 µg/mL
Boron, B	100.0 ± 0.7 µg/mL	Cadmium, Cd	100.0 ± 0.5 µg/mL
Chromium, Cr	100.0 ± 0.8 µg/mL	Cobalt, Co	100.0 ± 0.6 µg/mL
Copper, Cu	100.0 ± 0.5 µg/mL	Iron, Fe	100.1 ± 0.4 µg/mL
Lead, Pb	100.0 ± 0.6 µg/mL	Manganese, Mn	100.0 ± 0.5 µg/mL
Nickel, Ni	100.0 ± 0.6 µg/mL	Selenium, Se	100.0 ± 0.7 µg/mL
Silver, Ag	39.99 ± 0.18 µg/mL	Strontium, Sr	100.0 ± 0.4 µg/mL
Thallium, Tl	100.0 ± 0.6 µg/mL	Thorium, Th	100.0 ± 0.5 µg/mL
Uranium, U	100.0 ± 0.5 µg/mL	Vanadium, V	100.0 ± 0.5 µg/mL
Zinc, Zn	100.0 ± 0.5 µg/mL		

Density: 1.033 g/mL (measured at 20 ± 4 °C)

Assay Information:

ANALYTE	METHOD	NIST SRM#	SRM LOT#
Ag	ICP Assay	3151	160729
Ag	Volhard	999c	999c
Al	ICP Assay	3101a	140903
Al	EDTA	928	928
As	ICP Assay	3103a	100818
B	ICP Assay	3107	110830
Ba	ICP Assay	3104a	140909
Ba	Gravimetric		See Sec. 4.2
Be	ICP Assay	3105a	090514
Cd	ICP Assay	3108	130116
Cd	EDTA	928	928
Co	ICP Assay	3113	190630
Co	EDTA	928	928
Cr	ICP Assay	3112a	170630
Cu	ICP Assay	3114	121207
Cu	EDTA	928	928
Fe	ICP Assay	3126a	140812
Fe	EDTA	928	928
Fe	Calculated		See Sec. 4.2
Mn	ICP Assay	3132	050429
Mn	EDTA	928	928
Ni	ICP Assay	3136	120619
Ni	EDTA	928	928
Pb	ICP Assay	3128	101026
Pb	EDTA	928	928
Se	ICP Assay	3149	100901
Se	Calculated		See Sec. 4.2
Sr	EDTA	928	928
Sr	ICP Assay	Traceable to 3153a	K2-SR650985
Sr	Calculated		See Sec. 4.2
Th	EDTA	928	928
Th	Calculated		See Sec. 4.2
Tl	ICP Assay	3158	151215
U	ICP Assay	3164	080521
U	Calculated		See Sec. 4.2
V	ICP Assay	3165	160906
V	EDTA	928	928
Zn	ICP Assay	3168a	120629
Zn	EDTA	928	928

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of $k = 2$.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$$X_{CRM/RM} = \sum (w_i) (X_i)$$

X_i = mean of Assay Method i with standard uncertainty $u_{char i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$$w_i = (1/u_{char i}^2) / (\sum (1/u_{char i}^2))$$

$$CRM/RM \text{ Expanded Uncertainty } (\pm) = U_{CRM/RM} = k (u_{char}^2 + u_{bb}^2 + u_{lts}^2 + u_{ts}^2)^{1/2}$$

k = coverage factor = 2

$u_{char} = [\sum ((w_i)^2 (u_{char i}^2))]^{1/2}$ where $u_{char i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Certified Abundance:

IV's Certified Abundance

Isotope

Uranium 238U

Uranium 235U

Atom %

99.8 ± 0.1

0.24 ± 0.05

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$$X_{CRM/RM} = (X_a) (u_{char a})$$

X_a = mean of Assay Method A with

$u_{char a}$ = the standard uncertainty of characterization Method A

$$CRM/RM \text{ Expanded Uncertainty } (\pm) = U_{CRM/RM} = k (u_{char a}^2 + u_{bb}^2 + u_{lts}^2 + u_{ts}^2)^{1/2}$$

k = coverage factor = 2

$u_{char a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

N/A

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit www.inorganicventures.com/TCT

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va. 24073, USA; Telephone: 800.669.6799; 540.585.3030, Fax: 540.585.3012; inorganicventures.com; info@inorganicventures.com

11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

April 21, 2021

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **April 21, 2025**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Michael Booth
Director, Quality Control



Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director



Energy Laboratories Inc

Standard LOG

Standard ID: ME211221 MSCAL 3C
Standard Name: MSCAL 3C
Date Prepared: 12/21/2021
Date Expires: 12/21/2022
Department: ME
Vendor: Inorganic Ventures
Lot Number: S2-MEB700780
Balance ID:
Comments: Opened 12/21/21; expires 12/21/22

Type: Primary
BY: Stacy R. Hendricks
Status: Open

Chemical / Solvent Used	BottleNo	Amt	Units	Expires
Multi Analyte Custom Grade Solution	13473	250	mL	12/21/2022

Final Volume:
250 mL

Stock Source

Base Units

Amount Added

Analytes

CAS

Conc: **ug/mL**

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).


2.0 PRODUCT DESCRIPTION

Product Code: Multi Analyte Custom Grade Solution
 Catalog Number: EL-MSCAL-3C
 Lot Number: S2-MEB700780
 Matrix: 3% (v/v) HNO₃
 tr. HF
 Value / Analyte(s): 400 µg/mL ea:
 Silicon,
 100 µg/mL ea:
 Tin,
 Molybdenum,

1-6-2025

ID #: 13473
 Opened: _____
 Multi Analyte Custom Grade Solution
Expires: 1/6/2025
 Rec'd: 1/15/2021
 Energy Laboratories Inc 1120 So. 27th Street
 Billings MT 59107

Titanium,
 Antimony

3.0 CERTIFIED VALUES AND UNCERTAINTIES

ANALYTE	CERTIFIED VALUE	ANALYTE	CERTIFIED VALUE
Antimony, Sb	100.0 ± 0.8 µg/mL	Molybdenum, Mo	100.0 ± 0.6 µg/mL
Silicon, Si	399.9 ± 3.0 µg/mL	Tin, Sn	100.0 ± 0.6 µg/mL
Titanium, Ti	100.0 ± 0.7 µg/mL		

Density: 1.018 g/mL (measured at 20 ± 4 °C)

Assay Information:

ANALYTE	METHOD	NIST SRM#	SRM LOT#
Mo	ICP Assay	3134	130418
Sb	ICP Assay	3102a	140911
Si	ICP Assay	3150	130912
Sn	ICP Assay	3161a	140917
Ti	ICP Assay	3162a	130925

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{\text{CRM/RM}}$, where two or more methods of characterization are used is the weighted mean of the results:

$$X_{\text{CRM/RM}} = \sum(w_i)(X_i)$$

X_i = mean of Assay Method i with standard uncertainty $u_{\text{char } i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$$w_i = (1/u_{\text{char } i})^2 / (\sum(1/u_{\text{char } i})^2)$$

$$\text{CRM/RM Expanded Uncertainty } (\pm) = U_{\text{CRM/RM}} = k (u_{\text{char}}^2 + u_{\text{bb}}^2 + u_{\text{Its}}^2 + u_{\text{ts}}^2)^{1/2}$$

k = coverage factor = 2

$u_{\text{char}} = (\sum(w_i)^2 (u_{\text{char } i})^2)^{1/2}$ where $u_{\text{char } i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{Its} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{\text{CRM/RM}}$, where one method of characterization is used is the mean of individual results:

$$X_{\text{CRM/RM}} = (X_a) / (u_{\text{char } a})$$

X_a = mean of Assay Method A with

$u_{\text{char } a}$ = the standard uncertainty of characterization Method A

$$\text{CRM/RM Expanded Uncertainty } (\pm) = U_{\text{CRM/RM}} = k (u_{\text{char } a}^2 + u_{\text{bb}}^2 + u_{\text{Its}}^2 + u_{\text{ts}}^2)^{1/2}$$

k = coverage factor = 2

$u_{\text{char } a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{Its} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES ($\mu\text{g/mL}$)

N/A

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit www.inorganicventures.com/TCT

HF Note: This standard should not be prepared or stored in glass.

