

ABSTRACT
**ECOTOXICOLOGY ASSESSMENT OF WATER SAMPLES FROM PASIG RIVER,
PHILIPPINES BY WHOLE EFFLUENT TOXICITY (WET) TEST**

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The potential use of whole effluent toxicity (WET) as possible discharge permit system in the country was evaluated using the trophic level approach. The test organisms used in the acute, static, and non-renewal WET test were *Selenastrum capricornutum* Printz, *Ceriodaphnia cornuta* Sars, *Oreochronis niloticus* Linnaeus and *Cyprinus carpio* Linnaeus. In addition to acute WET test, the determination of the mutagenicity potential of the effluent by micronucleus test was also undertaken. The effluent used in the study was the water collected from Pasig River. The water collected from Jones and Lambingan inhibited the growth of *S. capricornutum* where there were also marked increase in the values of conductivity and cadmium content. The water samples from Jones, Guadalupe and Lambingan were the most toxic to the 50% neonates of *Ceriodaphnia cornuta*. The monitoring of the toxicity of *C. cornuta* must be aided with microscope, which was not necessary in the case of USEPA-approved *Daphnia magna*. The water sample from the Lambingan was the most toxic effluent to *Oreochronis niloticus* followed by the effluent from Jones. The low LC50 values of fry corresponded to the high readings of conductivity, TOC, and heavy metals (mercury and cadmium) in effluents. The fry of *Oreochronis niloticus* can be used in the routine WET testing but the fry of *Cyprinus carpio* may not be appropriate test organisms for WET testing due to its broad tolerance for toxicant. The water collected from four sites – Jones, Guadalupe, Lambingan, and Bambang showed potential of mutagenicity based on the results of data analysis. However, seasonal variations affected the degree of mutagenicity potential. These sampling sites also gave the highest concentrations of heavy metals, total hexane extract, and total organic carbon.