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ASPECTS OF HYDROBIOLOGY OF LAKE ONA IN SOUTHERN NIGERIA 2:PHYSICAL AND CHEMICAL HYDROLOGY

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ABSTRACT

Studies of the physical and chemical conditions of the water of Lake Ona, Asaba, Southern Nigeria were conducted fortnightly between August 2001 and July 2003. The physical parameters of the water were determined on site, while the chemical parameters were determined in the laboratory using standard methods for water analysis. Water temperature had a range of 22.5-29.0 °C, water level 1.03-6.32 m, pH 6.28-7.69, dissolved oxygen 2.40-12.80 mg/l, conductivity 19.50-69.00 µS/cm, total alkalinity 12.50-45.0 mg/l, nitrate-nitrogen 0.03-0.64 mg/l, phosphate-phosphorus 0.11-5.51 mg/l, calcium 1.20-9.89 mg/l, magnesium 0.49-3.89 mg/l, total dissolved solids 10.18-36.50 mg/l, and transparency 9.00-82.00 cm. With the exception of water temperature, water level, total alkalinity, calcium ion, dissolved oxygen, conductivity, phosphate as well as transparency which showed significant inter-season variations ($P < 0.05$), the other water parameters did not correlate significantly with season ($P > 0.05$). Out of the twelve parameters studied, only conductivity and total alkalinity showed significant inter-station variation ($P < 0.05$).

Reference: Ekelemu, K.J., and S.A.A. Zelibe. 2006. Aspects of hydrobiology of Lake Ona in Southern Nigeria 2: Physical and chemical hydrology. *Journal of Environmental Hydrology*, Vol. 14, Paper 21.

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