

CDN Resource Laboratories Ltd.

Certificate of Analysis

REFERENCE MATERIAL: CDN-ME-2401

Recommended values and the "Between Lab" Two Standard Deviations

Precious Metals and Targeted Major Base Metals					
Gold	1.231 gpt	±	0.088 gpt	30 g Fire Assay, ICP or AA finish	Certified value
Silver	74 ppm	±	6 ppm	4 Acid digestion / ICP finish	
	73.5 ppm	±	5.4 ppm	Aqua regia digestion / ICP finish	
Copper	581.4 ppm	±	34.4 ppm	4 Acid digestion / ICP finish	
	594.3 ppm	±	56.5 ppm	Aqua regia digestion / ICP finish	
Molybdenum	0.703 %	±	0.043 %	4 Acid digestion / ICP finish	
	0.702 %	±	0.057 %	Aqua regia digestion / ICP finish	
Lead	0.198 %	±	0.012 %	4 Acid digestion / ICP finish	
	0.197 %	±	0.010 %	Aqua regia digestion / ICP finish	
Zinc	0.408 %	±	0.023 %	4 Acid digestion / ICP finish	
	0.403 %	±	0.014 %	Aqua regia digestion / ICP finish	

Major and Minor Base Metals					
Arsenic	504 ppm	±	33 ppm	4 Acid digestion / ICP finish	Certified value
	513 ppm	±	27 ppm	Aqua regia digestion / ICP finish	
Calcium	4.45 %	±	0.16 %	4 Acid digestion / ICP finish	
	3.19 %	±	0.23 %	Aqua regia digestion / ICP finish	
Cesium	3.0 ppm	±	0.3 ppm	4 Acid digestion / ICP finish	
Iron	5.52 %	±	0.28 %	Aqua regia digestion / ICP finish	
	4.44 %	±	0.16 %	4 Acid digestion / ICP finish	
Potassium	1.18 %	±	0.04 %	4 Acid digestion / ICP finish	
	0.24 %	±	0.02 %	Aqua regia digestion / ICP finish	
Magnesium	3.27 %	±	0.20 %	4 Acid digestion / ICP finish	
	2.47 %	±	0.15 %	Aqua regia digestion / ICP finish	
Manganese	1068 ppm	±	37 ppm	4 Acid digestion / ICP finish	
	832 ppm	±	31 ppm	Aqua regia digestion / ICP finish	
Nickel	155.4 ppm	±	9.1 ppm	4 Acid digestion / ICP finish	
	141 ppm	±	11 ppm	Aqua regia digestion / ICP finish	
Phosphorus	810 ppm	±	31 ppm	4 Acid digestion / ICP finish	
	762 ppm	±	54 ppm	Aqua regia digestion / ICP finish	
Antimony	144 ppm	±	7 ppm	4 Acid digestion / ICP finish	
Sodium	1.45 %	±	0.09 %		
Strontium	245 ppm	±	15 ppm		
Sulfur	1.47 %	±	0.15 %		
Titanium	0.438 ppm	±	0.036 ppm		
Vanadium	159.2 ppm	±	11.5 ppm		

Major and Minor Base Metals				
Cadmium	24.7 ppm	±	3.3 ppm	4 Acid digestion / ICP finish
	24.3 ppm	±	3.9 ppm	Aqua regia digestion / ICP finish
Cobalt	31 ppm	±	4 ppm	4 Acid digestion / ICP finish
	25 ppm	±	3 ppm	Aqua regia digestion / ICP finish

Provisional Mean

Major Oxides				
SiO ₂	52.61 %	±	1.78 %	Certified value
Al ₂ O ₃	12.42 %	±	0.18 %	
Fe ₂ O ₃	8.13 %	±	0.21 %	
Na ₂ O	1.92 %	±	0.09 %	
CaO	6.41 %	±	0.25 %	
MnO	0.14 %	±	0.01 %	
MgO	5.56 %	±	0.31 %	
K ₂ O	1.47 %	±	0.08 %	
TiO ₂	0.80 %	±	0.02 %	
P ₂ O ₅	0.19 %	±	0.01 %	
LOI	6.02 %	±	0.77 %	
Total S	1.52 %	±	0.07 %	
Total C	1.28 %	±	0.05 %	

Note 1: Standards with an RSD of near or less than 5% are certified; RSD's of between 5% and 15% are Provisional; RSD's over 15% are Indicated. Provisional and Indicated values cannot be used to monitor accuracy with a high degree of certainty.

PREPARED BY: CDN Resource Laboratories Ltd.
CERTIFIED BY: Ali Alizadeh, MSc, MBA, P Geo, FGC
INDEPENDENT GEOCHEMIST: Dr. Barry Smee., Ph.D., FGC
DATE OF CERTIFICATION: May 17th, 2025

ORIGIN OF REFERENCE MATERIAL:

Standard CDN-ME-2401 was produced from a blend of ores.

METHOD OF PREPARATION:

Reject ore material was dried, crushed, pulverized, and then passed through a 270-mesh screen. The +270 material was discarded. The -270 material was mixed for 5 days in a double-cone mixer. Splits were taken and submitted to 19 commercial and mine laboratories for round-robin assaying.

Assay Procedures:

Au: Fire assay, AA or ICP finish.
Major and Minor Base Metals: 4-acid digestion and Aqua regia digestion instrumental finish
Major Oxides Fusion, XRF finish

Statistical Procedures:

Final limits were calculated by first assessing whether the data fell within the expected variance range for comparable methods used by reputable laboratories. Data from any one laboratory was removed from further calculations when the means of all analyses from that laboratory failed at test of the global means of the other laboratories. The means and standard deviations were calculated using all remaining

data. Any analysis that fell outside of the mean ± 2 standard deviations was removed from the ensuing database. The mean and standard deviations were again calculated using the remaining data. This method is different from that used by Government agencies in that the actual “between-laboratory” standard deviation is used in the calculations. This produces upper and lower limits that reflect actual individual analyses rather than a grouped set of analyses. The limits can therefore be used to monitor accuracy from individual analyses, unlike the Confidence Limits published on other standards.

Quality Assurance and Quality Control Procedures:

Screening Test: Three samples, 300g each of homogenized material, were randomly collected and **were** re-screened using a testing sieve. Based on CDN’s screening test, the oversize material in this standard was approximately 1.5%.

Homogeneity Test:

15 samples were selected throughout the batch and were sent to an independent assay Laboratories for Homogeneity testing following directions of Annex B, Homogeneity and Stability of proficiency test items, ISO 13528:2015 Guidelines.

Assay results were statistically evaluated by calculating the mean, standard deviation, and relative standard deviation (%RSD). Based on statistical analyses conducted in accordance with ISO 13528; CDN-ME-2401 is statistically homogenized (Appendix III).

LEGAL NOTICE:

This certificate and the reference material described in it have been prepared with due care and attention. However, CDN Resource Laboratories Ltd. nor Barry Smee accept any liability for any decisions or actions taken following the use of the reference material. Our liability is limited solely to the cost of the reference material.

