

Survey of Radon-222 Concentration in Groundwater in Miura Peninsula

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Active faults in Miura Peninsula, Kanagawa Prefecture, attract an attention from the Headquarters for Earthquake Research Promotion. Before Izu-Oshima-Kinkai Earthquake (Wakita et al., 1980) and Kobe Earthquake (Igarashi et al., 1995), anomalies of radon-222 concentration have reported. Surveys have conducted to know a better place for a continuous observation of radon concentration in groundwater in Miura Peninsula.

Samples of groundwater were taken in bottles and were shaken enough, then concentrations of radon in gas phase was measured with RTM1688 (SARAD). These concentrations were converted to concentrations in groundwater with water temperature and measurement time.

Average of radon concentration around active faults in Miura Peninsula was 10 ± 9 Bq/L, which was higher than a background level of 3 ± 2 Bq/L in Shonan area, Kanagawa Prefecture (Saito et al., 1993). Two reasons are supposed. The first is that the fault fracture zone is permeable for fluids (Lockner et al., 2000). The second is that radium-226, which is a parent nuclide of radon-222, concentrated in an aquifer (Saito and Takata, 1994).

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