BRIEF COMMUNICATIONS

AN AROMATIC ALDEHYDE FROM *Ferula equisetacea*

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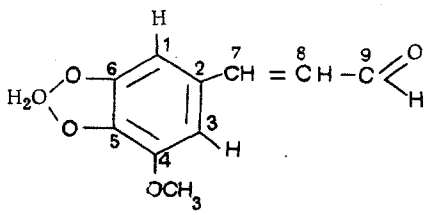
In addition to myristicin [1, 2], from the total extractive substances of the roots of *Ferula equisetacea* by adsorption chromatography on neutral alumina (activity grade IV) we have isolated an aromatic aldehyde not previously described in the literature with the composition $C_{11}H_{10}O_4$ (I), M^+ with m/e 208, mp 133-134°C (ethanol), R_f 0.48, which we have called equisetin.

The IR spectrum of (I) has absorption bands at (cm^{-1}) 3040, 1665, 1650, 1640, 1615, 970 (—CH=CH—, trans), 2810, 2730, 2705, 1680 (α,β-unsaturated —CHO), 1595, 1515, 1500 (aromatic ring), and 1050 and 922 (—O—CH_2—O—). The NMR spectrum of equisetin (Varian JNM-4H-100 MHz, $CDCl_3$, O — TMS, δ scale) shows the signals of protons at (ppm) 3.95 (—OCH_3, 3 H), 6.02 (—O—CH_2—O—, 2 H, singlet), 6.55 (—CH=CH—CHO, 1 H, quartet, $J_{8,9}$ = 7.5 Hz, $J_{8,7}$ = 15.3 Hz), 6.74 and 6.76 (hydrogen atoms of a benzene ring in the meta position in the form of two superposed doublets, 1 H each, $J_{1,3}$ = 1.5 Hz), 7.35 (—CH=CH—CHO, 1 H, doublet, $J_{7,8}$ = 15.3 Hz), and 9.62 (—CH=CH—CHO, 1 H, doublet, $J_{9,8}$ = 7.5 Hz).

The observed values of the chemical shift and the coupling constants of H-7 and H-8 protons are characteristic for the trans configuration of olefinic protons conjugated with a carbonyl group [3]. On the basis of the spectral facts given above, the following structure is suggested for equisetin:



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