Mineral chemistry studies of dunites in the Abgarm region (south of Kerman Province): An approach to tectonomagmatic position.

R. Alipour*, H. Moeinzadeh, H. Ahmadipour

Department of Geology, Shahid Bahonar University, Kerman, Iran

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Abstract: The Abgarm ultramafic complex in south of Kerman Province and also southeast of Sanandaj – Sirjan zone is a part of Esfandagheh- HajiAbad ophiolitic belt. Most ultramafic rocks are harzburgite, dunithe, and lherzolite. Dunites form the largest volume of ultramafic sequence in the study area after harzburgite and they are scattered into the mass form of harzburgites. Due to the present of several faults, it is difficult to detect the initial relationship between the dunites and the harzburgites in the region, and they are sometimes severely serpentinized. Olivine is the most abundant mineral in the dunites of the Abgarm ultramafic complex. The amount of forsterite in these minerals varies from 72.91 to 84.90 and the high amounts of forsterite in the olivines in the dunites, as well as the composition of the chromium spinels in these rocks show that peridotites belong to the mantle and have ophiolitic and depleted nature and probably are formed in the back-arc basin environment by the reaction of the basaltic melts of the back-arc basin with peridotites. Then they were replaced tectonically as a part of the ophiolite mélange in the crust.

Keywords: dunithe; harzburgite; ophiolite; Esfandagheh- HajiAbad; Abgarm ultramafic complex; Kerman.

* Corresponding author; Tel: 09132963420, Email: Alipour_raziyeh@yahoo.com