

# Turmalín v pegmatitech, aplitech a granitech ze západní granodioritové zóny brněnského masívu

## Tourmaline from pegmatites, aplites and granites in the Western Granodiorite area of the Brno Massif

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### Abstract

Tourmaline granites, pegmatites and aplites in the Western Granodiorite area of Brno Massif are spatially related to the metapelite enclaves, which represents relict of the contact aureole around biotite granites to amphibol-biotite granodiorites of Tetčice Suite. Tourmaline forms anhedral aggregates inside the nodule core in the biotite granites (Qtz + Kfs + Pl + Bt ± Tu). Euhedral to subhedral grains are typical for the pegmatite dykes (Qtz + Kfs + Pl ± Ms ± Bt ± Grt ± And ± Tu). Small anhedral to subhedral grains tourmaline occurs as accessory phase in the same gneisses and leucosomes of migmatites from contact aureole. The results of the calculations indicate breakdown tourmaline during partial melting metapelites related with contact metamorphism (~730 °C and 4 - 3 kbar). The P-T conditions of crystallisation of pegmatites have been constrained by stability of andalusite and quartz-tourmaline isotope thermometry (~570 °C and < 3 kbar). The two main exchange vectors characterize the substitutions in studied tourmaline schorl-dravite series:  $^x\text{Na}_1^y\text{Al}_1^x\text{Ca}_{-1}^y\text{Mg}_{-1}$  and  $^x\text{Al}_1^y\text{Al}_2^w\text{O}_1^x\text{Na}_{-1}^y\text{R}^{2+}_{-2}{}^w(\text{OH})_{-1}$ .

**Key words:** *tourmaline, partial melting, contact metamorphism, Brno Massif, Czech Republic*