

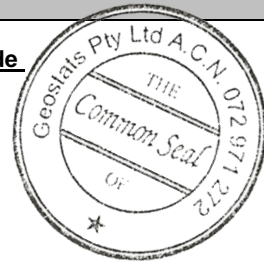
GEOSTATS PTY LTD

Mining Industry Consultants
Reference Material Manufacture and Sales

Certified Ore Grade Base Metal Reference Material Product Code

GBM919-14

Certified Control Values



GBM919-14

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

Element	Grade	Standard Deviation	Num of Analyses	Confidence Interval
Nickel (ppm)	16566	963	135	+/- 153
Copper (ppm)	288	19	121	+/- 4
Zinc (ppm)	1391	74	119	+/- 14
Lead (ppm)	361	30	110	+/- 6
Cobalt (ppm)	nr	nr	nr	nr
Silver (ppm)	1.1	0.5	48	+/- 0.15
Sulphur (%)	2.90	0.12	117	+/- 0.03

CRM Details

Control Statistic Details	Neutron Activation Analysis Results (ppm, unless otherwise noted)	Major Elements by Fusion / XRF (%)
Control statistics were produced from results accumulated in the October-2007, October-2019 round robins. The number of results used to certify each analyte is shown in the table above.	Antimony 1	Fe 19
	Arsenic 18.15	SiO ₂ 31.13
	Barium 107	Al ₂ O ₃ 4.52
	Bromine 22	TiO ₂ 0.21
	Cadmium <5	MnO 0.42
	Caesium <0.5	CaO 7.67
	Calcium (%) nr	P 0.012
	Cerium 18	S 3.01
	Chromium 12500	MgO 6.01
	Cobalt 1025	K ₂ O 0.13
	Europium 1.8	Na ₂ O 0.45
	Gold (ppb) 37.5	LOI1000 11.22
	Hafnium 2	
	Iridium (ppb) <50	Neutron Activation
	Iron (%) 19.9	Analyses and Fusion /
	Lanthanum 24	XRF Analyses are
	Lutetium 0.6	single results and are
	Mercury nr	indicative only. These
	Molybdenum 3	are provided for matrix
	Neodymium nr	identification
	Nickel 17750	purposes.
	Potassium (%) nr	
	Rubidium <10	'nr': Not Reported
	Samarium 5.35	
	Scandium 20.1	
	Selenium <5	
	Silver <2	
	Sodium (%) 0.335	
	Strontium nr	
	Tantalum <0.5	
	Tellurium <10	
	Terbium 0.95	
	Thorium 1.7	
	Tin <100	
	Tungsten <5	
	Uranium 2.65	
	Ytterbium 3.7	
	Zinc 1425	
	Zirconium <200	

Material Description
This material is described as a Laterite Nickel Ore.

Colour Designation (ISCC-NBS, SP440)
This material is moderate yellowish brown in colour.

Usage
This product is for use in the mining industry as a reference material for monitoring and testing the accuracy of laboratory assaying.

Preparation and Packaging
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.

Assay Testwork
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.

Stability
This product remains stable in its original packaging, away from direct sunlight.

Material Safety
This product is not hazardous and non-toxic.