

Petrographic Description and Petrochemical Character of Granitoid Rocks in Mudu Area, Northern Part of Maungmagan, Dawei District

Myo Zaw Set¹ and Htay Win¹

¹Department of Geology, University of Yangon (myozawsetgeol@gmail.com)

Abstract

The present research area is located in Yebyu Township, Dawei District, Tanintharyi Region, bounded by latitude 14.21° – 14.26'' N and longitude 98.07° - 98.14° E. In the study area, the Mergui Group is intruded by masses of granitic body. The metasedimentary rock of quartzite is exposed only on the northern part of the area. The major igneous rocks found in these area are biotite granite, biotite microgranite and hornblende-biotite granodiorite. Aplite dykes and numerous quartz veins intruded in these rock units.

Petrographically, suture boundaries of quartz grains show wavy extinction and give slightly parallel alignment in quartzite. The granitic rocks show hypidiomorphic granular texture, and the dominant minerals in decreasing abundance are quartz (33-40%), alkali feldspar (30-34%), plagioclase (20-24%) and biotite (6-10%). In the granodioritic varieties, green hornblende is prominent. Alkali feldspars include mainly orthoclase, string perthite, microcline perthite and flame perthite. Abundance of perthitic texture indicates feldspar formed at high temperature that has cooled slowly, resulting in unmixing as the solvovous curve. The most important accessories are zircon, apatite, muscovite, epidote and sphene. These granitoids contain biotite±hornblende±sphene mineral association, which is a characteristic of I-type. Apatite commonly occurs as inclusions in biotite and hornblende together with hornblende bearing xenoliths suggest that these granitoids are I-type.