

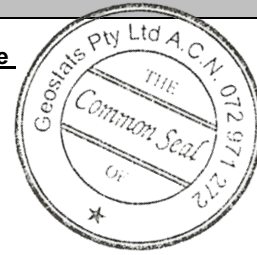
GEOSTATS PTY LTD

Mining Industry Consultants
Reference Material Manufacture and Sales

Certified Ore Grade Base Metal Reference Material Product Code

GBM310-15

Certified Control Values



GBM310-15

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

Element	Grade	Standard Deviation	Num of Analyses	Confidence Interval
Nickel (ppm)	293	nr	nr	nr
Copper (ppm)	237854	8084	231	+/- 1050
Zinc (ppm)	11931	499	220	+/- 66
Lead (ppm)	3327	170	216	+/- 23
Cobalt (ppm)	nr	nr	nr	nr
Silver (ppm)	78.8	4.4	216	+/- 0.6
Sulphur (%)	27.62	0.96	175	+/- 0.14

CRM Details

<u>Control Statistic Details</u> Control statistics were produced from results accumulated in the April-2010, October-2010 & April-2011 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 Concentrate.	Antimony	63.1	Fe
<u>Colour Designation (ISCC-NBS, SP440)</u> This material is medium dark gray in colour.	Arsenic	794.5	SiO ₂	9.315
<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	223	Al ₂ O ₃	1.755
<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	2.59	TiO ₂	0.209
<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	33.475	MnO	0.05
<u>Stability</u> This product remains stable in its original packaging, away from direct sunlight.	Caesium	<1	CaO	0.69
<u>Material Safety</u> This product is not hazardous and non-toxic.	Calcium (%)	nr	P	0.046
	Cerium	39.025	S	26.9
	Chromium	65.45	MgO	0.645
	Cobalt	766.75	K ₂ O	0.361
	Europium	1.165	Na ₂ O	0.502
	Gold (ppb)	22975	LOI1000	18.96
	Hafnium	1.7		
	Iridium (ppb)	<20	Neutron Activation Analyses and Fusion / XRF Analyses are single results and are indicative only. These are provided for matrix identification purposes.	
	Iron (%)	24.7	'nr': Not Reported	
	Lanthanum	25.85		
	Lutetium	0.16		
	Mercury	nr		
	Molybdenum	559.25		
	Neodymium	nr		
	Nickel	294.75		
	Potassium (%)	nr		
	Rubidium	16		
	Samarium	2.66		
	Scandium	3.753		
	Selenium	112.5		
	Silver	78.925		
	Sodium (%)	0.167		
	Strontium	nr		
	Tantalum	0.444		
	Tellurium	7		
	Terbium	0.336		
	Thorium	4.713		
	Tin	<121		
	Tungsten	12.9		
	Uranium	8.805		
	Ytterbium	1.08		
	Zinc	12075		
	Zirconium	<400		

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