

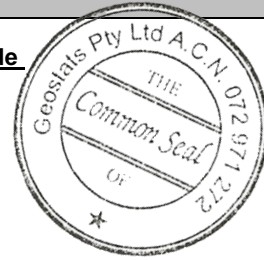
# GEOSTATS PTY LTD

Mining Industry Consultants  
Reference Material Manufacture and Sales

Certified Ore Grade Base Metal Reference Material Product Code

## GBM313-16

Certified Control Values



GBM313-16

Geostats Pty Ltd, Certified Ore Grade Base Metal Reference Material, Product Code:

Element	Grade	Standard Deviation	Num of Analyses	Confidence Interval
Nickel (ppm)	150	16	90	+/- 3
Copper (ppm)	242667	7293	227	+/- 956
Zinc (ppm)	54	19	79	+/- 4
Lead (ppm)	21	7	65	+/- 2
Cobalt (ppm)	nr	nr	nr	nr
Silver (ppm)	110.0	4.6	208	+/- 0.63
Sulphur (%)	3.64	0.19	191	+/- 0.03

### CRM Details

<u>Control Statistic Details</u> Control statistics were produced from results accumulated in the April-2013 & October-2018 round robins. The number of results used to certify each analyte is shown in the table above.	<u>Neutron Activation Analysis Results (ppm, unless otherwise noted)</u>	<u>Major Elements by Fusion / XRF (%)</u>		
<u>Material Description</u> This material is described as a High Grade Copper Ore.	Antimony	1.415	Fe	3.47
	Arsenic	3.565	SiO <sub>2</sub>	36.25
<u>Colour Designation (ISCC-NBS, SP440)</u> This material is greenish gray in colour.	Barium	492	Al <sub>2</sub> O <sub>3</sub>	6.99
	Bromine	<0.874	TiO <sub>2</sub>	0.426
<u>Usage</u> This product is for use in the mining industry as a reference material for monitoring and testing the accuracy of laboratory assaying.	Cadmium	<5.7	MnO	0.11
	Caesium	1.965	CaO	1.07
<u>Preparation and Packaging</u> 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.	Calcium (%)	nr	P	0.122
	Cerium	117	S	3.65
<u>Assay Testwork</u> 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.	Chromium	67.05	MgO	<0.01
	Cobalt	15.3	K <sub>2</sub> O	1.75
<u>Stability</u> This product remains stable in its original packaging, away from direct sunlight.	Europium	1.635	Na <sub>2</sub> O	1.989
	Gold (ppb)	18.95	LOI1000	13.24
<u>Material Safety</u> This product is not hazardous and non-toxic.	Hafnium	5.145	Neutron Activation Analyses and Fusion / XRF Analyses are single results and are indicative only. These are provided for matrix identification purposes.	
	Iridium (ppb)	<9.95	nr: Not Reported	
	Iron (%)	3.63		
	Lanthanum	65.85		
	Lutetium	0.352		
	Mercury	nr		
	Molybdenum	18.7		
	Neodymium	nr		
	Nickel	171		
	Potassium (%)	nr		
	Rubidium	68.5		
	Samarium	8.355		
	Scandium	4.22		
	Selenium	<2.73		
	Silver	112		
	Sodium (%)	1.22		
	Strontium	nr		
	Tantalum	1.16		
	Tellurium	<3.13		
	Terbium	0.895		
	Thorium	16.65		
	Tin	<46.9		
	Tungsten	<5		
	Uranium	7.985		
	Ytterbium	2.035		
	Zinc	<53		
	Zirconium	<275		

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