

Brittle fault rocks, their alteration processes, and exhumation of Gozu granitic mass, NE Japan.

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Brittle fault rocks derived from the Gozu granitic mass, Niigata Prefecture, are divided into 6 different color types. These color varieties are produced by the chemical and mineralogical compositions characteristic of each other, indicating different types of alteration. And these colors of powdered fault rocks have characteristic values in L*(white-black)-a*(red-green)-b*(yellow-blue) color space. There is a possibility that the color measurements of fault rocks determine that the types and strength of alteration, Fe²⁺/Fe³⁺ ratios in the rocks, and the relative temperatures indicated by illite polytypes and IC values. The alteration type of fault rocks varies with exhumation of the Gozu mass in upper crust.