Certified by



Ali Alizadeh, MSc, MBA, P.Geo., FGC

Geochemist



Dr. Barry Smee, PhD, FGC

APPENDIX I: Results from round-robin assaying:

	Lab 1	Lab 2	Lab3	Lab4	Lab5	Lab6	Lab7	Lab8	Lab9	Lab 10	Lab 11	Lab 12	Lab 13	Lab 14	Lab 15	Lab 16	Lab 17	Lab 18	Lab 19	Lab 20
ME-2401	Au by Fire Assay, 30g sample size and ICP or AA finish																			
	1.20	1.35	1.082	1.26	1.205	1.264	1.33	1.16	1.23	1.253	1.26	1.20	1.28	1.198	1.20	1.27	1.264	1.295	1.27	1.238
	1.28	1.43	1.073	1.18	1.193	1.255	1.34	1.28	1.18	1.121	1.25	1.17	1.21	1.188	1.19	1.21	1.261	1.267	1.23	1.237
	1.24	1.11	1.064	1.01	1.246	1.286	1.22	1.18	1.17	1.262	1.35	1.29	1.23	1.201	1.19	1.25	1.268	1.281	1.27	1.220
	1.20	1.28	0.969	1.11	1.227	1.282	1.17	1.23	1.15	1.227	1.27	1.24	1.26	1.207	1.20	1.29	1.260	1.283	1.27	1.155
	1.28	1.30	0.982	1.16	1.201	1.193	1.21	1.11	1.07	1.206	1.28	1.12	1.26	1.193	1.24	1.27	1.260	1.178	1.30	1.296
	1.24	1.27	0.995	1.17	1.225	1.224	1.24	1.18	1.17	1.269	1.21	1.27	1.20	1.168	1.19	1.22	1.259	1.266	1.19	1.326
	1.28	1.34	0.972	1.14	1.237	1.238	1.20	1.19	1.20	1.344	1.29	1.20	1.23	1.222	1.18	1.27	1.260	1.204	1.32	1.234
	1.28	1.10	0.881	1.11	1.200	1.123	1.22	1.29	1.23	1.174	1.29	1.24	1.22	1.217	1.28	1.26	1.260	1.195	1.27	1.240
Mean	1.25	1.27	1.002	1.14	1.217	1.233	1.24	1.20	1.18	1.232	1.28	1.22	1.24	1.199	1.21	1.26	1.262	1.246	1.27	1.243
Std. Devn.	0.04	0.11	0.07	0.07	0.02	0.05	0.06	0.06	0.05	0.07	0.04	0.06	0.03	0.02	0.03	0.03	0.00	0.05	0.04	0.05
% RSD	2.84	9.03	6.77	6.27	1.60	4.38	4.94	5.06	4.36	5.46	3.14	4.54	2.24	1.44	2.81	2.17	0.24	3.69	3.16	4.09

ME-2401	Ag (ppm) by 4Acid Digestion Instrumental Finish										
	69.7	78.90	73.8	74	74.02	70	71.90	75.40	78.62	76	75.0
	70.2	76.30	73.4	73	73.38	70	73.49	75.20	76.64	70	79.5
	70.7	76.90	73.7	77	74.09	72	73.09	75.85	75.76	72	76.4
	65.8	75.94	75.4	75	76.01	69	73.20	75.61	76.18	78	79.3
	69.3	76.10	78.5	74	73.01	68	73.52	75.62	76.87	74	79.2
	69.2	76.77	73.6	74	74.42	71	73.43	75.16	74.87	70	74.6
	69.7	75.71	74.4	74	73.90	70	74.72	75.27	77.61	71	77.3
	66.2	74.00	74.7	77	73.74	71	73.05	75.24	75.20	73	76.8
Mean	68.9	76.33	74.7	75	74.07	70.13	73.30	75.42	76.47	73	77.3
Std. Devn.	1.83	1.37	1.68	1	0.90	1.25	0.77	0.25	1.25	2.88	1.93
% RSD	2.65	1.80	2.25	1.99	1.21	1.78	1.06	0.33	1.63	3.94	2.50

ME-2401	Ag (ppm) by Aqua Regia Digestion Instrumental Finish										
	77.6	-	74.1	-	-	70.6	69.92	71.89	>10	-	-
	76.6	-	75.9	-	-	70.7	70.68	75.08	>10	-	-
	76.7	-	74.4	-	-	76.4	69.82	74.13	>10	-	-
	76.9	-	77.1	-	-	69.5	71.29	72.49	>10	-	-
	75.8	-	76.1	-	-	70.8	68.35	71.86	>10	-	-
	74.3	-	76.3	-	-	70.7	71.56	75.17	>10	-	-
	76.9	-	74.3	-	-	71.0	71.24	74.48	>10	-	-
	76.7	-	75.1	-	-	70.0	71.80	76.18	>10	-	-
Mean	76.4	-	75.4	-	-	71.2	70.58	73.91	-	-	-
Std. Devn.	0.99	-	1.10	-	-	2.15	1.16	1.64	-	-	-
% RSD	1.30	-	1.46	-	-	3.02	1.64	2.22	-	-	-

APPENDIX I: Results from round-robin assaying-Continue:

Cu (ppm) by 4 Acid digestion Instrumental finish											
ME-2401	578	-	575	-	554.4	552	589.9	604.5	658.6	589	570.8
	585	-	574	-	571.3	555	600.5	603.8	630.2	582	590.6
	585	-	560	-	573.0	555	588.5	603.1	643.9	590	569.5
	573	-	580	-	569.2	548	600.4	600.5	662.4	599	582.0
	585	-	594	-	567.6	553	602.6	603.7	668.2	595	604.6
	578	-	583	-	565.4	550	604.6	605.3	656.9	586	597.7
	583	-	578	-	571.6	552	593.5	607.1	641.8	599	593.8
	574	-	570	-	567.6	556	597.2	609.0	639.6	590	578.5
Mean	580	-	577	-	567.5	553	597.2	604.6	650.2	591	585.9
Std. Devn.	5.03	-	9.90	-	5.86	2.72	5.95	2.59	13.16	6.04	12.76
% RSD	0.87	-	1.72	-	1.03	0.49	1.00	0.43	2.02	1.02	2.18
Cu (ppm) by Aqua Regia Instrumental finish											
ME-2401	618	-	564	-	-	580	571.5	598.8	642.0	-	-
	626	-	565	-	-	579	585.8	593.8	639.0	-	-
	633	-	577	-	-	575	589.8	593.9	630.5	-	-
	619	-	572	-	-	579	571.5	594.2	639.0	-	-
	627	-	573	-	-	582	584.2	592.6	640.2	-	-
	628	-	570	-	-	554	566.4	598.0	632.5	-	-
	639	-	561	-	-	557	587.7	591.4	639.9	-	-
	624	-	555	-	-	562	562.9	596.9	637.7	-	-
Mean	627	-	567	-	-	571	577.5	594.9	637.6	-	-
Std. Devn.	6.92	-	7.20	-	-	11.41	10.54	2.63	3.99	-	-
% RSD	1.10	-	1.27	-	-	2.00	1.82	0.44	0.63	-	-
Mo (%) by 4 Acid digestion Instrumental finish											
ME-2401	0.548	-	0.6819	-	0.7105	0.726	0.6826	-	0.7182	0.7018	>1
	0.555	-	0.6876	-	0.7148	0.735	0.6907	-	0.7442	0.6761	>1
	0.559	-	0.6839	-	0.6972	0.735	0.6532	-	0.7136	0.6805	>1
	0.557	-	0.6889	-	0.7071	0.727	0.6825	-	0.7245	0.7040	>1
	0.542	-	0.6729	-	0.7069	0.719	0.6858	-	0.7387	0.7105	>1
	0.553	-	0.6790	-	0.7056	0.739	0.6606	-	0.7187	0.7219	>1
	0.561	-	0.6865	-	0.6954	0.730	0.7008	-	0.7005	0.6804	>1
	0.554	-	0.6913	-	0.6991	0.736	0.6885	-	0.6950	0.6806	>1
Mean	0.554	-	0.6840	-	0.7046	0.731	0.6806	-	0.7192	0.6945	-
Std. Devn.	0.01	-	0.01	-	0.01	0.01	0.02	-	0.02	0.02	-
% RSD	1.11	-	0.87	-	0.96	0.91	2.33	-	2.35	2.48	-
Mo (%) by Aqua Regia Instrumental finish											
ME-2401	0.688	-	>0.5	-	-	0.733	0.6538	-	0.7164	-	-
	0.701	-	>0.5	-	-	0.730	0.6667	-	0.7070	-	-
	0.703	-	>0.5	-	-	0.733	0.6765	-	0.7083	-	-
	0.692	-	>0.5	-	-	0.735	0.6563	-	0.7177	-	-
	0.700	-	>0.5	-	-	0.743	0.6738	-	0.7039	-	-
	0.681	-	>0.5	-	-	0.742	0.6619	-	0.7121	-	-
	0.702	-	>0.5	-	-	0.743	0.6719	-	0.7088	-	-
	0.699	-	>0.5	-	-	0.745	0.6517	-	0.7123	-	-
Mean	0.696	-	-	-	-	0.738	0.6641	-	0.7108	-	-
Std. Devn.	0.01	-	-	-	-	0.01	0.01	-	0.00	-	-
% RSD	1.14	-	-	-	-	0.79	1.44	-	0.66	-	-

