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SMP43-P16 Room:Convention Hall Time:May 24 18:15-19:30

Electron Probe Microanalyser and Laser Raman analyses of reaction textures in breccia veins, Tokunoshima, SW Japan

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Dark colored veins have been recognized in metamorphic body of Akirigami river in the western Tokunoshima, the Amami Islands (Ueda *et al*., 2012). This Dark colored veins are filled with breccia, microbreccia and fine-grained matrix derived from fault activity. Those matrices include circular opaque minerals which show bright rims and very dark cores under reflection microscope. The element concentration mapping by Electron Probe Microanalyser shows that bright rims consist mostly of Ti and dark cores are Ca-rich. Laser Raman Spectroscopic mapping differentiates that the small anatase grains (Ti rim) enclosing calcite (Ca – rich core). The circular opaque minerals are not found from host rocks (peltic – psammitc schists) and titanite is the only Ca – Ti bearing mineral phase in the host rocks. These observations indicate that the titanite-breakdown reaction operated during or shortly after injection of ultracataclastic veins under temperatures around 200 ℃ (e.g., Chakhmouradian, 2004) or higher.

Chakhmouradian, Anton R., 2004, American Mineralogist, 89, 1752-1762.
Ueda, S, Yamamoto, H, Terabayashi, M, 2012, the 119th Annual Meeting of the Geological Society of Japan.

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