African Mineral Standards
MATRIX REFERENCE MATERIALS

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AMIS0217

Certified Reference Material

Gold ore, greenstone, North Mara Gold Mine, Tanzania

Certificate of Analysis

Recommended Concentrations and Limits[1. 2.]
(at two Standard Deviations)

Provisional Concentrations

Au Pb Collection	1.31	±	0.18	g/t
Ag M/ICP	1.2	±	0.3	ppm
As M/ICP	1297	±	176	ppm

Certified Concentration

Specific Gravity	2.69	±	0.12	

1. *Manufacturers recommended limits for use of the material as control samples, based on two standard deviations, calculated using "Between Laboratory" statistics for treatment of the data for trivial, non-trivial and technically invalid results. See sections 1, 10 and 13.*
2. *There is additional certified major element data presented on p2 and uncertified trace element data presented as an appendix.*

Major Element
Recommended Concentrations and Limits
(at two Standard Deviations)

Certified Concentrations

Al_2O_3	14.17	±	0.14	%
CaO	1.23	±	0.02	%
Fe_2O_3	4.71	±	0.16	%
K_2O	8.67	±	0.22	%
MgO	1.04	±	0.10	%
Na_2O	1.18	±	0.06	%
SiO_2	63.86	±	1.08	%
TiO_2	0.56	±	0.01	%
S Comb/LECO	1.57	±	0.04	%

Provisional Concentrations

MnO	0.04	±	0.01	%
LOI	3.38	±	0.50	%

Indicated Mean

Cr_2O_3	0.05	%

1. **Intended Use**: AMIS0217 can be used to check analysis of samples of siliceous gold ores, with a similar grade and matrix.

It is a matrix matched Certified Reference Material, fit for use as control samples in routine assay laboratory quality control when inserted within runs of samples and measured in parallel to the unknown. Its purpose is to monitor inter-laboratory or instrument bias and within lab precision. It can be used, indirectly, to establish the traceability of results to an SI system of units.

The recommended concentrations and limits for this material are property values based on a measurement campaign (round robin) and reflect consensus results from the laboratories that participated in the round robin.

Slight variations in analytical procedures between laboratories will reflect as slight biases to the recommended concentrations (see Section 19). Good laboratories will report results within the two standard deviation levels with a failure rate of <10 %.

The material can also be used for method development and for the calibration of equipment.

2. **Origin of Material**: AMIS0217 is a commissioned CRM made from material supplied by SGS Minerals Services from the North Mara Gold Mine, which is wholly owned and operated by African Barrick Gold plc.

The North Mara Gold Mine is located in the northwestern part of Tanzania, 200km northeast of Mwanza, in Tarime District of Mara Region. This is 100 kilometres East of Lake Victoria and 20 kilometres south of the Kenyan border. The North Mara mine consists of three open pit deposits. Mining is under way at Nyabirama and the Nyabigena pit is in the development phase. The Gokona pit is currently being prepared for development.

The project comprises an Archaean granite-greenstone terrain, partially covered by Proterozoic sediments and Tertiary volcanic. The Mara greenstone belt hosts widespread, dominantly shear-controlled, gold mineralisation.

3. Mineral and Chemical Composition: The main body of the mineralisation is hosted within a zone of intense silica-feldspar-sulphide flooding that lies strike-parallel to and up dip of the Mara Shear.

4. Appearance: The material is a very fine powder. It is colored Medium Dark Grey (Corstor).

5. Handling instructions: The material is packaged in Laboratory Packs and Explorer Packs that must be shaken or otherwise agitated before use. Normal safety precautions for handling fine particulate matter are suggested, such as the use of safety glasses, breathing protection, gloves and a laboratory coat.

6. Method of Preparation: The material was crushed, dry-milled and air-classified to <54um. Wet sieve partic**l**e size analysis of random samples confirmed the material was 98.5% <54um. It was then blended in a bi-conical mixer, systematically divided and then sealed into 1kg Laboratory Packs. Explorer Packs are subdivided from the Laboratory packs as required. Samples were randomly selected for homogeneity testing and third party analysis. Statistical analysis of both homogeneity and the consensus test results were carried out by independent statisticians.

