

SVC062-P11

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X-ray fluorescence analysis of whole rock composition from Takahara volcano, in Tochigi prefecture, Northeast Japan.

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In order to clarify the volcanic history of Takahara volcano, so this study investigated whole rock major and trace element compositions analyzed by XRF are reported from the Takahara volcanic rocks. The volcanic activity of the Takahara volcano can be classified into eight stages on the basis of stratigraphy and whole rock composition.

Stage1: tholeiitic basalts-andesites eruption.

Stage2: caldera forming by dacite-rhyolite pyroclastic flow eruptions (KN-pfl: 0.6Ma).

Stage3: tholeiitic basalts-andesites eruption.

Stage4: dacites-rhyolites eruption.

Stage5: caldera forming/expanding by dacite-rhyolite pyroclastic flow eruption (TN-pfl: 0.3Ma).

Stage6, 7: stratovolcano building by calc-alkali andesites.

Stage8: dacitic lava and lava dome eruptions (Fujiyama lava dome: 6700cal yr BP).

In Haker diagrams, each stage rocks have distinctive chemical composition area. It is suggested that the different processes of magma genesis. Additionally, the incompatible elements ratio different in basalts and andesites-rhyolites in Takahara volcanic rocks.

Keywords: volcanic history, whole rock composition, caldera, Northeast Japan arc