

UNIVERSITI TEKNOLOGI MARA

**ASSESSMENT OF RECREATIONAL WATER
QUALITY AT PORT DICKSON BEACHES, NEGERI
SEMBILAN**

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**Project paper submitted in partial fulfillment of
the requirements
for the degree of
Bachelor in Environmental Health and Safety
(Hons.)**

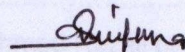
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Declaration by Student

Project entitled "Assessment of Recreational Water Quality at Port Dickson Beaches, Negeri Sembilan" is a presentation of my original research work. Wherever contributions of others are involved, every effort is made to indicate this clearly, with due reference to the literature, and acknowledgement of collaborative research and discussions. The project was done under the guidance of Sir Ahmad Razali bin Ishak as Project Supervisor. It has been submitted to the Faculty of Health Sciences in partial fulfillment of the requirement for the Degree of Bachelor in Environmental Health and Safety (Hons).

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Abstract

Assessment of Recreational Water Quality in Port Dickson Beach, Negeri Sembilan

Samihah Zura Binti Mohd Nani

Background: A cross sectional study was done to assess the level of water quality in coastal water of the Port Dickson beach in Negeri Sembilan.

Methods: The water quality was analyzed using several parameters which are physico-chemical and bacteriological parameters. The physico-chemical parameters were studied are pH, temperature, conductivity, salinity, turbidity, and dissolved oxygen, biological oxygen demand, lead, cadmium, copper, and chromium. The bacteriological parameters were studied are total coliform, *Escheria Coli*, and *Enterococcus*. Three beaches were selected which are Teluk Kemang beach, Cahaya Negeri Beach, and Saujana Beach. The sampling was done in two conditions which are during high tide and low tide. Sampling at two conditions was also done during weekend and weekdays. The health risk assessment was analyzed using Quantitative Risk Assessment for Dermal Dose Absorption by US EPA1989.

Results: Study found that the Cadmium, Copper, Lead and *Escheria Coli* has exceed the standard of Interim Marine Water Quality Status (2006). Result shows that there are significant different of parameters. There are significant different of temperature, conductivity, DO, Lead, Cadmium, *Escheria Coli* and *Enterococcus* at the selected beach. The results show significant different of temperature, DO, pH, TDS, salinity, Cadmium, Total Coliform and *Enterococcus* during intertidal changes of high tide and low tide. The results show significant different at weekend and weekdays which are concentration of conductivity, pH, TDS, salinity, turbidity, DO, Lead, Cadmium, Total Coliform, *Escheria Coli*, and *Enterococcus*.

Conclusion: There should have appropriate actions to control and improve water quality status in Port Dickson beach.

Keywords: Cadmium, Lead, Total Coliform, *Escheria Coli*, *Enterococcus*