7. Methods of Analysis requested:

1. Au – Pb collection ICP-OES or ICP-MS.
2. Multi-acid digest, including HF, ICP- OES or ICP-MS. Multi element scan to include Ag.
3. Majors (Al_2O_3, CaO, Cr_2O_3, Fe_2O_3, K_2O, MgO, MnO, Na_2O, SiO_2, TiO_2. LOI.) XRF fusion.
4. S – Combustion analysis.
5. SG – Gas Pycnometer.

8. Information requested:

1. State aliquots used for all determinations.
2. Report all results for gold in ppm
3. All results for major elements to be reported as oxides in percentages.
4. All results for multi-element scans to be reported in ppm.
5. Report all QC data, to include replicates, blanks and certified reference materials used.
6. State and provide brief description of analytical techniques used.

9. Method of Certification: Twenty three laboratories were each given eight randomly selected packages of sample. Twenty of the laboratories submitted results in time for certification.

Final limits were calculated after first determining if all data was compatible within a spread normally expected for similar analytical methods done by reputable laboratories. Data from any one laboratory was then removed from further calculations when the mean of all analyses from that laboratory failed a “t test” of the global means of the other laboratories. The means and standard deviations were then re-calculated using all remaining data. Any analysis that fell outside of the new two standard deviations was removed from the ensuing data base. The mean and standard deviations were again calculated using the remaining data.

The “between-laboratory” standard deviation is used in the calculation to eliminate technically and statistically invalid data. Upper and lower limits are based on the standard deviation of the remaining data, which reflect individual analyses and can be used to monitor accuracy in routine laboratory quality control. This is different to limits based on standard deviations derived from grouped set of

analyses (see 12), which provide important measures for precision and trueness, but which are less useful for routine QC.

Standards with an RSD of near or less than 5 % are termed “Certified”, RSD’s of between near 5 % and 15 % are termed “Provisional”, and RSD’s over 15 % are termed “Informational”.

10. Participating Laboratories: The 20 out of 23 laboratories that provided results timeously were (not in same order as in the table of assays):

1. Anglo Gold Ashanti - Navachab Gold Mine Laboratory Namibia
2. Genalysis Laboratory Services (South Africa) Pty
3. Genalysis Laboratory Services W Australia
4. Performance Laboratories FS (Allanridge)
5. Performance Laboratories SA (Randfontein)
6. Performance Laboratories Zimbabwe
7. Ready Lead Assay Laboratory
8. Set Point Laboratories (Isando) SA
9. SGS Australia Pty Ltd (Newburn) WA
10. SGS Chelopech (Bulgaria)
11. SGS Geosol Laboratories Ltda (Brazil)
12. SGS Kalgoorlie WA
13. SGS Mineral Services Callao (Peru)
14. SGS Mineral Services Lakefield (Canada)
15. SGS Mwanza (Tanzania)
16. SGS South Africa (Pty) Ltd - Booysens JHB
17. SGS Tarkwa (Ghana)
18. SGS Toronto (Canada)
19. SGS Townsville (Australia)
20. Ultra Trace (Pty) Ltd WA

11. Assay Data: Data as received from the laboratories for the important certified elements listed on p1 are set out below.