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va. 24073, USA; Telephone: 800 669 6799; 540 585 3030, Fax: 540 585 3012; inorganicventures.com; info@inorganicventures.com

11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

January 06, 2021

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **January 06, 2025**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Michael Booth
Director, Quality Control



Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director



Energy Laboratories Inc

Standard LOG

Standard ID: ME220110 CE, LA PRIMARY
Standard Name: Ce, La Primary Type: Secondary
Date Prepared: 1/10/2022 BY: Amanda E. McDani
Date Expires: 1/6/2023
Department: ME Status: Open
Vendor: Inorganic Ventures
Lot Number: M2-CE657768/M2-
Balance ID:
Comments: Used to make standards and spiking solutions; No primary La available

Chemical / Solvent Used	BottleNo	Amt	Units	Expires
Nitric Acid 69.0- 70.0% D0521	14626	0.5	mL	12/14/2026
Milli-Q H2O	391	39.5	mL	6/1/2100

Final Volume:
50 mL

Stock Source

ME220106-CE Ce Primary Stock

Base Units

ug/mL

Amount Added

5 mL

Analytes

CAS

Conc: ug/mL

Energy Laboratories Inc

Spike LOG

Standard ID: ME220112 7900 INTERNAL STANDARD
 Standard Name: Internal Standards 2 mg/L
 Date Prepared: 1/12/2022
 Date Expires: 2/8/2022
 Department: ME
 Vendor:
 Lot Number:
 Balance ID:
 Comments:

Type: Secondary
 BY: Cindy Rohrer
 Status: Open

Chemical / Solvent Used	BottleNo	Amt	Units	Exp
Hydrochloric Acid E1421	14721	10	mL	1/4/22
Nitric Acid 69.0- 70.0% D0521	14626	20	mL	12/14
Germanium Single Analyte Custom Gr	13636	2	mL	12/31
Holmium Single Analyte Custom Grad	13443	2	mL	2/12/22
Lutetium Single Analyte Atomic Absorp	13444	2	mL	3/1/22
Terbium Single Analyte Atomic Absorp	13445	2	mL	2/12/22
Indium Single Analyte Custom Grade	13654	2	mL	5/29/22
PlasmaCal Standard Bismuth	14230	2	mL	3/31/22
ICP/ICPMS Standard Scandium	13641	2	mL	8/31/22
ICP/ICPMS Standard Gold	14710	0.2	mL	12/29

Final Volume: 1000 mL

Stock Source

Base Units

Amount Added

Analtes

CAS

Conc: **mg/L**

Ge

1.0 DESCRIPTION: *PlasmaCAL ICP/ICPMS Standard - Germanium 1000 µg/ml*
 Catalogue Number: 140-050-320/-321/-325
 Starting Material: Ammonium Hexafluorogermanate(IV) 99.99+%
 Lot Number: **S201204009**
 Matrix: H₂O / tr. F⁻
 Expiration Date (End of month): **December 2022** (or 15 months after bottle is opened, whichever comes first)

2.0 CERTIFIED VALUES AND ASSOCIATED UNCERTAINTY:

Certified Concentration: **1002 µg/ml +/- 3 µg/ml**
1002 µg/g +/- 3 µg/g
 Method of analysis: Inductively Coupled Plasma Atomic Emission Spectroscopy (ICP-AES)
 Traceability: NIST Standard Reference Material 3120a Lot: **151115**

Note: The uncertainty of the certified value has been calculated from applicable uncertainty contributors (u_i) including uncertainty established during characterization of the material (u_{char}), the between bottle variation (u_{bb}), short-term stability (u_{sts}) and long-term stability (u_{lts}) according to the model $u_c = \sqrt{(u_{char}^2 + u_{bb}^2 + u_{sts}^2 + u_{lts}^2)}$. This combined uncertainty has been further multiplied by coverage factor (k) of 2 to provide a 95% confidence interval.

ID #: 13639

Opened: _____
 ICP/ICPMS Standard Germanium
Expires: 12/31/2022
 Rec'd: 3/16/2021
 Enerav Laboratories Inc 1120 So. 27th Street
 Billings MT 59107

3.0 REFERENCE VALUES:

Density: **1.000 g/ml @ 22.7 °C**

Trace Metal Impurities as tested by ICP-MS:

Element	Conc. (ppm)	Element	Conc. (ppm)	Element	Conc. (ppm)	Element	Conc. (ppm)
Ag	<0.0010	Fe	<0.0018	Nd	<0.0010	Sn	<0.0010
Al	<0.0010	Ga	<0.0010	Ni	<0.0010	Sr	<0.0025
As	0.0097	Gd	<0.0010	Os	<0.0010	Ta	<0.0010
Au	<0.0010	Ge	N/A	P	<0.0026	Tb	<0.0010
B	<0.0015	Hf	<0.0010	Pb	<0.0010	Te	<0.0010
Ba	<0.0010	Hg	*	Pd	<0.0010	Th	<0.0010
Be	<0.0010	Ho	<0.0010	Pr	<0.0010	Ti	<0.0012
Bi	<0.0010	In	<0.0010	Pt	<0.0010	Tl	<0.0011
Ca	<0.0135	Ir	<0.0010	Rb	<0.0010	Tm	<0.0010
Cd	<0.0010	K	<0.0024	Re	<0.0010	U	<0.0010
Ce	<0.0010	La	<0.0010	Rh	<0.0010	V	<0.0010
Co	<0.0010	Li	<0.0010	Ru	<0.0010	W	<0.0020
Cr	<0.0010	Lu	<0.0010	S	*	Y	<0.0010
Cs	<0.0010	Mg	<0.0010	Sb	<0.0010	Yb	<0.0010
Cu	<0.0010	Mn	<0.0010	Sc	<0.0010	Zn	<0.0010
Dy	<0.0010	Mo	<0.0010	Se	<0.0010	Zr	<0.0010
Er	<0.0010	Na	<0.0025	Si	*		
Eu	<0.0010	Nb	<0.0010	Sm	<0.0010		

*: Not tested

4.0 APPROVAL AND DATE OF CERTIFICATION:

Certification Approval: Daniel Boisvert, Chemist
 Certification Date: December 16, 2020

Daniel Boisvert

5.0 INTENDED USE / UTILISATION PRÉVUE:

- ICP Standards: For the calibration of, including but not limited to: ICP-AES, ICP-MS, FAAS, GFAA, XRF and DCP. / *Étalons ICP : Pour l'étalonnage d'instruments de mesure tels que: ICP-AES, ICP-MS, FAAS, GFAA, XRF et DCP.*
 - AA Standards: For the calibration of Flame (FAAS) and Graphite Furnace (GFAA) Atomic Absorption Spectrometers. / *Étalons AA : Pour l'étalonnage de spectromètres d'absorption atomique flamme (GFAA) et four au graphite (GFAA).*
 - Matrix Modifiers: For the optimization of analytical conditions to provide better Graphite Furnace Atomic Absorption (GFAA) instrument response and improved detection limits. / *Modificateur de matrice : Pour l'optimisation des conditions analytiques afin de fournir des meilleures réponses instrumentales et limites de détection pour SAA four au graphite.*
 - pH Standards: For the calibrating pH meters or for other wet chemistry applications. / *Étalons pH : Pour étalonnage de pH mètres et autres applications de chimie humide.*
 - Conductivity Standards: For electrolytic conductivity measurement as a calibration standard. / *Étalons de conductivité : Comme étalon pour les mesures de conductivité électrolytiques.*
 - IC Standards: for calibration of, but not limited to IC, HPLC, TLC, ISE, IR, NMR, MS, UV/VIS or other wet chemistry applications. / *Étalons IC : Pour étalonnage d'instruments tels que : IC, HPLC, TLC, ISE, IR, NMR, MS, UV/VIS et autres applications de chimie humide.*
- For any inquiries, please contact **SCP SCIENCE**. / *Pour toute question, veuillez contacter SCP SCIENCE.*

6.0 INSTRUCTIONS FOR USE / INSTRUCTIONS D'UTILISATION:

Handling and Storage / Manutention et entreposage: Keep product tightly capped when not in use. The solution should be opened for a minimum amount of time necessary to dispense the amount required. Do not pipet or use directly from container. Do not return unused portions back to container. Store under normal laboratory conditions. Avoid exposure to excessive sources of heat and humidity or direct sunlight. / *Garder les contenants bien fermés lorsque non utilisés. Le contenant devrait être ouvert seulement pour le temps requis afin de prélever la quantité nécessaire. Ne pas pipetter ou utiliser directement du contenant. Ne pas retourner les portions non-utilisées dans le contenant. Conserver dans des conditions normales de laboratoire. Éviter l'exposition à des sources de chaleur et d'humidité excessives ou à l'exposition solaire directe.*

Stability / Stabilité: This Standard is guaranteed to be stable and accurate to within the specified uncertainty of measurement up to the unopened expiry date, if sealed, or up to the opened expiry date (when indicated), whichever comes first, provided the solution is kept tightly capped and stored under the indicated storage conditions. Purchasers will be notified of any significant changes resulting in re-certification or withdrawal of the product prior to the expiration date. / *La stabilité et l'exactitude de cet étalon sont garanties d'être à l'intérieur de l'incertitude de mesure, jusqu'à la date d'expiration de la bouteille non-ouverte, si scellée, ou jusqu'à la date d'expiration de la bouteille ouverte (si indiquée), en présumant que le contenant est maintenu fermé et gardé dans les conditions d'entreposage indiquées. Les acheteurs seront avisés dans le cas où il y aura des changements significatifs nécessitant une re-certification ou un rappel du produit avant la date d'expiration.*

7.0 HAZARDOUS INFORMATION / INFORMATION SUR LES RISQUES POTENTIELS:

Please refer to the associated Safety Data Sheet (SDS) for information regarding this product (available at www.SCPSCIENCE.com). / *SVP vous référer à la Fiche Signalétique applicable pour de l'information sur ce produit (Disponible à www.SCPSCIENCE.com).*

8.0 HOMOGENEITY / HOMOGÉNÉITÉ:

This solution has been blended according to an in-house procedure and its homogeneity is guaranteed to be fit for purpose when a sample size sufficient for the intended method of analysis is used. / *Cette solution a été préparée selon une procédure maison et nous assurons que sa homogénéité est appropriée à l'emploi lorsqu'un échantillon suffisant pour la méthode d'analyse prévue est utilisé.*

