

Comparison of chemical composition of tourmaline in tin and tungsten-bearing quartz- tourmaline veins (Shah-kuh area, east of Iran and Nezamabad area, west of Iran)

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Abstract: In Iran, the most important tin and tungsten mineralization has occurred in Shah-Kuh granitoid pluton (Lut Block, east of Iran), and Nezamabad area (Boroujerd granitoid complex, west of Iran), respectively. Both mineralizations are mainly accompanied by existence of quartz-tourmaline veins. Nezamabad veins- type tourmalines have dravite composition and have been formed in hydrothermal condition on the basis of the following reasons: having more Mg than Fe, fine scale zoning, having low fluorine amount, low X-site vacancy, low Al amount, low Fe/(Fe+Mg) ratio, tendency away from alkali- and proton-deficient tourmaline and lack of negative correlation between Fe and Mg. Falling their composition in the metapelites and metapsammite zone reveals that the required forming fluids might be originated from host metamorphosed sedimentary rocks of the regions. Quartz-tourmaline veins from Shah- Kuh have been injected into main pluton and sedimentary rocks of Shemshak Formation. Vein- type tourmalines of the sedimentary rocks, have the same hydrothermal properties as Nezamabad tourmalines. Despite of having mostly schorl composition and originating from magmatic fluids, vein- type tourmalines of the granitic pluton represent hydrothermal nature as well.

Keywords: *Quartz-Tourmaline Vein, Nezamabad, Shah- Kuh, Hydrothermal, Mineralization.*

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