

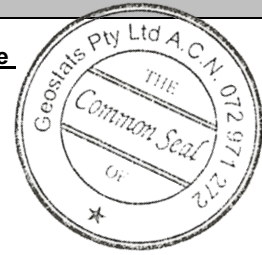
GEOSTATS PTY LTD

Mining Industry Consultants
Reference Material Manufacture and Sales

Certified Ore Grade Base Metal Reference Material Product Code

GBM310-16

Certified Control Values



GBM310-16

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

Element	Grade	Standard Deviation	Num of Analyses	Confidence Interval
Nickel (ppm)	35	nr	nr	nr
Copper (ppm)	3459	nr	nr	nr
Zinc (ppm)	170201	6825	148	+/- 1113
Lead (ppm)	112603	5008	144	+/- 828
Cobalt (ppm)	nr	nr	nr	nr
Silver (ppm)	314.3	14.9	94	+/- 3.07
Sulphur (%)	21.44	0.64	72	+/- 0.15

CRM Details

<u>Control Statistic Details</u> Control statistics were produced from results accumulated in the April-2010 & April-2012 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	725.5	Fe
<u>Colour Designation (ISCC-NBS, SP440)</u> This material is light gray in colour.	Arsenic	1935	SiO ₂	25.27
<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	475	Al ₂ O ₃	5.11
<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	<2	TiO ₂	0.215
<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	513.5	MnO	0.07
<u>Stability</u> This product remains stable in its original packaging, away from direct sunlight.	Caesium	1	CaO	0.22
<u>Material Safety</u> This product is not hazardous and non-toxic.	Calcium (%)	nr	P	0.022
	Cerium	33.45	S	20.6
	Chromium	50	MgO	0.44
	Cobalt	9.71	K ₂ O	1.38
	Europium	0.555	Na ₂ O	0.441
	Gold (ppb)	4070	LOI1000	17.36
	Hafnium	0.8		
	Iridium (ppb)	<10	Neutron Activation Analyses and Fusion / XRF Analyses are single results and are indicative only. These are provided for matrix identification purposes.	
	Iron (%)	11.1	'nr': Not Reported	
	Lanthanum	19.15		
	Lutetium	0.325		
	Mercury	nr		
	Molybdenum	11		
	Neodymium	nr		
	Nickel	30		
	Potassium (%)	nr		
	Rubidium	41		
	Samarium	2.42		
	Scandium	6.44		
	Selenium	<5		
	Silver	297		
	Sodium (%)	0.108		
	Strontium	nr		
	Tantalum	0.275		
	Tellurium	<10		
	Terbium	<0.5		
	Thorium	4.87		
	Tin	<500		
	Tungsten	<10		
	Uranium	2.5		
	Ytterbium	0.59		
	Zinc	165500		
	Zirconium	<400		

20 Hines Road, O'Connor, Western Australia 6163

Phone : +61 8 9314 2566, Fax : +61 8 9314 3699

e-mail : pjh@geostats.com.au, srr@geostats.com.au

Website <http://www.geostats.com.au>