DESACETYLMATRICARIN FROM ARTEMISIA INCANA

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Artemisia incana L. (druge) (Art. fasciculata var. iberica et var. armeniaca Bess) is endemic to the Caucasus [1]. We have studied plants collected on July 17, 1967, in the budding phase. Water extraction of the herb [2] yielded a substance (I) $C_{15}H_{18}O_4 \cdot H_2O$ with mp 149-150.5° C, yield 0.15%.

The IR spectrum of I has an absorption band at 3550 cm^{-1}, a broad band at 3450-3350 cm^{-1} (OH group), and bands at 1771 cm^{-1} (carbonyl group of a lactone ring), 1683 cm^{-1} (α,β-unsaturated ketone) and 1621 and 1641 cm^{-1} (conjugated C=C bond).

With acetic anhydride I forms an acetyl derivative, $C_{17}H_{20}O_5$, mp 190-192.5° C (kofler). IR spectrum (cm^{-1}): 1790 (γ-lactone), 1745 and 1250 ($OCOCH_3$), 1690 (α,β-unsaturated ketone), 1650 and 1620 (conjugated C=C).

The constants of the substance under consideration and those of its derivatives agree completely with those of desacetylmatricarin, a sesquiterpene lactone isolated from Artemisia leucoides, A. tilesii, A. austriaca, A. lercheana [2-5], and Achillea lanulosa [6]. A mixture with authentic desacetylmatricarin gave no depression of the melting point. Unambiguous results were obtained in a thin layer of alumina.

Thus, the herb Artemisia incana contains the sesquiterpene lactone desacetylmatricarin.

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