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Application of Biotite Mineral Chemistry of Granitoid Rocks of NW Saveh, Central Iran

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Abstract: The chemical composition of biotites of granitoid rocks of NW Saveh plutons are characterized by lower interval in total Al contents and Fe/ (Fe+Mg) ratios which both features are very important to indicate the crystallization of host magmas. In the annite- sidrophylite-phlogopite- eastonite (ASPE) quadrilateral used to plot the composition of trioctahedral micas based on the above parameters, all of the biotite samples from these plutons cluster together and show no trend that can imply absence of assimilation by crustal materials. Biotites from these plutons are primary and formed in high fugacity oxygen conditions and show calc-alkaline I-type properties. This is consistent with the suggested tectonomagmatic characteristics implying magmatic arc associated with subduction zones.

Key words: *granitoid; biotite; Saveh; magmatic properties.*

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