Microbiological Water Quality of Lake Lanao Waters

ABSTRACT

Studying microbiological water quality of a lake is of primary importance especially when this body of water is used as a source of water for recreation, hygiene, domestic use and especially drinking purposes. Standard Coliform test was used to determine the most probable number of total coliforms and the presence of fecal coliforms particularly *Escherichia coli*, as an indicator bacterium of fecal contamination. Results show that the water samples collected from Lake Lanao from bank up to 25 meters lakeward from Bacolod-Grande, Tamparan, Taraka, Tugaya, and Wato-Balindong, Lanao de Sur were unfit for drinking as shown by the presence of coliform bacteria. Most probable number of these coliforms ranged from an average of 148.97 to 986.80 cells per 100 ml of water during the six sampling periods from June, September, and October 2016 and until January, February, and March 2017; which was far higher as compared to what the Philippine National Standards for Drinking Water (PNSDW) established that fecal coliform count below 1.1 cells per 100 ml water as safe for human consumption. Boiling of water and cooking of fishery products must be done to prevent microbial infections. It is therefore recommended that environmental sanitation and Lake Lanao conservation must be given priority by the local government officials as a part of the Marawi rehabilitation.

Keywords: Microbial Ecology, water quality, coliform test, *Escherichia coli*, Lake Lanao