

FLAVONES FROM *Daphne feddei*

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Daphne feddei Levl. is a common evergreen shrub native to Yunnan, Sichuan, and Guizhou Provinces in China. Its stem bark is used in folk medicine for the treatment of bruises and injuries from falls [1]. In a previous phytochemical investigation of *D. feddei*, the occurrence of four diterpenes has been reported [2]. In the course of a study on chemical constituents of Thymelaeaceae plants [3–6], thirteen flavones were isolated from the title plant.

The plant material was collected in July 2006 in Kunming City, Yunnan province, China, and identified as *Daphne feddei* Levl. by Prof. Li-shan Xie of Kunming Institute of Botany. A voucher specimen has been deposited in the Herbarium of the School of Pharmacy, Second Military Medical University, Shanghai (No. 200607-12).

The air-dried and powdered stem bark of *D. feddei* (6.5 kg) was extracted with methanol (50 L) for 3 × 2 h. The solvent was evaporated under vacuum. Then the extract was suspended in water and partitioned with petroleum ether, EtOAc, and *n*-butanol successively. The EtOAc extract (400 g) was subjected to column chromatography over silica gel RP-18 and Sephadex LH-20 in various solvent systems to afford thirteen flavones. The spectroscopic data of all compounds were in good agreement with the literature data. All these structures are isolated from *D. feddei* for the first time.

Genkwanin (1), yellow powder, C₁₆H₁₂O₅. ESI-MS, *m/z*: 285 [M + H]⁺, 283 [M – H][–] [7].

Apigenin (2), yellow powder, C₁₅H₁₀O₅. ESI-MS, *m/z*: 293 [M + Na]⁺, 269 [M – H][–] [8].

Kaempferol (3), yellow acicular crystal (MeOH), C₁₅H₁₀O₆, ESI-MS, *m/z*: 309 [M + Na]⁺, 285 [M – H][–] [9].

4',5-Dihydroxy-3',7-dimethoxyflavone (4), yellow powder, C₁₇H₁₄O₆, ESI-MS, *m/z*: 337 [M + Na]⁺, 315 [M + H]⁺, 313 [M – H][–] [10].

Chrysoeriol (5), yellow powder, C₁₆H₁₂O₆. ESI-MS, *m/z*: 323 [M + Na]⁺, 299 [M – H][–] [11].

Luteolin (6), yellow powder, C₁₅H₁₀O₆. ESI-MS, *m/z*: 309 [M + Na]⁺, 285 [M – H][–] [12].

Sakuranetin (7), yellow powder, C₁₅H₁₂O₅. ESI-MS, *m/z*: 295 [M + Na]⁺, 271 [M – H][–] [13].

Sakuranin (8), yellow powder, C₂₂H₂₄O₁₀. ESI-MS, *m/z*: 449 [M + H]⁺, 447 [M – H][–] [14].

Genkwanin-5-*O*-β-glucopyranoside (9), yellow powder, C₂₂H₂₂O₁₀. ESI-MS, *m/z*: 469 [M + Na]⁺, 445 [M – H][–] [15].

Luteolin-7-methylether-5-*O*-β-glucoside (10), yellow powder, C₂₂H₂₂O₁₁. ESI-MS, *m/z*: 485 [M + Na]⁺, 461 [M – H][–] [16].

Chrysoeriol 7-*O*-β-glucoside (11), yellow powder, C₂₂H₂₂O₁₁. ESI-MS, *m/z*: 485 [M + Na]⁺, 461 [M – H]⁺ [17].

7-*O*-β-Glucopyranosyl(-)afzelechin (12), yellow powder, C₂₁H₂₄O₁₀. ESI-MS, *m/z*: 459 [M + Na]⁺, 435 [M – H][–] [18].

Genkwanin-5-*O*-β-xylopyranosyl-(1→6)-β-glucopyranoside (13), white powder, C₂₇H₃₀O₁₄. ESI-MS, *m/z*: 601 [M + Na]⁺ [19].

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