

Hydrochemical properties of thermal and cold mineral waters of Khangay Mountain Region, Mongol

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Hydrochemical properties were studied for thermal and cold mineral waters in Khangay mountain region, central Mongolia. The eastern part of Khangay hydro-geothermal system is one of the most energetically powerful on the quality of the fluid heat-carrier (temperatures of the geothermal water at ground surface are up to 92 degree) with the high yield of thermal sources and on the area of deep magma chamber and high activity of Cenozoic volcanism. Chemical compositions of 14 water samples in which 8 samples were analyzed. The Cl-SO₄-HCO₃ and Na-K-Mg ternary diagrams and mixing models were used to characterize the water chemistry and estimate their subsurface temperatures. The results show that most of the thermal waters are in partial equilibrium with the surrounding rocks. The hot waters in the study area can be classified into Na-HCO₃ and Na-SO₄ types.