

감태나무(*Lindera glauca* Blume) 목부로부터 페놀화합물의 분리 및 구조동정
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**Isolation and identification of phenolic compounds from the stem wood of
Lindera glauca Blume**

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Objectives

Lindera glauca Blume. (Lauraceae) is a deciduous shrub, which is distributed widely in the mountainous regions of China, Japan, Korea, and Taiwan. It is reported that the radices and berries of *L. glauca* are used as folk medicine for treating several symptoms by paralysis such as aphasia, cardialgia and abdominal pain. In the previous phytochemical studies from the aerial parts in this species, it was reported lots of compounds including alkaloids, a butanolide, benzenoids, a diterpene, a triterpene, steroids, flavonoids, a *p*-quinone, and a cyclohex-2-en-1-one. Moreover, it was verified that the methanolic extract of this species had biological activities against atopic dermatitis. This study deals with isolation and elucidation of bioactive indicators against atopy dermatitis from the stem wood of *L. glauca*.

Materials and Methods

○ Materials

The stem wood of *Lindera glauca* was offered by GFC Co., Ltd. (Suwon). ¹H-NMR (400 MHz) and ¹³C-NMR (100 MHz) spectra were recorded on a Varian Unity Inova AS-400 FT-NMR spectrometer (California, USA).

○ Methods

The chipped stem wood of this plant was extracted and concentrated repeatedly with 80% aqueous methanol at room temperature, and the methanolic extract was successively concentrated and partitioned with EtOAc, *n*-BuOH, and H₂O. From the

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EtOAc fraction, five phenolic compounds were isolated through the repeated silica gel, octadecylsilica gel (ODS), and Sephadex LH-20 column chromatographies.

Results

According to the results of spectrometric methods including nuclear magnetic resonance spectrometry (NMR), mass spectrometry (MS) and infrared spectrometry (IR), the chemical structures of the compounds were elucidated as a chalcone, 1,3-diaryl-2-methoxypropan-2-ol (**1**), two flavanols, (+)-catechin (**2**), (-)-epicatechin (**3**), a lignan, syringaresinol (**4**), and a phenol glucoside, 3,4,5-trimethoxyphenol-*O*- β -D-glucopyranoside (**5**). These compounds were firstly isolated from the stem wood of this plant and the compound **1** is a new compound. The further activity tests against atopic dermatitis will be done on these compounds.

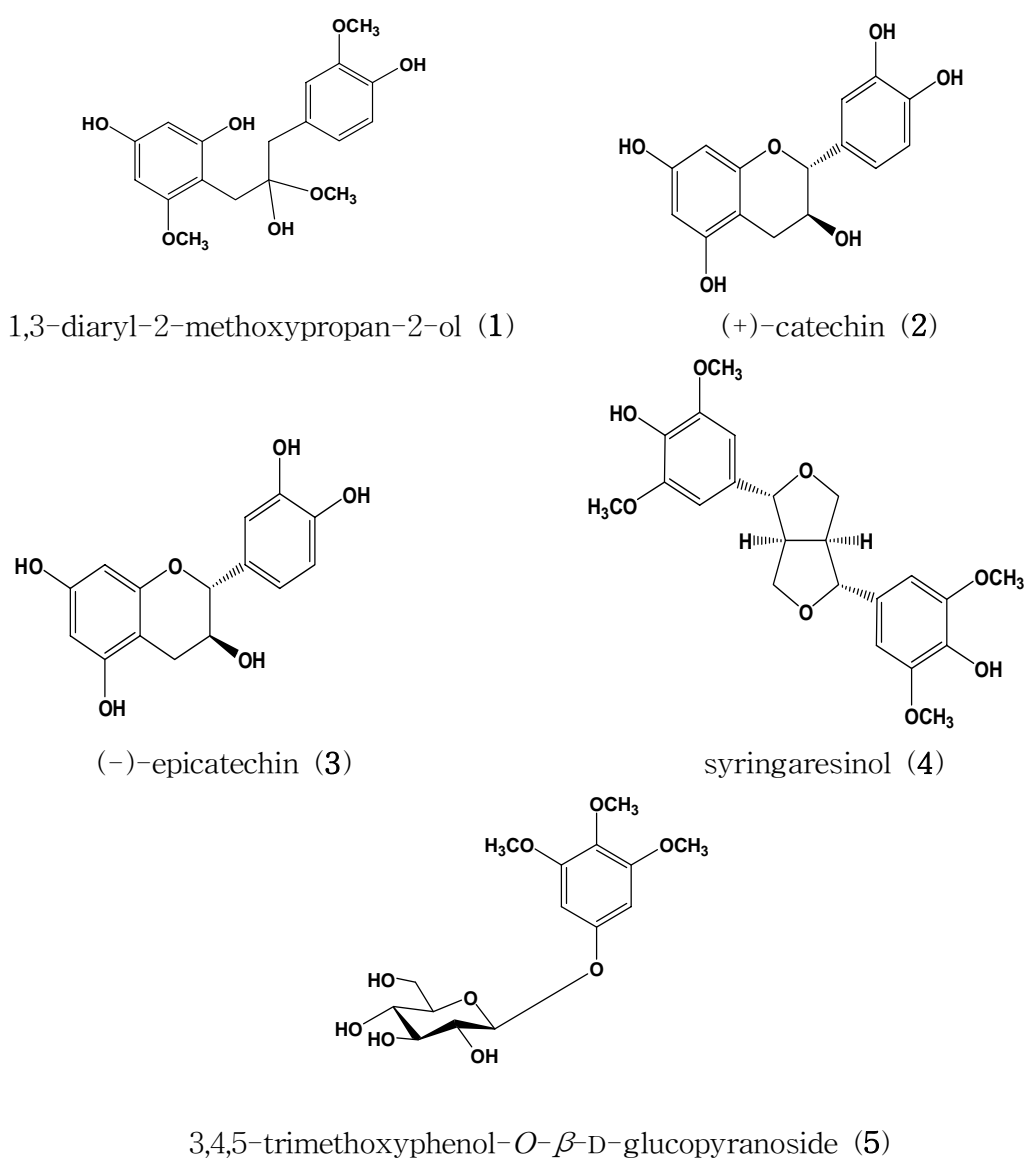


Fig. 1. Phenolic compounds from the stem wood of *Lindera glauca* Blume.