Lab Code	Au Pb Coll ppm	Ag M/ICP ppm	Al2O3 XRF %	CaO XRF %	Cr2O3 XRF %	Fe2O3 XRF %	K2O XRF %	MgO XRF %	MnO XRF %	Na2O XRF %	SiO2 XRF %	TiO2 XRF %	LOI %	S Comb/LECO %	SG pyc
A	1.12														
A	1.18														
A	1.14														
A	1.21														
A	1.24														
A	1.32														
A	1.24														
A	1.18														
B	1.16	1.00	14.13	1.24	0.06	4.66	8.69	1.00	0.04	1.15	64.04	0.56	3.12	1.56	2.81
B	1.28	1.50	14.17	1.24	0.06	4.67	8.70	1.01	0.04	1.16	64.07	0.56	3.13	1.58	2.81
B	1.18	2.00	14.14	1.24	0.06	4.67	8.69	1.01	0.04	1.15	64.00	0.56	3.14	1.56	2.82
B	1.31	1.50	14.19	1.25	0.06	4.67	8.71	1.01	0.04	1.16	64.08	0.56	3.17	1.57	2.78
B	1.24	1.00	14.13	1.24	0.06	4.68	8.69	1.00	0.05	1.15	63.99	0.56	3.18	1.57	2.77
B	1.26	1.00	14.14	1.24	0.06	4.67	8.70	1.01	0.04	1.16	64.01	0.56	3.13	1.57	2.81
B	1.29	1.00	14.15	1.24	0.07	4.66	8.69	1.00	0.04	1.15	63.97	0.56	3.20	1.57	2.77
B	1.15	1.00	14.16	1.25	0.07	4.66	8.71	1.01	0.04	1.16	64.08	0.56	3.21	1.58	2.78
C	1.21	1.30	14.10	1.23	0.06	4.69	8.62	1.00	0.04	1.17	63.90	0.56	3.10	1.44	
C	1.28	1.30	14.10	1.23	0.06	4.69	8.67	0.98	0.05	1.18	63.90	0.56	3.03	1.43	
C	1.25	1.20	14.10	1.25	0.06	4.69	8.67	0.99	0.05	1.19	63.90	0.56	3.06	1.42	
C	1.26	1.30	14.10	1.22	0.06	4.64	8.67	1.00	0.04	1.22	63.80	0.56	3.09	1.48	
C	1.27	1.30	14.10	1.23	0.06	4.64	8.67	1.00	0.04	1.21	63.80	0.56	3.07	1.54	
C	1.24	1.30	14.10	1.23	0.07	4.62	8.67	1.00	0.05	1.20	63.90	0.56	3.00	1.48	
C	1.23	1.30	14.10	1.23	0.06	4.67	8.70	1.01	0.05	1.20	63.80	0.56	2.94	1.40	
C	1.25	1.30	14.10	1.23	0.06	4.68	8.66	1.00	0.04	1.17	63.90	0.56	3.02	1.53	
D	1.41		14.14	1.23	0.07	4.74	8.72	1.02	0.05	1.17	64.11	0.56	3.21	1.56	2.62
D	1.43		14.14	1.24	0.06	4.73	8.72	1.00	0.05	1.16	64.21	0.57	3.24	1.58	2.64
D	1.43		14.16	1.23	0.07	4.76	8.76	1.01	0.05	1.17	64.02	0.57	3.23	1.59	2.64
D	1.43		14.18	1.24	0.06	4.75	8.73	1.02	0.05	1.16	64.09	0.56	3.19	1.58	2.68
D	1.39		14.14	1.24	0.06	4.74	8.74	1.01	0.05	1.17	63.99	0.56	3.19	1.62	2.68
D	1.41		14.15	1.23	0.06	4.74	8.69	1.00	0.04	1.17	63.98	0.56	3.22	1.56	2.63
D	1.39		14.14	1.24	0.07	4.75	8.73	1.00	0.05	1.17	64.04	0.56	3.22	1.55	2.69
D	1.40		14.18	1.24	0.06	4.77	8.75	1.01	0.05	1.17	64.20	0.57	3.19	1.62	2.68

Assay data (cont)

