

COUMARINS FROM *Ferula korshinskyi*

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From an ethereal extract of the roots of *Ferula korshinskyi* Eug. Korov collected on the slopes of the mountains to the northeast of Lake Iskander-Kul' (Tadzhik SSR) by chromatography on silica gel we have isolated three terpenoid coumarins: (I) with the composition $C_{24}H_{30}O_4$, mp 137-138°C (ether), M^+ 382; (II), $C_{24}H_{28}O_4$, with mp 141-142°C (ether), M^+ 380; and (III) $C_{24}H_{30}O_4$ (ether) with mp 115-116°C, $[\alpha]_D^{20} -50.0^\circ$ (c 0.8 chloroform), M^+ 382. Substances (I) and (II) were identified by their IR and NMR spectra as conferol and conferone, respectively, which have been obtained from *F. mosshata* K. Pol [1] and *F. conacaula* Eug. Korov. Substance (III) is readily soluble in chloroform, sparingly soluble in carbon tetrachloride and ethanol, and insoluble in petroleum ether and water. The NMR spectrum ("Joel" - 60 MHz, in $CDCl_3$, δ scale, 0 - HMDS) showed the following signals: singlets at 0.82 ppm (3 H, $C_{10}-CH_3$), at 0.82 and 0.92 ppm (3H each, C_4-CH_3), and at 1.63 ppm (3H, C_8-CH_3), multiplets at 5.47 ppm (1H, olefinic proton at C_7) and at 3.7-4.15 (2 H, $Ar-O-CH_2$); and a triplet at 3.15 ppm (1H, hemihydroxyl proton at C_3). The signals of the protons of a 7-hydroxy-substituted coumarin nucleus appear in the 6.06-7.57-ppm region. The oxidation of (III) with chromium trioxide in acetic acid gave a ketone with the composition $C_{24}H_{28}O_4$, mp 141-142°C, a mixture of which with (II) showed no depression of the melting point. Thus, on the basis of its IR and NMR spectra and its conversion into conferone (II), substance (III) with mp 115-116°C has been shown to be identical with the fesselol from *F. pseudooreoselinum* K. Pol [3]. We have isolated the same substance from an ethereal extract of the roots of *F. latiloba* Eug Korov collected in the mountains of Mogol-Tau.

LITERATURE CITED

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