



UNIVERSITI TEKNOLOGI MARA

PHYSICAL IMPACT OF HEAVY METALS (Cu, Fe and Zn) CONCENTRATIONS ON AEDES ALBOPICTUS (DIPTERA: CULICIDAE) LARVAE

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Declaration by Student

Project entitled "Physical Impact of Heavy Metals (Cu, Fe and Zn) Concentrations on *Aedes albopictus* (Diptera: Culicidae) Larvae" 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 Dr. Nazri Che Dom as Project Supervisor. 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).

Student's Signature:

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ABSTRACT

Physical Impact of Heavy Metals (Cu, Fe And Zn) Concentrations on *Aedes albopictus* (Diptera: Culicidae) Larvae

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INTRODUCTION: *Ae. albopictus*, an invasive mosquito species originally from Asia is a well-known vector for dengue has been adapt to harsh surrounding by adapting in habitat contained with heavy metals. **OBJECTIVES:** To assess the effects of heavy metals (Cu, Fe and Zn) concentrations on *Ae. albopictus* larvae in terms of their level of adaptability and physical characteristics in the laboratory setting. **METHODOLOGY:** A cross sectional study was conducted at Vector Laboratory, Dept. of Environmental Health. Samples consist of 50 samples of three different heavy metals with different concentration. Both wild and lab strain larvae were tested. No. of larvae survived and physical determination (pH, temperature, TDS and conductivity) were evaluated. **RESULTS:** Wild strain larvae have the ability to adapt to heavy metals much stronger compared to lab strain. Physical characteristics reading taken had indicated its influence in terms of tolerance of larvae in heavy metals. **CONCLUSION:** *Ae. albopictus* larvae are proven capable to survive in harsh environment.

Keyword: Heavy metals, *Ae. Albopictus* larvae.