

عنوان مقاله:

Geochemistry and Tectonic Environment of Volcanic Rocks in North and Northeast of Kelardasht (Central Alborz zone)

محل انتشار:

فصلنامه زمین و آمار، دوره 2، شماره 1 (سال: 1402)

تعداد صفحات اصل مقاله: 0

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خلاصه مقاله:

The study area structurally belongs to the Central Alborz tectonic range and is located ۲۵ km south of Chalous city. The volcanic rocks in the region, composed of basalt, andesite, trachyandesite and dolerite, have been formed by fractional crystallization and, in some cases, contamination processes. In general, the rocks of the region are rich in LIL and LREE elements and devoid of HFS elements. Investigation of trace element and rare earth element ratios shows that basalts in the study area can be formed by partial melting of a peridotite garnet at depths and high pressures. Negative Ce anomaly, Nb positive anomaly, Pb/Ce ratio similar to sources OIB and variation in Ce / Pb ratio emphasize the role of continental and mantle lithospheres in the alignment of magmatic sources of volcanic rock elements in the study area. The two phenomena of delamination & detachment of the lithosphere and its immersion in the mantle (due to density difference) and transfer of dense lithosphere to the bottom (lower mantle) are related to the contamination of the magmatic source with the lithosphere for early magma rocks. The area's volcanism is known to be within the sheet

کلمات کلیدی:

Petrography, Geochemistry, volcanic rocks, Central Alborz zone, Iran

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<https://civilica.com/doc/1916667>

