

Certificate of Analysis

MEG, LLC

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Au.22.04

Certified Reference Material

MEAN =	0.953	ppm Au	
95% Confidence =	0.868	to	1.037
MEAN =	80.484	ppm Ag	
95% Confidence =	74.187	to	86.782

Prepared By: MEG, LLC
Analyzed By: Ajeet Milliard, PhD
Manufactured for: MEG, LLC
Date of Certification: Thursday, December 15, 2022

Origin of Reference Material:

Reference material Au.22.04 was created from ore grade igneous and quartz vein material from Tonopah, Nevada.

This material is not intended to be matrix-matched to any specific ore lithology.

Method of Preparation:

100 kg of ore was jaw crushed and roll crushed where necessary.

Batch was comminuted to powder in a ceramic ball mill for 93 hours.

Sizing tests of the final product show greater than 95% pass -75um (-200 mesh).

The standard is packaged in 60 g envelopes, each envelope with a removable sticker-label.

Method of Analysis:

Homogeneity and characterization tests were conducted at one lab to estimate trace element distributions by aqua regia digestion (0.5 gram) from each of 10 samples.

Ten samples each to 10 laboratories were fire assayed for gold and analyzed for silver by aqua regia and ICP-MS/OES on 30 gram subsamples, and these data were used to certify the material for gold and silver concentration. New fire assay crucibles were used.

Summarized Assay Results:

PROJECT: Au.22.04

GOLD Au reported in ppm (parts per million)

DATA POINTS (LAB AVERAGE DATA)	9
MEAN (LABS)	0.953
STANDARD DEVIATION (LABS)	0.042
CV (% RSD)	4.4
RANGE OF VALUES - HIGH	1.010
RANGE OF VALUES - LOW	0.881
95% CONFIDENCE LIMITS	0.868 to 1.037

SILVER Ag reported in ppm (parts per million)

DATA POINTS (LAB DATA)	10
MEAN (LABS)	80.48
STANDARD DEVIATION (LABS)	3.15
% RSD	3.9
RANGE OF VALUES - HIGH	83.87
RANGE OF VALUES - LOW	73.66
95% CONFIDENCE LIMITS	74.19 to 86.78

Statistical Procedures:

Acceptable assay limits are based on the results of 10 samples shipped to each of 10 laboratories.

Some labs assayed submitted samples twice, in different months, or different years.

The samples were submitted with other MEG standards in randomized order, so that as much as possible, real operating conditions were obtained from the participating laboratories. All of the data were used to determine an acceptable range, based on the mean and standard deviation of the "Lab Average Data". The acceptable reporting range is the "95% Confidence Limit", which is the mean \pm 2 standard deviations. Other statistics are provided to help the user assign viable acceptance boundaries.

Standards with an RSD (Relative Standard Deviation) of near or less than 5% are termed "Certified", while RSD's 5% to 15% are designated "Provisional". RSD's over 15% are "Informational".

Instructions and Recommendations for Use:

Submit the entire contents of one 60 g envelope in random locations in the submittal, approximately every 10-20 samples. Use of blanks (samples with "below detection" concentration of analyte) are also recommended, randomly placed every 30-40 samples.

The analytical request should be the same as that used for the round robin assays that generated this certificate.

Intended Use:

The standard material can be used to validate the analysis of samples from gold ores with a similar grade.

As a control sample in routine assay laboratory operations, it should behave within the limits as indicated statistically in this certificate of analysis. Its intended use is to monitor inter-laboratory and instrumental bias within these limits.

The recommended concentrations and limits for this material are based on multiple assays from several laboratories and reflects a consensus of the inherent chemical concentration. These values are a first attempt at a chemical characterization to which later data may be added as experience with the material increases. Later data may be added and recommended concentrations changed as experience with the material increases.

Slight variations in analytical procedures between laboratories will result in slight biases to the recommended statistical limits.

This standard material is not recommended for method development, nor instrumental calibration.

Handling Instructions:

The material is packaged in manila tin-top envelopes for easy open and close use. The material should be reblended just prior to use in the assay laboratory. This can be done with a micro-riffle splitter or rubber sheeting.

Simple agitation and shaking is not sufficient to rehomogenize prior to use.

Normal safety precautions for handling powders are recommended. The use of safety glasses, dust inhalation protection, gloves, and a laboratory coat are suggested.

Safety Notice:

A Material Safety Data Sheet (MSDS) is not required for this material. This material will not release or otherwise result in exposure to a hazardous chemical, under normal conditions of use. Use regular precautions as for any work with fine powder material.

Legal Notice:

This certificate and the referenced material have been prepared with due care and attention. However, MEG, LLC and Ajeet Milliard, PhD., P.G., accept no liability for any decisions or actions taken following the use of this geochemical reference material.

Lab Assay Data Used to Calculate "True" Gold and Silver Value:

	Au (ppm)	Ag (ppm)
LAB 1	0.881	81.98
LAB 2	0.952	77.71
LAB 3	0.977	83.87
LAB 4	0.977	83.31
LAB 5	0.972	80.20
LAB 6		73.66
LAB 7	0.889	79.19
LAB 8	0.971	82.11
LAB 9	1.010	79.52
LAB 10	0.947	83.30

Major Constituents as Oxides

Average of 10 samples: 4-acid, ICPMS (Total Digestion)

Raw Data:	Al%	Ca%	Fe%	K%	Mg%	Na%	P%
ICP/MS Data (n=10):	0.31	1.62	1.37	0.16	0.23	0.48	0.04
Conversion Factor:	1.8899	1.3992	1.4297	1.2046	1.6579	1.348	2.2916
	Al₂O₃	CaO	Fe₂O₃	K₂O	MgO	Na₂O	P₂O₅
% Oxide:	0.59	2.27	1.96	0.19	0.38	0.65	0.09

Raw Data:	S%	Ti%	Si%
ICP/MS Data (n=5):	0.85	0.00	-
Conversion Factor:	2.4953	1.6681	2.1392
	SO₃	TiO₂	SiO₂
			estimated
% Oxide:	2.12	0.00	91.75

Participating Laboratories:

Activation Labs, Ancaster
 Activation Labs, Kamloops
 ALS, Loughrea
 ALS, Vancouver
 Bureau Veritas-Inspectorate, Sparks

Kappes Cassiday & Associates, Reno
 McClelland, Reno
 MSA Labs, Langley
 Intertek, Perth
 SGS Labs, Burnaby

Certified By: 

 Ajeet Milliard, PhD.