

Importance and use of thermal water in health, environmental and social aspect

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Abstract

Thermal waters are a great asset that gives us land for the development of an area in terms of curative, economic, social, and political, but it has important uses in the health sector for the treatment of various diseases. The assessment of these waters and their levels of pollution is done by studying the physical, chemical, and biological properties. The permissible standards for each of the indicators depend on the purpose of the water use. In Albania, geothermal springs such as thermal waters are mainly used for curative and tourist effects. Although these waters have a potential for energy use it has not yet started to be used. The springs of Elbasan Spas are the most famous thermo-mineral springs of Albania. This research aimed to evaluate the role of natural and mineral resources in health, environment, and recreation, tourism, etc. In the Elbasan area, two sources were collected for the collection of thermal water samples, allowing the analysis of physicochemical parameters and comparison of the results found. The results showed that the average value of temperature in two places of thermal water is up to 58.3. C, which is very high for the flora and fauna where these waters are discharged. Estimated values of H₂S, CO, sulfates, calcium, nitrates, magnesium, and phosphates are statistically significantly different in sampling. In the study area, the thermal waters flow in nature, on the surface of the soil, and in the streams around the springs and Lake Tregan. Based on the results these waters must be purified before being sent to the drainage system and in streams, rivers, and lakes or newly injected underground into geothermal reservoirs. These sources are visible for very high levels of parameters seen in the analyses performed. Compared to the first average-in-1995 analysis of values in the two supply sources that we have reduced in their content for the period April 2019.

Keywords: Physical-chemical parameters, healthy effect, thermal water, Elbasan area, Sulfate.

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