

해동피(Kalopanax Cortex)로부터 flavonoid의 분리

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Flavonoids 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. EI-MS data was recorded on a JEOL JMSAX-505-WA. ¹H-NMR (400 MHz) and ¹³C-NMR (100 MHz) spectra were recorded on a Varian Unity Inova AS-400 FT-NMR spectrometer.

○ 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, mass spectrometry and IR, the chemical structures of the compounds were determined to be liquiritin (**1**) and 3,4',7-trihydroxyflavone 4'- β -D-glucopyranoside (**2**). This is the first study to isolate flavonoids **1** and **2** from the Kalopanax Cortex.

Table 1. Isolation Procedure of Kalopanax Cortex.

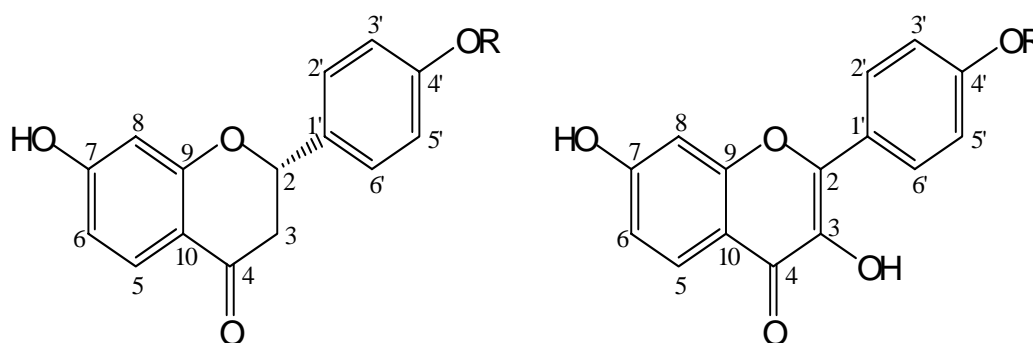
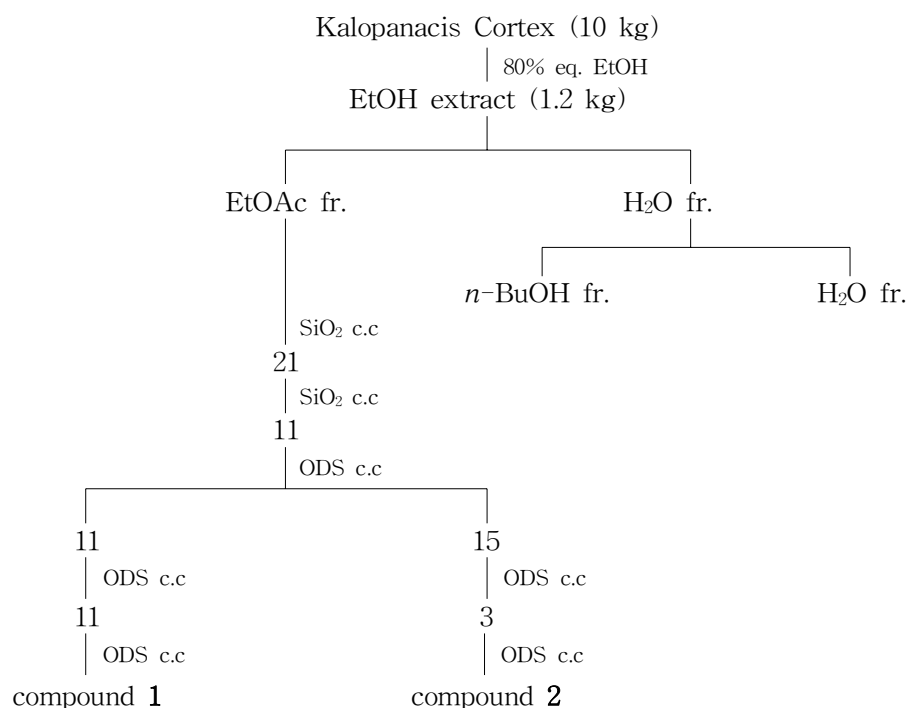


Fig. 1. Flavonoids from Kalopanax Cortex.