

## Geochemical and petrographic study of common minerals in the Taftan volcanic Rocks

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**Abstract:** Taftan volcano, is located in about 100 Km South to Southeast of Zahedan, Sistan and Baluchestan province in southeast of Iran. On geological point of view, it is located at the end of Nehbandan-Khash flysch and North Makran structural zones. Field, petrographic and geochemical studies from different samples of rocks show that the volcano mostly composed of andesitic and dacitic rocks. These rocks have no variety in mineralogy and mainly composed of plagioclase, biotite, hornblende and pyroxene minerals. Microanalyses on these minerals show that plagioclases are common minerals with reversal, oscillatory and normal zoning and are andesine to labradorite in chemical composition. Plagioclases have 57.2 to 60.2 wt% Silica contents in composition. These mineral shows variation in composition from the core to rim that is correlative with the microscopic evidence and may be resulted by changes in magma composition accompanied with pressure changes during the ascent of magma, magma mixing and variation in water pressure in magma. Structural formulae indicate that amphiboles, micas and pyroxenes minerals are magnesiohornblende, biotite, diopside and hypsthene composition, respectively.

**Keywords:** Taftan, Sistan and Baluchestan, Makran, Microanalyses.