

CRUDE EXTRACTS OF *Morinda citrifolia* (MENGKUDU BESAR)
AND ITS ANTIMICROBIAL ACTIVITIES

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Judul Crube extracts of morinda citrifolia		Tanda tangan	
Tarikh	Waktu Pemulangan	Nombor Ahli	
20/3/05	3.40 pm	UK 8230	
19/8/05	4.45 pm	UK 8230	
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CRUDE EXTRACTS OF *Morinda citrifolia* (MENGKUDU BESAR)
AND ITS ANTIMICROBIAL ACTIVITIES

BY

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This report is submitted in partial fulfillment of the requirements for the
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DEPARTMENT OF BIOLOGICAL SCIENCE

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APPROVAL AND DECLARATION FORM

I certify that the report of this final year project entitled “Crude Extracts of *Morinda citrifolia* (Mengkudu Besar) and its antimicrobial activities” by CHAN WAI MUN (matrik number UK 2552) have been read and all the alteration and correction recommended by Examiners have been done. This thesis submitted to Department of Biological Science, have been accepted as fulfillment of the requirement for degree of Bachelor of Science (Honors) – Biology in Faculty of Science and Technology, Kolej Universiti Terengganu, Universiti Putra Malaysia Terengganu, Malaysia.

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ABSTRACT

Methanol extracts and dichloromethane extracts of *Morinda citrifolia* were screened against fungi, especially yeast and *Candida*, as well as Gram negative and Gram-positive bacteria. Antimicrobial activities were present in methanol extracts of fruit and root and dichloromethane extract of root. Methanolic root extract showed exceptionally high activity against *Bacillus cereus* and *Staphylococcus aureus* while, only moderate activity was observed against *Aspergillus niger*, *Saccharomyces cerevisiae* and *Candida albicans*. On the other hand, methanolic fruit extract and dichloromethane root extract exhibited moderate activity against most of the microorganisms tested. Methanol leaf extract and dichloromethane leaf and fruit extract displayed no inhibition zone.

ABSTRAK

Ekstrak *Morinda citrifolia* menggunakan metanol dan diklorometana disaringkan terhadap pelbagai spesies kulat yang meliputi yis dan candida, serta bakteria-bakteria Gram negatif dan Gram-positif. Aktiviti antimikroorganisma didapati hadir dalam ekstrak buah dan akar yang menggunakan pelarut metanol serta ekstrak akar yang menggunakan pelarut diklorometana. Ekstrak akar menggunakan pelarut metanol menunjukkan aktiviti yang kuat terhadap *Bacillus cereus* dan *Staphylococcus aureus*. Walau bagaimanapun, hanya aktiviti sederhana terhadap *Aspergillus niger*, *Saccharomyces cerevisiae* and *Candida albicans* yang dapat diperhatikan. Di sebaliknya, ekstrak buah menggunakan pelarut metanol dan ekstrak akar menggunakan diklorometana hanya menunjukkan aktiviti sederhana terhadap kebanyakan mikroorganisma yang diuji. Ekstrak daun menggunakan pelarut diklorometana dan metanol serta ekstrak buah menggunakan pelarut diklorometana menunjukkan keputusan yang negatif.