



Vol. 26, No. 4, Winter 1397/2019

IRANIAN JOURNAL of
CRYSTALLOGRAPHY
and MINERALOGY

Geothermobarometry and pyrogenesis of Jaghin Gabbro in southeast of Rudan city, Hormozgan Province

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(Received: 7/10/2017, in revised form: 7/3/2018)

Abstract: Jaghin ophiolite rocks are located in the east of Hormozgan Province and southeast of Rudan city in the direction of the Makran zone. Lithologically, ultrabasic rocks such as dunite and harzburgite, and basic magma, including gabbro-norite and basalt, have been identified. According to chemical crystal analysis, the composition of pyroxenes in basic (Gabbro-norite) rocks is more than iron and magnesium, and poor of sodium, which included clinopyroxene with diopside and sometimes augite composition, as well as orthopyroxene is more than bronzite composition. Plagioclase crystals present in gabbro-norite rocks, also divide into high-sodium and medium-calcium types, which have mostly composition between albite and bitonite. Due to the thermometric of these masses and the utilize of the two-pyroxene method, the temperature of forming these masses is determined to be 800-1200 °C and, also using the barometric of aluminum distribution in pyroxenes, the pressure on the clinopyroxenes formation estimated to be about 6-12 kbars.

Keyword: *Plagioclase; pyroxene; gabbro-norite; dunite; basic masses; Jaghin; Makran zone.*

متن فارسی اصل مقاله از صفحه ۸۴۵ تا ۸۵۶ در این شماره به چاپ رسیده است.

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