

순채(*Brasenia schreberi*)로부터 flavonoid의 분리 및 동정
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Flavonoids from *Brasenia schreberi*

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Objectives

Brasenia schreberi is a waterplant genus belonging to the family Ranunculales, consisting of one extant species widely distributed in warm temperate and tropical regions of the world. *B. schreberi* has the vernacular name water-shield. Aquatic plants is known to cause allelopathic growth inhibition of the cyanobacterium *Microcystis aeruginosa*. *B. schreberi* is one of the aquatic plants. Screening of alcohol extracts from *B. schreberi* revealed anti-cyanobacterial effects significantly to inhibit the growth of *B. schreberi* *in vitro*. Therefore, we initiated this study to isolate and identify flavonoids to from *B. schreberi*. *B. schreberi* was extracted with 80% MeOH and the concentrated extract was partitioned with EtOAc, *n*-BuOH and H₂O, successively. And repeated silica gel and ODS column chromatographies of the *n*-BuOH fraction led to isolation of two flavonoids. The structure of these flavonoids were determined with the result of spectroscopic data of NMR.

Materials and Methods

○ Materials

B. schreberi was collected from the pond situated in Je-Chun city, Chung-Chung Buk-Do, Korea. 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 *B. schreberi* (8 kg) was extracted three times at room temperature with 80% aqueous MeOH. And the concentrated extract was partitioned with EtOAc, *n*-BuOH and H₂O, successively. From the *n*-BuOH fraction, three 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 as flavonoids. This is the first study to isolate flavonoids 1, 2 and 3 from *Brasenia schreberi*.

Table 1. Isolation Procedure of *Brasenia schreberi*.

