

## Geochemical variations of spring waters in the vicinity of fault before and after 1995 Kobe Earthquake in Japan

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The 1995 Kobe earthquake (M7.2) is one of destructive intra-arc earthquake in the past 100 years. The geochemical results have demonstrated that chlorine contents of underground water in Kobe area increased since August 1994, which is 6 months before the earthquake, January 1995 (Tsunogai and Wakita, 1996). The highest Cl content was observed in water sample recovered at end of February, which is 90 days after the earthquake. It may be explained that the higher Cl contents observed in underground waters are attributed to the Cl-enriched deep crustal fluids. To reveal the relationship between earthquake and deep fluids, we have investigated variation of the chemical composition of spring water in the vicinity of the Kobe earthquake fault since 1952. The results show that the Na-K-Ca geochemical temperature increased at one year before the 1995 Kobe earthquake. After that, the geochemical temperature has decreased with the time. These results indicate that the fluid derived from the deeper part was detected in the spring water in the vicinity of fault in Kobe area.

### References:

Tsunogai and Wakita, 1995, Science 269, 61-63.

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