APPENDIX I: Results from round-robin assaying-Continue:

Ni (ppm) by 4 Acid digestion Instrumental finish											
ME-2401	152	-	151	-	152.8	160	154.9	158.61	147.27	-	263.0
	156	-	154	-	153.8	160	159.5	159.21	140.90	-	270.9
	161	-	153	-	156.5	161	157.9	158.34	145.05	-	260.2
	157	-	153	-	151.7	159	154.3	158.01	146.72	-	265.4
	145	-	151	-	153.3	162	152.4	159.18	149.27	-	276.4
	157	-	153	-	154.9	162	155.7	158.35	149.11	-	269.4
	163	-	155	-	153.2	161	159.0	159.05	143.19	-	270.7
	158	-	153	-	155.1	165	158.2	158.50	142.53	-	276.8
Mean	156	-	153	-	153.9	161	156.5	158.66	145.51	-	269.1
Std. Devn.	5.57	-	1.36	-	1.49	1.83	2.53	0.44	3.10	-	5.96
% RSD	3.57	-	0.89	-	0.97	1.14	1.62	0.28	2.13	-	2.21
Ni (ppm) by Aqua Regia Instrumental finish											
ME-2401	138	-	134	-	-	149	136.6	142.0	144.37	-	-
	140	-	133	-	-	149	138.0	142.1	144.10	-	-
	140	-	134	-	-	151	140.1	142.8	141.45	-	-
	140	-	135	-	-	151	137.7	142.5	146.53	-	-
	138	-	134	-	-	152	140.3	143.7	145.86	-	-
	136	-	136	-	-	143	135.9	144.1	144.21	-	-
	141	-	132	-	-	145	139.0	143.6	143.48	-	-
	140	-	132	-	-	148	134.6	143.9	142.94	-	-
Mean	139	-	134	-	-	149	137.8	143.1	144.12	-	-
Std. Devn.	1.64	-	1.39	-	-	3.12	2.01	0.84	1.60	-	-
% RSD	1.18	-	1.04	-	-	2.10	1.46	0.59	1.11	-	-
Pb (%) by 4 Acid digestion Instrumental finish											
ME-2401	0.198	-	0.190	0.207	0.197	0.194	0.198	0.208	0.198	0.193	0.177
	0.203	-	0.192	0.210	0.205	0.194	0.198	0.208	0.194	0.190	0.179
	0.210	-	0.191	0.208	0.202	0.193	0.195	0.207	0.197	0.192	0.174
	0.200	-	0.193	0.207	0.208	0.192	0.198	0.209	0.198	0.201	0.178
	0.182	-	0.189	0.209	0.201	0.194	0.198	0.207	0.203	0.200	0.183
	0.203	-	0.191	0.207	0.202	0.194	0.199	0.205	0.198	0.206	0.180
	0.204	-	0.192	0.210	0.204	0.193	0.195	0.207	0.193	0.207	0.181
	0.204	-	0.193	0.208	0.199	0.195	0.199	0.206	0.194	0.193	0.187
Mean	0.201	-	0.191	0.208	0.202	0.194	0.197	0.207	0.197	0.198	0.180
Std. Devn.	0.01	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00
% RSD	4.11	-	0.74	0.63	1.73	0.47	0.84	0.59	1.71	3.28	2.19
Pb (%) by Aqua Regia Instrumental finish											
ME-2401	0.202	-	0.188	-	-	0.208	0.197	-	0.202	-	-
	0.207	-	0.188	-	-	0.211	0.198	-	0.202	-	-
	0.207	-	0.188	-	-	0.210	0.202	-	0.200	-	-
	0.203	-	0.190	-	-	0.215	0.196	-	0.205	-	-
	0.206	-	0.185	-	-	0.210	0.201	-	0.202	-	-
	0.203	-	0.189	-	-	0.207	0.199	-	0.202	-	-
	0.207	-	0.187	-	-	0.208	0.200	-	0.204	-	-
	0.206	-	0.186	-	-	0.223	0.195	-	0.203	-	-
Mean	0.205	-	0.187	-	-	0.212	0.199	-	0.202	-	-
Std. Devn.	0.00	-	0.00	-	-	0.01	0.00	-	0.00	-	-
% RSD	1.02	-	0.83	-	-	2.49	1.23	-	0.71	-	-

APPENDIX I: Results from round-robin assaying-Continue:

Zn (ppm) by 4 Acid digestion Instrumental finish											
ME-2401	0.394	-	0.3888	0.4102	0.4033	0.415	0.4084	0.4254	0.4014	0.4157	0.3935
	0.407	-	0.3920	0.4086	0.4183	0.424	0.4128	0.4221	0.3824	0.4028	0.4030
	0.417	-	0.3913	0.4042	0.4113	0.422	0.3882	0.4238	0.3841	0.4166	0.3929
	0.404	-	0.3968	0.4072	0.4156	0.420	0.4089	0.4248	0.3906	0.4137	0.3973
	0.358	-	0.3908	0.4154	0.4072	0.412	0.4157	0.4242	0.3927	0.4200	0.4115
	0.410	-	0.3974	0.4124	0.4010	0.422	0.3948	0.4236	0.3873	0.4096	0.4074
	0.411	-	0.3974	0.4132	0.4069	0.418	0.4173	0.4221	0.4114	0.4162	0.4064
	0.410	-	0.3941	0.4150	0.4127	0.418	0.4156	0.4228	0.3864	0.4163	0.4149
Mean	0.401	-	0.3936	0.4108	0.4095	0.419	0.4077	0.4236	0.3920	0.4139	0.4034
Std. Devn.	0.02	-	0.00	0.00	0.01	0.00	0.01	0.00	0.01	0.01	0.01
% RSD	4.67	-	0.85	0.96	1.46	0.95	2.61	0.29	2.51	1.29	2.03
Zn (ppm) by Aqua Regia Instrumental finish											
ME-2401	0.403	-	0.367	-	-	0.396	0.3998	0.4158	0.3930	-	-
	0.411	-	0.367	-	-	0.398	0.4067	0.4160	0.3947	-	-
	0.409	-	0.369	-	-	0.401	0.3969	0.4147	0.3893	-	-
	0.399	-	0.373	-	-	0.400	0.4013	0.4110	0.3823	-	-
	0.405	-	0.363	-	-	0.398	0.4098	0.4134	0.3940	-	-
	0.401	-	0.370	-	-	0.399	0.4062	0.4133	0.3955	-	-
	0.407	-	0.368	-	-	0.398	0.4079	0.4147	0.3927	-	-
	0.407	-	0.361	-	-	0.401	0.3955	0.4122	0.3999	-	-
Mean	0.405	-	0.367	-	-	0.399	0.4030	0.4139	0.3927	-	-
Std. Devn.	0.00	-	0.00	-	-	0.00	0.01	0.00	0.01	-	-
% RSD	1.00	-	1.05	-	-	0.43	1.33	0.42	1.31	-	-

