

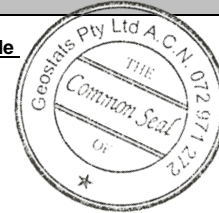
GEOSTATS PTY LTD

Mining Industry Consultants
Reference Material Manufacture and Sales

Certified Geochem Base Metal Reference Material Product Code

GBM316-1

Certified Control Values



GBM316-1

Total Digest

Element	Grade	Standard Deviation	Num of Analyses	Confidence Interval
Nickel (ppm)	52	3	68	+/- 0.8
Copper (ppm)	2966	112	81	+/- 24.9
Zinc (ppm)	2572	91	69	+/- 22.1
Lead (ppm)	1248	44	67	+/- 10.8
Arsenic (ppm)	163	11	60	+/- 2.8
Cobalt (ppm)	40	3	68	+/- 0.8
Silver (ppm)	6.3	0.7	69	+/- 0.18

Partial Digest

Element	Grade	Standard Deviation	Num of Analyses	Confidence Interval
Nickel (ppm)	44	3	60	+/- 0.7
Copper (ppm)	3014	117	80	+/- 26.1
Zinc (ppm)	2561	127	69	+/- 30.8
Lead (ppm)	1245	47	63	+/- 11.8
Arsenic (ppm)	164	9	64	+/- 2.3
Cobalt (ppm)	30	4	66	+/- 0.9
Silver (ppm)	6.4	0.8	80	+/- 0.17

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 April-2016 round robin. The number of results used to certify each analyte is shown in the table above.	Antimony	110	Fe
Material Description This material is described as a Copper Gold Ore Sulphide.	Arsenic	174	SiO ₂	58.64
Colour Designation (ISCC-NBS, SP440) This material is medium light gray in colour.	Barium	360	Al ₂ O ₃	12.46
Usage This product is for use in the mining industry as a reference material for monitoring and testing the accuracy of laboratory assaying.	Bromine	<2	TiO ₂	1.708
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.	Cadmium	<10	MnO	0.155
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.	Caesium	2	CaO	5.87
Stability This product remains stable in its original packaging, away from direct sunlight.	Calcium (%)	nr	P	0.097
Material Safety This product is not hazardous and non-toxic.	Cerium	35.8	S	0.6
	Chromium	30	MgO	3.02
	Cobalt	43	K ₂ O	1.66
	Europium	1.6	Na ₂ O	2.933
	Gold (ppb)	2100	LOI1000	1.42
	Hafnium	<5		
	Iridium (ppb)	<50	Neutron Activation	
	Iron (%)	8.4	Analyses and Fusion /	
	Lanthanum	25	XRF Analyses are	
	Lutetium	0.435	single results and are	
	Mercury	nr	indicative only. These	
	Molybdenum	10	are provided for matrix	
	Neodymium	nr	identification purposes.	
	Nickel	53		
	Potassium (%)	nr		
	Rubidium	70		
	Samarium	5.6		
	Scandium	25.5		
	Selenium	<10		
	Silver	6		
	Sodium (%)	2.07		
	Strontium	nr		
	Tantalum	<2		
	Tellurium	<20		
	Terbium	<1		
	Thorium	10.8		
	Tin	<200		
	Tungsten	<5		
	Uranium	6		
	Ytterbium	3		
	Zinc	2670		
	Zirconium	<500		

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