

GEOSTATS PTY LTD

Mining Industry Consultants
Reference Material Manufacture and Sales

Certified Geochem Base Metal Reference Material Product Code

GBM911-8

Certified Control Values



GBM911-8

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

Element	Grade	Standard Deviation	Num of Analyses	Confidence Interval
Nickel (ppm)	23	13	74	+/- 3
Copper (ppm)	55	8	89	+/- 1.6
Zinc (ppm)	88	36	91	+/- 7.5
Lead (ppm)	6	4	52	+/- 1.1
Arsenic (ppm)	4	nr	nr	nr
Cobalt (ppm)	27	13	78	+/- 2.9
Silver (ppm)	0.7	0.6	33	+/- 0.21

CRM Details

<u>Control Statistic Details</u> Control statistics were produced from results accumulated in the October-2011 round robin. 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 Fresh Bunbury Basalt - The results on this material are method dependent.	Antimony	0.1	Fe
<u>Colour Designation (ISCC-NBS, SP440)</u> This material is medium light gray in colour.	Arsenic	0.2	SiO ₂	51.82
<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	150	Al ₂ O ₃	14.73
<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	1.897
<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	<10	MnO	0.16
<u>Stability</u> This product remains stable in its original packaging, away from direct sunlight.	Caesium	0.5	CaO	9.68
<u>Material Safety</u> This product is not hazardous and non-toxic.	Calcium (%)	nr	P	0.091
	Cerium	24	S	0.055
	Chromium	200	MgO	5.47
	Cobalt	41	K ₂ O	0.388
	Europium	2	Na ₂ O	2.928
	Gold (ppb)	<2	LOI1000	0.32
	Hafnium	3.8		
	Iridium (ppb)	<20		
	Iron (%)	8.5		
	Lanthanum	9.9		
	Lutetium	0.5		
	Mercury	nr		
	Molybdenum	<5		
	Neodymium	nr		
	Nickel	41		
	Potassium (%)	nr		
	Rubidium	10		
	Samarium	5.3		
	Scandium	33.3		
	Selenium	<5		
	Silver	1		
	Sodium (%)	2.12		
	Strontium	nr		
	Tantalum	0.4		
	Tellurium	<10		
	Terbium	1.1		
	Thorium	1.3		
	Tin	<200		
	Tungsten	<2		
	Uranium	0.2		
	Ytterbium	3.1		
	Zinc	135		
	Zirconium	<500		

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>