

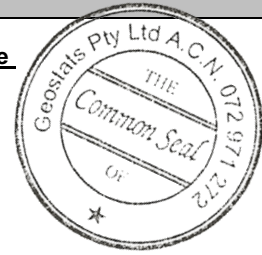
GEOSTATS PTY LTD

Mining Industry Consultants
Reference Material Manufacture and Sales

Certified Ore Grade Base Metal Reference Material Product Code

GBM914-12

Certified Control Values



GBM914-12

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

Element	Grade	Standard Deviation	Num of Analyses	Confidence Interval
Nickel (ppm)	20	nr	nr	nr
Copper (ppm)	270618	7335	118	+/- 1343
Zinc (ppm)	8240	340	113	+/- 64
Lead (ppm)	1256	nr	nr	nr
Cobalt (ppm)	nr	nr	nr	nr
Silver (ppm)	61.5	5.1	120	+/- 0.92
Sulphur (%)	29.74	0.96	91	+/- 0.2

CRM Details

<u>Control Statistic Details</u> Control statistics were produced from results accumulated in the October-2014 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 concentrate.	Antimony	4.5	Fe
<u>Colour Designation (ISCC-NBS, SP440)</u> This material is grayish black in colour.	Arsenic	86	SiO ₂	4.76
<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	<50	Al ₂ O ₃	0.46
<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	2.2	TiO ₂	0.06
<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	16.8	MnO	0.04
<u>Stability</u> This product remains stable in its original packaging, away from direct sunlight.	Caesium	<0.5	CaO	0.65
<u>Material Safety</u> This product is not hazardous and non-toxic.	Calcium (%)	nr	P	0.034
	Cerium	<20	S	27.8
	Chromium	20	MgO	1.67
	Cobalt	68	K ₂ O	0.147
	Europium	0.513	Na ₂ O	0.46
	Gold (ppb)	24400	LOI1000	19.4
	Hafnium	<1		
	Iridium (ppb)	<50	Neutron Activation Analyses and Fusion / XRF Analyses are single results and are indicative only. These are provided for matrix identification purposes.	
	Iron (%)	26.5	'nr': Not Reported	
	Lanthanum	5.56		
	Lutetium	0.2		
	Mercury	nr		
	Molybdenum	1210		
	Neodymium	nr		
	Nickel	36.4		
	Potassium (%)	nr		
	Rubidium	<10		
	Samarium	0.89		
	Scandium	0.541		
	Selenium	220		
	Silver	62		
	Sodium (%)	0.061		
	Strontium	nr		
	Tantalum	<0.5		
	Tellurium	nr		
	Terbium	0.6		
	Thorium	0.8		
	Tin	nr		
	Tungsten	27.3		
	Uranium	2.2		
	Ytterbium	<2		
	Zinc	8300		
	Zirconium	nr		

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