Lab Code	Au Pb Coll ppm	Ag M/ICP ppm	Al2O3 XRF %	CaO XRF %	Cr2O3 XRF %	Fe2O3 XRF %	K2O XRF %	MgO XRF %	MnO XRF %	Na2O XRF %	SiO2 XRF %	TiO2 XRF %	LOI %	S Comb/LECO %	SG pyc
E	1.30														
E	1.36														
E	1.34														
E	1.32														
E	1.32														
E	1.36														
E	1.36														
E	1.30														
F	1.39		14.20	1.22	0.08	4.69	8.64	1.05	0.03	1.13	64.30	0.55	3.34	1.61	
F	1.38		14.30	1.24	0.08	4.73	8.71	1.07	0.04	1.15	64.80	0.55	3.36	1.67	
F	1.36		14.20	1.20	0.07	4.69	8.68	1.07	0.04	1.14	64.30	0.55	3.31	1.57	
F	1.43		14.40	1.22	0.06	4.70	8.69	1.07	0.04	1.16	64.60	0.56	3.33	1.60	
F	1.38		14.30	1.25	0.06	4.71	8.68	1.05	0.04	1.16	64.60	0.55	3.39	1.52	
F	1.44		14.20	1.21	0.06	4.69	8.68	1.05	0.03	1.14	64.40	0.55	3.44	1.62	
F	1.38		14.30	1.22	0.06	4.68	8.69	1.07	0.03	1.15	64.40	0.56	3.55	1.60	
F	1.39		14.30	1.21	0.06	4.69	8.70	1.09	0.04	1.17	64.60	0.55	3.48	1.62	
H		1.17		1.37	0.04			1.14	0.04	1.23		0.37		1.55	2.60
H		1.21		1.26	0.04			1.13	0.05	1.29		0.37		1.56	2.59
H		1.08		1.33	0.04			1.14	0.04	1.31		0.35		1.56	2.57
H		1.25		1.26	0.04			1.11	0.05	1.29		0.37		1.58	2.59
H		1.19		1.34	0.04			1.18	0.04	1.32		0.37		1.56	2.59
H		1.19		1.25	0.04			1.09	0.05	1.31		0.38		1.57	2.62
H		1.17		1.30	0.04			1.14	0.05	1.32		0.35		1.57	2.59
H		1.21		1.30	0.04			1.16	0.04	1.27		0.40		1.58	2.61
I	1.10														
I	1.04														
I	0.96														
I	1.18														
I	1.01														
I	1.09														
I	0.98														
I	1.11														
J	1.19		14.20	1.23	0.06	4.63	8.66	1.03	0.04	1.21	62.90	0.57	3.75	1.56	2.69
J	1.35		14.20	1.23	0.06	4.63	8.63	1.03	0.04	1.20	62.90	0.56	3.81	1.62	2.66
J	1.21		14.20	1.23	0.06	4.66	8.68	1.04	0.04	1.22	63.20	0.56	3.73	1.55	2.66
J	1.25		14.20	1.22	0.06	4.65	8.66	1.02	0.04	1.24	63.00	0.56	3.79	1.58	2.66
J	1.29		14.30	1.24	0.06	4.71	8.72	1.05	0.04	1.23	63.10	0.57	3.81	1.58	2.66
J	1.22		14.10	1.24	0.06	4.83	8.50	1.03	0.05	1.24	62.70	0.55	3.75	1.55	2.70
J	1.14		14.00	1.24	0.06	4.80	8.50	1.03	0.04	1.21	62.70	0.56	3.71	1.54	2.70
J	1.24		14.20	1.21	0.06	4.66	8.60	1.02	0.04	1.22	63.20	0.55	3.70	1.56	2.69
K	1.29	1.14	14.02	1.23	0.03	4.83	8.53	1.01	0.04	1.23		0.42		1.54	
K	1.43	1.13	13.70	1.20	0.03	4.76	8.85	0.98	0.04	1.20		0.42		1.55	
K	1.41	1.15	13.93	1.22	0.03	4.79	8.82	1.03	0.04	1.23		0.42		1.56	
K	1.36	1.18	13.30	1.18	0.03	4.62	7.63	0.99	0.04	1.17		0.40		1.57	
K	1.44	1.18	13.62	1.20	0.03	4.72	8.94	0.99	0.04	1.20		0.40		1.54	
K	1.41	1.13	14.04	1.23	0.03	4.85	8.96	0.99	0.04	1.23		0.42		1.56	
K	1.27	1.21	13.81	1.22	0.03	4.73	9.05	0.99	0.04	1.21		0.42		1.57	
K	1.18	1.16	13.64	1.22	0.03	4.73	8.83	1.01	0.04	1.20		0.42		1.54	
M	1.24	1.00												1.54	
M	1.35	1.00												1.55	
M	1.24	1.50												1.57	
M	1.31	1.50												1.56	
M	1.20	1.50												1.58	
M	1.23	1.00												1.55	
M	1.12	1.50												1.56	
M	1.17	1.50												1.57	
N	1.39														
N	1.42														
N	1.41														
N	1.38														
N	1.39														
N	1.40														
N	1.40														
N	1.38														
O	1.19	1.27	14.10	1.23	0.06	4.69	8.64	1.02	0.03	1.05	63.90	0.55	3.44		
O	1.17	1.13	14.20	1.22	0.07	4.74	8.77	1.02	0.03	1.00	64.40	0.57	3.45		
O	1.18	1.39	14.10	1.25	0.06	4.76	8.74	1.05	0.04	1.03	64.40	0.56	3.55		
O	1.14	1.24	14.10	1.24	0.06	4.74	8.64	1.02	0.03	1.02	64.30	0.56	3.51		
O	1.17	1.22	14.10	1.21	0.06	4.73	8.65	1.04	0.03	1.07	64.20	0.55	3.73		
O	1.26	1.13	14.20	1.23	0.07	4.73	8.73	1.03	0.03	1.04	64.20	0.56	3.50		
O	1.21	1.23	14.10	1.24	0.07	4.73	8.65	1.02	0.03	1.01	64.00	0.55	3.57		
O	1.17	1.15	14.10	1.24	0.07	4.73	8.69	1.01	0.03	1.00	64.10	0.56	3.69		
P	1.40														
P	1.41														
P	1.35														
P	1.33														
P	1.42														
P	1.39														
P	1.44														
P	1.36														
Q	1.53														
Q	1.53														
Q	1.50														
Q	1.59														
Q	1.44														
Q	1.38														
Q	1.65														
Q	1.41														

