

GEOSTATS PTY LTD

Mining Industry Consultants
Reference Material Manufacture and Sales

Certified Pulp Rare Earth Reference Material

GRE-09

Certified Control Values

Method	Element	Units	Grade	Standard Deviation	No of Analyses	95% Confidence Interval
Fusion / ICP	Al	%	5.67	0.19	50	+/- 0.06
	Ba	ppm	4509	185	50	+/- 54
	Ca	%	1.2	0.1	50	+/- 0.1
	Ce	ppm	2577	162	40	+/- 53
	Dy	ppm	51	2	50	+/- 1
	Er	ppm	9.7	0.5	50	+/- 0.2
	Eu	ppm	49.4	2.5	50	+/- 0.8
	Fe	%	30.88	1.39	50	+/- 0.4
	Gd	ppm	130	8	50	+/- 3
	Ho	ppm	5.7	0.4	50	+/- 0.2
	La	ppm	620	27	50	+/- 8
	Lu	ppm	0.6	0.1	42	+/- 0.1
	Mg	%	0.57	0.02	50	+/- 0.01
	Mn	ppm	6617	314	50	+/- 91
	Nb	ppm	674	29	40	+/- 10
	Nd	ppm	2065	102	50	+/- 30
	P	ppm	6450	298	40	+/- 97
	Pr	ppm	461	12	48	+/- 4
	S	%	0.03			
	Sc	ppm	59	5	40	+/- 2
	Si	%	12.0	0.5	50	+/- 0.2
	Sm	ppm	234	6	50	+/- 2
	Sr	ppm	540	19	50	+/- 6
	Ta	ppm	11	1	40	+/- 1
	Tb	ppm	14.0	0.9	50	+/- 0.3
	Th	ppm	386	13	50	+/- 4
	Tm	ppm	1.0	0.1	40	+/- 0.1
	U	ppm	26.5	0.6	40	+/- 0.2
	Y	ppm	126	3	39	+/- 2
	Yb	ppm	5.1	0.4	50	+/- 0.2
	Zr	ppm	135	7	39	+/- 3

CRM Details

Control Statistic Details

Control values for this material were determined during a dedicated certification program.

Certification Date

This material was certified with the above values on the 30th of May 2023.

Source Material

Prior to homogenisation and testing, this material was sourced from:
Gascoyne region, Western Australia

Material Type

Pulp Rare Earth ore, 10g samples.

Usage

This product is for use in the mining industry as reference materials for monitoring and testing the accuracy of laboratory assaying.

Preparation and Packaging

This reference material was dried in an oven for a minimum of 8 hours at 110C. The dry material is then pulverised in a bowl and puck mill and homogenised in a vee-blender. The material is then stored in a sealed, stable container ready for final packaging.

Materials are statistically sampled from stores, then packaged into heat sealed, air tight, plastic packets ready for distribution. All packaging has been chosen to ensure minimal contamination from outside sources during shipment, use and storage.

Assay Testwork

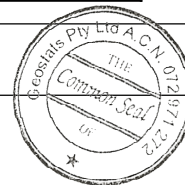
This standard was tested in a dedicated certification program. In late 2022, 10 x 20g samples were sent to 6 laboratories for fusion / ICP analyses. Assay distributions are checked and processed statistically, producing monitoring statistics for these standards. Materials are tested regularly to ensure stability and homogeneity.

Stability

This product remains stable in its original packaging, away from direct sunlight.

Material Safety

This product is not hazardous and non-toxic.



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Geostats Pty Ltd, Certified Rare Earth Reference Material, Product Code:

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