

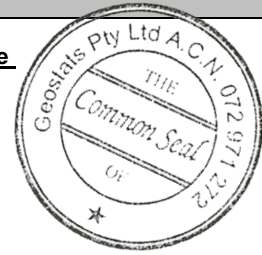
GEOSTATS PTY LTD

Mining Industry Consultants
Reference Material Manufacture and Sales

Certified Ore Grade Base Metal Reference Material Product Code

GBM310-14

Certified Control Values



GBM310-14

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

Element	Grade	Standard Deviation	Num of Analyses	Confidence Interval
Nickel (ppm)	41	nr	nr	nr
Copper (ppm)	116	nr	nr	nr
Zinc (ppm)	179106	8084	169	+/- 1231
Lead (ppm)	89465	3355	163	+/- 521
Cobalt (ppm)	nr	nr	nr	nr
Silver (ppm)	59.6	2.5	165	+/- 0.38
Sulphur (%)	10.96	0.38	137	+/- 0.06

CRM Details

<u>Control Statistic Details</u> Control statistics were produced from results accumulated in the April-2010 & April-2013 round robins. The number of results used to certify each analyte is shown in the table above.	<u>Neutron Activation Analysis Results (ppm, unless otherwise noted)</u>		<u>Major Elements by Fusion / XRF (%)</u>	
	<u>Material Description</u> This material is described as a Zinc Sulphide Ore .	Antimony	10.25	Fe
<u>Colour Designation (ISCC-NBS, SP440)</u> This material is light gray in colour.	Arsenic	64.8	SiO ₂	nr
<u>Usage</u> This product is for use in the mining industry as a reference material for monitoring and testing the accuracy of laboratory assaying.	Barium	140	Al ₂ O ₃	nr
<u>Preparation and Packaging</u> 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.	Bromine	5.23	TiO ₂	nr
<u>Assay Testwork</u> 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.	Cadmium	869.5	MnO	nr
<u>Stability</u> This product remains stable in its original packaging, away from direct sunlight.	Caesium	8.565	CaO	nr
<u>Material Safety</u> This product is not hazardous and non-toxic.	Calcium (%)	nr	P	nr
	Cerium	38.7	S	nr
	Chromium	51.8	MgO	nr
	Cobalt	5.19	K ₂ O	nr
	Europium	4.99	Na ₂ O	nr
	Gold (ppb)	634	LOI1000	nr
	Hafnium	1.45		
	Iridium (ppb)	<14	Neutron Activation Analyses and Fusion / XRF Analyses are single results and are indicative only. These are provided for matrix identification purposes.	
	Iron (%)	1.575	'nr': Not Reported	
	Lanthanum	17.3		
	Lutetium	0.256		
	Mercury	nr		
	Molybdenum	18.35		
	Neodymium	nr		
	Nickel	51.9		
	Potassium (%)	nr		
	Rubidium	70.7		
	Samarium	3.43		
	Scandium	5.57		
	Selenium	<3.7		
	Silver	59		
	Sodium (%)	0.095		
	Strontium	nr		
	Tantalum	0.504		
	Tellurium	<10		
	Terbium	1.3		
	Thorium	6.76		
	Tin	<100		
	Tungsten	<8		
	Uranium	6.38		
	Ytterbium	1.48		
	Zinc	179000		
	Zirconium	<500		

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