

**EFFECT OF BIO-DISC EXPOSURE ON SOME PHYSICO CHEMICAL
PARAMETERS OF WATER FROM THREE DIFFERENT SOURCES****¹Obaroh, I. O., ²Haruna, M. A. ³Muhhammed, A. & ⁴Akanji, A.**^{1&4}Department of Biological Sciences, Kebbi State University of Science and Technology, Aliero, P.M.B. 1144, Birnin Kebbi, **NIGERIA**²Department of Fisheries and Aquaculture, Federal University Dutse, P.M.B. 7156, Jigawa State, **NIGERIA**³Department of Pure and Applied Chemistry, Kebbi State University of Science and Technology, Aliero, P.M.B. 1144, Birnin Kebbi, **NIGERIA****ABSTRACT**

The effect of Bio disc on physico-chemical parameters from three water sources; borehole, river and well were assessed. Each water sample was energized by pouring it gently over the Bio-disc, after which it was returned into the containers and allowed to stand on the bio- disc for six hours, the non-energized water samples were taken as the control. The physico-chemical parameters were determined using standard methods for water analyses. The highest value for pH (7.24 ± 0.05) was observed in unenergized river water, while the least value (5.89 ± 0.01) was observed in unenergized well water, the highest dissolved oxygen (4.40 ± 0.1) was observed in non energized river water and the least dissolved oxygen (3.13 ± 0.04 mg/l) was observed in energized river water and the highest conductivity (259.77 ± 30.11) was observed in non energized river water and the least conductivity (47.73 ± 0.23) was observed in non energized well water while highest temperature value of 34.76 ± 0.06 was recorded in unenergized borehole sample with a minimum value of 28.27 ± 0.27 observed in well water sample, these values were all within World Health Organization and Standard Organization of Nigeria limits except in conductivity of non energized river. The result of the study indicated that the non energized river water sample recorded highest values of pH and dissolved oxygen and were still within permissible limit hence; do not pose any threat to aquatic organisms and humans. This further infers the relative safety of the unenergized river water for aquaculture and human activities.

Keywords: Physico-chemical, Water, Energized, Unenergized, Borehole, River, Well.