ME-2401	Lab 2	Lab9	Lab10	Lab12	Lab13	Lab14	Lab15	Lab16	Lab17	Lab18
	As (ppm) by 4Acid Digestion Instrumental Finish									
ME-2401	472	496	-	493.8	-	509.5	-	550.0	540	99.5
	489	509	-	502.8	-	516.2	-	497.7	532	88.6
	498	500	-	505.0	-	511.9	-	540.6	558	98.0
	490	509	-	504.1	-	524.1	-	533.7	549	92.5
	499	491	-	499.9	-	514.3	-	504.3	542	86.8
	482	495	-	502.6	-	509.0	-	532.8	509	95.3
	496	505	-	491.8	-	515.7	-	468.4	505	85.3
	490	504	-	493.5	-	516.5	-	489.0	514	98.8
Mean	490	501	-	499.2	-	514.7	-	514.6	531	93.1
Std. Devn.	9.01	6.71	-	5.32	-	4.82	-	28.82	19.66	5.65
% RSD	1.84	1.34	-	1.07	-	0.94	-	5.60	3.70	6.07
ME-2401	As (ppm) by Aqua Regia Instrumental finish									
	522	492	-	-	518	505.8	518.1	509.8	-	-
ME-2401	524	489	-	-	526	516.8	518.7	505.8	-	-
	534	490	-	-	520	524.7	515.3	505.5	-	-
	522	495	-	-	519	511.2	517.2	498.7	-	-
	528	489	-	-	519	520.7	517.2	509.0	-	-
	517	488	-	-	533	511.4	511.1	502.9	-	-
	532	480	-	-	529	515.1	519.0	506.1	-	-
	535	481	-	-	530	501.6	513.0	506.0	-	-
Mean	527	488	-	-	524	513.4	516.2	505.5	-	-
Std. Devn.	6.52	5.13	-	-	5.95	7.57	2.83	3.47	-	-

% RSD	1.24	1.05	-	-	1.13	1.47	0.55	0.69	-	-
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APPENDIX I: Results from round-robin assaying-Continue:

	Lab 2	Lab9	Lab10	Lab12	Lab13	Lab14	Lab15	Lab16	Lab17	Lab18
ME-2401	Ca (%) by 4Acid Digestion Instrumental Finish									
	4.28	4.46	-	4.33	4.73	4.50	4.41	4.42	4.5	4.62
	4.39	4.47	-	4.49	4.76	4.52	4.43	4.24	4.4	4.74
	4.47	4.46	-	4.43	4.75	4.45	4.42	4.31	4.5	4.59
	4.33	4.52	-	4.37	4.84	4.48	4.49	4.39	4.6	4.57
	4.31	4.44	-	4.32	4.79	4.53	4.42	4.46	4.6	4.80
	4.32	4.53	-	4.38	4.78	4.50	4.45	4.36	4.5	4.77
	4.40	4.49	-	4.49	4.90	4.59	4.45	4.25	4.6	4.76
	4.39	4.48	-	4.47	4.68	4.52	4.48	4.23	4.5	4.70
Mean	4.36	4.48	-	4.41	4.78	4.51	4.44	4.33	4.5	4.69
Std. Devn.	0.06	0.03	-	0.07	0.07	0.04	0.03	0.09	0.07	0.09
% RSD	1.42	0.70	-	1.60	1.41	0.91	0.62	2.03	1.56	1.89
ME-2401	Ca (%) by 4Acid Digestion Instrumental Finish									
	3.25	3.12	-	-	3.28	3.02	-	3.14	-	-
	3.31	3.12	-	-	3.30	3.06	-	3.13	-	-
	3.36	3.14	-	-	3.28	3.13	-	3.12	-	-
	3.28	3.14	-	-	3.37	3.04	-	3.16	-	-
	3.32	3.10	-	-	3.33	3.08	-	3.12	-	-
	3.25	3.14	-	-	3.32	3.04	-	3.13	-	-
	3.35	3.11	-	-	3.36	3.08	-	3.13	-	-
	3.33	3.08	-	-	3.31	2.97	-	3.15	-	-
Mean	3.31	3.12	-	-	3.32	3.05	-	3.14	-	-
Std. Devn.	0.04	0.02	-	-	0.03	0.05	-	0.01	-	-
% RSD	1.28	0.69	-	-	1.01	1.55	-	0.45	-	-
ME-2401	Lab 2	Lab9	Lab10	Lab12	Lab13	Lab14	Lab15	Lab16	Lab17	Lab18
	Cd (ppm) by 4Acid Digestion Instrumental Finish									
	23.3	22.5	-	31.92	23	26.63	27.00	25.91	25.9	25.0
	23.9	22.7	-	32.48	23	27.09	27.10	24.37	25.3	25.8
	24.6	22.5	-	32.00	23	26.43	26.97	25.55	25.3	25.4
	23.6	22.7	-	32.09	23	26.67	27.27	25.49	25.7	24.6
	23.1	22.0	-	31.72	23	26.76	27.08	25.78	26.1	25.0
	23.7	22.3	-	32.08	23	26.97	27.04	25.61	24.5	25.3
	23.6	22.8	-	31.07	23	27.04	26.80	25.19	24.6	25.2
Mean	23.7	22.5	-	31.77	23	26.82	27.05	25.36	25.3	25.2
Std. Devn.	0.45	0.28	-	0.56	0.00	0.23	0.14	0.50	0.61	0.35
% RSD	1.89	1.23	-	1.77	0.00	0.87	0.52	1.96	2.43	1.41
ME-2401	Co (ppm) by 4Acid Digestion Instrumental Finish									
	27	29	-	30.5	33	29.6	31.8	31.2	32.3	32.2
	28	29	-	30.7	33	29.2	31.8	29.4	31.9	33.0
	29	29	-	31.2	34	29.8	31.9	30.4	32.0	32.9
	28	29	-	30.7	33	29.5	31.9	30.2	33.5	32.2
	27	31	-	30.5	34	29.2	32.2	30.7	33.5	32.8
	28	28	-	31.1	34	30.0	31.5	30.1	32.8	32.6
	28	29	-	30.1	34	30.5	31.8	29.8	33.4	32.3
	29	29	-	30.3	34	30.3	32.3	29.3	32.1	32.3
Mean	28	29	-	30.6	34	29.8	31.9	30.1	32.7	32.5
Std. Devn.	0.76	0.83	-	0.38	0.52	0.48	0.26	0.66	0.70	0.33
% RSD	2.70	2.87	-	1.22	1.54	1.62	0.82	2.17	2.14	1.01

