MEG, LLC

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# MEG 2017 LITHIUM / BORON STANDARDS (updated: 01-MAY-17)

AVAILABLE in 25 gram Kraft Envelopes with removable sticky label Sold with Certificates of Assay for Lithium & Boron (5-8 laboratories, 42 samples) Analysis: Na<sub>2</sub>O<sub>2</sub> Fusion / ICPAES, Concentrations in Percent Cost: \$7 85 per 25 gram envelope Other Data: Average of 5 samples / agua regia digestion

Cost: \$7.65 per 25 grain envelope	1	Other Data:	Avera	age of	5 Sam	pies / a	iqua re	gia ulg	estion		
MEG-Li.10.11 (0.07% Lithiu	<b>m)</b> n = 85	Ca	Cs	Fe	К	La	Mg	Р	Rb	Sr	
SAMPLES AVG = 0.072	MAX = 0.080	%	ppm	%	%	ppm	%	ppm	ppm	ppm	
LABS AVG = 0.072	MIN = 0.060	6	70	0.38	0.54	18	2.5	140	125	3000	
MEAN + SD = 0.077	STDEV = 0.005										
MEAN - SD = 0.067	%RSD = 6.3										
95% Confidence = 0.065 - 0.	.079										
MEG-Li.10.11 (1.5% Boron)	n = 42										
SAMPLES AVG = 1.48	MAX = 1.63										
LABS AVG = 1.48	MIN = 1.25										
MEAN + SD = 1.63	STDEV = 0.11										
MEAN - SD = 1.33	%RSD = 7.6										
		Source = Clayton Valley, NV									
95% Confidence = 1.258 - 1.708											
		-		-	1.7						
MEG-LI.10.12 (0.12% Lithiu	<b>m</b> ) n = 41	Ca	Cs	Fe	K	La	Mg	Р	Rb	Sr	
SAMPLES AVG = 0.117	MAX = 0.140	%	ppm	%	%	ppm	%	ppm	ppm	ppm	
LABS AVG = 0.117	MIN = 0.097	4.1	310	1.57	0.55	75	1.5	290	123	860	
MEAN + SD = 0.130	STDEV = 0.009										
MEAN - SD = 0.105	%RSD = 8.5										
95% Confidence = 0.097_0	127										
95% Confidence - 0.097 - 0.	.157										
MEG-Li 10 12 (1 4% Boron)	n = 45										
MEO-EI.10.12 (1.476 DOIOII)	MAY = 1.6										
ABS AVG = 1.4	MIN = 1.2										
MFAN + SD = 1.3	STDEV = 0.1										
MEAN - SD = 1.1	%RSD = 7.2										
	/	Source	= Clay	/ton Va	lley, N	v					
95% Confidence = 1.2 - 1.6											
MEG-Li.10.13 (0.12% Lithiu	<b>m)</b> n = 43	Ca	Cs	Fe	Κ	La	Mg	Р	Rb	Sr	
SAMPLES AVG = 0.118	MAX = 0.140	%	ppm	%	%	ppm	%	ppm	ppm	ppm	
LABS AVG = 0.118	MIN = 0.099	7.5	100	0.51	0.83	48	3.8	220	190	5500	
MEAN + SD = 0.128	STDEV = 0.010										
MEAN - SD = 0.110	%RSD = 8.1										
95% Confidence = 0.099 - 0.	138										
MEG-Li.10.13 (1.7% Boron)	n = 43										
SAMPLES AVG = 1.7	MAX = 1.9										
LABS AVG = 1.7	MIN = 1.4										
MEAN + SD = 1.9	STDEV = 0.144										
MEAN - SD = 1.6	%RSD = 8.3		<b>.</b>			.,					
0.5% Confidence = 4.4 0.0		Source	= Clay	/ton Va	illey, N	V					
55% Connuence = 1.4 - 2.0											



