

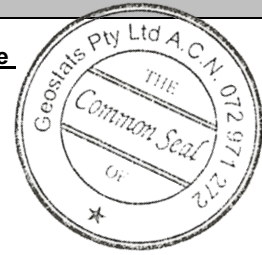
GEOSTATS PTY LTD

Mining Industry Consultants
Reference Material Manufacture and Sales

Certified Ore Grade Base Metal Reference Material Product Code

GBM309-14

Certified Control Values



GBM309-14

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

Element	Grade	Standard Deviation	Num of Analyses	Confidence Interval
Nickel (ppm)	22	nr	nr	nr
Copper (ppm)	28025	1176	157	+/- 186
Zinc (ppm)	227192	10735	137	+/- 1820
Lead (ppm)	14982	451	128	+/- 79
Cobalt (ppm)	nr	nr	nr	nr
Silver (ppm)	153.1	8.2	144	+/- 1.36
Sulphur (%)	33.21	1.25	113	+/- 0.23

CRM Details

<u>Control Statistic Details</u> Control statistics were produced from results accumulated in the April-2009 & October-2011 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 Cu/Pb/Zn/Ag massive sulphide ore.	Antimony	118	Fe
<u>Colour Designation (ISCC-NBS, SP440)</u> This material is medium dark gray in colour.	Arsenic	309	SiO ₂	7.68
<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	<50	Al ₂ O ₃	0.92
<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	<0.5	TiO ₂	0.076
<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	439.5	MnO	0.1
<u>Stability</u> This product remains stable in its original packaging, away from direct sunlight.	Caesium	<1	CaO	0.95
<u>Material Safety</u> This product is not hazardous and non-toxic.	Calcium (%)	nr	P	0.017
	Cerium	<3	S	33.2
	Chromium	31	MgO	1.12
	Cobalt	138.5	K ₂ O	0.193
	Europium	<0.2	Na ₂ O	<0.001
	Gold (ppb)	667.5	LOI1000	22.73
	Hafnium	<1	Neutron Activation Analyses and Fusion / XRF Analyses are single results and are indicative only. These are provided for matrix identification purposes.	
	Iridium (ppb)	<20	'nr': Not Reported	
	Iron (%)	24.1		
	Lanthanum	2.65		
	Lutetium	<0.1		
	Mercury	nr		
	Molybdenum	<5		
	Neodymium	nr		
	Nickel	<30		
	Potassium (%)	nr		
	Rubidium	16		
	Samarium	0.5		
	Scandium	1.4		
	Selenium	84.5		
	Silver	156		
	Sodium (%)	0.08		
	Strontium	nr		
	Tantalum	<0.2		
	Tellurium	<10		
	Terbium	<0.5		
	Thorium	<0.4		
	Tin	1175		
	Tungsten	4		
	Uranium	<1		
	Ytterbium	<0.5		
	Zinc	233000		
	Zirconium	<100		

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>