

عنوان مقاله:

Study the Concentration of Heavy Metals and some Chemical Parameters in Water Distribution Network of Sanandaj city in ۲۰۱۴

محل انتشار:

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خلاصه مقاله:

Background and Objective: The industrial development along with the rising in human population has led to releasing considerable hazardous materials such as heavy metals into the environment. Environmental pollution by heavy metals can in turn threaten the human health. Therefore, the aim of this study was to assess the concentration levels of some heavy metals including; Cd, Pb, Cr and Cu, as well as to estimate the physico-chemical parameters of drinking water distribution network of Sanandaj city in ۲۰۱۴. Methods: In order to accomplish the present descriptive study, ۱۸ samples were collected from the water distribution network of Sanandaj during ۲۰۱۴. The level of heavy metals were assayed by using a graphite furnace atomic absorption (Phoenix ۹۸۶). The standard approaches mentioned in the standard method book were used to measure the fluoride, nitrate and hardness of water. The Pearson Correlation test was used to estimate the association between parameters. Results: The mean concentrations of Cd, Pb, Cr and Cu were found to be ۰.۰۰۰۴, ۰.۰۱۱, ۰.۰۳, ۰.۳ mg/L respectively. Moreover, the mean levels of fluoride, nitrate, and total hardness were ۰.۱۱, ۶.۵۷, and ۱۶۶ mg/L respectively. The level of Hazard Quotient in this study was lower than ۱ ($HQ < 1$). Conclusion: The concentration of all heavy metals in this study were lower than the national and international thresholds of drinking water. It is concluded that Sanandaj drinking water is safe to drink concerning health issues.

کلمات کلیدی:

Heavy metals, Water Distribution Network, Sanandaj City
فلزات سنگین، شبکه توزیع آب، شهر
سنندج

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