**Drinking Water Quality Assessment of Çankırı Towns, Türkiye**

***Emrah Caylak***

*Department of Biochemistry, Faculty of Health Sciences, Karatekin University, 18200 Cankiri, Türkiye*

**Abstract**

The use of water due to the increasing population and industrialization on Earth is increasing every day, surface waters are preferred as a source of drinking water, it is necessary to supply water to the network after it has been determined by analyzes that it has undergone absolute healthy treatment. In this study, the physicochemical and microbiological character, and main pollutants of drinking water of Cankiri towns were examined for human health estimation. For this purpose, we performed the water quality index (WQI) assessment. The levels of As, Cd, Fe, Hg, Ni, Pb, Se and Vn were higher than their permissible limits of Turkish legislation and WHO. The WQI rating using physicochemical parameters determined the quality of the water to be good. When the heavy metals were used to calculate the WQI value, water quality was determined poor or very poor quality due to high heavy metal levels in samples. The health risk assessment indicated that the As, Pb, and Hg in drinking water can cause health problems. These results can be used by managers to determine the necessary drinking water treatment strategy to ensure the safety of consumers.

**Keywords:** Drinking water, heavy metal, water quality, health.

**References**

1. APHA (2017) Standard methods for the examination of water and wastewater. 23th Edition. American Public Health Association, Washington DC.
2. Caylak E (2012) Health risk assessment for arsenic in water sources of Cankiri province of Turkey. Clean – Soil, Air, Water 40(7):728–734.
3. Duruibe JO, Ogwuegbu MOC, Egwurugwu JN (2007) Heavy metal pollution and human biotoxic effects. International Journal of Physical Sciences 2:112–118.
4. ISKAY (2019) Icme suyu temin edilen sularin kalitesi ve aritilmasi hakkinda yönetmelik, 30823 sayili Resmi Gazete, Turkey.
5. WHO (2011) Guidelines for drinking water quality, 4th edition, World Health Organization Geneva.