# Method 27 – Rare Earth Elements by WDXRF

**Sample Weight: 2 g**

## Summary

Rare earth elements are determined in rocks by Wavelength Dispersive X-Ray Fluorescence spectrometry (WDXRF). Samples are fused with lithium borate and fused into a glass disk. The disk is then analyzed by WDXRF.

## Method 27 Elements and Reporting Limits

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| Element | Concentration (low) | Concentration (high) |
| Ce, Cerium | 0.02% | 20% |
| Dy, Dysprosium | 0.02% | 20% |
| Er, Erbium | 0.02% | 20% |
| Eu, Europium | 0.02% | 20% |
| Gd, Gadolinium | 0.02% | 20% |
| Ho, Holmium | 0.02% | 20% |
| La, Lanthanum | 0.02% | 20% |
| Lu, Lutetium | 0.02% | 20% |
| Nd, Neodymium | 0.02% | 20% |
| Pr, Praseodymium | 0.02% | 20% |
| Sm, Samarium | 0.02% | 20% |
| Tb, Terbium | 0.02% | 20% |
| Th, Thorium | 0.02% | 20% |
| Tm, Thulium | 0.02% | 20% |
| U, Uranium | 0.02% | 20% |
| Y, Yttrium | 0.02% | 20% |
| Yb, Ytterbium | 0.02% | 20% |

## Analytical Performance

Data will be deemed acceptable if recovery of the rare earth elements is ±5% at the LOD and the calculated percent RSD of duplicate samples is no greater than 5%.