

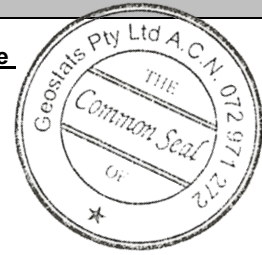
GEOSTATS PTY LTD

Mining Industry Consultants
Reference Material Manufacture and Sales

Certified Ore Grade Base Metal Reference Material Product Code

GBM311-14

Certified Control Values



GBM311-14

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

Element	Grade	Standard Deviation	Num of Analyses	Confidence Interval
Nickel (ppm)	38	nr	nr	nr
Copper (ppm)	17457	645	197	+/- 91
Zinc (ppm)	844	nr	nr	nr
Lead (ppm)	490	nr	nr	nr
Cobalt (ppm)	nr	nr	nr	nr
Silver (ppm)	4.0	0.7	108	+/- 0.13
Sulphur (%)	2.00	0.10	143	+/- 0.02

CRM Details

<u>Control Statistic Details</u> Control statistics were produced from results accumulated in the April-2011 & October-2012 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 Copper Sulphide ore.	Antimony	9.195	Fe
<u>Colour Designation (ISCC-NBS, SP440)</u> This material is medium light gray in colour.	Arsenic	41.15	SiO ₂	57.5
<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	285	Al ₂ O ₃	12.86
<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	0.965	TiO ₂	1.139
<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	77.9	MnO	0.11
<u>Stability</u> This product remains stable in its original packaging, away from direct sunlight.	Caesium	2.07	CaO	6.12
<u>Material Safety</u> This product is not hazardous and non-toxic.	Calcium (%)	nr	P	0.062
	Cerium	38.3	S	1.95
	Chromium	104.5	MgO	3.04
	Cobalt	76.55	K ₂ O	1.85
	Europium	1.006	Na ₂ O	2.885
	Gold (ppb)	2105	LOI1000	1.67
	Hafnium	3.62		
	Iridium (ppb)	<10	Neutron Activation Analyses and Fusion / XRF Analyses are single results and are indicative only. These are provided for matrix identification purposes.	
	Iron (%)	7.14	'nr': Not Reported	
	Lanthanum	20.7		
	Lutetium	0.4		
	Mercury	nr		
	Molybdenum	22.6		
	Neodymium	nr		
	Nickel	39.15		
	Potassium (%)	nr		
	Rubidium	87.1		
	Samarium	4.6		
	Scandium	20.1		
	Selenium	6.57		
	Silver	2.5		
	Sodium (%)	2.14		
	Strontium	nr		
	Tantalum	1.135		
	Tellurium	<5		
	Terbium	0.808		
	Thorium	12.3		
	Tin	<100		
	Tungsten	<2		
	Uranium	7.27		
	Ytterbium	1.726		
	Zinc	910		
	Zirconium	<400		

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