

The compositional zoning of garnet in eclogites from North of Shahrekord, Sanandaj – Sirjan Zone, Iran

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Abstract: The metabasite rocks from north of Shahrekord, which is a part of structural zone of Sanandaj-Sirjan, are undergone medium temperature – high pressure metamorphism (eclogite facies). These rocks then were subjected to a retrograde metamorphism (amphibolite facies). A distinct compositional zoning is preserved in fresh garnets which are formed during eclogite facies. The compositional or growth zoning in these eclogite rocks shows clockwise P-T-t path. In the beginning of metamorphism, P and T increased up to reach to the peak of high pressure metamorphism, then P decreased while the T was increasing during uplift and decompression. These growth stages indicate that P_{\max} was not contemporaneous with T_{\max} during eclogite facies metamorphism of the metabasites from North of Shahrekord, in Sanandaj - Sirjan Zone.

Keywords: Eclogite, Garnet, Compositional Zoning, P-T path, Sanandaj-Sirjan Zone.