Application of Amphibole Mineral Chemistry in the Study of Magma Features and Geothermobarometry of Granitoid Rocks of NW Saveh, Central Iran

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(Received: 4/4/2012, in revised form: 16/6/2012)

Abstract: The chemical composition of amphiboles from granitoid rocks of Selijerd and Neshveh plutons in NW Saveh, Central Iran, are studied for petrogenetic purposes, tectonomagmatic features and geotermobarometry of these plutons. The chemical composition of these amphiboles falls in the calcic amphibole group and is actinolite to magnasio-hornblende. They are asssiated with the active continental margin subduction-related zone and formed in relatively high oxygen fugacity. Based on the geotermobarometric methods, amphiboles from these plutons formed in temperatures ranging from 700 to 750 °C and low pressures ranging from 0.3 to 1.2 kilobars equivalent to a depth of approximately 1 to 4.5 km, respectively.

Key words: granitoid; amphibole; geotermobarometry; Saveh.

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