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A COUMARIN FROM THE ROOTS OF *Ferula nevskii*

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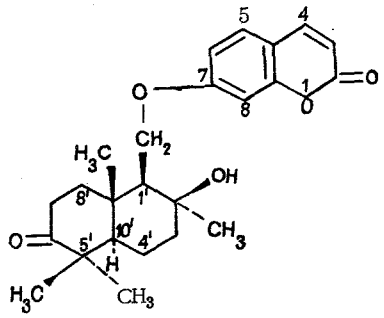
From the total extractive substances of the roots of *Ferula nevskii* by preparative separation on Silufol UV-254 plates (chloroform system) we have isolated a terpenoid coumarin with the composition $C_{24}H_{30}O_5$ (I), M^+ with m/e 398, mp 180-181°C (ethanol), R_f 0.09, not previously described in the literature, which we have called nevskone.

The IR spectrum of (I) has absorption bands at (cm^{-1}) 3510, 3470 (hydroxy group), 1720 (CO of a ketone in a six-membered ring), 1705 (CO of an α-pyrone), 1613, 1560, and 1510 (C=C of a coumarin system).

The NMR spectrum of nevskone (Varian JNM-4H 100/100 MHz, $CDCl_3$, 0 — TMS, δ scale) contains the signals of protons at 1.09 and 1.11 ppm ($CH_3-\overset{|}{C}-CH_3$, 3 H each, singlets), 1.22 ($-\overset{|}{C}-CH_3$, 3 H, singlet), 1.28 ($-\underset{OH}{\overset{|}{C}}-CH_3$, 3 H, singlet), 4.36 (Ar—O—CH—CH<, 1 H, quartet, J_{gem} = 10.0 Hz, J_{vic} = 4.0 Hz), 4.15 ppm (Ar—O—CH'—CH<, 1 H, quartet, J_{gem} = 10.0 Hz, J_{vic} = 3.0 Hz).

The signals of the protons of the coumarin system (5 H) resonate in the 6.20-7.70-ppm region. According to its composition and spectral characteristics, compound (I) is a new natural ketone of nevskin [1, 2]. The oxidation of nevskin formed nevskone. On the basis of the facts given, the following structure is suggested for the coumarin nevskone:



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