

# GEOSTATS PTY LTD

Mining Industry Consultants  
Reference Material Manufacture and Sales

Certified Geochem Base Metal Reference Material Product Code

## GBM311-8

Certified Control Values



GBM311-8

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

Element	Grade	Standard Deviation	Num of Analyses	Confidence Interval
Nickel (ppm)	2504	156	162	+/- 24.3
Copper (ppm)	1350	73	203	+/- 10.2
Zinc (ppm)	233	97	193	+/- 13.8
Lead (ppm)	266	21	181	+/- 3.1
Arsenic (ppm)	57	7	139	+/- 1.2
Cobalt (ppm)	140	24	162	+/- 3.7
Silver (ppm)	1.2	0.3	144	+/- 0.05

### CRM Details

<u>Control Statistic Details</u> Control statistics were produced from results accumulated in the April-2011 & April-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 Pt Pd Au ore.	Antimony	1.955	Fe
<u>Colour Designation (ISCC-NBS, SP440)</u> This material is light olive gray in colour.	Arsenic	58.9	SiO <sub>2</sub>	33.65
<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	56.1	Al <sub>2</sub> O <sub>3</sub>	5.93
<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	1.02	TiO <sub>2</sub>	0.2
<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	7	MnO	0.16
<u>Stability</u> This product remains stable in its original packaging, away from direct sunlight.	Caesium	0.94	CaO	2.56
<u>Material Safety</u> This product is not hazardous and non-toxic.	Calcium (%)	nr	P	0.007
	Cerium	15.1	S	0.54
	Chromium	37700	MgO	26.4
	Cobalt	190	K <sub>2</sub> O	0.137
	Europium	0.2	Na <sub>2</sub> O	0.162
	Gold (ppb)	1645	LOI1000	9.83
	Hafnium	0.5		
	Iridium (ppb)	92		
	Iron (%)	9.215		
	Lanthanum	3.275		
	Lutetium	<0.1		
	Mercury	nr		
	Molybdenum	3.75		
	Neodymium	nr		
	Nickel	2675		
	Potassium (%)	nr		
	Rubidium	12.7		
	Samarium	0.637		
	Scandium	11.25		
	Selenium	<5		
	Silver	1		
	Sodium (%)	0.215		
	Strontium	nr		
	Tantalum	0.26		
	Tellurium	<5		
	Terbium	<0.5		
	Thorium	0.468		
	Tin	<100		
	Tungsten	4.63		
	Uranium	<0.2		
	Ytterbium	<1		
	Zinc	372.5		
	Zirconium	<200		

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