

## The study of mineralogy and geochemistry of Lalezar Granitoid (Bardsir-Kerman)

S. M. Niktabar\*, A. Moradian, H. Ahmadipour

*Department of Geology, Shahid Bahonar University of Kerman, Kerman, Iran*

(Received: 3/1/2015, in revised form: 6/5/2015)

**Abstract:** Lalezar Granitoid Complex is located in the south-east of Urumieh-Dokhtar volcanic belt and Dehaj-Sarduieh belt (Kerman Province). It contains plutonic rocks with granitoid composition and has been intruded into the Eocene volcano-sedimentary rocks. The plutonic rocks have granite to gabbrodiorite composition with dominance of tonalite and diorite rocks. The main mineral phases are sodic plagioclase, k-feldspar, quartz, biotite and amphibole in granite to tonalite, and calcic plagioclase, amphibole, biotite, clinopyroxene and orthopyroxene (hypersthene) minerals in diorite to gabbrodioritic rocks. Tourmalinization is a common feature in the granitoides and related aplites. The tourmalines are seen as medium to coarse-grained prismatic crystals, veinlets, radial assemblages, euhedral to anhedral, nodular and needles. The tourmalinization in granitoids of this area is occurred in hydrothermal and pneumatolitic stages due to infiltration of boron rich fluids in rock fractures. In the aplites, probably, tourmalinization occurred as tourmaline rich nodules due to gas (pneumatolitic) differentiation in silicic- boron rich fluids at the late stage of crystallization. Sometimes the tourmaline emplacement has begun from margins, fractures and weak planes of feldspars lattices (such as cleavage and twinning) and extended to other parts of crystals. The geochemical data reveal that the granitoids belong to I-type and Calc-alkaline series. They have emplaced in continental arc and REE studies show that the source rocks could have been garnet or spinel bearing mantle peridotites.

**Keywords:** *Lalezar, calc-alkaline, granite, gabbrodiorite, tourmaline.*

متن فارسی اصل مقاله از صفحه ۸۰۳ تا ۸۱۸ در این شماره به چاپ رسیده است.

\*Corresponding author, Tel: 989133592860, fax: 03433257435, Email: Maryam.niktabar@gmail.com