

## Certified Rare Earth Reference Material - GRE-04

### Certificate of Analysis

Analyte	Units	Average	Standard Deviation	Count	95% Confidence Interval
Ce	ppm	6127	146	44	+/- 50
Dy	ppm	96.52	6.77	50	+/- 2.32
Er	ppm	28.56	1.81	50	+/- 0.62
Eu	ppm	100.56	9.15	50	+/- 3.14
Gd	ppm	232.8	15.1	50	+/- 5.2
Ho	ppm	13.52	1.03	50	+/- 0.35
La	ppm	2735.5	53.2	46	+/- 18.2
Lu	ppm	1.76	0.2	50	+/- 0.07
Nb	ppm	3553	308	50	+/- 106
Nd	ppm	2702	133	50	+/- 46
Pr	ppm	721.1	46	50	+/- 15.8
Sm	ppm	390.4	18.7	50	+/- 6.4
Ta	ppm	122.1	14	49	+/- 4.8
Tb	ppm	24.45	1.61	50	+/- 0.55
Tm	ppm	3.01	0.21	50	+/- 0.07
Y	ppm	319.4	14.8	50	+/- 5.1
Yb	ppm	15.02	0.74	50	+/- 0.25
Zr	ppm	948	128	50	+/- 44
P	ppm	27042	442	40	+/- 152
Sc	ppm	88.36	4.21	40	+/- 1.44
Ti	%	1.66	0.048	40	+/- 0.017

#### Control Statistic Details

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

#### Certification Date

This material was certified with the above values on: 1/04/2011

#### Source Material

Prior to homogenisation and testing, this material was sourced from  
Carbonatite, Tanzania

#### Usage

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

#### Preparation and Packaging

This certified reference material was dried in an oven for a minimum of 8 hours at 120C. The dry material was pulverised in an LM2 pulveriser and then homogenised in a vee-blender. The material is then packaged into 10g plastic packets, ready for shipment.

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**GEOSTATS PTY LTD**

**Mining Industry Consultants  
Reference Material Manufacture and Sales**

**Certification Testwork**

This certified reference material was tested in a dedicated certification program. 10 samples were sent to 5 laboratories for analyses. Assay distributions are checked and processed statistically, producing monitoring statistics for these standards. Materials are tested regularly to ensure stability and homogeneity.