APPENDIX I: Results from round-robin assaying-Continue:

	Lab 2	Lab9	Lab10	Lab12	Lab13	Lab14	Lab15	Lab16	Lab17	Lab18
ME-2401	Co (ppm) by Aqua Regia Instrumental finish									
	23.2	25	-	-	26	23.6	25.15	27.94	-	-
	23.7	24	-	-	27	24.3	25.21	27.24	-	-
	23.8	24	-	-	26	23.8	25.05	26.54	-	-
	23.1	25	-	-	27	23.7	25.04	26.84	-	-
	23.0	24	-	-	26	25.3	25.09	28.04	-	-
	23.4	24	-	-	27	23.9	25.09	27.96	-	-
	23.3	24	-	-	27	25.0	25.09	27.75	-	-
	23.3	24	-	-	27	22.4	25.12	27.24	-	-
Mean	23.4	24	-	-	27	24.0	25.11	27.44	-	-
Std. Devn.	0.28	0.46	-	-	0.52	0.90	0.05	0.56	-	-
% RSD	1.19	1.91	-	-	1.94	3.74	0.22	2.05	-	-
ME-2401	Cr (ppm) by 4Acid Digestion Instrumental Finish									
	206	234	235	185.4	198	198	192.2	158	265	222
	186	236	207	177.7	195	200	191.2	168	257	222
	189	235	196	198.1	229	189	190.9	159	268	221
	184	237	223	201.2	223	206	191.4	162	270	220
	154	235	215	179.5	208	203	191.3	163	269	229
	182	241	214	210.1	188	208	192.1	157	269	228
	185	234	215	212.3	234	195	191.5	158	269	221
	189	234	222	214.6	227	197	191.7	165	260	233
Mean	184	236	216	197.4	213	200	191.5	161	266	225
Std. Devn.	14.35	2.38	11.54	14.85	17.69	6.16	0.44	4.06	4.85	4.81
% RSD	7.78	1.01	5.35	7.52	8.32	3.09	0.23	2.52	1.83	2.14
ME-2401	Lab 2	Lab9	Lab10	Lab12	Lab13	Lab14	Lab15	Lab16	Lab17	Lab18
	Cr (ppm) by Aqua Regia Instrumental finish									
	132	136	-	-	139	134	-	122.73	-	-
	134	135	-	-	140	136	-	122.80	-	-
	136	136	-	-	139	139	-	120.20	-	-
	134	136	-	-	140	136	-	121.35	-	-
	134	134	-	-	143	136	-	120.34	-	-
	128	136	-	-	143	133	-	123.29	-	-
	135	135	-	-	141	136	-	123.27	-	-
	134	134	-	-	143	132	-	123.23	-	-
Mean	133	135	-	-	141	135	-	122.15	-	-
Std. Devn.	2.45	0.89	-	-	1.77	2.19	-	1.32	-	-
% RSD	1.83	0.66	-	-	1.26	1.62	-	1.08	-	-
ME-2401	Cs (ppm) by 4Acid Digestion Instrumental Finish									
	-	-	-	3.06	-	3.16	2.90	<5	3.0	2.8
	-	-	-	3.18	-	3.23	2.96	<5	2.8	3.0
	-	-	-	2.88	-	3.21	2.90	<5	2.9	2.5
	-	-	-	2.93	-	3.18	2.96	<5	2.9	2.9
	-	-	-	3.19	-	3.24	2.91	<5	3.0	2.9
	-	-	-	3.24	-	3.24	2.94	<5	3.4	3.0
	-	-	-	2.90	-	3.19	2.91	<5	3.0	3.0
	-	-	-	2.87	-	3.28	2.91	<5	2.9	2.8
Mean	-	-	-	3.03	-	3.22	2.92	-	3.0	2.9
Std. Devn.	-	-	-	0.15	-	0.04	0.02	-	0.18	0.17
% RSD	-	-	-	5.04	-	1.21	0.83	-	6.05	5.89

APPENDIX I: Results from round-robin assaying-Continue:

	Lab 2	Lab9	Lab10	Lab12	Lab13	Lab14	Lab15	Lab16	Lab17	Lab18
ME-2401	Fe (%) by 4Acid Digestion Instrumental Finish									
	5.40	5.54	4.94	5.47	5.80	5.73	5.54	5.59	-	5.18
	5.59	5.51	4.91	5.53	5.84	5.73	5.53	5.37	-	5.34
	5.79	5.53	4.93	5.47	5.82	5.66	5.56	5.48	-	5.21
	5.52	5.56	4.87	5.51	6.00	5.77	5.60	5.56	-	5.21
	5.30	5.48	4.81	5.49	5.96	5.76	5.53	5.64	-	5.27
	5.59	5.57	4.89	5.38	5.95	5.81	5.59	5.51	-	5.36
	5.60	5.57	4.89	5.41	6.01	5.67	5.59	5.40	-	5.32
	5.62	5.55	4.96	5.46	5.81	5.73	5.56	5.38	-	5.30
Mean	5.55	5.54	4.90	5.47	5.90	5.73	5.56	5.49	-	5.27
Std. Devn.	0.15	0.03	0.05	0.05	0.09	0.05	0.03	0.10	-	0.07
% RSD	2.67	0.57	0.96	0.94	1.52	0.87	0.47	1.85	-	1.27
ME-2401	Fe (%) by Aqua Regia Instrumental finish									
	4.35	4.57	-	-	4.81	4.37	-	4.36	-	-
	4.41	4.50	-	-	4.49	4.46	-	4.36	-	-
	4.44	4.53	-	-	4.52	4.51	-	4.34	-	-
	4.35	4.56	-	-	4.53	4.42	-	4.39	-	-
	4.40	4.52	-	-	4.52	4.47	-	4.37	-	-
	4.27	4.52	-	-	4.54	4.36	-	4.36	-	-
	4.41	4.47	-	-	4.57	4.47	-	4.36	-	-
	4.42	4.46	-	-	4.54	4.29	-	4.39	-	-
Mean	4.38	4.52	-	-	4.57	4.42	-	4.37	-	-
Std. Devn.	0.06	0.04	-	-	0.10	0.07	-	0.02	-	-
% RSD	1.26	0.86	-	-	2.22	1.66	-	0.39	-	-
ME-2401	Lab 2	Lab9	Lab10	Lab12	Lab13	Lab14	Lab15	Lab16	Lab17	Lab18
	K (%) by 4Acid Digestion Instrumental Finish									
	1.18	1.200	-	1.168	1.18	1.25	1.209	1.14	-	1.15
	1.18	1.199	-	1.202	1.20	1.27	1.206	1.11	-	1.19
	1.20	1.193	-	1.171	1.20	1.22	1.204	1.13	-	1.13
	1.18	1.212	-	1.181	1.17	1.25	1.208	1.15	-	1.15
	1.17	1.189	-	1.168	1.16	1.26	1.210	1.17	-	1.20
	1.18	1.218	-	1.159	1.20	1.25	1.207	1.15	-	1.18
	1.20	1.203	-	1.163	1.19	1.29	1.202	1.12	-	1.17
Mean	1.19	1.201	-	1.175	1.19	1.26	1.207	1.14	-	1.17
Std. Devn.	0.01	0.01	-	0.01	0.02	0.02	0.00	0.02	-	0.02
% RSD	1.17	0.82	-	1.18	1.28	1.63	0.21	1.88	-	1.99
ME-2401	K (%) by Aqua Regia Instrumental finish									
	0.23	0.231	-	-	0.246	0.25	-	0.23	-	-
	0.24	0.228	-	-	0.240	0.25	-	0.23	-	-
	0.24	0.229	-	-	0.248	0.26	-	0.23	-	-
	0.23	0.228	-	-	0.246	0.25	-	0.23	-	-
	0.24	0.227	-	-	0.240	0.25	-	0.23	-	-
	0.23	0.227	-	-	0.245	0.25	-	0.23	-	-
	0.24	0.226	-	-	0.241	0.25	-	0.23	-	-
	0.24	0.226	-	-	0.242	0.25	-	0.23	-	-
Mean	0.24	0.228	-	-	0.244	0.25	-	0.23	-	-
Std. Devn.	0.01	0.00	-	-	0.00	0.00	-	0.00	-	-
% RSD	2.19	0.73	-	-	1.28	1.41	-	0.00	-	-

