

Chemical composition of land water from Mt. Bandai

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A model of hydrothermal system at Bandai area was proposed by chemical and strontium isotopic studies.

Mt. Bandai is an active volcano situated on the east of Aizu basin in Fukushima prefecture. It has four main bodies; Obandai, Kushigamine, Akahaniyama, and a part of Kobandai. The volcanic activity has extended since middle Pleistocene and phreatic eruptions are main events lately. In 1888 a most part of Kobandai was lost in exploding with massive debris avalanche.

Water samples from and around Mt. Bandai were divided into five types (SO₄ type, Cl type, Cl-SO₄ type, HCO₃ type, Cl-HCO₃ type) based on the anion compositional classification. SO₄ type is shallow groundwater dissolving volcanic H₂S gases, and the water reacted with Quaternary volcanic rocks. Cl type is the NaCl water having character of fossil seawater or marine deposits. Cl-SO₄ type may be explained by mixing SO₄ type water with Cl type water. HCO₃ type is shallow groundwater dissolving volcanic CO₂ gases, and the water reacted with Quaternary volcanic rocks. Cl-HCO₃ type may be accounted for by the blend Cl type water into HCO₃ type water.

These results will be reported in this presentation.