Sempah Volcanic Complex, Pahang

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The Sempah volcanic complex occupies the central part of the Main Range Batholith to the east of Kuala Lumpur. The complex intruded the Selut Schist (pre-Devonian), Gombak Chert (Late Devonian-Early Carboniferous), and Sempah Conglomerate (Permian), which were collectively known as the Bentong Group (Alexander 1968). The complex consists of two main rock types namely orthopyroxene-lacking rhyodacite (OLR) and orthopyroxene-bearing rhyodacite (OBR). Geochemical evidence indicates that the OLR and OBR are not related by simple fractional crystallization. The difference is indicated by a compositional gap at 69.1 to 70.7% SiO_2, different ACNK values, different ACNK trends with increasing SiO_2 and contrasting behaviour for the major and trace elements, particularly K_2O and Ba. This is supported by major element modelling where both OBR and OLR have different mineral extract proportions.

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