APPENDIX I: Results from round-robin assaying-Continue:

	Lab 2	Lab9	Lab10	Lab12	Lab13	Lab14	Lab15	Lab16	Lab17	Lab18
ME-2401	Mg (%) by 4Acid Digestion Instrumental Finish									
	3.22	3.198	-	-	3.35	3.34	3.15	3.28	-	2.97
	3.31	3.199	-	-	3.35	3.38	3.18	3.15	-	3.10
	3.47	3.223	-	-	3.34	3.20	3.17	3.24	-	2.91
	3.26	3.271	-	-	3.45	3.34	3.19	3.28	-	2.89
	3.34	3.229	-	-	3.43	3.36	3.14	3.29	-	3.16
	3.35	3.284	-	-	3.42	3.23	3.17	3.25	-	3.13
	3.34	3.249	-	-	3.46	3.43	3.18	3.19	-	3.12
	3.37	3.230	-	-	3.34	3.37	3.18	3.17	-	3.07
Mean	3.33	3.235	-	-	3.39	3.33	3.17	3.23	-	3.04
Std. Devn.	0.07	0.03	-	-	0.05	0.08	0.02	0.05	-	0.11
% RSD	2.24	0.97	-	-	1.54	2.33	0.51	1.66	-	3.46
ME-2401	Mg (%) by Aqua Regia Instrumental finish									
	2.33	2.48	-	-	2.51	2.50	-	2.41	-	-
	2.36	2.49	-	-	2.52	2.55	-	2.42	-	-
	2.37	2.51	-	-	2.54	2.59	-	2.37	-	-
	2.33	2.51	-	-	2.54	2.52	-	2.42	-	-
	2.35	2.48	-	-	2.53	2.56	-	2.41	-	-
	2.26	2.50	-	-	2.55	2.50	-	2.42	-	-
	2.36	2.49	-	-	2.55	2.56	-	2.42	-	-
	2.36	2.48	-	-	2.54	2.47	-	2.43	-	-
Mean	2.34	2.49	-	-	2.54	2.53	-	2.41	-	-
Std. Devn.	0.04	0.01	-	-	0.01	0.04	-	0.02	-	-
% RSD	1.52	0.51	-	-	0.56	1.59	-	0.79	-	-
ME-2401	Lab 2	Lab9	Lab10	Lab12	Lab13	Lab14	Lab15	Lab16	Lab17	Lab18
	Mn (ppm) by 4Acid Digestion Instrumental Finish									
	1060	1074	-	-	1070	1074	1053	1052	-	1129
	1090	1076	-	-	1060	1087	1050	1008	-	1153
	1140	1074	-	-	1070	1032	1057	1036	-	1119
	1080	1090	-	-	1060	1075	1059	1054	-	1134
	1030	1071	-	-	1070	1081	1063	1058	-	1179
	1100	1092	-	-	1060	1036	1051	1052	-	1172
	1090	1083	-	-	1060	1105	1061	1011	-	1162
	1110	1077	-	-	1070	1086	1073	1015	-	1122
Mean	1088	1080	-	-	1065	1072	1058	1036	-	1146
Std. Devn.	32.84	7.84	-	-	5.35	25.35	7.57	21.18	-	23.32
% RSD	3.02	0.73	-	-	0.50	2.37	0.71	2.04	-	2.03
ME-2401	Mn (ppm) by Aqua Regia Instrumental finish									
	896	826	856	-	837	806	824	-	-	-
	914	820	850	-	841	822	838	-	-	-
	915	826	853	-	841	831	813	-	-	-
	892	829	851	-	842	808	828	-	-	-
	908	819	871	-	842	820	823	-	-	-
	886	827	857	-	856	804	826	-	-	-
	914	819	850	-	851	817	828	-	-	-
	908	812	852	-	856	788	834	-	-	-
Mean	904	822	855	-	846	812	827	-	-	-
Std. Devn.	11.24	5.70	6.97	-	7.44	13.32	7.72	-	-	-
% RSD	1.24	0.69	0.82	-	0.88	1.64	0.93	-	-	-

APPENDIX I: Results from round-robin assaying-Continue:

