

# Investigation of Some Physicochemical and Microbial Characteristics of the Lake Water of U Ray Kyaw Thu Monastery Campus in Sittway, Rakhine State

Khin Wai Wai Htun<sup>1</sup> and Linn Htin Aung<sup>2</sup>

## Abstract

In this research, three lake water samples from U Ray Kyaw Thu Monastery Campus in Sittway, Rakhine State were selected to assess the water quality in January, 2020. Some physicochemical parameters of water samples from three different sites in the campus such as pH, temperature, total dissolved solid, conductivity, turbidity, sulphate, chloride, total hardness, total alkalinity, dissolved oxygen, BOD, COD and intensity were determined by using the standard methods. Some trace elements in the water samples such as cadmium, iron and copper were determined by using Atomic Absorption Spectrophotometer and arsenic was detected by Arsenator. The microbiological properties of water samples such as total coliform and *Escherichia coli* were also determined. The laboratory analysis of water parameters was close to the permissible limits of WHO standard. The total coliform and *Escherichia coli* counts were unsatisfactory for drinking water. So, the study of the quality assessment of these water samples suggested that the water quality of the study area can be used for domestic purposes but they cannot be used as drinking water.

**Keywords:** water quality, physicochemical parameter, total coliform, E. coli

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1.Demonstrator, Department of Chemistry, Yangon University of Education

2.Associate Professor, Dr., Department of Chemistry, Mandalay University of Distance Education