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A SESQUITERPENE LACTONE FROM *Ferula malacophylla*

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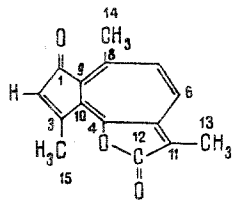
From the combined extractive substances of the fruits of *Ferula macrophylla* [1] by adsorption chromatography on neutral alumina (activity grade IV) we have isolated a previously unreported sesquiterpene compound with the composition $C_{15}H_{12}O_3$ (I), M^+ with m/e 240, mp 256°C (decomp.), R_f 0.61, which we have called malaphyllidin. In the IR spectrum of (I) there are adsorption bands at (cm^{-1}) 1745 (CO of a γ-lactone), 1680 (CO of an α,β-unsaturated pentanone), and 1630, 1585, and 1545 (double bonds in conjugation).

The NMR spectrum of malaphyllidin has signals of protons at 2.12, 2.64, and 2.70 ppm (3 =C—CH_3, 3 H each), and 6.88 and 7.18 ppm (=C_6—H and =C_7—H, doublets, 1 H each, $J_{6,7}$ = 12 Hz). According to its elementary composition and spectral characteristics, malaphyllidin has the structure of 1-oxoguaia-2,4,5,6,8-pentaen-4,5-olide;



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