

Physical and Chemical Parameters of Lower Ogun River, Ogun State, Nigeria

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Abstract : The aims of carrying out this experiment were to determine the water quality and to investigate if the various human and ecological activities around the river have any effect on the physico-chemical parameters of the river's resources with a view to effectively utilizing these resources. Water samples were collected from two stations on the surface water of Lower Ogun River Akomoje biweekly for a period of 5 months (January to May, 2011). Results showed that temperature ranged between 24.0-30.7°C, transparency (0.53-1.00 m), depth (1.0-3.88 m), alkalinity (4.5-14.5 mg/l), nitrates (0.235-5.445 mg/l), electrical conductivity (140-190 µS/cm), dissolved oxygen (4.12-5.32 mg/l), phosphates (0.02 mg/l-0.75 mg/l) and total dissolved solids (70-95). The parameters at the deep end (station A) accounted for the bulk of the highest values; there was however no significant differences between the stations at $P < 0.05$ with the exception of transparency, depth, total dissolved solids and electrical conductivity. The phosphate value was relatively low which accounted for the low productivity and high transparency. The results obtained from the physico-chemical parameters agreed with the limits set by both national and international bodies for drinking and fish growth. It was however observed that during the period of data collection, catch was low and this could be attributed to low level of primary productivity due to the quality of physico-chemical parameters of the water. It is recommended that the agencies involved in the management of the river should put the right policies in place that will effectively enhance proper exploitation of the water resources. More research should also be carried out on the physico-chemical parameters since this work only studied the water for five months.

Keywords : physical, chemical, parameters, water quality, Ogunriver

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