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Mineralogy and petrogenesis of chromian – spinel in Rudan ultramafic body, Hormozgan Province

M. Poosti*, Gh. R. Ghadami, S. Salehi

Department of Geology, University of Hormozgan

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Abstract: The studied area is located in the north of Rudan city and is a part of Kahnuj - Rudan - Minab ophiolite belt. The studied rock are harzburgite and lherzolite and are composed of olivine, orthopyroxene, clinopyroxene and chrome – spinel (as a minor). According to microprobe data, the amount of MgO in the olivines ranges between %50.17 to %50.55, so these olivines are forsterite. Clinopyroxenes are diopside and spinels contain chrome. Detail microprobe studies on the chrome - spinel of ultramafic lherzolites prove that they are high in Mg#(%71-%77) and Al_2O_3 (52.98 to 46.31 Wt%)) and low in Cr# (%0.14 - %0.22). (Cr/Al) ratio in the spinel of lherzolites is 0.19. The amount of Fe^{3+} in the chrome - spinel of ultramafic Peridotites is very low (<0.1 Wt%) that shows the crystallization has taken place in low oxygen fugacity. On the basis of spinel mineral chemistry, lherzolite samples are located in oceanic peridotites tectonic position (ABYSAL) and formed in the mid-ocean ridges (MORB).

Keywords: *Chrome spinel; lherzolite; peridotite; ultramafic; Rudan.*

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*Corresponding author: Tel: 076-33711000-11, Fax: 076-33670716, Email: m.poosti@yahoo.com