

SECONDARY METABOLITES FROM CHLOROFORM EXTRACT OF *Genista tricuspidata*

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UDC 547.972

In a previous study we reported our results on the chemical composition of the *n*-butanol soluble part of the ethanol extract of *G. tricuspidata* Desf. [1].

In the present study we have examined the chloroform extract of this species.

Genista tricuspidata Desf. (Fabaceae) was collected during the flowering phase in May 2002, in the East of Algeria, and was authenticated by Dr. D. Sarri (Biology department, University of M'Sila Algeria) on the basis of Quezel and Santa [2]. A voucher specimen was deposited in the Herbarium of the Laboratory VAREN, Mentouri University, Constantine (GTL05/02).

Dried and powdered aerial parts of *Genista tricuspidata* (1200 g) were macerated with EtOH for 24 hours three times. The crude extract was concentrated at room temperature and diluted with 500 mL H₂O. The remaining aqueous solution was extracted successively with petroleum ether, CHCl₃, and *n*-BuOH. The organic layers were dried with Na₂SO₄ giving, after removal of solvents under reduced pressure, petroleum ether (1.3 g), CHCl₃ (15.33 g), and *n*-BuOH (33.46 g) extracts, respectively.

A part of the chloroform extract (10 g) was chromatographed on a 230–400 mesh silica gel column eluted with a gradient of CHCl₃–MeOH to yield 38 fractions. The separation and purification of five fractions were performed by TLC on silica gel eluted with *n*-hexane–EtOAc, *n*-hexane–Et₂O, and cyclohexane–acetone systems with different polarities to give five compounds (1–5). Purification of each compound for spectral analysis was carried out using MeOH over a Sephadex LH-20 column.

The structures of these compounds were elucidated by UV, 1D NMR, 2D NMR (¹H, ¹³C, DEPT, COSY, HSQC, HMBC, NOESY), and HR-EI-MS.

Compound 1: C₄₆H₈₀O₃, mp 121–123°C. All the spectroscopic data of this compound were in good agreement with 28-hydroxy-olean-12-ene 3β-palmitate or 28-hydroxy-olean-12-ene 3β-hexadecanoate or erythrodiol 3-palmitate [3, 4].

Compound 2: C₂₀H₄₀O, mp 108°C, was identified as phytol [5].

Compound 3: C₁₆H₁₆O₃, mp 148.5–149.5°C, was characterized as 7-methoxy-4'-hydroxyflavane [6].

Compound 4: C₃₀H₅₀O₂, mp 235–237°C, was characterized as erythrodiol (3β,28-dihydroxyolean-12-ene) [7].

Compound 5: C₂₁H₂₀O₁₂, mp 182–185°C, was identified as 3',4',5,7,3-pentahydroxy-3-*O*-glucosylflavone (isoquercitrin) [8, 9].

All the data were in good agreement with the respective literature data [10–12].

Compound 1 is described for the first time for the Fabaceae family, and compounds 2, 3, and 4 are new for the genus *Genista*. All these compounds are reported for the first time from *Genista tricuspidata*.

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