

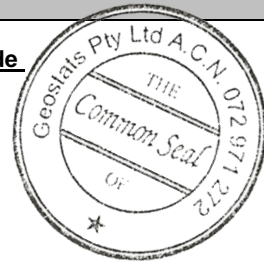
GEOSTATS PTY LTD

Mining Industry Consultants
Reference Material Manufacture and Sales

Certified Ore Grade Base Metal Reference Material Product Code

GBM323-16

Certified Control Values



Element	Grade	Standard Deviation	Num of Analyses	Confidence Interval
Nickel (ppm)	3034	151	85	+/- 33
Copper (ppm)	153247	6103	102	+/- 1205
Zinc (ppm)	33299	1440	90	+/- 303
Lead (ppm)	4040	193	95	+/- 39
Cobalt (ppm)	nr	nr	nr	nr
Silver (ppm)	215.4	9.4	98	+/- 1.9
Sulphur (%)	23.11	0.74	83	+/- 0.16

CRM Details

Control Statistic Details

Control statistics were produced from results accumulated in the April-2023 round robin. The number of results used to certify each analyte is shown in the table above.

Material Description

This material is described as a Composite Copper Sulphide Ore.

Colour Designation (ISCC-NBS, SP440)

This material is grayish black in colour.

Usage

This product is for use in the mining industry as a reference material for monitoring and testing the accuracy of laboratory assaying.

Preparation and Packaging

All CRMs are dried in an oven for a minimum of 12 hours at 110°C. The dry material is then pulverised to better than 75 micron (nominal mean of 45 micron) using an air classifier. The material is then homogenised and stored in a sealed, stable container ready for final packaging.

Materials are statistically sampled from stores, then packaged into either heat sealed, air tight, plastic pulp packets or screw top sealed plastic containers ready for distribution. All packaging has been chosen to ensure minimal contamination from outside sources during shipment, use and storage.

Assay Testwork

All standards are tested thoroughly in the Geostats bi-annual laboratory survey. This involves assaying by multiple laboratories from around the world. Results are compiled into a comprehensive report detailing statistics for each standard. Assay distributions are checked and processed statistically, producing monitoring statistics for these standards. Materials are tested regularly to ensure stability and homogeneity.

Stability

This product remains stable in its original packaging, away from direct sunlight.

Material Safety

This product is not hazardous and non-toxic.

Neutron Activation Analysis Results (ppm, unless otherwise noted)

Antimony	152
Arsenic	931
Barium	<100
Bromine	<2
Cadmium	138
Caesium	<2
Calcium (%)	nr
Cerium	27
Chromium	176
Cobalt	484
Europium	0.8
Gold (ppb)	67100
Hafnium	<5
Iridium (ppb)	<50
Iron (%)	23.1
Lanthanum	17
Lutetium	<0.2
Mercury	nr
Molybdenum	1290
Neodymium	nr
Nickel	3200
Potassium (%)	nr
Rubidium	<20
Samarium	2.2
Scandium	4.1
Selenium	113
Silver	235
Sodium (%)	0.516
Strontium	nr
Tantalum	<2
Tellurium	<20
Terbium	2
Thorium	<0.5
Tin	<200
Tungsten	52
Uranium	4
Ytterbium	<0.5
Zinc	33500
Zirconium	<500

Major Elements by Fusion / XRF (%)

Fe	22.43
SiO ₂	15.86
Al ₂ O ₃	3.83
TiO ₂	0.21
MnO	0.045
CaO	1.64
P	0.046
S	23.5
MgO	0.985
K ₂ O	0.432
Na ₂ O	0.78
LOI1000	17.97

Neutron Activation Analyses and Fusion / XRF Analyses are single results and are indicative only. These are provided for matrix identification purposes.

'nr': Not Reported

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