Assay data (cont)

Lab Code	Au Pb Coll ppm	Ag M/ICP ppm	Al2O3 XRF %	CaO XRF %	Cr2O3 XRF %	Fe2O3 XRF %	K2O XRF %	MgO XRF %	MnO XRF %	Na2O XRF %	SiO2 XRF %	TiO2 XRF %	LOI %	S comb LECO %	SG pyc
R	1.34														
R	1.33														
R	1.35														
R	1.29														
R	1.38														
R	1.35														
R	1.33														
R	1.38														
S	0.94														
S	1.11														
S	1.09														
S	1.14														
S	1.08														
S	1.07														
S	0.99														
S	1.13														
T	1.05		14.14	1.22	0.06	4.88	8.47	1.08	0.04	1.17	62.56	0.58	3.63		2.68
T	1.05		14.49	1.24	0.06	4.88	8.43	1.17	0.04	1.21	62.58	0.58	3.62		2.68
T	1.14		13.79	1.23	0.06	4.83	8.50	1.09	0.04	1.19	62.46	0.58	3.56		2.68
T	1.03		14.26	1.26	0.06	4.89	8.47	1.10	0.04	1.21	62.72	0.58	3.55		2.68
T	1.05		14.33	1.23	0.06	4.94	8.61	1.10	0.04	1.22	63.64	0.57	3.54		2.68
T	1.14		14.29	1.24	0.06	4.93	8.57	1.12	0.04	1.19	63.46	0.58	3.59		2.68
T	1.09		14.32	1.24	0.06	4.90	8.54	1.38	0.04	1.18	63.36	0.58	3.56		2.67
T	1.10		14.25	1.25	0.06	4.88	8.46	1.11	0.04	1.19	62.67	0.58	3.53		2.68
V	1.35														2.66
V	1.23														2.70
V	1.35														2.69
V	1.27														2.71
V	1.22														2.69
V	1.38														2.65
V	1.35														2.69
V	1.44														2.69
W	1.33	1.10		1.15	0.03	4.42	8.35		0.04	1.02				1.74	2.74
W	1.34	1.20		1.16	0.04	4.56	8.77		0.04	1.06				1.71	2.71
W	1.38	1.10		1.15	0.04	4.56	8.62		0.04	1.05				1.69	2.74
W	1.28	1.20		1.11	0.04	4.53	8.61		0.04	1.06				1.59	2.77
W	1.31	1.10		1.16	0.04	4.55	8.73		0.04	1.06				1.67	2.76
W	1.33	1.10		1.18	0.04	4.69	8.88		0.04	1.08				1.68	2.74
W	1.33	1.20		1.16	0.04	4.63	8.83		0.04	1.08				1.69	2.74
W	1.37	1.20		1.17	0.04	4.63	8.79		0.04	1.07				1.68	2.74

12. Measurement of Uncertainty :(*ref Dr Hugh Bartlett, Hugh Bartlett Consulting CC.)*

The samples used in this certification process have been selected in such a way as to represent the entire batch of material and were taken from the final packaged units; therefore all possible sources of uncertainty (sample uncertainty and measurement uncertainty) are included in the final combined standard uncertainty determination.

