

Spatial variations in the geochemistry of Hakusan volcanic chain, central Japan

Taichiro Horie[1], Hirokazu Fujimaki[2]

[1] Fac. sci., Tohoku Univ., [2] Inst. Min. Pet. Econ. Geol., Tohoku Univ.

Distinctive spatial variations in the geochemistry are observed in Quaternary andesitic lavas from Hakusan volcanic chain. Incompatible elements such as K,Rb show an increase in abundance toward back-arc, in contrast, Ba,LREE and LREE/HREE ratios are decrease. Abundances of Sr and its isotope ratios are decrease similarly. Single-handed crustal assimilation (Mesozoic-Paleozoic sediments participated) cannot explain the variation. As a possible explanation, mostly andesitic magmas may be derived from partial melting of a geochemically zoned lower crust material.