



Petrochemical Characteristics of the Felsic Veins within the Kaman Metamorphic Rocks: Central Anatolia, Turkiye

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The basement metamorphic rocks which outcrops in the vicinity of Kaman-Kirsehir, in Central Anatolia are composed of gneiss, biotite schist, amphibole schist, quartzite intercalated with amphibolite lenses in the region. This metamorphic rocks are cut by felsic veins. Felsic vein rocks are mainly composed of orthoclase, quartz, plagioclase, biotite and pyroxene minerals with accessory titanite and opaque minerals. Felsic vein rocks have holocrystalline texture in general and composed of mega crystalline orthoclase, quartz and mostly euhedral mafic minerals. The felsic veins are quartz syenite in composition. They are characterised by the lack of mafic magmatic enclaves. Clay formation, chloritization and opasitization with minor amount of uralitization are the main alteration part of the unit.

The felsic veins which cut the Kaman Metamorphic rocks have SiO_2 % concentration vary between 57.22-70.9 %, Na_2O % concentration between 1.9-2.63% and K_2O % concentration between 6.34 - 9.01%. Felsic veins are enriched in LIL (large ion lithophile) elements compared to HFS (high field strength) elements. Obtained geochemical and petrographical datas suggest that the felsic veins are genetically related with Central Anatolia alkali-enriched magmatic rocks and they may belong to the alkali-enriched magmatic rocks which have excess crustal contamination.