



Geochemical Procedure

ME-MS81h

High grade Rare Earth elements by fusion/ICPMS

Sample Decomposition:

Lithium Metaborate Fusion (FUS-LI01h)

Analytical Method:

Inductively Coupled Plasma - Mass Spectroscopy (ICP - MS)

A prepared sample (0.100 g) is added to lithium metaborate flux (0.90 g), mixed well and fused in a furnace at 1000°C. The resulting melt is then cooled and dissolved in 250 mL of 4% nitric acid. This solution is then analyzed by inductively coupled plasma - mass spectrometry.

Element	Symbol	Units	Lower Limit	Upper Limit
Cerium	Ce	ppm	3	50000
Dysprosium	Dy	ppm	0.3	5000
Erbium	Er	ppm	0.2	5000
Europium	Eu	ppm	0.2	5000
Gadolinium	Gd	ppm	0.3	5000
Hafnium	Hf	ppm	1	50000
Holmium	Ho	ppm	0.05	5000
Lanthanum	La	ppm	3	50000
Lutetium	Lu	ppm	0.05	5000
Niobium	Nb	ppm	1	5000
Neodymium	Nd	ppm	0.5	50000
Praseodymium	Pr	ppm	0.2	5000
Rubidium	Rb	ppm	1	50000
Samarium	Sm	ppm	0.2	5000

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Element	Symbol	Units	Lower Limit	Upper Limit
Tin	Sn	ppm	5	50000
Tantalum	Ta	ppm	0.5	5000
Terbium	Tb	ppm	0.05	5000
Thorium	Th	ppm	0.3	5000
Thulium	Tm	ppm	0.05	5000
Uranium	U	ppm	0.3	5000
Tungsten	W	ppm	5	50000
Yttrium	Y	ppm	3	50000
Ytterbium	Yb	ppm	0.2	5000
Zirconium	Zr	ppm	10	50000

Elements listed below are available upon request

Element	Symbol	Units	Lower Limit	Upper Limit
Indium	In	ppm	0.3	5000

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