

ISOLATION AND CHARACTERIZATION OF COMPOUNDS FROM THE STEM BARK OF *UVARIA RUFa* (ANNONACEAE)

(Pemisahan dan Pencirian Sebastian dari Kulit Batang *Uvaria rufa* (Annonaceae))

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Abstract

Isolation of compounds from methanol extract of the stem bark of *Uvaria rufa* has been conducted by using radial chromatography. Their structures were elucidated by UV, IR, NMR and mass spectroscopy, and by comparison with the literature. Seven compounds were isolated namely benzyl benzoate (1), caryophyllene oxide (2), glutinol (3), 5-hydroxy-7-methoxyflavone (4), 5-hydroxy-6,7-dimethoxyflavone (5), 2,5-dihydroxy-7-methoxyflavanone (6) and 5,7-dihydroxyflavanone (7). Separation of the caryophyllene oxide (2), glutinol (3) and 5,7-dihydroxyflavanone (7) from *Uvaria rufa* has never been reported.

Keywords: *Annonaceae*, *Uvaria rufa*, *terpene*, *flavonoid*

Abstrak

Pengasingan sebatian dari ekstrak metanol kulit batang *Uvaria rufa* telah dilakukan dengan menggunakan kromatografi radial. Struktur semua sebatian ditentukan dengan spektroskopi UL, IM, RMN dan jisim, dan secara perbandingan dengan data kepustakaan. Tujuh sebatian telah diasingkan iaitu benzil benzoat (1), kariofilena oksida (2), glutinol (3), 5-hidroksi-7-metoksiflavin (4), 5-hidroksi-6,7-dimetoksiflavin (5), 2,5-dihidroksi-7-metoksiflavanon (6) dan 5,7-dihidroksiflavanon (7). Pemisahan kariofilena oksida (2), glutinol (3) dan 5,7-dihidroksiflavanon (7) dari *Uvaria rufa* belum pernah dilaporkan.

Kata Kunci: *Annonaceae*, *Uvaria rufa*, *terpena*, *flavonoid*

Introduction

Uvaria, a genus of Annonaceae family, consists of approximately 150 species that are distributed in several areas including tropical Africa, Madagascar, Indo-Malaya and Australia [30]. Most plants of the genus *Uvaria* are found to grow as vines on trees. Some are known as Larak (Malaysia), Kalak (Java) and Allagat or Hinlalaki (Luzon). *Uvaria rufa* or *U. ridleyi* is widely available in Peninsular Malaysia, and have been named by the locals as Larak or Pisang-pisang [16]. This plant was reported to be found in the north-west and southern part of Peninsular Malaysia, namely the River Tebrau in Johor and Pahang [4]. Traditionally, all parts of this plant can be used for specific purposes; the squeezed leaves afford a cinnamon bark-like smell and water decoctions can be consumed directly, while the fruits are believed to cure certain diseases like ulcers of the intestines [4]. It has also been mentioned that the water decoction of the roots are used to treat women after giving birth [11]. *Uvaria rufa* is a rich source of various new compounds as proven by the isolation of benzoylated derivatives [17], flavonoids [5] and flavonoid