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Physico-Chemical Analysis of a Fresh Water Lake in Siddipet District, Telangana State, India

K. Anuradha* and Nirmala Babu Rao

Department of Botany, University College of Science,Osmania University, Hyderabad.
Email:saiteja.b@gmail.com

ABSTRACT

Present paper deals with the estimation and analysis of some physical and chemical parameters of a fresh water lake. This lake is located at Thornala village of Siddipet District, Telangana state, India. This fresh water lake is known as Raorukula cheruvu. Presently this lake water is using for domestic and agriculture purposes by local people. Some of the physical and chemical parameters such as Alkalinity, Chloride, Nitrate, Phosphate, Turbidity, Water temperature, pH, Transparency, Total dissolved solids, Total hardness, Dissolved oxygen(DO), Chemical oxygen demand(COD),Biological oxygen demand (BOD), free carbon dioxide were estimated by using standard methods. Present study comprises for a period of one year i.e. from January, 2017 to December, 2017. Water samples were collected from four stations in monthly variation and values of the parameters were recorded. The results were analysed with standard limits prescribed by WHO. Results revealed that some of the parameters were not in the permissible range and indicated poor quality of water. It has been found that the water can be used for other domestic purposes and agriculture work but not for drinking. The direct discharge of sewage, surface run off, agriculture run off and other anthropogenic activities like washing clothes are might be reasons for pollution of the lake water. There is an immediate need to take steps like creating awareness among local people, planning and proper management to protect the lake.

Keywords: Physico-chemical parameters, Water quality, Monthly variation, Fresh water lake.