LA-ICP-MS setup for Su et al. (2023)

The LA-ICP-MS system consists of an Agilent 7900 ICP-MS coupled with an ESI NWR193nm excimer laser with a TwoVol2 sample chamber and dual-concentric-injector torch interface for rapid sample washout. MPI-DING glasses (GOR132-G and GOR128-G) were used as reference materials and were measured every 14 minutes to correct for instrumental drift.

Isotopes measured: 23Na, 39K and 63Cu. 44Ca and 57Fe are included as internal standards.

Integration time for each isotope: 50 ms for 44Ca and 57Fe, 240 ms for 23Na, 250 ms for 39K and 400 ms for 63Cu.

Beam size: 7 × 7 μm square laser beam

Scan speed: 7 μm/s

Energy density: ~2.4 J/cm2

Laser repetition rate: 80 Hz