

Water-soluble materials formed by the reaction between volcanic rocks and HCl and/or SO₂ gases

Seishi Akagi[1], Masahiro Yamamoto[2]

[1] Earth Sci. and Environm. Eng., Okayama Univ., [2] Dept. Earth Sci., Okayama Univ.

Experiments for the reaction of some volcanic rocks with HCl and/or SO₂ gases have been carried out at room temperature to 800C for understanding of the condition of the formation of water-soluble materials on volcanic ash. For all the rocks studied, HCl reacted with volcanic rocks mainly at low temperatures, whereas SO₂ did mainly at high temperatures. Therefore, the Cl/SO₄ ratios of water-soluble materials were very high at low temperatures, but decreased rapidly with increasing temperature.