

Abstract

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Petrological and geochronological study of high-temperature Mogok metamorphic rocks,
central Myanmar

(ミャンマーに産する Mogok 高温変成岩類の岩石学的, 地質年代学的研究)

Myanmar (Burma) is geologically divided into western and eastern provinces, which are bordered by the 1200 km long north-south trending, right-lateral, strike-slip Sagaing fault. In the Sagaing area of the Mandalay region, central Myanmar, gneissose and schistose rocks occur on the eastern (Sagaing ridge) and western (Minwun ridge) sides of the Sagaing fault, respectively. Garnet-biotite-plagioclase-sillimanite-quartz assemblage and its partial system of the gneissose rocks in the Sagaing ridge suggest equilibrium P/T conditions of 0.65–1.1 GPa/780–950 °C for the peak metamorphic stage and 0.3–0.5 GPa/600–680 °C for the exhumation and hydration stage. The CHIME monazite ages of the gneissose rocks suggested mixed records for multiple growths of monazite grains of the Late Eocene and Late Oligocene epochs, which were interpreted as peak metamorphic stage of upper amphibolite and/or granulite facies and subsequent hydration stage, respectively. Garnet-biotite-muscovite-plagioclase-quartz assemblage of the schistose rocks in the Minwun ridge yields equilibrium P/T conditions of 0.41–0.68 GPa/570–640 °C, which are distinctly lower in grade than the Mogok metamorphic rocks.