

Trace elements determination in zircon by LA-SF-ICP-MS

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For this work a Photon Machines Excite.193 laser ablation system with a two volume HelEx coupled with a Thermo Scientific Element XR ICP-MS were used. Laser frequency was set up at 10 Hz, spot size of 40 μm and fluence of 4.74 $\text{J}\cdot\text{cm}^{-2}$. The ablation time was 90 s (30s for gas blank and 60s for sample ablation). Nist 612 and ²⁹Si were used as external and internal standard, respectively. Iolite 2.5 version (DRS-trace elements_IS) was used to reduce data [1]

The results have reproduced, with good agreement, the 91500 reference material values [2] as shown Figure 1. Results obtained for other trace elements (Y, Nb, Hf, Ta, Pb, Th and U) reproduced the reference values, considering the uncertainty of the reference material.

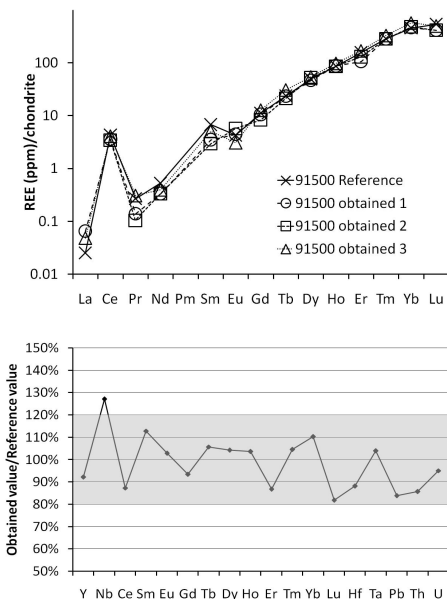


Figure 1: Comparison between obtained results and reference values for 91500 [2].

For the future, new data will be acquired on other minerals of interest.

[1] Paton et al (2010) *Geochemistry, Geophysics and Geosystems*, **11**, Q0AA06. [2] Wiedenbeck et al (1995) *Geostandards Newsletter*, **19**, 1–23.