

GEOSTATS PTY LTD

Mining Industry Consultants
Reference Material Manufacture and Sales

Certified Geochem Base Metal Reference Material Product Code

GBM398-6

Certified Control Values



GBM398-6

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

Element	Grade	Standard Deviation	Num of Analyses	Confidence Interval
Nickel (ppm)	378	24	105	+/- 4.7
Copper (ppm)	3654	161	131	+/- 27.9
Zinc (ppm)	143	10	113	+/- 1.8
Lead (ppm)	159	16	116	+/- 2.9
Arsenic (ppm)	261	23	104	+/- 4.6
Cobalt (ppm)	137	11	101	+/- 2.1
Silver (ppm)	1.5	0.5	94	+/- 0.1

CRM Details

<u>Control Statistic Details</u> Control statistics were produced from results accumulated in the April-1998 & October-2005 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>	
	Element	Value	Element	Value
<u>Material Description</u> This material is described as a Cu/Au ex Pilbara. Minor sulphide.	Antimony	1.415	Fe	nr
	Arsenic	265.5	SiO ₂	nr
<u>Colour Designation (ISCC-NBS, SP440)</u> This material is light gray in colour.	Barium	120	Al ₂ O ₃	nr
	Bromine	1.665	TiO 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.	Cadmium	<5	MnO	nr
	Caesium	8.535	CaO	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.	Calcium (%)	3.65	P	nr
	Cerium	91.5	S	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.	Chromium	266.5	MgO	nr
	Cobalt	148	K ₂ O	nr
<u>Stability</u> This product remains stable in its original packaging, away from direct sunlight.	Europium	0.58	Na ₂ O	nr
	Gold (ppb)	2545	LOI1000	nr
<u>Material Safety</u> This product is not hazardous and non-toxic.	Hafnium	4.765	Neutron Activation Analyses and Fusion / XRF Analyses are single results and are indicative only. These are provided for matrix identification purposes.	
	Iridium (ppb)	<35	nr: Not Reported	
	Iron (%)	3.89		
	Lanthanum	50		
	Lutetium	0.385		
	Mercury	nr		
	Molybdenum	2		
	Neodymium	nr		
	Nickel	380		
	Potassium (%)	2.93		
	Rubidium	446.5		
	Samarium	6.655		
	Scandium	10.2		
	Selenium	<5		
	Silver	1		
	Sodium (%)	1.59		
	Strontium	nr		
	Tantalum	0.6		
	Tellurium	<10		
	Terbium	0.6		
	Thorium	5.89		
	Tin	<100		
	Tungsten	73.1		
	Uranium	1.8		
	Ytterbium	2.835		
	Zinc	137		
	Zirconium	<200		

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