SESQUITERPENE LACTONES OF Artemisia santonica

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Artemisia santonica L. is given in the "Flora of Azerbaidzhan" under the name Artemisia monogyna Waldst. et Kit. [1]. T. G. Leonova [2] has restored the forgotten prior Linnaean name Artemisia santonica L.

The plant material investigated was collected by A. N. Aleskerova in the Shemakhinskii region between the villages of Agdere and Kasumkend (February 8, 1980) and was determined by T. G. Leonova (V. L. Komarov Botanical Institute of the Academy of Sciences of the USSR). By column chromatography on neutral alumina of the resin obtained by double extraction of the epigeal part of *Art. santonica*, two substances belonging to the group of sesquiterpene lactones were isolated in the individual state. Substance (I), $C_{15}H_{18}O_3$, mp 171-173°C (from aqueous ethanol). The IR spectrum showed the absorption bands of the CO group of a γ -lactone ring (1785 cm⁻¹), of the CO of a conjugated ketone group in a six-membered ring (1660 cm⁻¹), and of conjugated double bonds (1630 and 1620 cm⁻¹).

A comparison of the composition, melting point, and IR and NMR spectra of compound (I) with those of α -santonin showed their identity. A mixture of (I) with an authentic sample of α -santonin gave no depression of the melting point.

Substance (II), $C_{15}H_{18}O_4$, mp 201-202°C (from ethanol). The IR spectrum contained the absorption bands of an OH group (3500 cm⁻¹), of a CO group of a γ -lactone ring (1780 cm⁻¹), the CO of a conjugated ketone group in a six-membered ring (1670 cm⁻¹), and of conjugated double bonds (1640, 1620 cm⁻¹). Acetylation by a known method [3] led to an acetyl derivative of (III) with the composition $C_{17}H_{20}O_5$, mp 199-200°C (from aqueous ethanol). The IR spectrum of the latter had the band of the CO group of a γ -lactone ring, the CO of an aldehyde group, and of conjugated double bonds. There was no band of an OH group.

A comparison of the IR spectra of compound (II) and of artemisin showed their identity. A mixture of the compounds being compared gave no depression of the melting point.

There is information in the literature [4] on the isolation of the sesquiterpene lactones mibulactone and monogynin from Artemisia monogyna Waldst. et Kit. This is the first time that α -santonin and artemisin have been isolated from Art. santonica L.

LITERATURE CITED

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