## MEG 2017 LITHIUM / BORON STANDARDS CONTINUED (updated: 01-MAY-17)

MEG-Li.10.14 (0.08% Lithiu	<b>m)</b> n = 42	Ca	Cs	Fe	Κ	La	Mg	Р	Rb	Sr
SAMPLES AVG = 0.081	MAX = 0.098	%	ppm	%	%	ppm	%	ppm	ppm	ppm
LABS AVG = 0.081	MIN = 0.073	7	125	0.59	1.1	31	4.6	170	240	7500
MEAN + SD = 0.090	STDEV = 0.072									
MEAN - SD = 0.073	%RSD = 8.9									
95% Confidence = 0.067 - 0.	097									
MEG-Li.10.14 (0.1% Boron)	n = 42									
SAMPLES AVG = 0.14	MAX = 0.17									
LABS AVG = 0.14	MIN = 0.12									
MEAN + SD = 0.016	STDEV = 0.01									
MEAN - SD = 0.012	%RSD = 9.0									
		Sourc	e = Clay	yton Va	lley, N	V				
95% Confidence = 0.12 - 0.1	7									
MEG-Li.10.15 (0.16% Lithiu	<b>m) n = 38</b>	Ca	Cs	Fe	K	La	Mg	Р	Rb	Sr
	MAX = 0.171	0/	nnm	%	%	mag	%	nnm	mag	ppm
SAMIFLES AVG - 0.101	WAX = 0.171	%	ppin					PPIII		
LABS AVG = 0.161	MIN = 0.142	% 7	125	0.59	1.1	31	4.6	170	240	7500
LABS AVG = 0.161 MEAN + SD = 0.177	MIN = 0.142 STDEV = 0.010	% 7	125	0.59	1.1	31	4.6	170	240	7500
LABS AVG = 0.161 MEAN + SD = 0.177 MEAN - SD = 0.145	MIN = 0.142 STDEV = 0.010 %RSD = 6.5	% 7	125	0.59	1.1	31	4.6	170	240	7500
LABS AVG = 0.161 MEAN + SD = 0.177 MEAN - SD = 0.145	MIN = 0.142 STDEV = 0.010 %RSD = 6.5	% 7	125	0.59	1.1	31	4.6	170	240	7500
LABS AVG = 0.161 MEAN + SD = 0.177 MEAN - SD = 0.145 95% Confidence = 0.140 - 0.	MIN = 0.142 STDEV = 0.010 %RSD = 6.5	% 7	125	0.59	1.1	31	4.6	170	240	7500
LABS AVG = 0.161 MEAN + SD = 0.161 MEAN - SD = 0.145 95% Confidence = 0.140 - 0.	MIN = 0.142 STDEV = 0.010 %RSD = 6.5 182	70 7	125	0.59	1.1	31	4.6	170	240	7500
LABS AVG = 0.161 MEAN + SD = 0.177 MEAN - SD = 0.145 95% Confidence = 0.140 - 0. MEG-Li.10.15 (1.6% Boron) SAMPLES AVG = 1.587	MIN = 0.142 STDEV = 0.010 %RSD = 6.5 182 n = 42 MAX = 1.740	70 7	125	0.59	1.1	31	4.6	170	240	7500
LABS AVG = 0.161 MEAN + SD = 0.177 MEAN - SD = 0.145 95% Confidence = 0.140 - 0. MEG-Li.10.15 (1.6% Boron) SAMPLES AVG = 1.587 LABS AVG = 1.587	MIN = 0.142 STDEV = 0.010 %RSD = 6.5 182 n = 42 MAX = 1.740 MIN = 1.239	70 7	125	0.59	1.1	31	4.6	170	240	7500
LABS AVG = 0.161 MEAN + SD = 0.177 MEAN - SD = 0.145 95% Confidence = 0.140 - 0. MEG-Li.10.15 (1.6% Boron) SAMPLES AVG = 1.587 LABS AVG = 1.587 MEAN + SD = 1.750	MIN = 0.142 STDEV = 0.010 %RSD = 6.5 182 n = 42 MAX = 1.740 MIN = 1.239 STDEV = 0.142	7	125	0.59	1.1	31	4.6	170	240	7500
LABS AVG = 0.161 MEAN + SD = 0.177 MEAN - SD = 0.145 95% Confidence = 0.140 - 0. MEG-Li.10.15 (1.6% Boron) SAMPLES AVG = 1.587 LABS AVG = 1.587 MEAN + SD = 1.750 MEAN - SD = 1.430	MIN = 0.142 STDEV = 0.010 %RSD = 6.5 182 n = 42 MAX = 1.740 MIN = 1.239 STDEV = 0.142 %RSD = 8.9	7	125	0.59	1.1	31	4.6	170	240	7500
LABS AVG = 0.161   MEAN + SD = 0.177   MEAN - SD = 0.145   95% Confidence = 0.140 - 0.   MEG-Li.10.15 (1.6% Boron)   SAMPLES AVG = 1.587   LABS AVG = 1.587   MEAN + SD = 1.750   MEAN - SD = 1.430	MIN = 0.142 STDEV = 0.010 %RSD = 6.5 182 n = 42 MAX = 1.740 MIN = 1.239 STDEV = 0.142 %RSD = 8.9	7 7 Sourc	125 e = Clav	0.59 rton Va	1.1	31	4.6	170	240	7500
LABS AVG = 0.161 MEAN + SD = 0.177 MEAN - SD = 0.145 95% Confidence = 0.140 - 0. MEG-Li.10.15 (1.6% Boron) SAMPLES AVG = 1.587 LABS AVG = 1.587 MEAN + SD = 1.750 MEAN - SD = 1.430 95% Confidence = 1.304 - 1.	MIN = 0.142 STDEV = 0.010 %RSD = 6.5 182 n = 42 MAX = 1.740 MIN = 1.239 STDEV = 0.142 %RSD = 8.9 870	7 7 Sourc	125 e = Clay	0.59 yton Va	1.1	31	4.6	170	240	7500
LABS AVG = 0.161   MEAN + SD = 0.177   MEAN - SD = 0.145   95% Confidence = 0.140 - 0.   MEG-Li.10.15 (1.6% Boron)   SAMPLES AVG = 1.587   LABS AVG = 1.587   MEAN + SD = 1.750   MEAN - SD = 1.430   95% Confidence = 1.304 - 1.400	MIN = 0.142 STDEV = 0.010 %RSD = 6.5 182 MAX = 1.740 MIN = 1.239 STDEV = 0.142 %RSD = 8.9 870	7 7 Sourc	125 e = Clay	0.59 yton Va	1.1	31	4.6	170	240	7500

