

**Certified Pulp Iron Ore Reference Material - GIOP-57**

## Certificate of Analysis

Analyte	Units	Average	Standard Deviation	Count	95% Confidence Interval
Fe	%	54	0.17	50	+/- 0.05
Fe (Calc)	%	54	0.14	50	+/- 0.04
SiO2	%	7.415	0.049	49	+/- 0.014
Al2O3	%	5.131	0.054	49	+/- 0.016
TiO2	%	0.2846	0.0086	50	+/- 0.0025
Mn	%	0.1702	0.0069	50	+/- 0.002
CaO	%	0.472	0.013	50	+/- 0.004
P	%	0.0469	0.0013	50	+/- 0.0004
S	%	0.0905	0.0022	47	+/- 0.0006
MgO	%	0.141	0.014	50	+/- 0.004
K2O	%	0.041	0.0047	50	+/- 0.0013
Zn	%	0.0048			
Pb	%	0.009			
Cu	%	0.0034			
Ba	%	0.0046			
V	%	0.00308	0.00061	36	+/- 0.00021
Cr	%	0.00618	0.00083	39	+/- 0.00027
Cl	%	0.0167	0.0035	49	+/- 0.001
As	%	0.0049			
Ni	%	0.0028			
Co	%	0.0034			
Sn	%	0.0037			
Sr	%	0.003			
Zr	%	0.008			
Na	%	0.0301	0.0084	48	+/- 0.0025
LOI425	%	7.112	0.082	48	+/- 0.024
LOI650	%	8.364	0.094	50	+/- 0.027
LOI	%	8.718	0.077	49	+/- 0.022

**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: 1/12/2010

**Source Material**

Prior to homogenisation and testing, this material was sourced from Pilbara

**Usage**

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**GEOSTATS PTY LTD**

Mining Industry Consultants  
Reference Material Manufacture and Sales

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 105°C. The dry material was pulverised in a "puck and bowl" 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 XRF analyses. Assay distributions are checked and processed statistically, producing monitoring statistics for these standards. Materials are tested regularly to ensure stability and homogeneity.