

## Geochemistry and tectonic setting of granite-gneisses from Abadchi, north of Shahrekord

F. Riyahi Samani, N. Shabanian Boroujeni\*, A. Davoudian Dehkordi

*Faculty of Natural Resources and Earth Sciences, Shahrekord University*

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**Abstract:** The granite-gneiss body of Abadchi area (vicinity of Zayandeh-Rud dam) is a part of Sanandaj-Sirjan tectonic zone. The mineralogical composition of the granite-gneisses contains quartz, K-feldspar, plagioclase, biotite and muscovite and minor minerals of opaque, zircon, amphibole and allanite. The granite-gneiss rocks have been influenced by deformation dynamics and weakly Na-metazomatism. Geochemically, these rocks are calcic to calc-alkali, ferroan to magnesian, peraluminous to slightly metaluminous and are A to I-type granitoid. On the bases of chondrite-normalized REE diagram, they show a relatively enrichment in LREES rather than HREES with negative Eu anomalies. On primitive-mantle normalized spider diagrams, the rocks display relatively enrichment in LILE and LREE rather than HFSE which represent the magmatic rocks depending on arc and collision setting. This granite-gneiss is formed in post-collisional tectonic setting.

**Keywords:** *Granite-gneiss; A-Type granite; geochemistry; Abadchi; Sanandaj-Sirjan Zone.*

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\*Corresponding author, Tel.: 03832334423, Fax:03832334423, E-mail: nahid.shabanian@gmail.com