Picrite basalt in the boundary unit between Kiyama metamorphic rocks and Mifune group, Kumamoto prefecture, Southwest Japan

Masaya Miyoshi[1]; Taro Shinmura[2]; Yoji Arakawa[3]; Toshiaki Hasenaka[4]

[1] Grad. Sch. Sci. & Tech., Kumamoto univ.; [2] Economics, Kumamoto Gakuen Univ; [3] Earth Evol. Sci., Grad. School. Life and Envir. Sci. Univ. Tsukuba; [4] Dept. Earch Sci. Kumamoto Univ.

Picrite basalt was found in the boundary serpentinite unit intruded between Carboniferous-Permian Kiyama metamorphic rocks and late Cretaceous Mifune group, central part of Kumamoto prefecture, Southwest Japan. The picrite basalt occurs as a small mass enclosed by serpentinite. The basalt probably intruded the serpentinite unit, because it includes small amounts of the angular serpentinite fragments. Olivine phenocrysts occupies more than 20 volume % of the rock. The basalt is characterized by high MgO (= 15 wt. %), Ni (= 300 ppm), Cr (= 500 ppm) contents and low FeO*/MgO ratio (= 0.5) and is grouped into low-alkaline tholeiite. We report the distribution, petrological feature and K-Ar age of the basalt, and discuss about the origin of it.