The uncertainty measurement takes into consideration the between lab and the within lab variances and is calculated from the square roots of the variances of these components using the formula:

Combined standard uncertainty=sqrt((between lab.var/no of labs) + (mean square within lab.var /no of assays))

These uncertainty measurements may be used, by laboratories, as a component for calculating the total uncertainty for method validation according to the relevant ISO guidelines.

Analyte	Method	Unit	S [1]	σ_L [2]	Sw [3]	CSU [4]
Au	Pb Coll	g/t	0.086	0.052	0.049	0.014
Ag	M/ICP	ppm	0.146	0.049	0.139	0.026
Al_2O_3	XRF	%	0.074	0.060	0.050	0.024
CaO	XRF	%	0.012	0.006	0.010	0.003
Cr_2O_3	XRF	%	0.013	0.012	0.004	0.004
Fe_2O_3	XRF	%	0.080	0.066	0.044	0.022
K_2O	XRF	%	0.110	0.071	0.083	0.026
MgO	XRF	%	0.048	0.045	0.015	0.015
MnO	XRF	%	0.004	0.002	0.003	0.001
Na_2O	XRF	%	0.029	0.029	0.014	0.011
SiO_2	XRF	%	0.540	0.564	0.187	0.215
TiO_2	XRF	%	0.006	0.004	0.005	0.002
LOI		%	0.249	0.276	0.061	0.105
S	Comb/LECO	%	0.027	0.015	0.023	0.006
SG	pyc		0.060	0.064	0.019	0.024

1. *S - Std Dev for use on control charts.*
2. *σ_L - Betw Lab Std Dev, for use to calculate a measure of accuracy.*
3. *S_W - Within Lab Stc Dev, for use to calculate a measure of precision.*
4. *CSU - Combined Standard Uncertainty, a component for use to calculate the total uncertainty in method validation.*

13. Certified values: The Certified, Provisional and Indicated values listed on p1 of this certificate fulfill the AMIS statistical criteria regarding agreement for certification and have been independently validated by Dr Barry Smee.

14. 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 the majority of which are accredited and who have maintained measurement traceability during the analytical process.

15. Certification: AMIS0217 is a new material.

16. Period of validity: The certified values are valid for this product, while still sealed in its original packaging, until notification to the contrary. The stability of the material will be subject to continuous testing for the duration of the inventory. Should product stability become an issue, all customers will be notified and notification to that effect will be placed on the www.amis.co.za website.

17. Minimum sample size: The majority of laboratories reporting used a 0.5g sample size for the ICP and a 30g sample size for the fire assay. These are the recommended minimum sample sizes for the use of this material.

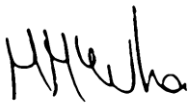
18. Availability: This product is available in Laboratory Packs containing 1kg of material and Explorer Packs containing custom weights (from 50 to 250g) of material. Laboratory Packs are sealed bottles delivered in sealed foil pouches. Explorer Packs contain material in standard geochem envelopes, nitrogen flushed and vacuum sealed in foil pouches.

19. Recommended use: The data used to characterize this CRM has been scrutinized using outlier treatment techniques. This, together with the number of participating laboratories, should overcome any "inter-laboratory issues" and should lead to a very accurate measure for the given methods; notwithstanding the underlying assumption that what the good inter-laboratory labs reported was accurate. However an amount of bad data might have had an effect, resulting in limits which in some situations might be too broad for the effective monitoring of a single analytical method, laboratory or production process. Users should therefore set their own limits based on their own data quality objectives and control measurements, after determining the performance characteristics of their own particular method, using a minimum of 20 analyses using this CRM. User set limits should normally be within the limits recommended on p1 and 2 of this certificate.

20. Legal Notice: This certificate and the reference material described in it have been prepared with due care and attention. However AMIS, Set Point Technology (Pty) Ltd, Mike McWha, Dr Barry Smee and Smee and Associates Ltd; accept no liability for any decisions or actions taken following the use of the reference material.

