Tourmalinization in the Astaneh granitoids (south west Arak)

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Abstract: The studied area is a small portion of Sanandaj – Sirjan zone. Metasomatism at the contact of intrusive body studied and penetration of Al-rich rocks caused tourmalinization to stratiform tourmalinite in pelitic hornfels. In addition, hydrothermal fluids crystallized tourmaline nodules in monzogranite surface. The Fe/ (Fe + Mg) ratio in varied between 0.4-0.76 in stratiform tourmaline and 0.83-0.96 in tourmaline nodules respectively. The tourmaline composition is schorlite- dravite. Chemical zoning in this mineral show that system is open and crystallization is unequilibrium. The flat trace end rare earth elements imply to mobility of LREE induced to alteration that this phenomena occur to increasing HREE/ LREE in this type tourmalines.

Keywords: Astaneh, microprobe, metasomatism, Sanandaj- Sirjan zone, tourmaline.