



**ASSESSMENT OF THE POLLUTION STATUS OF IMUS RIVER ALONG
DASMARIÑAS USING DIATOMS AS INDICATOR AND ITS
CORRELATION TO ITS PHYSICO-CHEMICAL PROPERTIES**

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ABSTRACT

The purpose of this research is to assess the current pollution status of Imus River along Barangay San Lorenzo Luis I, beside Gate 3 of De La Salle University-Dasmariñas, and along Barangay San Miguel II using diatoms as bio-indicator. Diatoms belong to the Class *Bacillariophyceae* which are photosynthetic algae that are sensitive to changes in its environment and have been widely used for the determination of the current status of a certain body of water. Relative abundance of each species was correlated to physico-chemical properties of the river to determine their relationship. Physico-chemical properties include pH, Dissolved oxygen (DO), temperature, salinity, and Total Dissolved Solids (TDS). The research was done with a monthly collection of samples from April to September 2012, and uses a glass panel as artificial substrata to collect diatom species from the selected sampling sites. Collected diatom samples were cleaned, preserved, and then counted using Sedgewick rafter counting chamber. A total of 27 diatom species that belong to 9 families were identified. During the month of April, the dominating species was *Gomphonema parvulum* while in the months of May to September, the dominating diatom genera was *Nitzschia*. The index used to assess the water quality was Saprobity Index which measures the organic pollution of the said river. The calculated Saprobity index were 1.91, 3.00, 2.38, 2.29, 2.87 and 2.83, from April to September respectively which translates that the river was critically burdened with organic pollutants based on Pantle & Buck Saprobity Index (1955).



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