

## **ASSESSMENT OF SEASONAL VARIATION OF OXYGEN DEMANDS AS POLLUTION INDICATORS OF RIVER BENUE, NIGERIA**

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### **ABSTRACT**

The quality of a river dictates its application in the environment and also the health status. Water samples were collected monthly from five different locations of River Benue at Makurdi for a period of two years (July 2011-June 2013) and were examined for DO, BOD and COD using standard methods. The results of the pollution indicators of the water samples showed that across the stations: DO ranged from 3.09-4.47mg/L, BOD varied between 1.51 and 2.79mg/L and COD ranged from 2.89-4.80 mg/L. Similarly during the rainy season DO ranged from 3.99-5.76mg/L, BOD ranged from 1.51 to 2.79 mg/L and COD ranged from 3.51-6.21mg/L, while during the dry season DO ranged from 2.21-2.89 mg/L, BOD ranged from 0.95-1.34mg/L and COD ranged from 2.04 -2.89mg/L. The mean values of the pollution indicators during the rainy were high as compared to the dry season during the study period. The statistical analysis of result of shows that all the parameters were significant during the seasons and across the stations ( $P < 0.05$ ). It is recommended that the discharged of effluents and other waste into the River Benue should be controlled and enforced by the regulatory authority.

**Keywords:** Oxygen demands, Seasonal variation, Biochemical oxygen demand, Chemical oxygen demand.