Laser ablation system	
Make, Model & type	RESOlution ArF excimer
Ablation cell	Laurin Technic S-155
Laser wavelength	193 nm
Pulse width	20 ns
Fluence	*ca*. 6.5 J.cm^{-2} (120 mJ, 44% transmission)
Repetition rate	8 Hz
Ablation/Washout duration	60 secs / 60 secs
Ablation rate	0.125μm.pulse^{-1} with the *ca*. 6.5 J.cm^{-2} setting
Spot diameter	33 μm
Sampling mode / pattern	Static spot ablation
Carrier gas and gas flow	A mixture of ~0.85 L/min Ar and 6- 7 ml/min N_2, which entered tangentially from the top of the S-155 ablation cell funnel and ~400 ml/min He entering from the side of the cell.

Lu–Yb–Hf measurements									
Make, Model & type	Thermo Fisher Scientific, Neptune Plus, MC-SF-ICP-MS								
Sample introduction	Ablation aerosol introduced tygon tubing. Ni-Jet Sample cone and X-Skimmer cone.								
RF power	1250W								
Detection system	Static Faraday (attached to 10^{11} Ω amplifier) measurement								
Masses measured	172, 173, 175, 176, 177, 178, 179, 180, 181								
Total integration time per output datapoint	1.049 secs								
Cup configuration	L4	L3	L2	L1	Axial	H1	H2	H3	H4
	172	173	175	176	177	178	179	180	181

Data Processing	
Gas blank	60 second on-peak zero subtracted for Lu-Hf measurements
Reference Material info	Plešovice (Sláma et al., 2008) 91500 (Blichert-Toft, 2008) MUN-1 and MUN-3 (Fisher et al., 2011)
Data processing package used	Iolite software package (Paton *et al.*, 2010; Paton *et al.*, 2011; Fisher *et al.*, 2017) using the following DRS: ""*Hf_Alberta*"
Yb mass bias coefficient (β^{Yb})	Calculated using ^{173}Yb/^{172}Yb invariant ratio and the exponential law of Russell et al. (1978).
Yb interference	Calculated with ^{176}Yb/^{173}Yb ratio, the Yb-mass bias coefficient (β^{Yb}) and the exponential law of Russell et al. (1978). Daily adjusted.
Lu interference	Calculated with ^{176}Lu/^{175}Lu ratio, the Yb-mass bias coefficient (β^{Yb}) and the exponential law of Russell et al. (1978). Daily adjusted.