



## **Germanium in Mineral and Curative waters. Geochemical Study and Potential Medical Benefits**

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**Abstract :** Germanium is looked at to be non-essential element, however still little is known about its significance for living organisms. The germanium element is not regulated and discussed in drinking-water standards and reports. Nonetheless, germanium seems to be a very promising microelement that could be used in prophylactics and therapy of such diseases as cancer, AIDS, autoimmune diseases, arthritis or senile osteoporosis. In East Asian countries germanium is appreciated and its significant role in health care is assigned. In Europe, medical interest in germanium, including use of germanium-rich mineral/curative water, is negligible. Germanium is a trace element in the Earth's crust, with mean mass fraction concentration of 1.4 ppm. In natural waters this element occurs usually in concentrations of three–five orders of magnitude less than in the crust rocks. Highest germanium concentrations in groundwater are found in some of thermal and/or mineral waters, and reach up to 300 ppb, but even in these waters germanium rarely exceeds 50 ppb.

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