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Mineralogical study of Gharebagh mica mine and relationship between mineralization and plutonic, metamorphic host rocks.

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Key Words: *Phlogopite, Apatite, Nonorogeny granite type A, Assimilation, pneumatolite to hydrothermal phase.*

Abstract: Microscopic and XRD investigations indicate that the main mica is phlogopite. There are also a small amount of Muscovite in the east part. Trend of mica layers is NE-SW.

Host rocks are Gneiss, micaschists, granite and gabbro. Minerals assemblage of this mine is phlogopite, apatite and calcite. Chemical and microscopical investigations of granite indicate that they are nonorogen alkaligranite type A. The major minerals are potassic feldspars and albite (with microperthite texture) and quartz (with micrographice texture). Garnet and calcite are minor minerals. Phogopite, Apatite and calcite vein is resulted in pneumatolite to hydrothermal phase from a granitic melt with high Mg, K, Ca and P.