12 October 2012 (Arsenic Certified, 23 May 2013, Amended)

Certifying Officers:



African Mineral Standards: _____

Mike McWha
BSc (Hons), FGSSA, MAusIMM, Pr.Sci.Nat

Geochemist: _____

Barry W. Smee
BSc, PhD, P.Geo, (B.C.)

Appendix – uncertified trace element statistics

Analyte	Method	Unit	Mean	2SD	RSD%	n
Al	M/ICP	%	7.2	0.46	3.2	56
As	M/ICP	ppm	1297	176	6.8	64
Ba	M/ICP	ppm	1392	558	20.1	48
Be	M/ICP	ppm	1.5	0.20	6.7	62
Bi	M/ICP	ppm	0.36	0.09	12.1	55
Ca	M/ICP	%	0.86	0.07	4.0	61
Cd	M/ICP	ppm	0.17	0.07	21.4	40
Ce	M/ICP	ppm	104	27.5	13.2	56
Co	M/ICP	ppm	14.0	2.3	8.2	68
Cr	M/ICP	ppm	109	9.1	4.2	63
Cs	M/ICP	ppm	268	64.1	11.9	56
Cu	M/ICP	ppm	2.8	0.46	8.2	40
Dy	M/ICP	ppm	3.4	0.30	4.4	24
Er	M/ICP	ppm	1.4	0.26	9.0	24
Eu	M/ICP	ppm	1.9	0.28	7.5	24
Fe	M/ICP	%	3.2	0.28	4.3	69
Ga	M/ICP	ppm	19.9	3.7	9.2	46
Gd	M/ICP	ppm	6.0	1.1	9.0	24
Hf	M/ICP	ppm	4.5	1.0	11.2	48
Ho	M/ICP	ppm	1.2	2.3	98.0	32
In	M/ICP	ppm	0.04	0.01	14.7	55
K	M/ICP	%	7.2	0.8	5.8	62
La	M/ICP	ppm	52.4	11.4	10.9	62
Li	M/ICP	ppm	18.2	1.9	5.2	64
Lu	M/ICP	ppm	0.17	0.04	10.4	54
Mg	M/ICP	%	0.59	0.09	7.2	70
Mn	M/ICP	ppm	323.4	31.5	4.9	71
Mo	M/ICP	ppm	6.9	0.96	7.0	67
Na	M/ICP	%	0.85	0.13	7.5	71
Nb	M/ICP	ppm	7.0	1.8	12.7	51
Nd	M/ICP	ppm	47.5	4.0	4.2	24
Ni	M/ICP	ppm	36.0	4.2	5.9	66
P	M/ICP	ppm	1195	210	8.8	67
Pb	M/ICP	ppm	36.6	7.1	9.6	64
Pr	M/ICP	ppm	11.7	2.8	11.9	24
Rb	M/ICP	ppm	213	37.4	8.8	52
S	M/ICP	%	1.5	0.13	4.4	64
Sb	M/ICP	ppm	6.1	1.5	12.5	54
Sc	M/ICP	ppm	8.2	2.1	12.6	63
Se	M/ICP	ppm	2.1	1.6	38.2	21
Si	M/ICP	%	30.8	3.6	5.8	8
Sm	M/ICP	ppm	8.4	0.82	4.9	24
Sn	M/ICP	ppm	2.6	0.76	14.5	55
Sr	M/ICP	ppm	292	36.7	6.3	64
Ta	M/ICP	ppm	0.52	0.30	28.7	55
Tb	M/ICP	ppm	0.68	0.20	14.6	56
Te	M/ICP	ppm	1.0	0.15	7.4	51
Th	M/ICP	ppm	8.7	1.6	9.3	55
Ti	M/ICP	%	0.25	0.11	21.7	61
Tl	M/ICP	ppm	3.6	0.61	8.5	52
Tm	M/ICP	ppm	0.20	0.02	5.1	23
U	M/ICP	ppm	4.9	0.77	7.8	55
V	M/ICP	ppm	80.4	7.0	4.3	67
W	M/ICP	ppm	12.0	6.0	25.0	56
Y	M/ICP	ppm	14.8	4.0	13.6	56
Yb	M/ICP	ppm	1.2	0.26	10.8	54
Zn	M/ICP	ppm	61.4	11.6	9.5	61
Zr	M/ICP	ppm	137	51.7	18.9	59