	Lab 2	Lab9	Lab10	Lab12	Lab13	Lab14	Lab15	Lab16	Lab17	Lab18
ME-2401	Na (%) by 4Acid Digestion Instrumental Finish									
	1.47	1.451	-	1.382	1.41	1.48	-	1.51	-	1.41
	1.50	1.453	-	1.460	1.42	1.48	-	1.51	-	1.49
	1.55	1.426	-	1.414	1.42	1.46	-	1.55	-	1.34
	1.47	1.447	-	1.413	1.40	1.46	-	1.53	-	1.37
	1.45	1.471	-	1.397	1.38	1.47	-	1.59	-	1.45
	1.51	1.455	-	1.387	1.43	1.41	-	1.52	-	1.46
	1.50	1.436	-	1.409	1.40	1.46	-	1.48	-	1.48
	1.52	1.427	-	1.429	1.41	1.48	-	1.46	-	1.37
Mean	1.50	1.446	-	1.411	1.41	1.46	-	1.52	-	1.42
Std. Devn.	0.03	0.02	-	0.02	0.02	0.02	-	0.04	-	0.06
% RSD	2.14	1.06	-	1.76	1.10	1.58	-	2.64	-	3.99
ME-2401	P (ppm) by 4Acid Digestion Instrumental finish									
	775	798	-	-	819	845	-	823	-	800
	803	809	-	-	831	855	-	794	-	830
	831	801	-	-	823	813	-	804	-	800
	788	807	-	-	831	841	-	820	-	810
	758	786	-	-	828	859	-	825	-	820
	798	799	-	-	829	825	-	810	-	830
	805	804	-	-	830	863	-	790	-	820
	814	802	-	-	824	859	-	847	-	820
Mean	797	801	-	-	827	845	-	814	-	816
Std. Devn.	22.77	7.05	-	-	4.39	17.95	-	18.68	-	11.88
% RSD	2.86	0.88	-	-	0.53	2.12	-	2.29	-	1.46
ME-2401	Lab 2	Lab9	Lab10	Lab12	Lab13	Lab14	Lab15	Lab16	Lab17	Lab18
	P (ppm) by Aqua Regia Instrumental Finish									
	760	760	-	-	726	769	-	804.2	-	-
	778	752	-	-	728	787	-	803.7	-	-
	778	756	-	-	729	796	-	790.6	-	-
	760	757	-	-	730	774	-	809.0	-	-
	768	745	-	-	727	788	-	799.3	-	-
	758	755	-	-	723	772	-	799.9	-	-
	776	741	-	-	722	785	-	804.1	-	-
	774	746	-	-	727	759	-	803.0	-	-
Mean	769	752	-	-	727	779	-	801.7	-	-
Std. Devn.	8.62	6.74	-	-	2.78	12.21	-	5.38	-	-
% RSD	1.12	0.90	-	-	0.38	1.57	-	0.67	-	-
ME-2401	S (%) by 4Acid Digestion Instrumental finish									
	1.40	1.49	-	1.40	-	1.46	1.551	1.57	-	1.33
	1.45	1.50	-	1.49	-	1.47	1.536	1.56	-	1.37
	1.49	1.48	-	1.43	-	1.45	1.560	1.59	-	1.33
	1.41	1.50	-	1.48	-	1.46	1.567	1.63	-	1.34
	1.24	1.47	-	1.43	-	1.47	1.550	1.64	-	1.36
	1.43	1.52	-	1.40	-	1.48	1.559	1.60	-	1.38
	1.45	1.49	-	1.45	-	1.45	1.559	1.56	-	1.37
	1.46	1.49	-	1.41	-	1.47	1.553	1.56	-	1.38
Mean	1.42	1.49	-	1.44	-	1.46	1.555	1.59	-	1.36
Std. Devn.	0.08	0.01	-	0.03	-	0.01	0.01	0.03	-	0.02
% RSD	5.42	0.82	-	2.23	-	0.72	0.60	2.03	-	1.56

APPENDIX I: Results from round-robin assaying-Continue:

	Lab 2	Lab9	Lab10	Lab12	Lab13	Lab14	Lab15	Lab16	Lab17	Lab18
ME-2401	S (%) by Aqua Regia Instrumental finish									
	1.37	1.33	-	-	-	1.41	1.484	1.45	-	-
	1.40	1.32	-	-	-	1.43	1.481	1.44	-	-
	1.40	1.32	-	-	-	1.45	1.481	1.44	-	-
	1.37	1.33	-	-	-	1.41	1.488	1.48	-	-
	1.39	1.31	-	-	-	1.44	1.484	1.46	-	-
	1.37	1.33	-	-	-	1.42	1.484	1.45	-	-
	1.40	1.31	-	-	-	1.44	1.482	1.46	-	-
	1.39	1.30	-	-	-	1.39	1.481	1.47	-	-
Mean	1.39	1.32	-	-	-	1.42	1.483	1.46	-	-
Std. Devn.	0.01	0.01	-	-	-	0.02	0.00	0.01	-	-
% RSD	1.02	0.83	-	-	-	1.40	0.16	0.97	-	-
ME-2401	Sb (ppm) by 4Acid Digestion Instrumental finish									
	147	149	-	140.2	142	167.2	146.91	151.0	-	79.8
	154	146	-	140.6	142	169.1	147.18	143.5	-	80.3
	158	146	-	141.3	139	168.8	144.68	145.5	-	79.0
	152	148	-	142.7	141	166.7	144.03	150.7	-	79.8
	138	142	-	140.2	140	173.9	145.35	150.2	-	80.7
	158	145	-	142.3	142	171.2	145.60	148.0	-	79.8
	154	148	-	138.6	141	168.0	143.97	145.4	-	79.5
	155	149	-	142.0	140	169.4	145.58	143.7	-	80.2
Mean	152	147	-	141.0	141	169.3	145.41	147.2	-	79.9
Std. Devn.	6.65	2.39	-	1.36	1.13	2.33	1.19	3.13	-	0.52
% RSD	4.38	1.63	-	0.97	0.80	1.38	0.82	2.12	-	0.65
ME-2401	Lab 2	Lab9	Lab10	Lab12	Lab13	Lab14	Lab15	Lab16	Lab17	Lab18
	Sb (ppm) by Aqua Regia Instrumental finish									
	110	134	-	-	98	88.93	-	138.78	-	-
	109	134	-	-	95	92.09	-	139.52	-	-
	111	134	-	-	97	93.54	-	141.66	-	-
	110	134	-	-	96	90.37	-	141.53	-	-
	111	134	-	-	95	97.45	-	137.25	-	-
	117	133	-	-	94	87.71	-	137.49	-	-
	111	132	-	-	96	97.94	-	139.07	-	-
	110	131	-	-	96	91.41	-	136.83	-	-
Mean	111	133	-	-	96	92.43	-	139.02	-	-
Std. Devn.	2.47	1.16	-	-	1.25	3.72	-	1.85	-	-
% RSD	2.23	0.87	-	-	1.30	4.02	-	1.33	-	-
ME-2401	Sr (ppm) by 4Acid Digestion Instrumental finish									
	232	246	-	246	238	246.2	254.9	244.5	-	258
	238	250	-	256	243	249.3	255.7	233.9	-	273
	250	248	-	247	242	245.8	254.3	241.2	-	235
	235	251	-	242	239	239.8	254.6	243.8	-	253
	236	246	-	244	234	246.8	253.6	251.2	-	265
	240	251	-	242	243	249.6	257.1	242.3	-	270
	240	252	-	247	235	245.6	253.4	235.7	-	277
	241	249	-	244	238	249.4	258.4	230.9	-	261
Mean	239	249	-	246	239	246.6	255.2	240.4	-	262
Std. Devn.	5.37	2.30	-	4.43	3.46	3.21	1.75	6.58	-	13.33
% RSD	2.25	0.92	-	1.80	1.45	1.30	0.69	2.74	-	5.10

APPENDIX I: Results from round-robin assaying-Continue:

	Lab 2	Lab9	Lab10	Lab12	Lab13	Lab14	Lab15	Lab16	Lab17	Lab18
ME-2401	Ti (%) by 4Acid Digestion Instrumental Finish									
	0.41	0.438	-	0.416	0.433	0.46	0.441	0.44	-	0.464
	0.42	0.450	-	0.421	0.432	0.46	0.449	0.42	-	0.466
	0.44	0.446	-	0.411	0.437	0.44	0.442	0.44	-	0.453
	0.41	0.449	-	0.409	0.425	0.46	0.446	0.44	-	0.460
	0.41	0.444	-	0.409	0.423	0.46	0.450	0.45	-	0.475
	0.42	0.450	-	0.393	0.432	0.44	0.449	0.44	-	0.474
	0.42	0.446	-	0.395	0.419	0.47	0.444	0.43	-	0.468
	0.42	0.450	-	0.421	0.423	0.46	0.443	0.42	-	0.480
Mean	0.42	0.447	-	0.409	0.428	0.46	0.445	0.44	-	0.468
Std. Devn.	0.01	0.00	-	0.01	0.01	0.01	0.00	0.01	-	0.01
% RSD	2.37	0.95	-	2.57	1.47	2.32	0.75	2.46	-	1.87
ME-2401	V (ppm) by 4Acid Digestion Instrumental Finish									
	163	164	-	153	164	156	159.4	148.5	-	268
	167	164	-	165	163	154	159.3	143.0	-	272
	173	164	-	158	164	147	156.5	146.8	-	265
	164	165	-	165	161	150	158.6	147.3	-	267
	152	164	-	158	165	156	155.5	154.5	-	269
	167	162	-	157	165	153	157.0	150.2	-	266
	168	161	-	160	164	156	158.3	141.9	-	268
	166	161	-	156	166	152	156.7	137.5	-	266
Mean	165	163	-	159	164	153	157.7	146.2	-	268
Std. Devn.	6.05	1.55	-	4.25	1.51	3.25	1.43	5.28	-	2.20
% RSD	3.67	0.95	-	2.68	0.92	2.13	0.91	3.61	-	0.82

Notes: Highlighted assay results were removed for failing the t-test.