9.0 TRACEABILITY / TRAÇABILITÉ:

This CRM (Certified Reference Material) is traceable to the NIST SRM (Standard Reference Material) indicated in section 2 through an unbroken chain of comparisons. In addition, balances used are regularly calibrated using weights which are traceable to NIST (National Institute of Standards and Technology) or NRC (National Research Council of Canada) standards. All conductivity meters used to analyze this standard have been regularly calibrated using a NIST or NRC traceable Thermometer and standards. All pH meters used to analyze this standard have been regularly calibrated using a NIST or NRC traceable thermometer and pH/MV simulator. / *Ce matériel de référence certifié est traçable au Matériel de Référence Standardisé de NIST indiqué à la section 2 par une chaîne de comparaison ininterrompue. De plus, les balances utilisées sont étalonnées régulièrement en utilisant des poids qui sont traçables au NIST (National Institute of Standards and Technology) ou au CRNC (Conseil National de Recherches Canada). Tout conductimètre utilisé afin d'analyser cet étalon a été sujet à un étalonnage périodique utilisant des thermomètres et étalons traçables au NIST ou CNRC. Tout pH mètre utilisé afin d'analyser cet étalon a été sujet à un étalonnage périodique utilisant des thermomètres et un simulateur pH/MV traçables au NIST ou au CNRC.*

10.0 PREPARATION / PRÉPARATION:

For the preparation of these solutions, 18 meghom/cm double deionized water, high-purity acids and glassware calibrated to ASTM Class A specifications are used. / *Une eau de 18 meghom/cm doublement déionisé, de l'acide de haute pureté, ainsi que de la verrerie étalonnée afin de satisfaire les spécifications Classe A de ASTM ont été utilisés pour la préparation de cet étalon.*

11.0 QUALITY SYSTEM CERTIFICATIONS / CERTIFICATIONS DE SYSTÈME QUALITÉ:

ISO 9001 Certification / Certification ISO 9001: This standard was produced in a facility which operates under a registered ISO 9001 Quality Management System. Please consult our web site for a copy of the most recent revision of our certificate of registration. / *Cet étalon a été fabriqué dans un laboratoire qui utilise un Système de Gestion de la Qualité enregistré à la norme ISO 9001. Veuillez consulter notre site web pour obtenir la version la plus récente de notre certificat d'enregistrement.*

ISO 17025 Accreditation / Accréditation ISO 17025: SCP SCIENCE (Corporate Headquarters) operates an ISO 17025 accredited laboratory. Please consult our web site for a copy of the most recent revision of our certificate and scope of accreditation. / *SCP SCIENCE (Siège social) est accréditée ISO 17025. Veuillez consulter notre site web afin d'obtenir la plus récente version de notre certificat d'accréditation ainsi que la portée de notre accréditation.*

ISO 17034 Accreditation / Accréditation ISO 17034 : SCP SCIENCE (Corporate Headquarters) is an ISO 17034 accredited Reference Material Producer. Please consult our website for a copy of our most recent certificate and scope of accreditation. / *SCP SCIENCE (Siège social) est un Fabricant de Matériaux de Référence Accrédité ISO 17034. Veuillez consulter notre site web afin d'obtenir la plus récente version de notre certificat d'accréditation ainsi que la portée de notre accréditation.*

CORPORATE HEADQUARTERS
21800 Clark Graham
Baie D'Urfé (Montréal), Quebec,
H9X 4B6 Canada
Phone: +1 (800) 361-6820
Fax: +1 (800) 253-5549

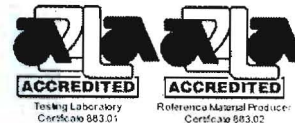
USA
3rd Party Distribution Center
348 Route 11, Champlain,
N.Y. 12919-4816
Phone: +1 (800) 361-6820
Fax: +1 (800) 253-5549

FRANCE
12 Ave. de Québec, Bat. IRIS
SILIC 642, 91965
Villebon sur Yvette, France
Phone: +33 (0) 1 69 18 71 17
Fax: +33 (0) 1 60 92 05 67

GERMANY
Alte Marktobderdorfer Straße 14, 87616
Marktobderdorf
Phone: +49 (0) 8342-89560-61
Fax: +49 (0) 8342-89560-69

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).



2.0 PRODUCT DESCRIPTION

Product Code: Single Analyte Custom Grade Solution
 Catalog Number: CGHO1
 Lot Number: R2-HO691014
 Matrix: 5% (v/v) HNO3
 Value / Analyte(s): 1 000 µg/mL ea:
 Holmium
 Starting Material: Holmium Oxide
 Starting Material Lot#: 1890
 Starting Material Purity: 99.9947%

ID #: 13443
 Opened: _____
 Holmium Single Analyte Custom Grade Solution
Expires: 4/1/2024
 Rec'd: 1/7/2021
 Energy Laboratories Inc 1120 So. 27th Street
 Billings MT 59107

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 999 ± 3 µg/mL
Density: 1.026 g/mL (measured at 20 ± 4 °C)

Assay Information:

Assay Method #1	996 ± 6 µg/mL ICP Assay NIST SRM 3123a Lot Number: 090408
Assay Method #2	998 ± 3 µg/mL EDTA NIST SRM 928 Lot Number: 928
Assay Method #3	1000 ± 3 µg/mL Calculated NIST SRM Lot Number: See Sec. 4.2

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$$X_{CRM/RM} = \sum(w_i)(X_i)$$

X_i = mean of Assay Method i with standard uncertainty $u_{char i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$$w_i = (1/u_{char i}^2) / (\sum(1/u_{char i}^2))$$

$$CRM/RM \text{ Expanded Uncertainty } (\pm) = U_{CRM/RM} = k (u_{char}^2 + u_{bb}^2 + u_{lts}^2 + u_{ts}^2)^{1/2}$$

k = coverage factor = 2

$u_{char} = [\sum(w_i)^2 (u_{char i}^2)]^{1/2}$ where $u_{char i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$$X_{CRM/RM} = (X_a) / (u_{char a})$$

X_a = mean of Assay Method A with

$u_{char a}$ = the standard uncertainty of characterization Method A

$$CRM/RM \text{ Expanded Uncertainty } (\pm) = U_{CRM/RM} = k (u_{char a}^2 + u_{bb}^2 + u_{lts}^2 + u_{ts}^2)^{1/2}$$

k = coverage factor = 2

$u_{char a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES ($\mu\text{g/mL}$)

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3 μm .

M	Ag	<	0.010000	M	Eu	0.000377	M	Na	<	0.036000	M	Se	<	0.004400	M	Zn	<	0.071000
M	Al	<	0.020000	M	Fe	0.002965	M	Nb	<	0.001200	i	Si	<		M	Zr	<	0.000400
M	As	<	0.011000	M	Ga	<	0.001600	M	Nd	0.000183	M	Sm		0.000700				
M	Au	<	0.006400	M	Gd	0.000404	M	Ni	<	0.004800	M	Sn	<	0.002400				
M	B	<	0.091000	M	Ge	<	0.004000	M	Os	<	0.000400	M	Sr	<	0.002400			
M	Ba	<	0.002400	M	Hf	<	0.003200	i	P	<		i	Ta	<				
M	Be	<	0.003200	M	Hg	<	0.005600	M	Pb	<	0.057000	M	Tb		0.000431			
M	Bi	<	0.005600	s	Ho	<		M	Pd	<	0.004400	M	Te	<	0.008000			
M	Ca	<	0.028000	M	In	<	0.001600	M	Pr	0.000204	M	Th	<	0.001200				
M	Cd	<	0.000800	M	Ir	<	0.001600	M	Pt	<	0.000400	M	Ti	<	0.000800			
M	Ce	<	0.004800	O	K	0.002965	M	Rb	<	0.002400	M	Tl	<	0.001600				
M	Co	<	0.001600	M	La	0.000350	M	Re	<	0.000400	M	Tm		0.000323				
M	Cr	<	0.005600	O	Li	<	0.001200	M	Rh	<	0.001600	M	U	<	0.000400			
M	Cs		0.000485	M	Lu	0.037737	M	Ru	<	0.000400	M	V	<	0.029000				
M	Cu	<	0.005600	O	Mg	<	0.003300	n	S	<		M	W	<	0.011000			
M	Dy		0.009434	M	Mn	<	0.001200	M	Sb	<	0.002000	M	Y		0.003504			
M	Er		0.001671	M	Mo	<	0.011000	M	Sc	<	0.001200	M	Yb		0.006199			

M - Checked by ICP-MS O - Checked by ICP-OES i - Spectral Interference
n - Not Checked For s - Solution Standard Element

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.
- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.
- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit www.inorganicventures.com/TCT

Atomic Weight; Valence; Coordination Number; Chemical Form in Solution - 164.93 +3 6 to 9 or 10 for some compounds $\text{Ho}(\text{OH})_x(\text{H}_2\text{O})_{y+3-x}$

Chemical Compatibility - Soluble in HCl, H₂SO₄ and HNO₃. Avoid HF, H₃PO₄ and neutral to basic media. Stable with most metals and inorganic anions forming an insoluble carbonate, oxide, oxalate, and fluoride. Avoid mixing with elements / solutions containing moderate amounts of fluoride.

Stability - 2-100 ppb levels stable for months in 1% HNO₃ / LDPE container. 1-10,000 ppm solutions chemically stable for years in 2-5% HNO₃ / LDPE container.

Ho Containing Samples (Preparation and Solution) - Meta I (Soluble in acids); Oxide (Dissolved by heating in H₂O / HNO₃); Ores (Carbonate fusion in PtO followed by HCl dissolution); Organic Matrices (Dry ash and dissolve in 1:1 H₂O / HCl or HNO₃).

