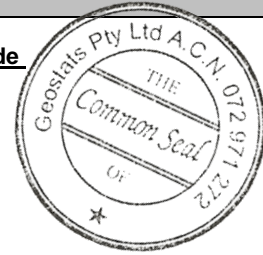


GEOSTATS PTY LTD

Mining Industry Consultants
Reference Material Manufacture and Sales

Certified Ore Grade Base Metal Reference Material Product Code

GBM316-11



Certified Control Values

Element	Grade	Standard Deviation	Num of Analyses	Confidence Interval
Nickel (ppm)	21	nr	nr	nr
Copper (ppm)	22288	674	128	+/- 118
Zinc (ppm)	10133	414	114	+/- 77
Lead (ppm)	1065	nr	nr	nr
Cobalt (ppm)	nr	nr	nr	nr
Silver (ppm)	21.7	1.5	122	+/- 0.27
Sulphur (%)	18.11	0.52	90	+/- 0.11

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-2016 round robin. The number of results used to certify each analyte is shown in the table above.	Antimony	15.4	Fe
Material Description This material is described as a Chalcopyrite with minor sphalerite and galena ex WA.	Arsenic	250	SiO ₂	39.35
	Colour Designation (ISCC-NBS, SP440) This material is dark gray in colour.	Barium	<50	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	<2	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	30	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	<1	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	22.9	S
	Neutron Activation Analysis Results (ppm, unless otherwise noted)	Chromium	<20	MgO
Major Elements by Fusion / XRF (%)		Cobalt	428	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	1.4	Na ₂ O
'nr': Not Reported		Gold (ppb)	319	LOI1000
	Neutron Activation Analyses and Fusion / XRF Analyses are single results and are indicative only. These are provided for matrix identification purposes.	Hafnium	<5	
Neutron Activation Analyses and Fusion / XRF Analyses are single results and are indicative only. These are provided for matrix identification purposes.		Iridium (ppb)	<50	
	Neutron Activation Analyses and Fusion / XRF Analyses are single results and are indicative only. These are provided for matrix identification purposes.	Iron (%)	22.9	
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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	0.339	
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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	25	
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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.	Silver	23	
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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.	Thorium	1.2	
Neutron Activation Analyses and Fusion / XRF Analyses are single results and are indicative only. These are provided for matrix identification purposes.		Tin	<200	
	Neutron Activation Analyses and Fusion / XRF Analyses are single results and are indicative only. These are provided for matrix identification purposes.	Tungsten	<5	
Neutron Activation Analyses and Fusion / XRF Analyses are single results and are indicative only. These are provided for matrix identification purposes.		Uranium	1	
	Neutron Activation Analyses and Fusion / XRF Analyses are single results and are indicative only. These are provided for matrix identification purposes.	Ytterbium	1	
Neutron Activation Analyses and Fusion / XRF Analyses are single results and are indicative only. These are provided for matrix identification purposes.		Zinc	10300	
	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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