APPENDIX II:

Participating Laboratories: (not in same order as table of assays)

AGAT Labs, Calgary, Canada	MSA Singida Mine
Couer Mexicana S.A de C.V Laboratorio Químico, Mexico	MSA Bulyanhulu, Tanzania
Impala Terminals, Peru	MSA Yamoussoukro Côte d'Ivoire
Intertek Perth, Australia	Newlyn Lab Services, South Africa
Intertek Mineral Tarkwa Ghana	Dallaglio Pickstone Peerless Laboratory, Zimbabwe
Jinning Testing and Inspection, Maddington, Australia	SGS Geosol Laboratories Ltd. Brazil
MSA Egypt Ltd.	SGS Lakefield, ON, Canada
MSALABS Guyana Inc.	SGS Burnaby, BC Canada
MSA Langley	Shiva Analytical India
MSA Mauritania	Skyline Assayers and Labs, Az, USA

APPENDIX III: QAQC

The table below illustrates percentages of over size (+200 mesh) material in CDN-ME-2401

Standard	Study Date	Total weight Screened (g)	Total weight Over size (g)	Percentage
ME-2401	4/19/2024	300	5	1.7%
	4/19/2024	300	4.5	1.5%
	4/19/2024	300	5	1.7%

Table below shows homogeneity test results of CDN-ME-2401

ME-2401	Au Original	Au Repeat	Between Sample Variance Wt	Sample Avg. Xt	Stdev of Sample Avg	Within-Sample Std.
	1.24	1.25	0.010	1.245	0.001	0.000
	1.25	1.15	0.100	1.200	0.000	0.010
	1.22	1.22	0.000	1.220	0.000	0.000
	1.18	1.23	0.050	1.205	0.000	0.003
	1.23	1.26	0.030	1.245	0.001	0.001
	1.32	1.16	0.160	1.240	0.001	0.026
	1.22	1.28	0.060	1.250	0.001	0.004
	1.23	1.20	0.030	1.215	0.000	0.001
	1.18	1.20	0.020	1.190	0.001	0.000
	1.13	1.22	0.090	1.175	0.002	0.008
	1.22	1.20	0.020	1.210	0.000	0.000
	1.23	1.13	0.100	1.180	0.001	0.010
	1.25	1.26	0.010	1.255	0.002	0.000
	1.16	1.19	0.030	1.175	0.002	0.001
	1.29	1.15	0.140	1.220	0.000	0.020
Statistics			Gavg	SX	SS	
Mean	1.223	1.207	1.215	0.028	0.025	
SD	0.0479	0.0453	C	C SQRT		
RSD	3.916	3.754	0.0033	0.06		
Based on Statistical procedures outlined in Annex B, ISO 13528:2015 guidelines, if “SS is < square root of C” Standard is considered homogeneous. ME-2401 is statistically homogenous						

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APPENDIX IV: Statistics for Uncertified Elements

Oxides/ Elements	Analytical Method	Number of results	Mean	Standard Deviation	RSD %	Unit
Cr ₂ O ₃	Fusion	62	0.04	0.005	11.7	%
V ₂ O ₅		30	7.1	0.002	7.1	
Al	4 Acid Digestion-Instrumental Finish	64	6.5	0.16	2.5	ppm
Ba		70	4485	416	9	
Be		42	0.67	0.06	8.5	
Bi		48	1.65	0.1	7	
Ce		48	28.4	2	7	
Cr		86	204	23	11	
Ga		48	15.15	0.99	6	
In		40	0.115	0.009	7.5	
La		48	13.5	0.9	6.5	
Li		64	28.7	1.0	3.5	
Nb		40	11.6	0.9	8	
Rb		40	38.3	2.3	6	
Re		32	2.2	0.2	8	
Sc		54	19.2	1	5	
Sn		32	2.7	0.2	8	
Ta		32	0.74	0.14	19	
Y		48	13.4	0.9	7	
U		40	1.34	0.11	8.5	
W		56	47	3	6	
Zr		48	50	21	43	
Al	Aqua Regia Digestion- Instrumental finish	40	2.12	0.14	6.8	ppm
Ba		46	533	198	37	
Cr		46	136	2	2	
La		30	7.1	0.6	8	
Li		44	21	3	12	
Na		40	0.07	0.01	16.5	
Sb		46	114	19	16	
Sc		36	7.7	0.2	3	
Sr		38	95.3	11.6	12	
Ti		46	0.09	0.01	6.47	
Y		10	7.3	0.1	1.5	
V		46	83	5	6	
W		20	45	16	37	

APPENDIX V: General Notes

Intended Use

This Certified Reference Material, fit for use as a control sample in routine assay laboratory quality control when inserted within runs of test samples and measured in parallel to test samples. This material can also be used for method development, use as independent calibration verification check standard or for validation of accuracy in a method validation exercise.

This CRM can also be used to assess inter-laboratory or instrument bias and establish within-laboratory precision and within-laboratory reproducibility. The certified concentrations and expanded uncertainty for this material are property values based on an inter-laboratory measurement campaign and reflect consensus results from the laboratories that took part in the exercise.

Handling

Do not use the product if the seal is broken or there are any signs of contamination.

The material is packaged in either Tin Tie envelopes, foil envelopes or jars that must be shaken before use.

Storage information

The material should be stored in a dry place, in such a way that it does not compromise the integrity of the CRM. The material should be stored in conditions which will ensure it does not absorb moisture.

The certificate is not valid if re-packaged by a third party.

Metrological Traceability

The values quoted herein are based on the consensus values derived from statistical analysis of the data from an inter-laboratory measurement program. Traceability to SI units is via the standards used by the individual laboratories, all of which are accredited to the ISO17025 general requirements for the competence of testing and calibration laboratories and who have maintained measurement traceability during the analytical process.

Period of Validity

The certified values are valid for this product, while still sealed in its original packaging, until notification to the contrary. The material's stability will undergo regular testing every five years throughout its inventory duration. Should product stability become an issue, all customers will be notified and notification to that effect will be placed on the <http://www.cdnlabs.com/> website.

Minimum Sample Size

Most of the laboratory's reporting used a 0.5g sample size for the ICP and a 30g sample size for the fire assay. Our certified gold values are based on 30 g Fire Assay determinations. For optimal results, we strongly recommend you assay our standards with similar methods using "at least" 30g of material. Using a smaller sample weight may result in erratic values. These are the recommended minimum sample sizes for the use of this material.