

Geochemistry and petrology of syenite, monzonite and gabbro from the western part of Benom Complex of Peninsular Malaysia

AZMAN A. GHANI, V. RAMESH, B.T. YONG & T.T. KHOO
Department of Geology, University of Malaya, 50603 Kuala Lumpur

The Benom Igneous Complex situated in the central part of this belt forms a pear shaped batholith consisting of a variety of igneous rocks ranging in composition from granitic to syenitic to monzonitic and gabbroic. The syenitic, monzonitic and gabbroic rocks are found mainly in the western part of the batholith. The range of SiO₂ for each of the gabbro, syenite and monzonite are 46.5 to 49.1%, 52.9 to 56.9% and 56.6 to 64.7% respectively; with high alkali content and shoshonitic with I type characteristics. They have very high LIL elements, i.e. Ba and Sr are nearly 1000 times rock/mantle. The high Ba and Sr values may result from the penetration of the lower lithosphere by a small volume of mantle material that is enriched in those elements.