Adulticidal efficacy of alpha-cypermethrin against *Aedes albopictus* in Malaysia

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ABSTRACT

Introduction: The use of chemical insecticides such as pyrethroid class continues as the most favoured approach in the vector control programmes in many countries including Malaysia. **Materials and Methods:** The adulticidal efficacy of pyrethroid alpha-cypermethrin for the control of *Aedes albopictus* populations from several types of housing and agrarian sites in Peninsular Malaysia was assessed through the bioassays. *Aedes albopictus* adult female populations from each study site were selected for alpha-cypermethrin 0.05% through the 1 h exposure period. The lethality percentages were recorded at 30 minutes of the bioassays and after 24h recovery time. **Results:** At 30 minutes of selection pressure, the lowest and highest 50% lethal time (LT50) values were displayed by *Ae. albopictus* adults from dengue-risk housing sites (34.19 min) and oil palm plantations (56.53 min), respectively. After 24 h recovery time, field populations of *Ae. albopictus* adults from rubber estates, dengue-free housing sites and dengue-risk housing sites showed almost full susceptibility to alpha-cypermethrin 0.05%. **Conclusion:** These findings implied a positive adulticidal effect of alpha-cypermethrin and its promising utilization in the prospective vector control programme particularly at rubber estates and both types of housing sites chosen in this study.