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## Geochemistry and Emplacement of Post-collisional Shoshonitic Dyke Swarms, NW of Iran

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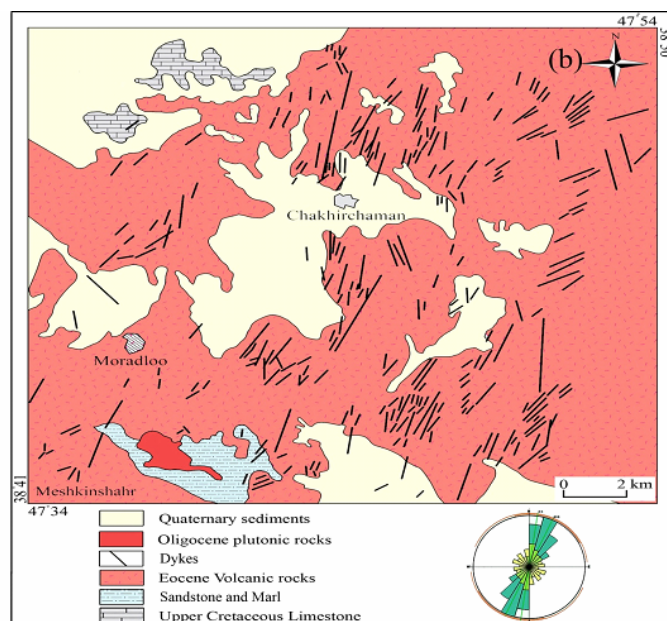
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About 300 mafic dykes are intruded Eocene volcanic and pyroclastic rocks, north east of Meshkinshahr city in the NW of Iran. Most of dyke swarms display NNE-SSE trend. Their composition varies from basalt to tephrite and trachi-andesite. They are characterized by alkaline and shoshonitic nature with SiO<sub>2</sub> content ranging from 44.8 to 59.6 wt%, MgO from 0.55- 7.96 wt% and high concentrations of Na<sub>2</sub>O+K<sub>2</sub>O (4.58 - 12.5 wt %). The studied samples indicate enrichment in LREEs and are characterized by enrichment in LILEs and depletion in HFSEs. The negative Nb–Ta–Ti anomalies in rocks compare with the features of subduction-related

magmatism and Nd, Sr radiogenic isotopes imply the involvement of slab sediments and/or a sub-continental metasomatized lithospheric mantle in genesis of parent magma. The geochemical and isotopic data for the north east meshkinshahr dyke swarms suggest that these Late Eocene magmas were derived from a small degree of partial melting of subduction-metasomatized lithospheric mantle source in a post-collisional setting. The magma differentiation and AFC process in magma chamber and during magma ascending is produced swarm dykes with different composition.



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