Atomic Spectroscopic Information (ICP-OES D.L.s are given as radial/axial view):

Technique/Line	Estimated D.L.	Order	Interferences (underlined indicates severe)
ICP-MS 165 amu	1 ppt	n/a	149 Sm 16O
ICP-OES 339.898 nm	0.02 / 0.002 µg/mL	1	Ce, Re
ICP-OES 345.600 nm	0.006 / 0.0001 µg/mL	1	U, Ti

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va. 24073, USA; Telephone: 800.669.6799; 540.585.3030, Fax: 540.585.3012; inorganicventures.com; info@inorganicventures.com

11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

April 01, 2020

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **April 01, 2024**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

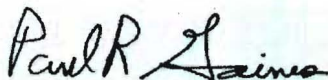
Certificate Approved By:

Michael Booth
Manager, Quality Control



Certifying Officer:

Paul Gaines
CEO, Senior Technical Director



1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

2.0 PRODUCT DESCRIPTION

Product Code: Single Analyte Atomic Absorption Solution
Catalog Number: AALU1
Lot Number: R2-LU689867RAA
Matrix: 2% (v/v) HNO₃
Value / Analyte(s): 1 000 µg/mL ea:
Lutetium

ID #: 13444

Opened: _____

Lutetium Single Analyte Custom Grade Solution

Expires: 3/1/2024

Rec'd: 1/7/2021

Energy Laboratories Inc 1120 So. 27th Street
Billings MT 59107**3.0 CERTIFIED VALUES AND UNCERTAINTIES**

Certified Value: 1000 ± 10 µg/mL
Density: 1.011 g/mL (measured at 20 ± 4 °C)

4.0 TRACEABILITY TO NIST

The concentration of this solution standard has been verified by Inductively Coupled Plasma Spectroscopy (ICP) and is traceable to NIST SRM 3130a.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

N/A

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL**7.1 Storage and Handling Recommendations**

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit www.inorganicventures.com/TCT

Atomic Weight; Valence; Coordination Number; Chemical Form in Solution - 174.97 +3 6 to 9 or 10 for some compounds $\text{Lu}(\text{OH})_x(\text{H}_2\text{O})_{y+3-x}$

Chemical Compatibility -Soluble in HCl, H₂SO₄ and HNO₃. Avoid HF, H₃PO₄ and neutral to basic media. Stable with most metals and inorganic anions forming an insoluble carbonate, oxide, oxalate, and fluoride. Avoid mixing with elements / solutions containing moderate amounts of fluoride.

Stability - 2-100 ppb levels stable for months in 1% HNO₃ / LDPE container. 1-10,000 ppm solutions chemically stable for years in 2-5% HNO₃ / LDPE container.

Lu Containing Samples (Preparation and Solution) -Metal (Soluble in acids); Oxide (Dissolved by heating in H₂O/ HNO₃); Ores (Carbonate fusion in Pt0 followed by HCl dissolution); Organic Matrices (Dry ash and dissolve in 1:1 H₂O / HCl or HNO₃).

Atomic Spectroscopic Information (ICP-OES D.L.s are given as radial/axial view):

Technique/Line	Estimated D.L.	Order	Interferences (underlined indicates severe)
ICP-MS 175 amu	1 ppt	n/a	159 Tb16O
ICP-OES 261.542 nm	0.001 / 0.0003 µg/mL	1	Th, Mo, V, W
ICP-OES 291.139 nm	0.006 / 0.0006 µg/mL	1	Cr, U

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

March 01, 2020

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **March 01, 2024**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

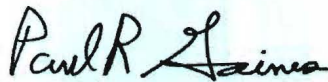
Certificate Approved By:

Michael Booth
Manager, Quality Control



Certifying Officer:

Paul Gaines
CEO, Senior Technical Director



1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

2.0 PRODUCT DESCRIPTION

Product Code: Single Analyte Atomic Absorption Solution
Catalog Number: AATB1
Lot Number: R2-TB695079AA
Matrix: 5% (v/v) HNO₃
Value / Analyte(s): 1 000 µg/mL ea:
Terbium

ID #: 13445
Opened:
Terbium Single Analyte Atomic Absorption So
Expires: 8/19/2024
Rec'd: 1/7/2021
Enerav Laboratories Inc 1120 So. 27th Street
Billings MT 59107

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 1000 ± 10 µg/mL
Density: 1.026 g/mL (measured at 20 ± 4 °C)

4.0 TRACEABILITY TO NIST

The concentration of this solution standard has been verified by Inductively Coupled Plasma Spectroscopy (ICP) and is traceable to NIST SRM 3157a.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

N/A

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL**7.1 Storage and Handling Recommendations**

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit www.inorganicventures.com/TCT

Atomic Weight; Valence; Coordination Number; Chemical Form in Solution - 158.93 +3 6 to 9 or 10 for some compounds $Tb(OH)_x(H_2O)_y+3-x$

Chemical Compatibility -Soluble in HCl, H₂SO₄ and HNO₃. Avoid HF, H₃PO₄ and neutral to basic media. Stable with most metals and inorganic anions forming an insoluble carbonate, oxide, oxalate, and fluoride. Avoid mixing with elements / solutions containing moderate amounts of fluoride.

Stability - 2-100 ppb levels stable for months in 1% HNO₃ / LDPE container. 1-10,000 ppm solutions chemically stable for years in 2 - 5% HNO₃ / LDPE container.

Tb Containing Samples (Preparation and Solution) -Metal (Soluble in acids); Oxide (Dissolve by heating in H₂O/ HNO₃); Ores (Carbonate fusion in PtO followed by HCl dissolution); Organic Matrices (dry ash and dissolve in 1:1 H₂O / HCl or HNO₃).

Atomic Spectroscopic Information (ICP-OES D.L.s are given as radial/axial view):

<u>Technique/Line</u>	<u>Estimated D.L.</u>	<u>Order</u>	<u>Interferences (underlined indicates severe)</u>
ICP-MS 159 amu	1 ppt	N/A	
ICP-OES 350.917 nm	0.02 / 0.002 µg/mL	1	V, Th, Ce, Zr
ICP-OES 367.635 nm	0.06 / 0.006 µg/mL	1	Ta, Ce, Co, U

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

August 19, 2020

- The certification is valid within the measurement uncertainty specified provided the CRMWRM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRMWRM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **August 19, 2024**

- The date after which this CRMWRM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRMWRM can be supported by long term stability studies conducted on properly stored and handled CRMWRMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRMWRM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRMWRM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS


Certificate Approved By:

Michael Booth
Director, Quality Control



Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director



1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).



2.0 PRODUCT DESCRIPTION

Product Code: Single Analyte Custom Grade Solution
Catalog Number: CGIN1
Lot Number: R2-IN693030
Matrix: 2% (v/v) HNO₃
Value / Analyte(s): 1 000 µg/mL ea:
Indium
Starting Material: Indium Metal
Starting Material Lot#: 2249
Starting Material Purity: 99.9997%

ID #: 13654
Opened: _____
Indium Single Analyte Custom Grade Solution
Expires: 5/29/2024
Rec'd: 3/18/2021
Energy Laboratories Inc 1120 So 27th Street
Billings MT 59107

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 1001 ± 3 µg/mL
Density: 1.011 g/mL (measured at 20 ± 4 °C)

Assay Information:

Assay Method #1	998 ± 6 µg/mL ICP Assay NIST SRM 3124a Lot Number: 110516
Assay Method #2	1001 ± 3 µg/mL EDTA NIST SRM 928 Lot Number: 928
Assay Method #3	1002 ± 3 µg/mL Calculated NIST SRM Lot Number: See Sec. 4.2

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$$X_{CRM/RM} = \sum(w_i) (X_i)$$

X_i = mean of Assay Method I with standard uncertainty $u_{char i}$
 w_i = the weighting factors for each method calculated using the inverse square of the variance:
 $w_i = (1/u_{char i})^2 / (\sum(1/(u_{char j})^2))$

$$CRM/RM \text{ Expanded Uncertainty } (\pm) = U_{CRM/RM} = k (u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{1/2}$$

k = coverage factor = 2
 $u_{char} = (\sum(w_i)^2 (u_{char i})^2)^{1/2}$ where $u_{char i}$ are the errors from each characterization method
 u_{bb} = bottle to bottle homogeneity standard uncertainty
 u_{lts} = long term stability standard uncertainty (storage)
 u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$$X_{CRM/RM} = (X_a) (u_{char a})$$

X_a = mean of Assay Method A with
 $u_{char a}$ = the standard uncertainty of characterization Method A

$$CRM/RM \text{ Expanded Uncertainty } (\pm) = U_{CRM/RM} = k (u^2_{char a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{1/2}$$

k = coverage factor = 2
 $u_{char a}$ = the errors from characterization
 u_{bb} = bottle to bottle homogeneity standard uncertainty
 u_{lts} = long term stability standard uncertainty (storage)
 u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRMRM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRMRM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

