

## Melt inclusions in phenocrysts of the younger ejecta (41-43ka) of Myoko Volcano

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Melt inclusions in phenocrysts from the younger ejecta of Myoko volcano were investigated for major elements and sulfur by electron microprobe. Sekiyama scoria (43 ka) and Kannoki scoria (41 ka) were sampled for this study. Both ejecta include olivine, ortho-pyroxene, clino-pyroxene, and plagioclase as phenocrysts. In Sekiyama scoria, olivine contains mafic melt (47-56 wt% SiO<sub>2</sub>) while plagioclase commonly contains felsic melt (70-76 wt% SiO<sub>2</sub>). Matrix glasses have intermediate compositions (63-66 wt% SiO<sub>2</sub>). Plagioclase shows wide and bi-modal compositional range (An 50-70 and An 85-87). These mafic and felsic melt inclusions are comparable to the mafic and felsic end member magma, respectively, before magma mixing, corresponding to those of R-type rocks of Sakuyama (1981).

On the other hand, the melt compositional range of Kannoki scoria is small relative to those from Sekiyama scoria. Olivine includes mafic melt (51-59 wt% SiO<sub>2</sub>), and the other phenocrysts include melt inclusions of 53-64 wt% SiO<sub>2</sub>. Matrix glasses are more felsic (76-78 wt% SiO<sub>2</sub>), extending on the same trend of the melt inclusion. Anorthite contents of plagioclase are clustering between An 85 and An 90. These features are similar to those of N-type rocks of Sakuyama (1981).

The highest sulfur concentration (S = 3500 ppm) is found from the most mafic inclusion (47 wt% SiO<sub>2</sub>) of Sekiyama scoria. However, felsic melt inclusions have low sulfur concentration (around 100 ppm). All the four kinds of phenocrysts trap Fe-sulfides, indicating that both mafic and felsic end member magma had saturated with sulfur. On the other hand, sulfur content of melt inclusions from Kannoki scoria is low relative to Sekiyama scoria. Inclusions from olivine contain 400-1000 ppm S. Ortho-pyroxene, clino-pyroxene, and plagioclase phenocrysts have 100-1000 ppm S. Fe-sulfides can be also found from olivine and clino-pyroxene phenocrysts.