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PŮVODNÍ PRÁCE/ORIGINAL PAPER

Atolové granáty v bazaltových metapyroklastikách z lokality Čučma - Vincent (Slovenská republika)

Atoll garnets in basalt metapyroclastics from the locality Čučma - Vincent (Slovak Republic)

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Abstract

Atoll garnets in basalt metapyroclastics from the locality Čučma - Vincent (Slovak Republic) consist of relict cores and zonal rings. Research was focused on comparison of chemical changes in these garnet microstructures. Relict cores have composition $\text{Sps}_{41.4-45.2}\text{Grs}_{40.6-43.0}\text{Adr}_{6.4-13.6}\text{Alm}_{1.9-6.1}$, inner BSE light zone in the rings has composition $\text{Grs}_{38.2-44.9}\text{Sps}_{39.6-43.7}\text{Alm}_{6.3-12.4}\text{Adr}_{6.5-9.6}$ and outer BSE dark zone in the rings has composition $\text{Sps}_{34.3-40.3}\text{Grs}_{33.3-38.3}\text{Adr}_{8.5-17.3}\text{Alm}_{12.7-17.1}$. The highest content of Mn^{2+} in the atoll garnets was observed in the relict cores (1.21 - 1.33 *apfu*) and subsequent decreasing trend in contents of Mn^{2+} from the inner parts of the rings (BSE dark zone; 1.16 - 1.29 *apfu*) to their edge (BSE light zone; 1.02 - 1.20 *apfu*) is present. The opposite trend was observed for Fe^{2+} content. Inner parts of the garnets are replaced by actinolite and calcite with slightly higher content of Mn (Act up to 0.07 *apfu*; Cal up to 0.02 *apfu*). Matrix of basalt metapyroclastics was primarily formed by hedenbergite which was later replaced by actinolite.

Key words: atoll garnets, basalt metapyroclastics, Čučma, Slovak Republic

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