

Petrologic characteristics of Za-To5 tephra of the Zao volcano

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The eruption centers of the Zao volcano during last 30,000 years have been in the Okama and Goshiki-dake area. The tephra layers of the last 30,000 years activities were named from Za-To1 to Za-To10. In this study, we present petrologic characteristics of scoriae in Za-To5, which is the largest scale among Za-To5 to 10. Many petrologic features suggest that the magma, which produced the scoriae, derived from magma mixing of several chemically different magmas. The phenocrysts are chemically classified into three groups; plg (An62-70), opx (Mg-v60-64), cpx (Mg-v66-68) derived from magma A (1000-1100 degrees C), plg (An80-86), olv (Mg-v84) derived from magma B, and plg (An74-78), opx (Mg-v76-80), olv (Mg-v78) derived from magma C (>1100 degrees C)