



Physico-chemical and bacteriological quality's Study of the water source of the low Cheliff-Rrlizane aria (Algeria)

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Abstract:

A Water sources sampling companion was carried through a year from January to December 2018 at the level of six wells located in rural areas (the Bas Cheliff area Oued-Rhiou, Jdiouia, H'madna of the wilaya of Relizane (ALGERIA). The physico-chemical characteristics investigated and bacterial load obtained were examined, equated and validated as per Algeria Bureau of Standards (IANOR) and the adopted World Health Organization (WHO) maximum guideline limits for potable water. Wells water sources were analyzed for selected physico-chemical properties that included: The temperature, the acidity (pH), electrical conductivity (EC), ammonium, potassium, nitrate, phosphate, sulfate and the concentration of copper, we also did bacteriological analysis of wells to study to see its pollution with fecal bacilli. Results revealed that parameter levels of mean EC (526.25 and 1293.92 μ S/cm) due to high concentrations of total dissolved solids in water due to dissolution of fertilizers used in agriculture and pH found no significant differences ($6 < \text{pH} < 8.5$) and while there was a significant difference in mean values of ammonium, potassium, nitrate, phosphate, sulfate and the concentration of copper. The study concludes that most water sources in tropics do not meet the potable water standards according to IANOR and WHO; hence they can be potential sources of waterborne diseases. The pathogenic bacteria screened were not detected in the study wells.

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Biography:

Fares Redouane has 49 years old completed his PhD at the age of 35 years from Ahmed ZABANA University and Postdoctoral Studies from School of Physics, USTM-MB University, ALGERIA

Publication of speakers:

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3. Houcine Naim, Redouane Fares, Abed Bouadi, et al. An Improved Model of Estimation Global Solar Irradiation From in Situ Data: Case of Algerian Oranie's Region; January 21, 2020; 10.1115/1.4045737
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