

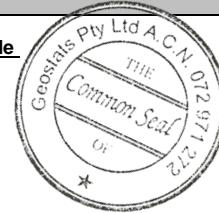
GEOSTATS PTY LTD

Mining Industry Consultants
Reference Material Manufacture and Sales

Certified Geochem Base Metal Reference Material Product Code

GBM317-2

Certified Control Values



GBM317-2

Total Digest

Element	Grade	Standard Deviation	Num of Analyses	Confidence Interval
Nickel (ppm)	11	3	56	+/- 0.7
Copper (ppm)	7414	258	72	+/- 61.1
Zinc (ppm)	2356	125	65	+/- 31.3
Lead (ppm)	338	23	64	+/- 5.8
Arsenic (ppm)	166	12	49	+/- 3.4
Cobalt (ppm)	388	19	60	+/- 5.1
Silver (ppm)	7.4	0.5	57	+/- 0.13

Partial Digest

Element	Grade	Standard Deviation	Num of Analyses	Confidence Interval
Nickel (ppm)	11	3	44	+/- 1
Copper (ppm)	7287	316	74	+/- 73.7
Zinc (ppm)	2227	147	62	+/- 37.6
Lead (ppm)	338	27	59	+/- 7.2
Arsenic (ppm)	169	11	51	+/- 3.2
Cobalt (ppm)	384	24	49	+/- 6.9
Silver (ppm)	7.6	1.1	68	+/- 0.27

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-2017 round robin. The number of results used to certify each analyte is shown in the table above.	Antimony	8.5	Fe
Material Description This material is described as a Cu / Zn Sulphide Tailings and Feed Composite ex Western Australia.	Arsenic	180	SiO ₂	33.83
Colour Designation (ISCC-NBS, SP440) This material is medium dark gray in colour.	Barium	<50	Al ₂ O ₃	4.82
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	0.162
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	0.129
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	1.63
Stability This product remains stable in its original packaging, away from direct sunlight.	Calcium (%)	nr	P	0.039
Material Safety This product is not hazardous and non-toxic.	Cerium	23	S	16.8
	Chromium	<20	MgO	3.03
	Cobalt	425	K ₂ O	0.208
	Europium	1.2	Na ₂ O	0.15
	Gold (ppb)	285	LOI1000	13.4
	Hafnium	<5		
	Iridium (ppb)	<50	Neutron Activation	
	Iron (%)	28.8	Analyses and Fusion /	
	Lanthanum	11	XRF Analyses are	
	Lutetium	0.4	single results and are	
	Mercury	nr	indicative only. These	
	Molybdenum	<10	are provided for matrix	
	Neodymium	nr	identification purposes.	
	Nickel	<20		
	Potassium (%)	nr		
	Rubidium	<50	'nr': Not Reported	
	Samarium	2.7		
	Scandium	6.9		
	Selenium	17		
	Silver	7		
	Sodium (%)	0.12		
	Strontium	nr		
	Tantalum	<2		
	Tellurium	<20		
	Terbium	<1		
	Thorium	1.8		
	Tin	<200		
	Tungsten	5		
	Uranium	<1		
	Ytterbium	1.3		
	Zinc	2700		
	Zirconium	<500		

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