

Mineral Chemistry and metamorphic evolution of the Late Neoproterozoic metabasites of Do-Chah metamorphic - igneous complex (SE Shahrood)

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Abstract: Metapelites of the Do Chah complex (SE Shahrood) are composed of micaschist, garnet micaschist, chloritoid schist and garnet-bearing gneiss. In the highest degree of metamorphism, metapelites have been affected by partial melting, resulting as granitization. A significant part of these rocks, imposed by compressional tectonic regime and show typical evidence of plastic deformation and intensive mylonitization. Secondary chlorite and phengite in metapelites are indicators of retrograde metamorphism which occurred during uplifting and P-T condition of greenschist facies. Thermobarometry of these rocks shows the occurrence of a Barrovian type progressive metamorphism in relation to Cadomian orogeny (Late Neoproterozoic) in P-T conditions of greenschist to upper amphibolite facies.

Keywords: mineral chemistry; metamorphic evolution; metabasite; Neoproterozoic; Do Chah; Shahrood.

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