

Supplementary Material:

Laser ablation of ‘diamonds-in-water’ for trace element and isotopic composition analysis

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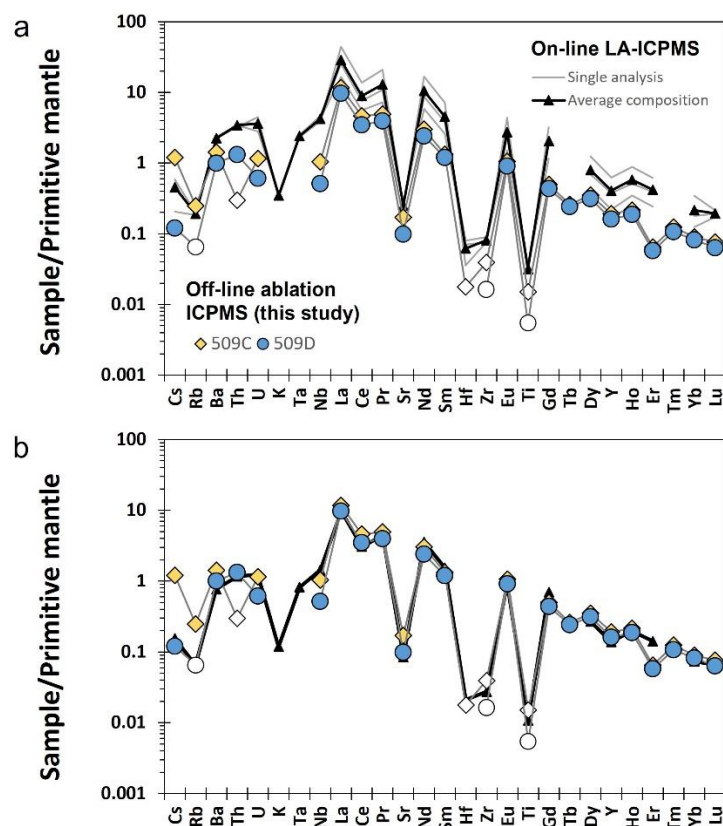


Fig. S1: Comparison between off-line ‘diamonds-in-water’ ablation ICPMS analyses (this study) and on-line LA-ICPMS analyses ^{ref. 22,23} of diamond 509. (a) Primitive mantle normalized trace element patterns of the two large ‘diamonds-in-water’ ablation duplicates 509C (orange diamonds) and 509D (blue circles); white filled symbols are data falling between LOQ and LOD (between $10\times\sigma$ and $3\times\sigma$ of the TPB). For comparison, 3 single on-line analyses of the same diamond (gray lines) and their average (solid black line with black triangles) are presented. The similarity between results is clear and the difference in absolute enrichment of the complete patterns is due to different amounts of microinclusions in the diamond volume that is ablated using the two techniques. (b) When the data are normalized to take into account the amount of microinclusions (in this case on-line average $\times 0.35$) the patterns match confirming the accuracy of the analysis results of both techniques. Primitive-mantle values are from ref. 53.