



Drinking water quality: comparative study of tap water, drinking bottled water and point of use (PoU) treated water in Bandar-e-Abbas, Iran

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ABSTRACT

The physical and chemical quality of the public drinking water supply (tap water), bottled water, and point of use (PoU) treated water was studied comparatively. The analyzed parameters were: turbidity, electrical conductivity, total dissolved solids, pH, hardness, sodium, potassium, chloride, and alkalinity. The samples were taken and analyzed based on standard methods references for the examination of the water and wastewater. The data analysis was conducted by SPSS 16 software. The results show that the concentration of the chemical and physical parameters in all waters is below limits as allowed by national and international drinking water guidelines and standards, although there is significant difference between three types of water. The quality of the tap water is consistent to mentioned guidelines and standards; therefore, the tap water is safe for drinking and it is no need to use other water resources instead of this water. The distrust to public water supply has caused a large number of citizens to use bottled and PoU treated waters for drinking aims. The consumption of these waters imposes huge costs to families because the costs of the 0.25, 1.5, and 20 L bottled waters are about 17,777, 1,776, and 500 times the price of the tap water, respectively. Increased public awareness and confidence about the quality of tap water is needed to prevent the loss of the income of the family.

Keywords: Tap water; Bottled water; PoU treated water; Chemical quality; Physical quality

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