

CHEMICAL CONSTITUENTS OF  
MEDICINAL DECADEBRIDRON LEAVES

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FACULTY OF SCIENCE AND TECHNOLOGY  
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**CHEMICAL CONSTITUENTS OF *MELALEUCA LEUCADENDRON* LEAVES**

**By**

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the requirements for the degree of  
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PROJEK PENYELIDIKAN I DAN II

Adalah ini diakui dan disahkan bahawa laporan penyelidikan bertajuk:

**Chemical Constituents of *Melalucea Leucadendron* Leaves** oleh **Kok Siaw Hun**,  
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## LIST OF ABBREVIATIONS

$\lambda$	: Wavelength
Abs.	: Absorption
CC	: Column Chromatography
C1	: First column
C2	: Second column
C3	: Third column
C4	: Fourth column
CHCl <sub>3</sub>	: Chloroform
DCM	: Dichloromethane
EtOAc	: Ethyl acetate
Frac.	: Fraction
G1-G10	: Numbering of compounds obtained from ethyl acetate extract in first column
REA1-REA4	: Numbering of compounds obtained from ethyl acetate extract in second column
K1-K9	: Numbering of compounds obtained from ethyl acetate extract in third column
F1-F12	: Numbering of compounds obtained from ethyl acetate extract in forth column
G1	: First compound obtained from ethyl acetate extract in C1
REA1	: First compound obtained from ethyl acetate extract in C2

K1	: First compound obtained from ethyl acetate extract in C3
K2	: Second compound obtained from ethyl acetate extract in C3
K5	: Fifth compound obtained from ethyl acetate extract in C3
H <sub>2</sub> SO <sub>4</sub>	: Sulfuric Acid
IR	: Infrared
MeOH	: Methanol
<i>n</i> -hex	: Hexane
No.	: Number
PE	: Petroleum ether
TLC	: Thin Layer Chromatography
UV	: Ultraviolet

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## ABSTRACT

This study focused on the *Melaleuca leucadendron* leaves. The leaves of *Melaleuca leucadendron* were extracted with petroleum ether, ethyl acetate and methanol. Three of the sample extracts were analyzed by using thin layer chromatography (TLC). Only ethyl acetate extract had been chosen for separation and isolation by using column chromatography with the solvent system of *n*-hexane and ethyl acetate. Chromatography techniques had been used to isolate five (5) different components respectively. These five components of sample G1, REA1, K1, K2 and K5 were analyzed by using Infrared (IR) and Ultraviolet (UV) spectroscopy.

## **KAJIAN BAHAN KIMIA KE ATAS DAUN POKOK GELAM (*Melaleuca leucadendron*)**

### **ABSTRAK**

Kajian ini dilakukan terhadap daun pokok gelam (*Melaleuca leucadendron*). Sampel daun *Melaleuca leucadendron* diekstrak dengan menggunakan pelarut petroleum eter, etil asetat dan metanol. Ketiga-tiga hasil ekstrak yang diperolehi telah dianalisa dengan menggunakan kaedah kromatografi lapisan nipis (TLC). Hanya ekstrak etil asetat yang dipilih untuk tujuan pemisahan dan penulenan secara kromatografi turus dengan menggunakan sistem pelarut *n*-hexane dan etil asetat. Teknik kromatografi telah dilakukan untuk memisahkan lima (5) komponen kimia yang berlainan secara berturut-turut. Sampel bagi lima komponen kimia ini iaitu G1, REA1, K1 , K2 dan K5 telah dianalisa dengan menggunakan spektroskopi inframerah (IR) dan spektroskopi ultralembayung (UV).