Geochemical study of hot spring waters in Abukuma area, Fukushima Prefecture, northeast Japan.

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

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

Analyses of chemical and hydrogen and oxygen isotopic compositions were carried out for 166 hot spring waters obtained from Abukuma area, northeastern Ibaraki, eastern Fukushima and southeastern Miyagi Prefectures, northeast Japan.

(1)The formation mechanism of hot spring waters of high chloride ion concentration is mixing between saline water which originates from interstitial water in marine sediments (marine layers) or oil field brine, and groundwater and/or so-called green tuff type hot spring water.

(2)The formation mechanism of hot spring water of low chloride ion concentration is mixing between groundwater and so-called green tuff type hot spring water.