

# Melt inclusions in phenocrysts and sulfide phases in cinders erupted in the 2004.9.1 eruptive event of Asama volcano

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The erupted products of the 2004 eruption event of Asama

Volcano contains variable types of sulfide phases. Sulfide globules are commonly found in the glassy groundmass. Orthopyroxene and clinopyroxene, and plagioclase phenocrysts include also rounded sulfide globules. The globules often consists of FeS<sub>2</sub> and Fe-Cu-S phases. We performed microprobe analyses of sulfur, chlorine and major components of melt inclusions trapped in phenocrysts of the scoria fall of the 23rd Sept. eruption.

Major phenocrysts (ortho- and clinopyroxene, plagioclase, Fe-Ti oxides) trapped sulfur-poor felsic melt inclusions (S: less than 400 ppm; SiO<sub>2</sub>: 66-75 wt%). In contrast, olivine (Fo<sub>75-80</sub>), a rare phenocryst, trapped sulfur-rich mafic melt inclusions of basaltic to andesitic compositions (SiO<sub>2</sub>: 52-65 wt%). The highest sulfur concentration (2240 ppm S) is found from the most mafic inclusion (SiO<sub>2</sub>: 54 wt%).

From these occurrences of sulfide phases and the melt inclusion evidence, it is suggested that sulfur-rich mafic magmas injected into a crystal-rich felsic reservoir beneath the volcano in the 2004 events.