

## **Determination of the Dissolve Oxygen and It's Affecting Parameters of Kurhada Lake at. Pauni, Bhandara District, Maharastra**

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### **Abstract:**

The present study focuses on the determination of dissolved oxygen (DO) levels in Kurhada Lake, situated in Pauni, Bhandara District, Maharashtra, with a thorough investigation into the factors affecting DO concentrations. Dissolved oxygen is a critical parameter in aquatic ecosystems, playing a pivotal role in sustaining aquatic life and reflecting the overall health of water bodies.

The research employs standardized methods for the measurement of DO levels at different depths and locations within Kurhada Lake, considering seasonal variations. Concurrently, the study assesses key parameters that influence DO concentrations, including temperature, pH, nutrient levels, and anthropogenic activities. Field measurements, laboratory analyses, and statistical tools are utilized to gather and interpret the data.

The findings of this study aim to provide valuable insights into the spatial and temporal variations of DO in Kurhada Lake, contributing to a better understanding of the lake's ecological dynamics. Additionally, the identification of factors influencing DO levels will enable informed management strategies for the preservation and enhancement of water quality in the lake. The results obtained from this research may serve as a basis for implementing sustainable practices and policies to mitigate potential threats to Kurhada Lake's ecosystem and, by extension, other freshwater bodies facing similar challenges.

### **Introduction:**

Kurhada Lake, located in the serene landscape of Pauni, Bhandara District, Maharashtra, stands as a vital component of the region's aquatic ecosystem. Recognized for its ecological significance, the lake plays a crucial role in supporting biodiversity and sustaining the livelihoods of local communities. Dissolved oxygen (DO) is a fundamental parameter in understanding the health and functionality of aquatic environments, influencing the metabolic processes of aquatic organisms and indicating the overall water quality.