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
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**TOXICITY EFFECT OF CRUDE EXTRACT FROM SPONGES
(*THEONELLA SP. AND AAPTOS SP.*)
ON MOSQUITO LARVAE *AEDES AEGYPTI***

By

Chew Li Fang

**Research Report submitted in partial fulfillment of
the requirements for the degree of
Bachelor of Science (Biological Science)**

**Department of Biological Science
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**JABATAN SAINS BIOLOGI
FAKULTI SAINS DAN TEKNOLOGI
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PROJEK PENYELIDIKAN I DAN II**

Adalah ini diakui dan disahkan bahawa laporan penyelidikan bertajuk:

Toxicity Effect of Crude Extract from Sponges (*Theonella* sp. and
Aaptos sp.) on Mosquito Larvae *Aedes aegypti*

oleh Chew Li Fang, No. Matrik UK5348

telah diperiksa dan semua pembetulan yang disarankan telah dilakukan. Laporan ini dikemukakan kepada Jabatan Sains Biologi sebagai memenuhi sebahagian daripada keperluan memperoleh Ijazah Sarjana Muda Sains - Sains Biologi,
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ABSTRACT

Sponge natural products research is guided by bioactivity test from crude extract. Marine sponges especially from class Demospongiae are rich sources of bioactive compounds. Toxicity effect of two crude extract from sponges, *Aaptos sp.* and *Theonella sp.* collected from Perhentian Island has been studied using *Aedes aegypti* larvicidal assay. Both sponges showed significance difference in variances (F-test, $P < 0.05$). The toxicity against third instar *Aedes aegypti* larvae at 24-hour larvacidal activity was also significantly different (Paired *t*-test, $P < 0.05$). *Theonella sp.* showed larvicidal activity with LC_{50} at 0.0548 mg/ml while LC_{50} for *Aaptos sp.* was at 3.0827 mg/ml. The results obtained from this study revealed that crude extract from *Theonella sp.* are promising as larvicides against *Aedes aegypti*.

ABSTRAK

Produk semulajadi span boleh dikaji melalui ujian bioaktiviti dari ekstrak kasar. Span marin terutama dari kelas Demospongiae adalah kaya dengan kompaun bioaktif. Kesan ketoksikan dua ekstrak kasar dari span *Aaptos sp.* dan *Theonella sp.* yang dikutip dari Pulau Perhentian dikaji menggunakan bioasai larva *Aedes aegypti*. Kedua-dua span menunjukkan perbezaan varians yang signifikan (ujian-F, $P < 0.05$). Ujian ketoksikan terhadap larva instar ketiga *Aedes aegypti* pada 24 jam juga menunjukkan perbezaan signifikan (ujian-t berpasangan, $P < 0.05$). *Theonella sp.* menunjukkan aktiviti larvasid LC_{50} pada kepekatan 0.0548 mg/ml manakala LC_{50} *Aaptos sp.* adalah pada kepekatan 3.0827 mg/ml. Keputusan yang diperolehi dari kajian menunjukkan bahawa ekstrak kasar dari *Theonella sp.* mempunyai potensi sebagai larvisid terhadap *Aedes aegypti*.