Microbial and physicochemical parameters of the Anzali wetland

Monireh Faeed[1*]
HadiBabaee[2]
Ali Abedini[3]

1. Ph.D. Candidate of Microbiology, Institute of Aquaculture, Anzali, Iran
2. Department of Ecology, Institute of Aquaculture, Anzali, Iran
3. Department of Ecology, Institute of Aquaculture, Anzali, Iran

***Corresponding author**
m_faeed@yahoo.com

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Abstract

The aim of this investigatin is study of some biological and physico-chemical parameters of the river water into the Anzali wetland and comparison with international standards.The Samples collected in the summer and fall of 1390 and conducted monthly.Heterotrophic microorganisms were isolated in plate count agar, enterococci in kf agar and coliforms and E. coli in Chromagar ECC agar and Maccangi agar. After 48 to 72 hours of incubation at 30 ° C were identified and counted. Water physicochemical parameters were also studied and noted. Most of the logarithmic mean change in total bacteria (7.07 cfu / ml), total coliform (6.537 cfu / ml), fecal coliforms (4.96 cfu / ml) and fecal streptococci (3.649 cfu / ml) at station No. 6 (river Pir Bazar) was in summer($P<0.05$). In this study, NO2 mg / l range in the water stations were higher than the EPA standard limits but NO3mg / l ,NH4mg / l and PO4mg / l ranges were acceptable range. The Coliform bacteria and Fecal coliform and Enterococci at many stations the standard was very high and higher than allowed. Temperature rise, urban populations grow near the Lagoon and domestic wastewater, urban and industrial pollution load in the wetland are the main reasons for microbial increase.

Keywords: Anzali wetland, coliforms, Escherichia coli, Enterococcus.