

Preliminary study of volatile flux from magma of Aso volcano through shallow groundwater layer, Kumamoto Prefecture, Southwest Japan

*Masaaki Takahashi¹, Kohei Kazahaya¹, Tsutomu Sato¹, Hiroshi A Takahashi¹, Akinobu Miyakoshi¹, Yuki Tosaki¹, Noritoshi Morikawa¹, Akihiko Inamura¹, Jun Daimaru¹, Hiroko Handa¹, Atsuko Nakama¹, Hinako Shimizu¹, Hisako Takeuchi¹

1. The National Institute of Advanced Industrial Science and Technology

Volatile flux of magma of Aso volcano through shallow ground water layer is preliminary studied by groundwater and river (Shirakawa, Kurokawa and Midorikawa) surveys in Aso caldera and adjacent areas. Flow rates of S and Cl of Kurokawa river (Ofuchi Bridge, Aso-dani, Akamizu) are 53.7ton/day and 25ton/day, and of Shirakawa river (Myoken Bridge, Nango-dani, Kain) are 12.3ton/day and 5.4ton/day, respectively.

It is necessary to understand volatile flux of magma of Aso volcano through shallow groundwater layer considering the amount of sulfur and chlorine supplied from rainfall or strata, or the influence of hot spring water (deep groundwater) to shallow groundwater layer.

This study was supported by the Secretariat of the Nuclear Regulation Authority, Japan.

Keywords: Aso caldera, groundwater and river survey, volatile flux of magma, hydrogen and oxygen isotopic ratio