

<https://www.researchgate.net/publication/333192191> **Water quality indices for Euphrates River**

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Online Journal of Veterinary Research

Volume 23 (5):407-413, 2019.

Abstract

, Water quality indices for Euphrates River, Onl J Vet Res., 23 (5):407-413, 2019. Authors describe bacteria, physical and chemical properties, conductance, suspended and dissolved solids, pH, hardness, trace and heavy metals for water quality index (WQI) from 5 samples of different locations of the Euphrates River, Ramadi, Iraq, Spring 2018. We found aerobic bacteria reached 114×10^8 cell/ml with *Enterobacter amnigenus*, *Klebsiella aerogenes*, *Pseudomonas* spp, *Escherichia coli*, *Proteus* sp, *Shigella* spp and *Streptococcus faecalis* predominating. Water pH varied 7.6-7.8 with 742 ± 2 mg/L dissolved solids and hardness of 1333.2 ± 38 mg/L exceeding limits of 500 and 1000 mg/L. Sodium levels were 145.1 ± 0.94 and potassium 11.08 ± 1.06 mg/L (within limit). Calcium (105 ± 7 mg/L), magnesium (56.4 ± 6.4 mg/L) and sulphate (265.6 ± 1.47 mg/L) exceeded permitted levels whereas nitrate ions were below limit (2.2 ± 0.8 mg/L). Conductance was 1245.2 ± 91 μ s/cm exceeding limit of 750 μ s/cm and total suspended solids 215 ± 37.5 mg/L, well above limit of 50 mg/L. There were no significant correlations between water quality and conductivity, hardness, calcium but there was with coliform count (P 0.001) and magnesium levels (P < 0.05). We find that water samples from The Euphrates River, Ramadi, Iraq, were of poor quality, and should not be ingested by animals or humans

.Key words: Euphrates River, Water pollution, Chemical, Microbial, WQI