

GEOSTATS PTY LTD

Mining Industry Consultants
Reference Material Manufacture and Sales

Certified Geochem Base Metal Reference Material Product Code

GBM320-10



Certified Control Values

Total Digest

Element	Grade	Standard Deviation	Num of Analyses	Confidence Interval
Nickel (ppm)	563	32	59	+/- 8.3
Copper (ppm)	1531	60	61	+/- 15.5
Zinc (ppm)	1139	59	61	+/- 15.2
Lead (ppm)	476	29	59	+/- 7.7
Arsenic (ppm)	142	8	52	+/- 2.2
Cobalt (ppm)	45	3	55	+/- 0.7
Silver (ppm)	6.2	0.5	60	+/- 0.13

Partial Digest

Element	Grade	Standard Deviation	Num of Analyses	Confidence Interval
Nickel (ppm)	556	27	51	+/- 7.6
Copper (ppm)	1535	51	70	+/- 12.2
Zinc (ppm)	1118	44	55	+/- 12
Lead (ppm)	468	25	55	+/- 6.7
Arsenic (ppm)	137	9	53	+/- 2.4
Cobalt (ppm)	35	3	48	+/- 0.9
Silver (ppm)	6.3	0.4	61	+/- 0.1

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-2020 round robin. The number of results used to certify each analyte is shown in the table above.	Antimony	29.4	Fe
Material Description This material is described as a Composite of Samples.	Arsenic	146	SiO ₂	59.13
	Barium	517	Al ₂ O ₃	14.35
Colour Designation (ISCC-NBS, SP440) This material is pale yellowish brown in colour.	Bromine	<2	TiO ₂	1.12
	Cadmium	<10	MnO	0.11
Usage This product is for use in the mining industry as a reference material for monitoring and testing the accuracy of laboratory assaying.	Caesium	<2	CaO	4.9
	Calcium (%)	nr	P	0.063
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.	Cerium	49	S	0.58
	Chromium	330	MgO	3.14
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.	Cobalt	47	K ₂ O	2.18
	Europium	1.3	Na ₂ O	2.87
Stability This product remains stable in its original packaging, away from direct sunlight.	Gold (ppb)	2880	LOH1000	2
	Hafnium	5	Neutron Activation Analyses and Fusion / XRF Analyses are single results and are indicative only. These are provided for matrix identification purposes.	
Material Safety This product is not hazardous and non-toxic.	Iridium (ppb)	<50	'nr': Not Reported	
	Iron (%)	6.8		
	Lanthanum	24		
	Lutetium	0.4		
	Mercury	nr		
	Molybdenum	12		
	Neodymium	nr		
	Nickel	580		
	Potassium (%)	nr		
	Rubidium	110		
	Samarium	5		
	Scandium	17.9		
	Selenium	<10		
	Silver	6.7		
	Sodium (%)	2.02		
	Strontium	nr		
	Tantalum	<2		
	Tellurium	<20		
	Terbium	1		
	Thorium	14.5		
	Tin	<200		
	Tungsten	6		
	Uranium	6		
	Ytterbium	2.3		
	Zinc	1150		
	Zirconium	<500		

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