M Ag < 0.000670	M Eu < 0.000670	O Na < 0.000371	M Se < 0.007300	M Zn < 0.035000
O Al < 0.016000	O Fe < 0.000106	M Nb < 0.000670	O Si < 0.001486	M Zr < 0.000670
M As < 0.005400	M Ga < 0.000670	M Nd < 0.000670	M Sm < 0.000670	
M Au < 0.000670	M Gd < 0.000670	O Ni < 0.015000	M Sn < 0.001400	
O B < 0.000265	M Ge < 0.003400	M Os < 0.002000	O Sr < 0.000240	
O Ba < 0.001200	M Hf < 0.000670	n P < 0.000670	M Ta < 0.000670	
M Be < 0.000670	M Hg < 0.002000	M Pb < 0.000177	M Tb < 0.000670	
M Bi < 0.001400	M Ho < 0.000670	M Pd < 0.000670	M Te < 0.014000	
O Ca < 0.000548	s In < 0.000670	M Pr < 0.000670	M Th < 0.000670	
M Cd < 0.000670	M Ir < 0.000670	M Pt < 0.000670	O Tl < 0.002100	
M Ce < 0.000670	O K < 0.000247	M Rb < 0.000670	M Tl < 0.000670	
M Co < 0.001400	M La < 0.000670	M Re < 0.000670	M Tm < 0.000670	
O Cr < 0.002900	O Li < 0.000120	M Rh < 0.000670	M U < 0.000670	
M Cs < 0.001400	M Lu < 0.000670	M Ru < 0.000670	M V < 0.000670	
O Cu < 0.002400	O Mg < 0.000026	n S < 0.000670	M W < 0.000670	
M Dy < 0.000670	O Mn < 0.000720	M Sb < 0.002700	M Y < 0.000670	
M Er < 0.000670	M Mo < 0.001400	O Sc < 0.000600	M Yb < 0.000670	

M - Checked by ICP-MS O - Checked by ICP-OES i - Spectral Interference
 n - Not Checked For s - Solution Standard Element

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit www.inorganicventures.com/TCT

Atomic Weight; Valence; Coordination Number; Chemical Form in Solution - 114.82 +3 6 In(H₂O)₆+3

Chemical Compatibility -Soluble in HCl, HNO₃, and H₂SO₄. Avoid neutral and basic media. Stable with most metals and inorganic anions. The oxalate, sulfide, carbonate, hydroxide and phosphate are insoluble in water.

Stability - 2-100 ppb levels stable for months in 1% HNO₃ / LDPE container. 1-10,000 ppm solutions chemically stable for years in 2-5% HNO₃ / LDPE container.

In Containing Samples (Preparation and Solution) -Metal (Best dissolved in HCl / HNO₃); Oxide (Soluble in mineral acids); Ores (Carbonate fusion in PtO followed by HCl dissolution); Organic Matrices (Sulfuric/peroxide digestion or dry ash and dissolution in dilute HCl).

Atomic Spectroscopic Information (ICP-OES D.L.s are given as radial/axial view):

Technique/Line	Estimated D.L.	Order	Interferences (underlined indicates severe)
ICP-MS 115 amu	1 ppt	n/a	115Sn, 99Ru16O
ICP-OES 158.583 nm	0.05 / 0.002 µg/mL	1	
ICP-OES 230.606 nm	0.1 / 0.03 µg/mL	1	Ni, Os
ICP-OES 325.609 nm	0.2 / 0.05 µg/mL	1	Mn, Mo, Th

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va. 24073, USA; Telephone: 800.669.6799; 540.585.3030, Fax: 540.585.3012; inorganicventures.com; info@inorganicventures.com

11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

May 29, 2020

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **May 29, 2024**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Michael Booth
Manager, Quality Control



Certifying Officer:

Paul Gaines
CEO, Senior Technical Director



Bi

1.0 DESCRIPTION: *PlasmaCAL ICP/ICPMS Standard - Bismuth 1000 µg/ml*
 Catalogue Number: 140-051-830/-831/-835
 Starting Material: Bismuth Metal 99.99+%
 Lot Number: **S210302013**
 Matrix: 4% HNO₃ (See Section 3 for actual matrix)
 Expiration Date (End of month): **March 2023** (or 15 months after bottle is opened, whichever comes first)

2.0 CERTIFIED VALUES AND ASSOCIATED UNCERTAINTY:
 Certified Concentration: **1002 µg/ml +/- 4 µg/ml**
982 µg/g +/- 4 µg/g
 Method of analysis: Inductively Coupled Plasma Atomic Emission Spectroscopy (ICP-AES)
 Traceability: NIST Standard Reference Material 3106 Lot: **180815**

Note: The uncertainty of the certified value has been calculated from applicable uncertainty contributors (u_i) including uncertainty established during characterization of the material (u_{char}), the between bottle variation (u_{bb}), short-term stability (u_{sts}) and long-term stability (u_{lts}) according to the model $u_c = \sqrt{(u_{char}^2 + u_{bb}^2 + u_{sts}^2 + u_{lts}^2)}$. This combined uncertainty has been further multiplied by a coverage factor (k) of 2 to provide a 95% confidence interval.

3.0 REFERENCE VALUES:
 Density: **1.020 g/ml @ 23.4 °C**
 Actual Matrix: **4.0% (v/v) HNO₃**

ID #: 14230
 Opened: _____
 PlasmaCal Standard Bismuth
Expires: 3/31/2023
 Rec'd: 9/1/2021
 Enerav Laboratories Inc 1120 So. 27th Street
 Billings MT 59107

Trace Metal Impurities as tested by ICP-MS:

Element	Conc. (ppm)	Element	Conc. (ppm)	Element	Conc. (ppm)	Element	Conc. (ppm)
Ag	<0.0010	Fe	<0.0090	Nd	<0.0010	Sn	<0.0010
Al	0.0042	Ga	<0.0010	Ni	<0.0010	Sr	<0.0025
As	<0.0010	Gd	<0.0010	Os	<0.0010	Ta	<0.0010
Au	<0.0010	Ge	<0.0010	P	<0.0026	Tb	<0.0010
B	<0.0015	Hf	<0.0010	Pb	<0.0010	Te	<0.0010
Ba	<0.0010	Hg	*	Pd	<0.0010	Th	<0.0010
Be	<0.0010	Ho	<0.0010	Pr	<0.0010	Ti	<0.0012
Bi	N/A	In	<0.0010	Pt	<0.0010	Tl	<0.0055
Ca	<0.0135	Ir	<0.0010	Rb	<0.0010	Tm	<0.0010
Cd	<0.0010	K	<0.0120	Re	<0.0010	U	<0.0010
Ce	<0.0010	La	<0.0010	Rh	<0.0010	V	<0.0010
Co	<0.0010	Li	<0.0010	Ru	<0.0010	W	<0.0020
Cr	<0.0010	Lu	<0.0010	S	*	Y	<0.0010
Cs	<0.0010	Mg	<0.0010	Sb	<0.0010	Yb	<0.0010
Cu	<0.0010	Mn	<0.0010	Sc	<0.0010	Zn	<0.0010
Dy	<0.0010	Mo	<0.0010	Se	<0.0010	Zr	<0.0010
Er	<0.0010	Na	<0.0010	Si	<0.1		
Eu	<0.0010	Nb	<0.0010	Sm	<0.0010		

*: Not tested

4.0 APPROVAL AND DATE OF CERTIFICATION:
 Certification Approval: Daniel Boisvert, Chemist
 Certification Date: March 04, 2021

Daniel Boisvert

5.0 INTENDED USE / UTILISATION PRÉVUE:

- ICP Standards: For the calibration of, including but not limited to: ICP-AES, ICP-MS, FAAS, GFAA, XRF and DCP. / *Étalons ICP : Pour l'étalonnage d'instruments de mesure tels que: ICP-AES, ICP-MS, FAAS, GFAA, XRF et DCP.*
 - AA Standards: For the calibration of Flame (FAAS) and Graphite Furnace (GFAA) Atomic Absorption Spectrometers. / *Étalons AA : Pour l'étalonnage de spectromètres d'absorption atomique flamme (FAAS) et four au graphite (GFAA).*
 - Matrix Modifiers: For the optimization of analytical conditions to provide better Graphite Furnace Atomic Absorption (GFAA) instrument response and improved detection limits. / *Modificateur de matrice : Pour l'optimisation des conditions analytiques afin de fournir des meilleures réponses instrumentales et limites de détection pour SAA four au graphite.*
 - pH Standards: For the calibrating pH meters or for other wet chemistry applications. / *Étalons pH : Pour étalonnage de pH mètres et autres applications de chimie humide.*
 - Conductivity Standards: For electrolytic conductivity measurement as a calibration standard. / *Étalons de conductivité : Comme étalon pour les mesures de conductivité électrolytiques.*
 - IC Standards: for calibration of, but not limited to IC, HPLC, TLC, ISE, IR, NMR, MS, UV/VIS or other wet chemistry applications. / *Étalons IC : Pour étalonnage d'instruments tels que : IC, HPLC, TLC, ISE, IR, NMR, MS, UV/VIS et autres applications de chimie humide.*
- For any inquiries, please contact **SCP SCIENCE**. / *Pour toute question, veuillez contacter SCP SCIENCE.*

6.0 INSTRUCTIONS FOR USE / INSTRUCTIONS D'UTILISATION:

Handling and Storage / Manutention et entreposage: Keep product tightly capped when not in use. The solution should be opened for a minimum amount of time necessary to dispense the amount required. Do not pipet or use directly from container. Do not return unused portions back to container. Store under normal laboratory conditions. Avoid exposure to excessive sources of heat and humidity or direct sunlight. / *Garder les contenants bien fermés lorsque non utilisés. Le contenant devrait être ouvert seulement pour le temps requis afin de prélever la quantité nécessaire. Ne pas pipetter ou utiliser directement du contenant. Ne pas retourner les portions non-utilisées dans le contenant. Conserver dans des conditions normales de laboratoire. Éviter l'exposition à des sources de chaleur et d'humidité excessives ou à l'exposition solaire directe.*

