

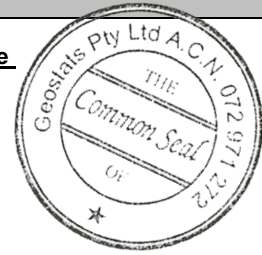
GEOSTATS PTY LTD

Mining Industry Consultants
Reference Material Manufacture and Sales

Certified Ore Grade Base Metal Reference Material Product Code

GBM313-11

Certified Control Values



GBM313-11

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

Element	Grade	Standard Deviation	Num of Analyses	Confidence Interval
Nickel (ppm)	54	nr	nr	nr
Copper (ppm)	1168	59	113	+/- 11
Zinc (ppm)	75	nr	nr	nr
Lead (ppm)	12	nr	nr	nr
Cobalt (ppm)	nr	nr	nr	nr
Silver (ppm)	1.7	0.6	77	+/- 0.13
Sulphur (%)	0.23	0.02	84	+/- 0.003

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 Copper / Gold ore material.	Antimony	1.23	Fe
<u>Colour Designation (ISCC-NBS, SP440)</u> This material is light gray in colour.	Arsenic	9.09	SiO ₂	62.61
<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	160	Al ₂ O ₃	15.94
<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	1.09	TiO ₂	0.688
<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	<4.18	MnO	0.08
<u>Stability</u> This product remains stable in its original packaging, away from direct sunlight.	Caesium	4.84	CaO	5.69
<u>Material Safety</u> This product is not hazardous and non-toxic.	Calcium (%)	nr	P	0.071
	Cerium	28	S	0.228
	Chromium	98.6	MgO	3.5
	Cobalt	13.2	K ₂ O	1.43
	Europium	0.729	Na ₂ O	2.773
	Gold (ppb)	19700	LOI1000	1.18
	Hafnium	4.19		
	Iridium (ppb)	<7.08	Neutron Activation Analyses and Fusion / XRF Analyses are single results and are indicative only. These are provided for matrix identification purposes.	
	Iron (%)	3.78	'nr': Not Reported	
	Lanthanum	18.6		
	Lutetium	0.164		
	Mercury	nr		
	Molybdenum	20		
	Neodymium	nr		
	Nickel	56.5		
	Potassium (%)	nr		
	Rubidium	115		
	Samarium	3.49		
	Scandium	10.1		
	Selenium	<2.38		
	Silver	3.7		
	Sodium (%)	2.1		
	Strontium	nr		
	Tantalum	0.545		
	Tellurium	<3.96		
	Terbium	0.444		
	Thorium	7.15		
	Tin	<61.4		
	Tungsten	11.3		
	Uranium	2.26		
	Ytterbium	<1.03		
	Zinc	85.6		
	Zirconium	233		

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