

해동피(Kalopanax Cortex)로부터 지질화합물의 분리 및 동정
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Lipids from the Kalopanax Cortex

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Objectives

Kalopanax Cortex is the stem bark of *Kalopanax pictus* Nakai (Araliaceae), which has been used as a traditional Korean medicine for the remedy of paralysis, arthritis, rheumatism, neuralgia, lumbago, diabetes and tonic. It was also reported that *Kalopanax pictus* Nakai extract has anti-nociceptive, anti-rheumatoid, anti-inflammatory effect and anti-lipid peroxidative activity. Various saponins are reported as the principal components of the processed Kalopanax Cortex that manifest pharmacological activities. Except for saponins, however, there are few reports on other pharmacologically active compounds of Kalopanax Cortex. We, therefore, initiated this study to identify principal low molecular weight compounds of Kalopanax Cortex.

Materials and Methods

○ Materials

Kalopanax Cortex was purchased from Kyungdong Market, Seoul, Korea, in June 2006. IR spectra were obtained with a Perkin Elmer Spectrum One FT-IR spectrometer. ¹H-NMR (400 MHz) and ¹³C-NMR (100 MHz) spectra were recorded on a Varian Unity Inova AS-400 FT-NMR spectrometer. GC-MS analysis was carried out on a mass spectrometer JMS-700 (JEOL, Tokyo, Japan) connected to a gas chromatograph (Shimadzu, Tokyo, Japan)

○ Methods

The dried and powdered Kalopanax Cortex (10 kg) was extracted three times at room temperature with 80% aqueous EtOH. And the concentrated extract was partitioned with EtOAc, *n*-BuOH and H₂O, successively. From the EtOAc fraction, two compounds were isolated through repeated silica gel and ODS column chromatographies.

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Results

From the result of physico-chemical data including NMR, GC-MS spectrometry and IR, the chemical structures of the compounds were determined to be 9,12,15-Octadecatrienoic acid methyl ester (1) and 8,10-Octadecadienoic acid methyl ester (2). This is the first study to isolate Lipids 1 and 2 from the Kalopanax Cortex.

Table 1. Isolation Procedure of Kalopanax Cortex.

