

## Br/Cl weight ratio of hot spring waters collected from Abukuma area

# Masaaki Takahashi[1]; Kohei Kazahaya[2]; Masaya Yasuhara[3]; Hiroshi Takahashi[4]; Noritoshi Morikawa[5]; Akihiko Inamura[6]; Michiko Ohwada[4]

[1] GSJ, AIST; [2] Geol. Surv. Japan, AIST; [3] Geol. Surv. J.; [4] Res. Center for Deep Geol. Environ., GSJ, AIST; [5] Deep Geol. Environ., AIST; [6] Geol.Surv.J.

Hot and mineral spring waters were collected from Abukuma area and their chloride and bromide ion concentrations were analyzed in detail to know their origin and formation mechanisms.

Br/Cl weight ratios of hot and mineral spring waters which contain higher than 100ppm Cl, were classified into two categories, 0.003-0.0045 and 0.0015-0.003. The former springs are distributed mainly in coastal area, whereas the latter springs are mainly in inland area.

On the other hand, Br/Cl ratios of hot and mineral spring waters which contain lower than 100ppm Cl, were distributed widely from 0.0005 to 0.016. As Br/Cl ratios of groundwaters under the natural condition are distributed between 0.004 to 0.005, these low Cl waters may be able to be classified into two categories, Br-enrichment waters (0.005-0.016) and Cl-enrichment waters (0.0005-0.004). The former springs are distributed mainly in farmland area.