

The U-Pb dating of Jebale Barez plutonic complex: Evidence for the Old Iranian basement in the SE of Urumieh-Dokhtar magmatic zone.

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Abstract: The Jebale-Barez plutonic complex (JBPC) is composed of granitic rocks and located in the E-NE of Jiroft in the SE part of Kerman Province. It is mainly consists of granodiorite but alkali-feldspar granite, granite, quartz-syenite and quartz-diorite can be observed in the region. The U-Th ratio in granitoids was used for petrogenetic studies. In this point of view, the JBPC has U-Th ratio lower than 5 which may imply its magmatic origin. The zircon isotopic closure of 900 °C and U-Pb ratio indicated that the U-Pb age (15.48 ± 0.71 Ma) could be assigned to the crystallization of granitic magma. Some analyzed zircon crystals display inherited ages of Iranian basement (Early and Middle Proterozoic) which is not exposed in the study area.

Keyword: U-Pb zircon dating; Iranian Basement; Early and Middle Proterozoic; Inherited zircon; Jebale Barez.

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