

Supplementary table S1: Settings for the instruments used in the geochronological Laboratory (GeoPlasmaLab Dresden) of the Senckenberg Naturhistorische Sammlungen Dresden, (Excimer Laser, New Wave, UP 193) and (ICP-MS, Thermo Fisher, Element 2 XR).

ICP-MS	Finnigan Element 2 XR
Forward Power	1390 W
Gas flow rate	15.0 l min ⁻¹ (plasma) 1.07 l min ⁻¹ (aux)
Scan mode	E-scan
Scanned masses	202, 204, 206, 207, 208, 232, 235, 238
Mass resolution	300
Dead time	18 ns
Oxide UO ⁺ /U ⁺	< 1%
Dwell time	4 ms
Settling time	≤ 1 ms/amu
Number of scans	1500
Background	15 s
Ablation time	30 s
Integration time	1.4 s (=25 scans)
Laser system	UP193 New Wave 193 nm, excimer
Nominal spot diameter	25-35 μm (unknowns) 35 μm (standard)
Carrier gas	0.25 l min ⁻¹ He 1.1 l min ⁻¹ Ar
Laser settings	10 Hz, 55% LP
Drill speed (DS) / Raster scan speed (RSS)	~ 0.5 μm/s (DS)
Cell volume	c. 3 cm ³
Sensitivity	6 × 10 ⁶ counts/pg U