

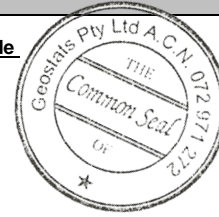
GEOSTATS PTY LTD

Mining Industry Consultants
Reference Material Manufacture and Sales

Certified Geochem Base Metal Reference Material Product Code

GBM318-8

Certified Control Values



Total Digest

Element	Grade	Standard Deviation	Num of Analyses	Confidence Interval
Nickel (ppm)	12863	624	54	+/- 171.9
Copper (ppm)	17336	588	61	+/- 151.9
Zinc (ppm)	35	5	58	+/- 1.3
Lead (ppm)	97	9	62	+/- 2.4
Arsenic (ppm)	5606	194	48	+/- 56.9
Cobalt (ppm)	3258	149	66	+/- 36.9
Silver (ppm)	18.5	1.1	60	+/- 0.28

Partial Digest

Element	Grade	Standard Deviation	Num of Analyses	Confidence Interval
Nickel (ppm)	12967	626	47	+/- 185.9
Copper (ppm)	17315	556	74	+/- 129.8
Zinc (ppm)	35	11	65	+/- 2.7
Lead (ppm)	90	12	66	+/- 3.1
Arsenic (ppm)	5421	340	58	+/- 90.3
Cobalt (ppm)	3202	213	57	+/- 57
Silver (ppm)	18.0	1.3	77	+/- 0.3

CRM Details

Control Statistic Details	Neutron Activation Analysis Results (ppm, unless otherwise noted)		Major Elements by Fusion / XRF (%)	
	Control statistics were produced from results accumulated in the April-2018 round robin. The number of results used to certify each analyte is shown in the table above.	Antimony	32.1	Fe
Material Description This material is described as a Blend of nickel filtercake and coffee rock.	Arsenic	5600	SiO ₂	10.82
	Colour Designation (ISCC-NBS, SP440) This material is moderate brown in colour.	Barium	537	Al ₂ O ₃
Usage This product is for use in the mining industry as a reference material for monitoring and testing the accuracy of laboratory assaying.		Bromine	5	TiO ₂
	Preparation and Packaging 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.	Cadmium	<37	MnO
Assay Testwork 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.		Caesium	<2	CaO
	Stability This product remains stable in its original packaging, away from direct sunlight.	Calcium (%)	nr	P
Material Safety This product is not hazardous and non-toxic.		Cerium	20	S
	Neutron Activation Analysis Results (ppm, unless otherwise noted)	Chromium	121	MgO
Major Elements by Fusion / XRF (%)		Cobalt	3500	K ₂ O
	Neutron Activation Analyses and Fusion / XRF Analyses are single results and are indicative only. These are provided for matrix identification purposes.	Europium	<0.5	Na ₂ O
'nr': Not Reported		Gold (ppb)	1150	LOI1000
	Neutron Activation Analyses and Fusion / XRF Analyses are single results and are indicative only. These are provided for matrix identification purposes.	Hafnium	9	
Neutron Activation Analyses and Fusion / XRF Analyses are single results and are indicative only. These are provided for matrix identification purposes.		Iridium (ppb)	659	
	Neutron Activation Analyses and Fusion / XRF Analyses are single results and are indicative only. These are provided for matrix identification purposes.	Iron (%)	20.8	
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	Neutron Activation Analyses and Fusion / XRF Analyses are single results and are indicative only. These are provided for matrix identification purposes.	Lutetium	<0.2	
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	Neutron Activation Analyses and Fusion / XRF Analyses are single results and are indicative only. These are provided for matrix identification purposes.	Molybdenum	<10	
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	Neutron Activation Analyses and Fusion / XRF Analyses are single results and are indicative only. These are provided for matrix identification purposes.	Nickel	12900	
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	Neutron Activation Analyses and Fusion / XRF Analyses are single results and are indicative only. These are provided for matrix identification purposes.	Tellurium	67.7	
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Neutron Activation Analyses and Fusion / XRF Analyses are single results and are indicative only. These are provided for matrix identification purposes.		Zinc	<200	
	Neutron Activation Analyses and Fusion / XRF Analyses are single results and are indicative only. These are provided for matrix identification purposes.	Zirconium	<500	

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