The mechanism of fibrolite formation in the contact aureole of Mashhad granite

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Abstract: The mechanism of fibrolite formation in metapelitic rocks of the contact aureole of Mashhad granite is examined in this study. According to textural features, fibrolite considered to be disharmonious. Textural evidence strongly suggests that most of the fibrolite in this aureole are formed by decomposition of biotite. Fibrolite produced late in the thermal history of the aureole through a reaction involving acidic volatiles emanating from the adjacent intrusion. Textural evidence suggest that the fibrolite formed at temperatures within the andalusite stability field in the aureole investigated in this study.

Keywords: fibrolite, contact aureole, Mashhad metamorphic zone, metasomatism, cation leaching.