

# GEOSTATS PTY LTD

Mining Industry Consultants  
Reference Material Manufacture and Sales

Certified Geochem Base Metal Reference Material Product Code

## GBM301-9

Certified Control Values



GBM301-9

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

Element	Grade	Standard Deviation	Num of Analyses	Confidence Interval
Nickel (ppm)	102	16	119	+/- 2.8
Copper (ppm)	2881	196	147	+/- 32.1
Zinc (ppm)	7208	433	134	+/- 74.3
Lead (ppm)	389	85	127	+/- 15
Arsenic (ppm)	317	36	107	+/- 7
Cobalt (ppm)	48	8	110	+/- 1.5
Silver (ppm)	11.2	1.6	126	+/- 0.3

### CRM Details

<u>Control Statistic Details</u> Control statistics were produced from results accumulated in the April-2001 & October-2001 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 Pyrite Concentrate Composites.	Antimony	13.9	Fe
<u>Colour Designation (ISCC-NBS, SP440)</u> This material is medium dark gray in colour.	Arsenic	316	SiO <sub>2</sub>	nr
<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	26350	Al <sub>2</sub> O <sub>3</sub>	nr
<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	TiO <sub>2</sub>	nr
<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	nr	MnO	nr
<u>Stability</u> This product remains stable in its original packaging, away from direct sunlight.	Caesium	3.32	CaO	nr
<u>Material Safety</u> This product is not hazardous and non-toxic.	Calcium (%)	2.46	P	nr
	Cerium	15.7	S	nr
	Chromium	787	MgO	nr
	Cobalt	47.1	K <sub>2</sub> O	nr
	Europium	0.61	Na <sub>2</sub> O	nr
	Gold (ppb)	1115	LOI1000	nr
	Hafnium	1.36		
	Iridium (ppb)	<20		
	Iron (%)	26.1		
	Lanthanum	8.05		
	Lutetium	<0.2		
	Mercury	nr		
	Molybdenum	27.65		
	Neodymium	nr		
	Nickel	nr		
	Potassium (%)	0.64		
	Rubidium	31.1		
	Samarium	1.39		
	Scandium	9.405		
	Selenium	11.9		
	Silver	10.45		
	Sodium (%)	0.333		
	Strontium	nr		
	Tantalum	<1		
	Tellurium	12.5		
	Terbium	nr		
	Thorium	1.22		
	Tin	nr		
	Tungsten	6.4		
	Uranium	<2		
	Ytterbium	0.875		
	Zinc	6935		
	Zirconium	<500		

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