

**CHEMICAL CONSTITUENTS OF *CRYPTOCARYA DENSIFLORA***

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## ABBREVIATIONS

$\alpha$	Alpha
$\beta$	Beta
$\lambda$	Maximum wave length
$\delta$	Chemical shift
$\mu\text{M}$	Micromolar
$\mu\text{l}$	Microlitre
mM	Milimolar
mg/ml	Miligram per mililitre
g	Gram
kg	Kilogram
U/ml	Unit per mililitre
ml	Mililitre
m	Meter
MHz	Mega Hertz
Hz	Hertz
UV	Ultraviolet
IR	Infrared
ppm	Part per million
eV	Electron Volt
MeOH	Methanol
$\text{CHCl}_3$	Chloroform

CH <sub>2</sub> Cl <sub>2</sub>	Dichloromethane
DMSO	Dimethylsulphoxide
OCH <sub>2</sub> O	Methylenedioxy
CH <sub>3</sub>	Methyl group
OCH <sub>3</sub>	Methoxyl group
OH	Hydroxyl group
NH <sub>3</sub>	Ammonia
pH	Power of Hydrogen
HCl	Hydrogen Chloride
TLC	Thin layer chromatography
PTLC	Preparative thin layer chromatography
CC	Column Chromatography
NMR	Nuclear Magnetic Resonance
FT-NMR	Fourier Transform Nuclear Magnetic Resonance
cm <sup>-1</sup>	Per centimeter
<i>J</i>	Coupling constant
<i>d</i>	Doublet
<i>s</i>	Singlet
<i>dd</i>	Doublet of doublet
<i>t</i>	Triplet
<i>m</i>	Multiplet
BBIQ	Bisbenzylisoquinoline
1D-NMR	One Dimension Nuclear Magnetic Resonance

2D-NMR	Two Dimensional Nuclear Magnetic Resonance
$^1\text{H}$	Proton NMR
$^{13}\text{C}$	13-Carbon NMR
COSY	$^1\text{H}$ - $^1\text{H}$ Correlation Spectroscopy
DEPT	Distortionless Enhancement by Polarization Transfer
HMQC	Heteronuclear Multiple Quantum Coherence
HMBC	Heteronuclear Multiple Bond Coherence
NOE	Nuclear Overhauser Enhancement
GC-MS	Gas Chromatography-Mass Spectroscopy
LC-MS	Liquid Chromatography-Mass Spectroscopy
MS	Mass Spectroscopy
EIMS	Electron Impact Mass Spectroscopy
FAB	Fast Atomic Bombardment
ESI	Electrospray Ionization
m/z	Mass per charge
$\text{CDCl}_3$	Deuterated chloroform
MeOD	Deuterated methanol
OD	Optical density

## ABSTRACT

The extraction of alkaloids from the Malaysian *Cryptocarya densiflora* has been carried out in this study. The alkaloids were extracted from the bark and leaves of this species using acid base extraction and the crude alkaloids obtained were subjected to extensive chromatographic techniques such as thin layer and column chromatography. The structural elucidation of the purified alkaloids were performed with the aid of spectroscopic methods i.e.  $^1\text{H}$  NMR,  $^{13}\text{C}$  NMR, 2D NMR, IR, UV and LCMS.

Investigation of the alkaloidal content from the bark of *Cryptocarya densiflora* afforded six alkaloids and their structures were elucidated as laurotetanine **63**, isocaryachine **64**, *N*-demethylphyllocryptine **65**, nornantenine **66**, reticuline **14** and laudanidine **2**.

Isolation and purification of alkaloids from the leaves of *Cryptocarya densiflora* afforded four alkaloids of which one is novel compound: cryptocaryadine **68** along with three known compounds: dicentrinone **67**, crychine **60** and *N*-methyllaurotetanine **53**.

## ABSTRAK

Kandungan alkaloid dalam pokok *Cryptocarya densiflora* telah dikaji dan ditentukan. Alkaloid telah diekstrak daripada bahagian batang dan daun menggunakan ekstrak asid bes dan ekstrak mentah ini dipisahkan dengan menggunakan teknik kromatografi (kromatografi lapisan nipis dan kromatografi turus). Formula struktur sebatian tulen yang diperolehi ditentukan melalui kaedah spektroskopi iaitu  $^1\text{H}$  NMR,  $^{13}\text{C}$  NMR, 2D NMR, IR, UV dan LCMS.

Kajian terhadap bahagian kulit batang *Cryptocarya densiflora* telah memberikan enam sebatian alkaloid di mana strukturnya telah dikenalpasti sebagai laurotetanina **63**, isocaryachina **64**, *N*-demetilphyllokriptina **65**, nornantenina **66**, retikulina **14** dan laudanidina **2**.

Pengasingan dan penulenan terhadap alkaloid daripada bahagian daun pokok *Cryptocarya densiflora* telah menghasilkan empat jenis alkaloid iaitu satu daripadanya adalah sebatian baru: cryptocaryadina **68** disamping tiga alkaloid yang sudah dikenalpasti dan sering ditemui: dicentrinone **67**, crychina **60** dan *N*-metillaurotetanina **53**.