

Temporal Change of Gas Composition in Groundwater at Omaezaki

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Earthquake is a rupture phenomenon of the crust when load on itself exceeds the limit. Many precursors have been reported. Seismo-geochemical change in groundwater, such as the ion concentration and the Rn concentration, is also one of precursors before earthquake. Recent studies revealed that multiple chemical species should be monitored in order to evaluate whether the anomalous concentration change in one component in groundwater is a precursor or not. A method to analyze the chemical composition simultaneously is therefore important. Though the gas chromatography is an useful answer, it requires a frequent maintenance. We have been making efforts to establish a new observation system by use of a quadrupole mass spectrometer in order to solve the maintenance problem and also to reduce an interval time of measurement. In addition, a pumping method has been improved to install our system to not artesian well.

In this workshop, we will report a stable method to extract gas from groundwater. Time series of gas composition in groundwater will be also discussed.

