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Modal compositions and microfabrics of anatectic segregates, diatexites and granites from the variscan regional metamorphic Moldanubian Zone, Bayerischer Wald, SE Germany

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At the western margin of the Bohemian Massif within the Bayerischer Wald which forms part of the Moldanubian Zone of the Variscan Metamorphic Belt of Europe, crustal anatexis of mainly metasedimentary rocks led to the formation of structurally variable types of migmatites. Predominantly stromatitic metatexites form transitional contacts to progressively massive, less heterogeneous migmatites, e.g. nebulitic gneisses. This development leads to the formation of schlieren bearing granitoid looking portions of variable colour index usually refered to as diatexites. In the course of the ongoing detailed geological mapping in this area, lively discussion came up about how to discriminate granitoid looking in situ diatexites from intrusive granitoids.

Observations like contact relationships are taken from suitable outcrops. Rock and mineral fabrics (e.g. grain size distribution, textural properties, grain shapes, angular relationships of phase contacts, equilibrium/disequilibrium textures) and modal compositions obtained from thin sections are used to characterize the petrographic properties of anatectic segregates and extracted mobilisates for comparison with granitoids from several occurrances. It is important to point out that microstructural evidence with respect to melt forming processes is often erased by subsequent deformation, which limits the number of samples that were selected for the study. Additionally, also

modal composition data from literature and contact migmatite samples formed within a thermoaureole from the Kaledonides of Scotland are taken into account. The results of geochemical analysis of a representative collection of samples will be included, if available on time.

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