AQUATIC PLANTS AS BIOINDICATOR FOR WATER POLLUTION

NUR ATHIRAH BINTI MAZLAN

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ABSTRACT

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Water is one of the important substance that is needed by living organisms. Therefore, water pollution should be prevented. Bioindicator is consider as an animal or plants which accumulate contaminants in their tissue and organs from their surroundings. The objectives of this study were to determine the quality of water sample based on pH, DO and BOD, to investigate the potential of aquatic plants as bioindicator for water pollution and to determine the cytotoxicity effect of selected plants. The water samples were collected from three different rivers nearby Jengka's Town. Both aquatic plants were collected from the pond in UiTM. The DO values were determined first to get the BOD values for water quality determination. The morphology of plants was measured based on qualitative and quantitative parameter. For cytology study, histology technique was used to determine the cytotoxicity effect of selected aquatic plants in polluted water samples. *Limnocahris flava* and *Ipomea aquatica* were aquatic plants used in this study. The result showed water sample from Jengka's River had higher BOD value which was 2.156 mg/L. For the pH, Jengka's River also got higher value which indicate less acidity. The morphology of *Limnocharis flava* and *Ipomea aquatica* does showed some changes in term of stem and root diameter, leaves counting and colour of leaves and roots, and of. The number of chromosome for *Limnocharis flava* for treatment A was 2(n) = 12 and treatment C was 2(n) = 20. For *Ipomea aquatica*, treatment B and C, the number of chromosome were 2(n) = 38 and 2(n) = 14 respectively. The number of chromosome differ to theory due to the composition in the water treatment. As conclusion, *Limnocharis flava* showed excellent potential compared to *Ipomea aquatica* as a bioindicator for water pollution.

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