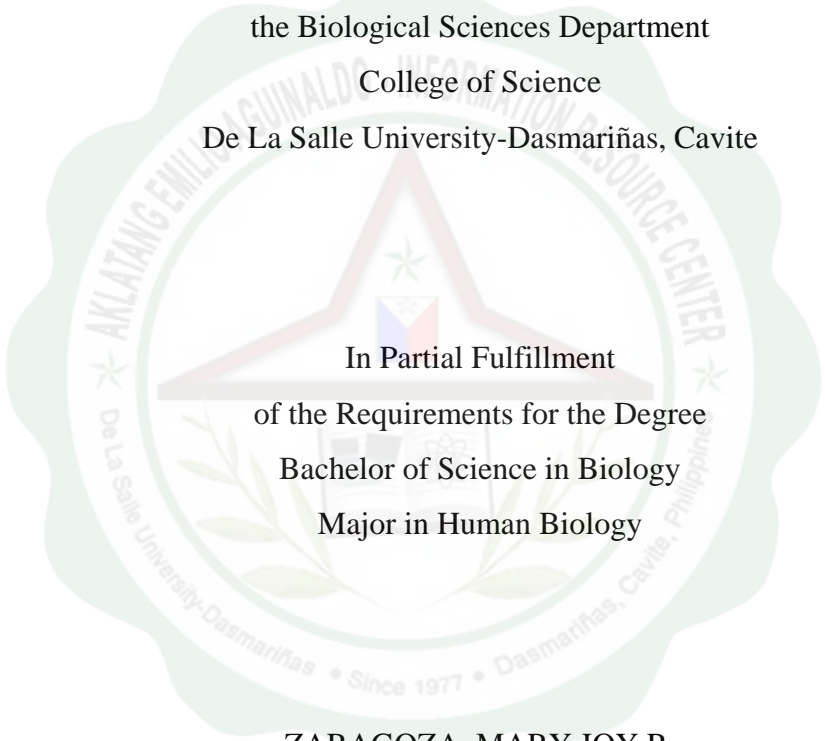


COLIFORM ANALYSIS DURING DRY AND WET SEASONS IN MARAGONDON RIVER, CAVITE

An Undergraduate Research Study Presented to
the Biological Sciences Department
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De La Salle University-Dasmariñas, Cavite



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ABSTRACT

This descriptive study with correlation analysis determined the microbiological condition of Maragondon River. The abundance of coliform through MPN method was correlated to the physico- chemical factors in the river such as temperature, dissolved oxygen and pH.

The analysis revealed that the river was contaminated with coliforms as determined by the high MPN values of 1373-1867 and 1600-2400 during the dry and wet seasons respectively with no significant difference. This condition is possibly due to the entry of soil or fecal wastes into the water from various sources in the river vicinity. Dissolved oxygen level was considerably low, which could be due to the high level of coliforms using up this gas in their biochemical processes. There were moderate negative correlations between MPN value and the dissolved oxygen and temperature. However, there was low negative correlation between the MPN value and pH. Also due to seasonal differences, the temperature and pH values during dry and wet seasons revealed significant difference.

The MPN value found in the two stations during dry and wet seasons were extremely high found in congruence with the Class C water classification of DENR intended for fish propagation and recreational purposes (boating). With the aid of the API identification system, it is very evident that most of the identified species belong to family *Enterobacteriaceae*, specifically *Klebsiella planticola*, *Enterobacter cloacae*, *Enterobacter sakazakii*, *Serratia liquefaciens* and *Serratia odorifera*. And *Escherichia coli* were most abundant in wet season based on the completed test.



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