Stability / Stabilité: This Standard is guaranteed to be stable and accurate to within the specified uncertainty of measurement up to the unopened expiry date, if sealed, or up to the opened expiry date (when indicated), whichever comes first, provided the solution is kept tightly capped and stored under the indicated storage conditions. Purchasers will be notified of any significant changes resulting in re-certification or withdrawal of the product prior to the expiration date. / *La stabilité et l'exactitude de cet étalon sont garanties d'être à l'intérieur de l'incertitude de mesure, jusqu'à la date d'expiration de la bouteille non-ouverte, si scellée, ou jusqu'à la date d'expiration de la bouteille ouverte (si indiquée), en présupposant que le contenant est maintenu fermé et gardé dans les conditions d'entreposage indiquées. Les acheteurs seront avisés dans le cas où il y aura des changements significatifs nécessitant une re-certification ou un rappel du produit avant la date d'expiration.*

7.0 HAZARDOUS INFORMATION / INFORMATION SUR LES RISQUES POTENTIELS:

Please refer to the associated Safety Data Sheet (SDS) for information regarding this product (available at www.SCPSCIENCE.com). / *SVP vous référer à la Fiche Signalétique applicable pour de l'information sur ce produit (Disponible à www.SCPSCIENCE.com).*

8.0 HOMOGENEITY / HOMOGÉNÉITÉ:

This solution has been blended according to an in-house procedure and its homogeneity is guaranteed to be fit for purpose when a sample size sufficient for the intended method of analysis is used. / *Cette solution a été préparée selon une procédure maison et nous assurons que sa homogénéité est approprié à l'emploi lorsqu'un échantillon suffisant pour la méthode d'analyse prévue est utilisé.*

9.0 TRACEABILITY / TRAÇABILITÉ:

This CRM (Certified Reference Material) is traceable to the NIST SRM (Standard Reference Material) indicated in section 2 through an unbroken chain of comparisons. In addition, balances used are regularly calibrated using weights which are traceable to NIST (National Institute of Standards and Technology) or NRC (National Research Council of Canada) standards. All conductivity meters used to analyze this standard have been regularly calibrated using a NIST or NRC traceable Thermometer and standards. All pH meters used to analyze this standard have been regularly calibrated using a NIST or NRC traceable thermometer and pH/MV simulator. / *Ce matériel de référence certifié est traçable au Matériel de Référence Standardisé de NIST indiqué à la section 2 par une chaîne de comparaison ininterrompue. De plus, les balances utilisées sont étalonnées régulièrement en utilisant des poids qui sont traçables au NIST (National Institute of Standards and Technology) ou au CRNC (Conseil National de Recherches Canada). Tout conductimètre utilisé afin d'analyser cet étalon a été sujet à un étalonnage périodique utilisant des thermomètres et étalons traçables au NIST ou CNRC. Tout pH mètre utilisé afin d'analyser cet étalon a été sujet à un étalonnage périodique utilisant des thermomètres et un simulateur pH/MV traçables au NIST ou au CNRC.*

10.0 PREPARATION / PRÉPARATION:

For the preparation of these solutions, 18 megohm/cm double deionized water, high-purity acids and glassware calibrated to ASTM Class A specifications are used. / *Une eau de 18 megohm/cm doublement déionisé, de l'acide de haute pureté, ainsi que de la verrerie étalonnée afin de satisfaire les spécifications Classe A de ASTM ont été utilisés pour la préparation de cet étalon.*

11.0 QUALITY SYSTEM CERTIFICATIONS / CERTIFICATIONS DE SYSTÈME QUALITÉ:

ISO 9001 Certification / Certification ISO 9001: This standard was produced in a facility which operates under a registered ISO 9001 Quality Management System. Please consult our web site for a copy of the most recent revision of our certificate of registration. / *Cet étalon a été fabriqué dans un laboratoire qui utilise un Système de Gestion de la Qualité enregistré à la norme ISO 9001. Veuillez consulter notre site web pour obtenir la version la plus récente de notre certificat d'enregistrement.*

ISO 17025 Accreditation / Accréditation ISO 17025: SCP SCIENCE (Corporate Headquarters) operates an ISO 17025 accredited laboratory. Please consult our web site for a copy of the most recent revision of our certificate and scope of accreditation. / *SCP SCIENCE (Siège social) est accréditée ISO 17025. Veuillez consulter notre site web afin d'obtenir la plus récente version de notre certificat d'accréditation ainsi que la portée de notre accréditation.*

ISO 17034 Accreditation / Accréditation ISO 17034: SCP SCIENCE (Corporate Headquarters) is an ISO 17034 accredited Reference Material Producer. Please consult our website for a copy of our most recent certificate and scope of accreditation. / *SCP SCIENCE (Siège social) est un Fabricant de Matériaux de Référence Accrédité ISO 17034. Veuillez consulter notre site web afin d'obtenir la plus récente version de notre certificat d'accréditation ainsi que la portée de notre accréditation.*

CORPORATE HEADQUARTERS
21800 Clark Graham
Baie D'Urfé (Montréal), Quebec,
H9X 4B6 Canada
Phone: +1 (800) 361-6820
Fax: +1 (800) 253-5549

USA
3rd Party Distribution Center
348 Route 11, Champlain,
N.Y. 12919-4816
Phone: +1 (800) 361-6820
Fax: +1 (800) 253-5549

FRANCE
12 Ave. de Québec, Bat. IRIS
91140, Villebon-sur-Yvette
Phone: +33 (0) 1 69 18 71 17
Fax: +33 (0) 1 60 92 05 67

GERMANY
Alte Marktoberdorfer Straße 14, 87616
Marktoberdorf
Phone: +49 (0) 8342-89560-61
Fax: +49 (0) 8342-89560-69

Sc

1.0 DESCRIPTION: *PlasmaCAL ICP/ICPMS Standard - Scandium 1000 µg/ml*
 Catalogue Number: 140-051-210/-211/-215
 Starting Material: Scandium(III) Oxide 99.99+%
 Lot Number: **S200813011**
 Matrix: 4% HNO₃ (See Section 3 for actual matrix)
 Expiration Date (End of month): **August 2022** (or 15 months after bottle is opened, whichever comes first)

2.0 CERTIFIED VALUES AND ASSOCIATED UNCERTAINTY:
 Certified Concentration: **999 µg/ml +/- 5 µg/ml**
978 µg/g +/- 5 µg/g
 Method of analysis: Inductively Coupled Plasma Atomic Emission Spectroscopy (ICP-AES)
 Traceability: NIST Standard Reference Material 3148a Lot: **100701**

Note: The uncertainty of the certified value has been calculated from applicable uncertainty contributors (u_i) including uncertainty established during characterization of the material (u_{char}), the between bottle variation (u_{bb}), short-term stability (u_{sts}) and long-term stability (u_{lts}) according to the model $u_c = \sqrt{(u_{char}^2 + u_{bb}^2 + u_{sts}^2 + u_{lts}^2)}$. This combined uncertainty has been further multiplied by a coverage factor (k) of 2 to provide a 95% confidence interval.

3.0 REFERENCE VALUES:
 Density: **1.022 g/ml @ 22.5 °C**
 Actual Matrix: **4.0% (v/v) HNO₃**

ID #: 13641

Opened: _____

ICP/ICPMS Standard Scandium

Expires: 8/31/2022

Rec'd: 3/16/2021

Energv Laboratories Inc 1120 So. 27th Street
 Billings MT 59107

Trace Metal Impurities as tested by ICP-AES:

Element	Conc. (ppm)	Element	Conc. (ppm)	Element	Conc. (ppm)	Element	Conc. (ppm)
Ag	<0.0244	Fe	<0.0102	Nd	<0.0319	Sn	<0.1535
Al	<0.0280	Ga	<0.0260	Ni	<0.0139	Sr	<0.0004
As	<0.0105	Gd	<0.0137	Os	*	Ta	<0.0635
Au	<0.0085	Ge	<0.0548	P	<0.0104	Tb	<0.0146
B	<0.0507	Hf	<0.0339	Pb	<0.0492	Te	<0.4025
Ba	<0.0005	Hg	*	Pd	<0.0282	Th	<0.0471
Be	<0.0022	Ho	<0.0065	Pr	<0.1370	Ti	<0.0013
Bi	<0.0156	In	<0.0105	Pt	<0.2665	Tl	<0.5600
Ca	0.0742	Ir	<0.0243	Rb	*	Tm	<0.0105
Cd	<0.0048	K	<0.0128	Re	<0.0076	U	<0.2490
Ce	<0.0393	La	<0.0173	Rh	<0.0163	V	<0.0049
Co	<0.0224	Li	<0.0028	Ru	<0.0304	W	<0.0443
Cr	<0.0063	Lu	<0.0021	S	<0.0515	Y	<0.0033
Cs	*	Mg	<0.0009	Sb	<0.0197	Yb	<0.0057
Cu	<0.0200	Mn	<0.0089	Sc	N/A	Zn	<0.0045
Dy	<0.0214	Mo	<0.0229	Se	<0.1245	Zr	0.1015
Er	<0.0349	Na	<0.0191	Si	<0.0091		
Eu	<0.0017	Nb	<0.0112	Sm	<0.1105		

*: Not tested

4.0 APPROVAL AND DATE OF CERTIFICATION:
 Certification Approval: Daniel Boisvert, Chemist
 Certification Date: August 20, 2020

