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Rhyolite magma evolution recorded in isotope and trace element composition of zircon from Halle Volcanic Complex

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ABSTRACT

Voluminous felsic volcanic magmas were formed in Central Europe at the Carboniferous/Permian boundary in numerous pull-apart basins; one of which is the Saale Basin, which holds the Halle Volcanic Complex (HVC), the focus of this study. The rhyolites in the HVC formed laccoliths and scarce lavas, and occur in two different textural types: fine and coarse porphyritic. Zircon isotope and trace element composition was analysed in four units, two per each textural type. Zircon from the different units show similar ranges in ε Hf (-4.1 to -8.1) and δ^{18} O values (6.51 - 8.26), indicating similar sources and evolution processes

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