

GEOSTATS PTY LTD

Mining Industry Consultants
Reference Material Manufacture and Sales

Certified Geochem Base Metal Reference Material Product Code

GBM908-10

Certified Control Values



GBM908-10

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

Element	Grade	Standard Deviation	Num of Analyses	Confidence Interval
Nickel (ppm)	2241	102	141	+/- 17
Copper (ppm)	3601	144	181	+/- 21.2
Zinc (ppm)	1045	51	166	+/- 7.8
Lead (ppm)	2049	139	171	+/- 21
Arsenic (ppm)	56	6	128	+/- 1
Cobalt (ppm)	23	7	152	+/- 1.1
Silver (ppm)	2.9	0.4	159	+/- 0.06

CRM Details

<u>Control Statistic Details</u> Control statistics were produced from results accumulated in the October-2008 & October-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 Low Cu Oxide.	Antimony	1.8	Fe
<u>Colour Designation (ISCC-NBS, SP440)</u> This material is pale red in colour.	Arsenic	58.5	SiO ₂	59.12
<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	1100	Al ₂ O ₃	13.9
<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	1.131
<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	<5	MnO	0.11
<u>Stability</u> This product remains stable in its original packaging, away from direct sunlight.	Caesium	3.8	CaO	5.46
<u>Material Safety</u> This product is not hazardous and non-toxic.	Calcium (%)	nr	P	0.103
	Cerium	112	S	0.37
	Chromium	193	MgO	3.24
	Cobalt	29.5	K ₂ O	2.63
	Europium	1.9	Na ₂ O	2.951
	Gold (ppb)	473	LOI1000	1.25
	Hafnium	7.15	Neutron Activation Analyses and Fusion / XRF Analyses are single results and are indicative only. These are provided for matrix identification purposes.	
	Iridium (ppb)	<10	nr: Not Reported	
	Iron (%)	5.8		
	Lanthanum	55.5		
	Lutetium	0.5		
	Mercury	nr		
	Molybdenum	68.5		
	Neodymium	nr		
	Nickel	2285		
	Potassium (%)	nr		
	Rubidium	173.5		
	Samarium	8.7		
	Scandium	19		
	Selenium	<2		
	Silver	3		
	Sodium (%)	2.21		
	Strontium	nr		
	Tantalum	1		
	Tellurium	<10		
	Terbium	1.05		
	Thorium	18.25		
	Tin	<100		
	Tungsten	5		
	Uranium	2.25		
	Ytterbium	3.8		
	Zinc	1077.5		
	Zirconium	<200		

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