

## SUMMARY

Fluid inclusions of pegmatites from two localities in the Moldanubina Zone were studied in order to constrain P-T conditions of their crystallization and establish composition and properties of fluids associated with pegmatite formation. The first locality Skalsko (near Jílové u Prahy) is located within the Central Bohemian Plutonic Complex (CBPC) of Variscian age. Pegmatitic dykes represent the late stage of magmatic evolution of the CBPC. Pegmatite is hosted by biotite-granodiorite of the „Požáry“ and „Sázava“ types and probably belongs to the muscovite class of the pegmatites. The other locality, Dolní Bory, is located within the Bory granulite Massif (metamorphism is dated to about 340 Ma). Following types of pegmatite occur in this district: 1. barren to less evolved pegmatites; 2. more evolved phosphate-bearing pegmatites and 3. Li-complex, the most evolved pegmatites. The studied material comes from an andalusite-diaspore nodule hosted by blocky quartz of the barren pegmatite (pegmatite dike No. 3).

Fluid inclusions were studied mostly in quartz (Skalsko, Dolní Bory), andalusite and diaspore (Dolní Bory). Fluids trapped in samples from Skalsko correspond to H<sub>2</sub>O-CO<sub>2</sub> and H<sub>2</sub>O types. The H<sub>2</sub>O-CO<sub>2</sub> fluid had relatively low salinity (4,1-5,9 wt.% NaCl<sub>eq</sub>), contained from 20 to 5 mol.% CO<sub>2</sub> and its bulk density was 0,84-1,03 g/cm<sup>3</sup>. In the case of aqueous fluid bulk fluid density was 0,90-0,94 g/cm<sup>3</sup>. The salinity, however, was not possible to measure.

Fluids associated with formation of pegmatites from the Dolní Bory correspond to H<sub>2</sub>O-CO<sub>2</sub>, H<sub>2</sub>O and CO<sub>2</sub> (+/-CH<sub>4</sub>) fluids. H<sub>2</sub>O-CO<sub>2</sub> fluids contained from 2 to 13 mol.% CO<sub>2</sub> and max. 5 mol.% CH<sub>4</sub>. The salinity 2,6-4,8 wt.% NaCl<sub>eq</sub> and density was about 0,81-1,07 g/cm<sup>3</sup>. Salinity of aqueous fluid is about 7,6-10,5 wt.% NaCl<sub>eq</sub>. The CO<sub>2</sub> fluids contained to about 5 mol% CH<sub>4</sub> and its density was cca 0,18-0,81 g/cm<sup>3</sup>.

The most probable P-T conditions of pegmatite formation are: 520-630 °C and 600-800 MPa for Skalsko pegmatite, and 525-630 °C and 150-250 MPa. For pegmatite from the Dolní Bory (pegmatite dike No. 3.).

**Keywords** Fluid inclusion · Pegmatites · Skalsko · Dolní Bory