

Vertical distribution of stable isotopes in deep groundwater of Kofu basin

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To identify the deep groundwater (until 1500m depth) recharge sources and flow path in basin-scale hydrology, the hydrogen and oxygen stable isotope distributions were analyzed for 307 deep groundwater samples collected from hot spring water wells in Kofu Basin.

The results of chemical and isotope analysis were suggesting that some of the samples contain the Slab related water at north-west Kofu Basin while the other samples collected representing the whole Kofu Basin showed isotopically local precipitation origin. However, these samples contain relatively high NaCl which suggests the mixing with seawater (fossil saltwater). The groundwater hydrogen isotope values of the precipitation originated were estimated using the mass-balance model. The hydrogen isotope values in deep groundwater (precipitation originated) were slightly decreasing with the depth of wells until 1100m. The estimated recharge elevation using the local recharge line in Kofu Basin were ranged from approximately 1000m to 1600m.

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