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**GEOSTATS PTY LTD**

Mining Industry Consultants
Reference Material Manufacture and Sales

# Certified Rare Earth Reference Material - GRE-05

## Certificate of Analysis

| Analyte | Units | Average | Standard Deviation | Count | 95% Confidence Interval |
|---|---|---|---|---|---|
| Be | ppm | 100.89 | 7.27 | 40 | +/- 2.49 |
| Ce | ppm | 121.05 | 6.02 | 49 | +/- 2.07 |
| Dy | ppm | 195.6 | 12.6 | 50 | +/- 4.3 |
| Er | ppm | 149.16 | 5.99 | 40 | +/- 2.05 |
| Eu | ppm | 3.29 | 0.2 | 49 | +/- 0.07 |
| Ga | ppm | 99.91 | 9.9 | 50 | +/- 3.4 |
| Gd | ppm | 74 | 4.31 | 50 | +/- 1.48 |
| Hf | ppm | 310.7 | 21.4 | 40 | +/- 7.3 |
| Ho | ppm | 44.7 | 2.14 | 50 | +/- 0.73 |
| La | ppm | 27.38 | 2.04 | 47 | +/- 0.7 |
| Li | ppm | 241 | | | |
| Lu | ppm | 19.32 | 0.71 | 50 | +/- 0.24 |
| Nb | ppm | 2832 | 129 | 30 | +/- 44 |
| Nd | ppm | 68.39 | 4.91 | 49 | +/- 1.68 |
| Pr | ppm | 17.79 | 1.05 | 49 | +/- 0.36 |
| Sm | ppm | 46.14 | 2.81 | 50 | +/- 0.96 |
| Sn | ppm | 308 | 16 | 47 | +/- 5.5 |
| Ta | ppm | 181.9 | 17.7 | 50 | +/- 6.1 |
| Tb | ppm | 24.55 | 0.87 | 50 | +/- 0.3 |
| Th | ppm | 314.51 | 6.93 | 40 | +/- 2.37 |
| Tm | ppm | 23.39 | 0.96 | 50 | +/- 0.33 |
| U | ppm | 42.8 | 1.84 | 50 | +/- 0.63 |
| W | ppm | 9.04 | 1.35 | 49 | +/- 0.46 |
| Y | ppm | 1076.3 | 85.8 | 50 | +/- 29.4 |
| Yb | ppm | 145.28 | 5.14 | 50 | +/- 1.76 |
| Zr | ppm | 7133 | 594 | 40 | +/- 204 |

**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: 7/09/2011

**Source Material**

Prior to homogenisation and testing, this material was sourced from

Silica sericite / tuffaceous rhyolitic volcanistic

**Usage**

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

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## Preparation and Packaging

This certified reference material was dried in an oven for a minimum of 8 hours are 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.

## 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.