

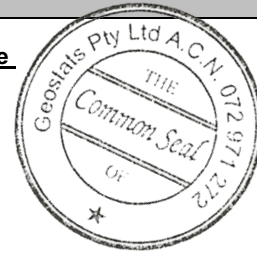
GEOSTATS PTY LTD

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)	153	nr	nr	nr
Copper (ppm)	242702	7670	101	+/- 1522
Zinc (ppm)	43	nr	nr	nr
Lead (ppm)	35	nr	nr	nr
Cobalt (ppm)	nr	nr	nr	nr
Silver (ppm)	109.3	5.5	99	+/- 1.11
Sulphur (%)	3.64	0.19	91	+/- 0.04

CRM Details

<u>Control Statistic Details</u> Control statistics were produced from results accumulated in the April-2013 round robin. 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	1.43	Fe
<u>Colour Designation (ISCC-NBS, SP440)</u> This material is greenish gray in colour.	Arsenic	3.43	SiO ₂	36.25
<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.	Barium	488	Al ₂ O ₃	6.99
<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.	Bromine	<0.874	TiO ₂	0.426
<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.	Cadmium	<5.7	MnO	0.11
<u>Stability</u> This product remains stable in its original packaging, away from direct sunlight.	Caesium	1.93	CaO	1.07
<u>Material Safety</u> This product is not hazardous and non-toxic.	Calcium (%)	nr	P	0.122
	Cerium	112	S	3.65
	Chromium	60.1	MgO	<0.01
	Cobalt	19.6	K ₂ O	1.75
	Europium	1.57	Na ₂ O	1.989
	Gold (ppb)	17.9	LOI1000	13.24
	Hafnium	5.29		
	Iridium (ppb)	<9.95		
	Iron (%)	3.66		
	Lanthanum	66.7		
	Lutetium	0.304		
	Mercury	nr		
	Molybdenum	24.4		
	Neodymium	nr		
	Nickel	162		
	Potassium (%)	nr		
	Rubidium	68		
	Samarium	8.61		
	Scandium	3.64		
	Selenium	<2.73		
	Silver	119		
	Sodium (%)	1.19		
	Strontium	nr		
	Tantalum	1.16		
	Tellurium	<3.13		
	Terbium	0.789		
	Thorium	17.1		
	Tin	<46.9		
	Tungsten	<8.14		
	Uranium	7.97		
	Ytterbium	1.77		
	Zinc	<53		
	Zirconium	<275		

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