Daniel Boisvert

5.0 INTENDED USE / UTILISATION PRÉVUE:

- ICP Standards: For the calibration of, including but not limited to: ICP-AES, ICP-MS, FAAS, GFAA, XRF and DCP. / *Étalons ICP : Pour l'étalonnage d'instruments de mesure tels que: ICP-AES, ICP-MS, FAAS, GFAA, XRF et DCP.*
 - AA Standards: For the calibration of Flame (FAAS) and Graphite Furnace (GFAA) Atomic Absorption Spectrometers. / *Étalons AA : Pour l'étalonnage de spectromètres d'absorption atomique flamme (FAA) et four au graphite (GFAA).*
 - Matrix Modifiers: For the optimization of analytical conditions to provide better Graphite Furnace Atomic Absorption (GFAA) instrument response and improved detection limits. / *Modificateur de matrice : Pour l'optimisation des conditions analytiques afin de fournir des meilleures réponses instrumentales et limites de détection pour SAA four au graphite.*
 - pH Standards: For the calibrating pH meters or for other wet chemistry applications. / *Étalons pH : Pour étalonnage de pH mètres et autres applications de chimie humide.*
 - Conductivity Standards: For electrolytic conductivity measurement as a calibration standard. / *Étalons de conductivité : Comme étalon pour les mesures de conductivité électrolytiques.*
 - IC Standards: for calibration of, but not limited to IC, HPLC, TLC, ISE, IR, NMR, MS, UV/VIS or other wet chemistry applications. / *Étalons IC : Pour étalonnage d'instruments tels que : IC, HPLC, TLC, ISE, IR, NMR, MS, UV/VIS et autres applications de chimie humide.*
- For any inquiries, please contact **SCP SCIENCE**. / *Pour toute question, veuillez contacter SCP SCIENCE.*

6.0 INSTRUCTIONS FOR USE / INSTRUCTIONS D'UTILISATION:

Handling and Storage / Manutention et entreposage: Keep product tightly capped when not in use. The solution should be opened for a minimum amount of time necessary to dispense the amount required. Do not pipet or use directly from container. Do not return unused portions back to container. Store under normal laboratory conditions. Avoid exposure to excessive sources of heat and humidity or direct sunlight. / *Garder les contenants bien fermés lorsque non utilisés. Le contenant devrait être ouvert seulement pour le temps requis afin de prélever la quantité nécessaire. Ne pas pipetter ou utiliser directement du contenant. Ne pas retourner les portions non-utilisées dans le contenant. Conserver dans des conditions normales de laboratoire. Éviter l'exposition à des sources de chaleur et d'humidité excessives ou à l'exposition solaire directe.*

Stability / Stabilité: This Standard is guaranteed to be stable and accurate to within the specified uncertainty of measurement up to the unopened expiry date, if sealed, or up to the opened expiry date (when indicated), whichever comes first, provided the solution is kept tightly capped and stored under the indicated storage conditions. Purchasers will be notified of any significant changes resulting in re-certification or withdrawal of the product prior to the expiration date. / *La stabilité et l'exactitude de cet étalon sont garanties d'être à l'intérieur de l'incertitude de mesure, jusqu'à la date d'expiration de la bouteille non-ouverte, si scellée, ou jusqu'à la date d'expiration de la bouteille ouverte (si indiquée), en présumant que le contenant est maintenu fermé et gardé dans les conditions d'entreposage indiquées. Les acheteurs seront avisés dans le cas où il y aura des changements significatifs nécessitant une re-certification ou un rappel du produit avant la date d'expiration.*

7.0 HAZARDOUS INFORMATION / INFORMATION SUR LES RISQUES POTENTIELS:

Please refer to the associated Safety Data Sheet (SDS) for information regarding this product (available at www.SCPSCIENCE.com). / *SVP vous référer à la Fiche Signalétique applicable pour de l'information sur ce produit (Disponible à www.SCPSCIENCE.com).*

8.0 HOMOGENEITY / HOMOGÉNÉITÉ:

This solution has been blended according to an in-house procedure and its homogeneity is guaranteed to be fit for purpose when a sample size sufficient for the intended method of analysis is used. / *Cette solution a été préparée selon une procédure maison et nous assurons que sa homogénéité est approprié à l'emploi lorsqu'un échantillon suffisant pour la méthode d'analyse prévue est utilisé.*

9.0 TRACEABILITY / TRAÇABILITÉ:

This CRM (Certified Reference Material) is traceable to the NIST SRM (Standard Reference Material) indicated in section 2 through an unbroken chain of comparisons. In addition, balances used are regularly calibrated using weights which are traceable to NIST (National Institute of Standards and Technology) or NRC (National Research Council of Canada) standards. All conductivity meters used to analyze this standard have been regularly calibrated using a NIST or NRC traceable Thermometer and standards. All pH meters used to analyze this standard have been regularly calibrated using a NIST or NRC traceable thermometer and pH/MV simulator. / *Ce matériel de référence certifié est traçable au Matériel de Référence Standardisé de NIST indiqué à la section 2 par une chaîne de comparaison ininterrompue. De plus, les balances utilisées sont étalonnées régulièrement en utilisant des poids qui sont traçables au NIST (National Institute of Standards and Technology) ou au CRNC (Conseil National de Recherches Canada). Tout conductimètre utilisé afin d'analyser cet étalon a été sujet à un étalonnage périodique utilisant des thermomètres et étalons traçables au NIST ou CNRC. Tout pH mètre utilisé afin d'analyser cet étalon a été sujet à un étalonnage périodique utilisant des thermomètres et un simulateur pH/MV traçables au NIST ou au CNRC.*

10.0 PREPARATION / PRÉPARATION:

For the preparation of these solutions, 18 meghom/cm double deionized water, high-purity acids and glassware calibrated to ASTM Class A specifications are used. / *Une eau de 18 meghom/cm doublement déionisé, de l'acide de haute pureté, ainsi que de la verrerie étalonnée afin de satisfaire les spécifications Classe A de ASTM ont été utilisés pour la préparation de cet étalon.*

11.0 QUALITY SYSTEM CERTIFICATIONS / CERTIFICATIONS DE SYSTÈME QUALITÉ:

ISO 9001 Certification / Certification ISO 9001: This standard was produced in a facility which operates under a registered ISO 9001 Quality Management System. Please consult our web site for a copy of the most recent revision of our certificate of registration. / *Cet étalon a été fabriqué dans un laboratoire qui utilise un Système de Gestion de la Qualité enregistré à la norme ISO 9001. Veuillez consulter notre site web pour obtenir la version la plus récente de notre certificat d'enregistrement.*

ISO 17025 Accreditation / Accréditation ISO 17025: SCP SCIENCE (Corporate Headquarters) operates an ISO 17025 accredited laboratory. Please consult our web site for a copy of the most recent revision of our certificate and scope of accreditation. / *SCP SCIENCE (Siège social) est accréditée ISO 17025. Veuillez consulter notre site web afin d'obtenir la plus récente version de notre certificat d'accréditation ainsi que la portée de notre accréditation.*

ISO 17034 Accreditation / Accréditation ISO 17034: SCP SCIENCE (Corporate Headquarters) is an ISO 17034 accredited Reference Material Producer. Please consult our website for a copy of our most recent certificate and scope of accreditation. / *SCP SCIENCE (Siège social) est un Fabricant de Matériaux de Référence Accrédité ISO 17034. Veuillez consulter notre site web afin d'obtenir la plus récente version de notre certificat d'accréditation ainsi que la portée de notre accréditation.*

CORPORATE HEADQUARTERS
21800 Clark Graham
Baie D'Urfé (Montréal), Quebec,
H9X 4B6 Canada
Phone: +1 (800) 361-6820
Fax: +1 (800) 253-5549

USA
3rd Party Distribution Center
348 Route 11, Champlain,
N.Y. 12919-4816
Phone: +1 (800) 361-6820
Fax: +1 (800) 253-5549

FRANCE
12 Ave. de Québec, Bat. IRIS
SILIC 642, 91965
Villebon sur Yvette, France
Phone: +33 (0) 1 69 18 71 17
Fax: +33 (0) 1 60 92 05 67

GERMANY
Alte Marktoberdorfer Straße 14, 87616
Marktoberdorf
Phone: +49 (0) 8342-89560-61
Fax: +49 (0) 8342-89560-69

ID #: 14710

Opened:

ICP/ICPMS Standard Gold

Expires: 12/31/2023

Rec'd: 12/29/2021

Eneray Laboratories Inc 1120 So. 27th Street

Billings MT 59107

SCP SCIENC

Providing Innovative Solutions to Analytical

Certificate of Analysis**Au****1.0 DESCRIPTION:****PlasmaCAL ICP/ICPMS Standard - Gold 1000 µg/ml**

Catalogue Number: 140-052-790/-791/-795

Starting Material: Gold Metal 99.99+%

Lot Number: **S211129013**

Matrix: 10% HCl (See Section 3 for actual matrix)

Expiration Date (End of month): **December 2023** (or 15 months after bottle is opened, whichever comes first)**2.0 CERTIFIED VALUES AND ASSOCIATED UNCERTAINTY:**Certified Concentration: **1001 µg/ml +/- 4 µg/ml****982 µg/g +/- 4 µg/g**

Method of analysis: Inductively Coupled Plasma Atomic Emission Spectroscopy (ICP-AES)

Traceability: NIST Standard Reference Material 3121 Lot: **991806**

Note: The uncertainty of the certified value has been calculated from applicable uncertainty contributors (u_i) including uncertainty established during characterization of the material (u_{char}), the between bottle variation (u_{bb}), short-term stability (u_{sts}) and long-term stability (u_{lts}) according to the model $u_c = \sqrt{(u_{char}^2 + u_{bb}^2 + u_{sts}^2 + u_{lts}^2)}$. This combined uncertainty has been further multiplied by a coverage factor (k) of 2 to provide a 95% confidence interval.

