

UNIVERSITI TEKNOLOGI MARA

**EFFECT OF DIET REGIME ON THE
DEVELOPMENT OF *Aedes albopictus*
(SKUSE) (DIPTERA: CULICIDAE)
WITH REFERENCE TO DIFFERENT
WATER CONTAINER TYPES**

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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 Diet Regime on Development of *Aedes albopictus* (Skuse) (Diptera: Culicidae) With Reference to Different Water Container Types” 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 Bin 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

Two studies were conducted to determine the effect of diet regime on development of *Aedes albopictus* (Skuse) (Diptera: Culicidae) with reference to different water container types. In the first study, different diet regime (0.1 mg, 0.6 mg, 1.0 mg and 1.6 mg of fish pellet) were exposed to 50 eggs of *Ae. albopictus* with 300 ml of distilled water in plastic container under laboratory conditions. In second study, the effect of diet regime (0.1 mg, 0.6 mg, 1.0 mg and 1.6 mg of fish pellet) and different types of water container (coconut shell, plastic container and glass container) of *Ae. albopictus* was observed. Development of the *Ae. albopictus* was observed and recorded from egg hatching until adult emergence. Results in first study showed that, development time was significantly effect by diet regime. Furthermore, juvenile body size and adult wing size of *Ae. albopictus* was found to be greatly affected by diet regime expose during juvenile stages. Generally, increase of diet regime resulted in decrease of development time and increase in juvenile body size and adult wing size. However, results in second study show that development of *Ae. albopictus* was not affected by different diet regime and types of container. As overall, different diet regime was affected development of *Ae. albopictus*. While, different types of water container did not affected the development of *Ae. albopictus*. The outcome of this study was important as base line information for better understanding on population dynamic of mosquito. The input also critical for biological control of the dengue fever especially in endemic area.

Keywords: *Ae. albopictus*, diet, wing size, juvenile size, water container