#### **Preparation Methods**

Mineralized source rock is dried, crushed, blended, and reduced to powder using either (or both) ring & puck pulverizers and ceramic ball mill. Product from the mill is sieved through an 80 mesh (177um) screen. The -80 mesh product is tested for particle size distribution, with an acceptable criterion of 96% pass 200 mesh. If the product is known to contain metal sulfides, futher blending is done with a rotary splitter to assure homogenous particle distribution. The product is immediately packaged into tintop envelopes of 50 grams to reduce and isolate gravity separation and redistribution that may occur in bulk packaging. To each envelope is attached a removable sticky label for the accuracy of assay submittal records.

## **Statistical Methods**

Numerical parameters are determined and presented for each standard. The mean of all samples is stated as "Samples Avg". "Samples Avg" disregards between-lab bias and includes a measure of variance for the entire population comprised of individual samples. The mean of all labs is stated as "Labs Avg", which incorporates a measure of laboratory bias, yet reduces the affects of within-lab variance. The best estimate of the True Mean is considered to be the "Labs Avg", and from this mean are calculated Standard Deviation, Min, Max, %Relative Standard Deviation, and the 95%Confidence Limits of +/- 2 standard deviations.

5%RSD = Excellent for measurements of accuracy with high degree of certainty. 5%RSD - 10%RSD = Good for measurements of accuracy with moderate degree of certainty. 10%RSD - 15%RSD = Provisional for measurements of accuracy with low degree of certainty.

Users are encouraged to refine these initial statistical parameters by adding their own data .

## **Liability Statement**

MEG Standards are intended for use as QAQC monitors for analytical submittals, and not for use in the calibration of instrumental methods. These geochemical reference materials and the statistics that charaterize them have been prepared with professional care and attention to detail. Shea Clark Smith / MEG, Inc. and Shea Clark Smith, MSc., P.G. accept no liability for any decisions or actions that have been taken following the use of these reference materials. Liability is limited to only the cost of the reference material.