

## Comparison of PGE concentration in the chromitites of Khoy Ophiolite: Its implication for the presence of two types of chromitites with two different origins

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**Abstract:** Khoy ophiolitic complex in northwest of Iran have several chromitite bodies with various textures, different geochemical features and associated minerals. Based on Cr#, Khoy chromitites are divided into two groups: high-Cr (Cr# > 0.6) and high-Al (Cr# < 0.6) chromitites. The high-Cr contain some amount of PGEs with tiny grains of platinum-group minerals (PGM), whereas, high-Al chromitites are poor in PGE with no PGM inclusions. Geochemical analysis and Raman spectroscopy data on PGM inclusions in the high-Cr chromian spinels shows that they are laurite and rarely irarsite in composition. The PGE concentration in high-Cr- and high-Al chromitite reveals that the high-Cr chromitites probably were formed in a magmatic arc tectonic setting and those of high-Al were occurred in a back arc basin environment.

**Keywords:** *Platinum group-elements; chromitites; Raman spectroscopy; Khoy ophiolite; Iran.*

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