P18. EVALUATION OF ARSENIC ISSUE FOR THERMAL RESORTS IN CENTRAL ANATOLIA

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Thermal waters contain thermal, mineral and thermo - mineral waters which are used in treatment in the health resorts. Most of these waters are used for bathing cures, drinking cures and inhalation cures beside being an important resource in terms of the health tourism. Turkey has a number of rich thermal waters since its geological structure. A great number of different elements of thermal waters are very useful for treatment purposes of various diseases. However, some thermal waters are not suitable for drinking cures because of their heavy metal contents.

In this study, arsenic rate of thermal waters that are collected throughout Nevsehir in Turkey was analyzed by ICP- MS and the results were evaluated. It was detected that following results; 205.7 µg / L arsenic in Kozakli (thermal water), 20,78 µg/ L arsenic in Bayramhacılı (thermal water), 268,6 µg/ L arsenic and 267,7 µg/ L arsenic Kozaklı (drilling water), 2052 µg/ L arsenic in Haciveli Özbölükler (thermal water). When the values of acceptable limit consider which is 10 µg /L according to the regulation of the Health Ministry of Turkey (Water Intended for Human Consumption) it is revealed that all thermal and drilling waters that we collected contain high amount of Arsenic than the limit value.

Conclusion, these waters can be harmful for public health, for this reason it is required people who live around Nevsehir should be done health control frequently as well as creating a hydrogeochemical map for long-term studies. This is very important to operate the arsenic treatment plant effectively and use it sustainably.

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