3.0 REFERENCE VALUES:Density: **1.019 g/ml @ 22.4 °C**Actual Matrix: **10.0% (v/v) HCl**

Trace Metal Impurities as tested by ICP-MS:

Element	Conc. (ppm)	Element	Conc. (ppm)	Element	Conc. (ppm)	Element	Conc. (ppm)
Ag	0.3851	Fe	<0.0090	Nd	<0.0010	Sn	<0.0010
Al	0.0062	Ga	<0.0010	Ni	<0.0010	Sr	<0.0025
As	<0.0010	Gd	<0.0010	Os	<0.0010	Ta	<0.0010
Au	N/A	Ge	<0.0010	P	<0.0132	Tb	<0.0010
B	<0.0015	Hf	<0.0010	Pb	<0.0010	Te	<0.0010
Ba	<0.0010	Hg	*	Pd	0.0434	Th	<0.0010
Be	<0.0010	Ho	<0.0010	Pr	<0.0010	Ti	<0.0012
Bi	<0.0010	In	<0.0010	Pt	0.0048	Tl	<0.0011
Ca	<0.0135	Ir	<0.0010	Rb	<0.0010	Tm	<0.0010
Cd	<0.0010	K	0.0362	Re	<0.0010	U	<0.0010
Ce	<0.0010	La	<0.0010	Rh	<0.0010	V	<0.0010
Co	<0.0010	Li	<0.0010	Ru	<0.0010	W	<0.0020
Cr	<0.0010	Lu	<0.0010	S	*	Y	<0.0010
Cs	0.0029	Mg	<0.0010	Sb	<0.0010	Yb	<0.0010
Cu	0.0023	Mn	<0.0010	Sc	<0.0010	Zn	<0.0010
Dy	<0.0010	Mo	<0.0010	Se	<0.01	Zr	<0.0010
Er	<0.0010	Na	0.0070	Si	<0.1		
Eu	<0.0010	Nb	<0.0010	Sm	<0.0010		

*: Not tested

4.0 APPROVAL AND DATE OF CERTIFICATION:

Certification Approval: Daniel Boisvert, Chemist

Certification Date: December 10, 2021

Daniel Boisvert

5.0 INTENDED USE / UTILISATION PRÉVUE:

- ICP Standards: For the calibration of, including but not limited to: ICP-AES, ICP-MS, FAAS, GFAA, XRF and DCP. / *Étalons ICP* : Pour l'étalonnage d'instruments de mesure tels que: ICP-AES, ICP-MS, FAAS, GFAA, XRF et DCP.
- AA Standards: For the calibration of Flame (FAAS) and Graphite Furnace (GFAA) Atomic Absorption Spectrometers. / *Étalons AA* : Pour l'étalonnage de spectromètres d'absorption atomique flamme (GFAA) et four au graphite (GFAA).
- Matrix Modifiers: For the optimization of analytical conditions to provide better Graphite Furnace Atomic Absorption (GFAA) instrument response and improved detection limits. / *Modificateur de matrice* : Pour l'optimisation des conditions analytiques afin de fournir des meilleures réponses instrumentales et limites de détection pour SAA four au graphite.
- pH Standards: For the calibrating pH meters or for other wet chemistry applications. / *Étalons pH* : Pour étalonnage de pH mètres et autres applications de chimie humide.
- Conductivity Standards: For electrolytic conductivity measurement as a calibration standard. / *Étalons de conductivité* : Comme étalon pour les mesures de conductivité électrolytiques.
- IC Standards: for calibration of, but not limited to IC, HPLC, TLC, ISE, IR, NMR, MS, UV/VIS or other wet chemistry applications. / *Étalons IC* : Pour étalonnage d'instruments tels que : IC, HPLC, TLC, ISE, IR, NMR, MS, UV/VIS et autres applications de chimie humide.
For any inquiries, please contact **SCP SCIENCE**. / *Pour toute question, veuillez contacter SCP SCIENCE.*

6.0 INSTRUCTIONS FOR USE / INSTRUCTIONS D'UTILISATION:

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Stability / Stabilité: This Standard is guaranteed to be stable and accurate to within the specified uncertainty of measurement up to the unopened expiry date, if sealed, or up to the opened expiry date (when indicated), whichever comes first, provided the solution is kept tightly capped and stored under the indicated storage conditions. Purchasers will be notified of any significant changes resulting in re-certification or withdrawal of the product prior to the expiration date. / *La stabilité et l'exactitude de cet étalon sont garanties d'être à l'intérieur de l'incertitude de mesure, jusqu'à la date d'expiration de la bouteille non-ouverte, si scellée, ou jusqu'à la date d'expiration de la bouteille ouverte (si indiquée), en présumant que le contenant est maintenu fermé et gardé dans les conditions d'entreposage indiquées. Les acheteurs seront avisés dans le cas où il y aura des changements significatifs nécessitant une re-certification ou un rappel du produit avant la date d'expiration.*

7.0 HAZARDOUS INFORMATION / INFORMATION SUR LES RISQUES POTENTIELS:

Please refer to the associated Safety Data Sheet (SDS) for information regarding this product (available at www.SCPSCIENCE.com). / *SVP vous référer à la Fiche Signalétique applicable pour de l'information sur ce produit (Disponible à www.SCPSCIENCE.com).*

8.0 HOMOGENEITY / HOMOGÉNÉITÉ:

This solution has been blended according to an in-house procedure and its homogeneity is guaranteed to be fit for purpose when a sample size sufficient for the intended method of analysis is used. / *Cette solution a été préparée selon une procédure maison et nous assurons que sa homogénéité est approprié à l'emploi lorsqu'un échantillon suffisant pour la méthode d'analyse prévue est utilisé.*

9.0 TRACEABILITY / TRAÇABILITÉ:

This CRM (Certified Reference Material) is traceable to the NIST SRM (Standard Reference Material) indicated in section 2 through an unbroken chain of comparisons. In addition, balances used are regularly calibrated using weights which are traceable to NIST (National Institute of Standards and Technology) or NRC (National Research Council of Canada) standards. All conductivity meters used to analyze this standard have been regularly calibrated using a NIST or NRC traceable Thermometer and standards. All pH meters used to analyze this standard have been regularly calibrated using a NIST or NRC traceable thermometer and pH/MV simulator. / *Ce matériel de référence certifié est traçable au Matériel de Référence Standardisé de NIST indiqué à la section 2 par une chaîne de comparaison ininterrompue. De plus, les balances utilisées sont étalonnées régulièrement en utilisant des poids qui sont traçables au NIST (National Institute of Standards and Technology) ou au CRNC (Conseil National de Recherches Canada). Tout conductimètre utilisé afin d'analyser cet étalon a été sujet à un étalonnage périodique utilisant des thermomètres et étalons traçables au NIST ou CNRC. Tout pH mètre utilisé afin d'analyser cet étalon a été sujet à un étalonnage périodique utilisant des thermomètres et un simulateur pH/MV traçables au NIST ou au CNRC.*

10.0 PREPARATION / PRÉPARATION:

For the preparation of these solutions, 18 megohm/cm double deionized water, high-purity acids and glassware calibrated to ASTM Class A specifications are used. / *Une eau de 18 megohm/cm doublement déionisée, de l'acide de haute pureté, ainsi que de la verrerie étalonnée afin de satisfaire les spécifications Classe A de ASTM ont été utilisés pour la préparation de cet étalon.*

11.0 QUALITY SYSTEM CERTIFICATIONS / CERTIFICATIONS DE SYSTÈME QUALITÉ:

ISO 9001 Certification / Certification ISO 9001: This standard was produced in a facility which operates under a registered ISO 9001 Quality Management System. Please consult our web site for a copy of the most recent revision of our certificate of registration. / *Cet étalon a été fabriqué dans un laboratoire qui utilise un Système de Gestion de la Qualité enregistré à la norme ISO 9001. Veuillez consulter notre site web pour obtenir la version la plus récente de notre certificat d'enregistrement.*

ISO 17025 Accreditation / Accréditation ISO 17025: SCP SCIENCE (Corporate Headquarters) operates an ISO 17025 accredited laboratory. Please consult our web site for a copy of the most recent revision of our certificate and scope of accreditation. / *SCP SCIENCE (Siège social) est accréditée ISO 17025. Veuillez consulter notre site web afin d'obtenir la plus récente version de notre certificat d'accréditation ainsi que la portée de notre accréditation.*

ISO 17034 Accreditation / Accréditation ISO 17034: SCP SCIENCE (Corporate Headquarters) is an ISO 17034 accredited Reference Material Producer. Please consult our website for a copy of our most recent certificate and scope of accreditation. / *SCP SCIENCE (Siège social) est un Fabricant de Matériaux de Référence Accrédité ISO 17034. Veuillez consulter notre site web afin d'obtenir la plus récente version de notre certificat d'accréditation ainsi que la portée de notre accréditation.*

CORPORATE HEADQUARTERS
21800 Clark Graham
Baie D'Urfé (Montréal), Quebec,
H9X 4B6 Canada
Phone: +1 (800) 361-6820
Fax: +1 (800) 253-5549

USA
3rd Party Distribution Center
348 Route 11, Champlain,
N.Y. 12919-4816
Phone: +1 (800) 361-6820
Fax: +1 (800) 253-5549

FRANCE
12 Ave. de Québec, Bat. IRIS
91140, Villebon-sur-Yvette
Phone: +33 (0) 1 69 18 71 17
Fax: +33 (0) 1 60 92 05 67

GERMANY
Alte Marktoberdorfer Straße 14, 87616
Marktoberdorf
Phone: +49 (0) 8342-89560-61
Fax: +49 (0) 8342-89560-69