

Petrological characteristic and volatile content of magma of August 18,2000 eruption of Miyakejima volcano

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At Miyakejima volcano, a largest summit eruption occurred on August 18, 2000 among a series of magmatic activity of 2000. Detail observations of the texture and chemical analyses of minerals and glass inclusions in the ejecta of August 18 eruption were carried out. SEM images and EPMA analyses indicate that black ash particles, lapilli and bombs have similar groundmass texture and identical chemical compositions of constituent minerals. The results indicate that the ejecta are essential materials derived from the same. Glass inclusion analyses indicate that melt in the magma had 1.2-1.4wt% H₂O, <0.01wt% CO₂, 0.05-0.13wt% S and 0.06-0.08wt% Cl, suggesting the degassing magma located at a shallow depth.

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