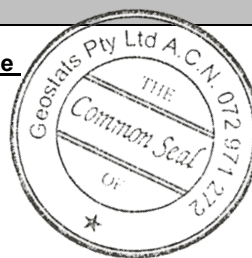


GEOSTATS PTY LTD

Mining Industry Consultants
Reference Material Manufacture and Sales

Certified Ore Grade Base Metal Reference Material Product Code

GBM315-13



Certified Control Values

Element	Grade	Standard Deviation	Num of Analyses	Confidence Interval
Nickel (ppm)	180	23	86	+/- 5
Copper (ppm)	12565	399	258	+/- 49
Zinc (ppm)	37270	1254	212	+/- 170
Lead (ppm)	34135	1050	205	+/- 145
Cobalt (ppm)	nr	nr	nr	nr
Silver (ppm)	41.3	1.6	221	+/- 0.22
Sulphur (%)	5.32	0.16	184	+/- 0.02

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-2015, April-2018 round robins. The number of results used to certify each analyte is shown in the table above.	Antimony	40.85	Fe
Material Description This material is described as a Composite Cu, Pb, Zn concentrate.	Arsenic	37.45	SiO ₂	48.86
	Barium	431	Al ₂ O ₃	11.58
Colour Designation (ISCC-NBS, SP440) This material is medium gray in colour.	Bromine	0.699	TiO ₂	0.82
	Cadmium	94.5	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	2.35	CaO	3.88
	Calcium (%)	nr	P	0.059
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	41	S	5.206
	Chromium	313	MgO	4.37
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	48.5	K ₂ O	2.02
	Europium	0.85	Na ₂ O	2.25
Stability This product remains stable in its original packaging, away from direct sunlight.	Gold (ppb)	10885	LOI1000	4.19
	Hafnium	9.5		
Material Safety This product is not hazardous and non-toxic.	Iridium (ppb)	<50	Neutron Activation Analyses and Fusion / XRF Analyses are single results and are indicative only. These are provided for matrix identification purposes.	
	Iron (%)	7.55	'nr': Not Reported	
	Lanthanum	24.5		
	Lutetium	0.4		
	Mercury	nr		
	Molybdenum	208.5		
	Neodymium	nr		
	Nickel	218.5		
	Potassium (%)	nr		
	Rubidium	85.5		
	Samarium	3.85		
	Scandium	14.65		
	Selenium	<10		
	Silver	39.5		
	Sodium (%)	1.61		
	Strontium	nr		
	Tantalum	0.8		
	Tellurium	<20		
	Terbium	0.6		
	Thorium	12.2		
	Tin	<200		
	Tungsten	3		
	Uranium	5.25		
	Ytterbium	2.5		
	Zinc	38750		
	Zirconium	<500		

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