

Geochemical characteristics of S- and I-Type Granites: Example from Peninsular Malaysia granites

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Abstract: The Peninsular Malaysian granites are distributed into three parallel belts, i.e. Western, Central and Eastern belts. They have been grouped into two granite provinces; a Western province consisting of granites confined to the Western Belt with an age range from 200 to 230 Ma and the Eastern province consisting of granites from both the Eastern and Central belt and aged from 200 to 264 Ma. A first order difference between the Western and Eastern Belt Granites of Peninsular Malaysia is the S type nature of the former. This is contrast with the expanded compositional nature of the Eastern Belt rocks where I type; S type granitoids and mafic rocks are all recognized. Among the other geochemical difference between these two granitoids province are expanded nature of the Eastern Belt Granite, low Na₂O and high Th, U, Sn, Pb and Cs of Western Belt Granite compared to the Eastern Belt Granite. Both Western and Eastern belt granitic magmas are controlled by different mineral proportion (Western Belt Granite: K-feldspar, plagioclase and biotite and Eastern Belt granite: hornblende, K-feldspar, plagioclase, biotite)