

**WATER QUALITY OF THIMMAPUR FRESH WATER LAKE IN WARANGAL DISTRICT,
TELANGANA STATE, INDIA - AN ASSESSMENT FOR FISHCULTURE USING
PHYSICO-CHEMICAL PARAMETERS**

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ABSTRACT

The present study is an attempt that has been made on the physicochemical characteristics of the Thimmapur Lake, a fresh waters tank located in Warangal district of Telangana State. The study was carried out for a period of one year from February 2015 to January 2016. Water samples were collected and analyzed using the Standard laboratory methods and procedures. The results of the analysis of water samples have shown that there is a variation in these parameters at the different sampling stations and some of these parameters vary during different seasons too. The Temperature was ranging from 22.2 to 29.6°C, pH was ranging from 6.8 to 7.5, DO content was from 7.2 to 8.6 mg/l, BOD ranged from 3.8 to 6.32 mg/l, Total Alkalinity was 39.4 to 65.28 mg/l, TDS varied from 37.24 to 64.82 mg/l, Turbidity was ranging from 19.0 to 56.11 ppm, Free CO₂ from 1.31 to 3.0 mg/l, EC was from 135.06 to 437 µmhos/cm, Chlorides from 36.0 to 59.3 mg/l, Phosphates from 1.76 to 3.01 mg/l, Sulphates from 34.82 to 53.43 mg/l, Nitrates from 0.30 to 0.64 mg/l, Ammonia content from 1.01 to 1.58 ppm, Sodium from 3.8 to 7.3 ppm, and Potassium from 1.73 to 2.21 ppm. Results of water quality assessment clearly showed that most of the parameters are slightly higher in the wet season than dry season. This study observed that Ammonia, BOD & Electrical Conductivity levels were fairly high. The high content of BOD has depleted the Dissolved Oxygen levels which will eventually be harmful to aquatic life. Therefore there is a need for the proper assessment, monitoring and precautionary measures to be initiated to overcome the pollution load in this Lake for the proper utilization of these waters for other purposes such as Fishculture.

KEYWORDS: Thimmapur Fresh Water Lake, Physico-Chemical Parameters & Fishculture