

UNIVERSITI TEKNOLOGI MARA

**EFFECT OF THE BACTERIAL
ABUNDANCE ON THE DENSITY OF
AEDES MOSQUITO LARVAL**

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

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DECLARATION BY STUDENT

Project entitled “Effect of Bacterial Abundance on The Density of Aedes Mosquito Larval” is a presentation of my original research work. Whenever contributions of others are involved, every effort is made to indicate this clearly, with due reference to literature, and acknowledgement of collaborative research and discussions. The project was done under the guidance of Project Supervisor, Dr. Nazri Che Dom. It has been submitted to the Faculty of Health Sciences in partial fulfilment of the requirement for the Degree of Bachelor in Environmental Health and Safety (Hons).

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In the name of Allah, The Most Gracious, The Most Merciful.

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ABSTRACT

Bacterial communities in *Aedes* breeding site acts as attractant to gravid female mosquitoes. Hence, this study identify the bacterial abundance and characteristic of the bacteria in water holding container. The objective of the study was to analyze the relationship between the larval density and the bacterial abundance of water holding containers around Puncak Alam, Selangor. Positive container and wet containers are randomly obtained on site and classified according to the criteria. *In-situ* and *ex-situ* measurement was done to find the physical and microbiological properties of the water using appropriate equipments. The parameter tested are pH, temperature, turbidity, and bacterial abundance and characterization. Study shows that there are no significant difference between the biological parameters of the breeding containers towards the density of the *Aedes* mosquito larvae as all result could not achieve the significant value of $p < 0.05$. However, in terms of containers efficiency, rubber material based containers have shown the most promising result to serve as a potential breeding site of *Aedes* mosquitoes compare to other type of containers. The outcome of this study shows that microbiological parameters does not influence the ovipositioning of the *Aedes* mosquito thus proving that all containers containing water have the potential in becoming a breeding site for the *Aedes* mosquito.

Keywords: *Aedes*, positive, wet, microbiological, bacterial abundance, larval density