A TRITERPENE ALCOHOL FROM *Xeranthemum cylindricetum*

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When an acetone extract of the epigeal part of *Xeranthemum cylindricetum* collected in the Kusarskii region of the Azerbaidzhan SSR in the period of flowering was chromatographed on a column of alumina (50 × 3.5 cm), from the fractions eluted with a mixture of hexane and ether (1:4) we isolated a crystalline substance with the composition $C_{30}H_{50}O$, mp 195-196°C (acetone—methanol).

The IR spectrum (UR-20 in paraffin oil) of the substance showed absorption bands of an OH group (3400 cm^{-1}) and of a double bond (3080, 1645, 880 cm^{-1}).

The UV spectrum had no maxima in the 220-400 nm region.

The NMR spectrum (δ scale, Varian HA-100D in a mixture of $CDCl_3$ + CCl_4, internal standard TMS) had the signals of methyl groups at 0.75, 0.84, 0.88, 0.92, 0.95, 1.01, and 1.04 ppm with a total area of 21 H (7 CH_3—), the one-proton quartet of a hemihydroxylic proton group at 3.18 ppm ($J_1 = 10$, $J_2 = 5$ Hz), showing the secondary nature of the OH group, and the singlets of an exocyclic methylene group at 4.57 and 4.60 ppm. The presence in the NMR spectrum of two doublets of a $CH_2{=}C\!<$ group shows that the compound belongs to the α-amyrin, and not the β-amyrin, group.

The presence of a hydroxy group in the molecule of the substance was shown by acetylation. This gave a monoacetyl derivative, $C_{31}H_{52}O_2$, mp 216-217°C (from acetone) in the IR spectrum of which the band at 3400 cm^{-1} had been replaced by maxima at 1730 and 1250 cm^{-1} (CO of an acetyl group). The NMR spectrum of the latter compound has confirmed the formation of a monoacetyl derivative (singlet at 2.0 ppm with an area of 3 H, $CH_3{-}C(=O){-}O{-}$).

Oxidation of the compound with chromium trioxide in acetic acid solution led to a keto derivative $C_{30}H_{48}O$, mp 175-177°C.

The IR spectrum of the oxidized product lacked the band of a hydroxy group and instead there was a maximum at 1705 cm^{-1}; the PMR spectrum lacked the quartet (at 3.18 ppm) corresponding to a proton geminal to a OH group.

In the literature, stereoisomeric triterpene alcohols differing from one another by the cis [1, 2] and trans [3] linkage of rings D and E are known.

A comparison of the melting points, compositions, and IR and PMR spectra of the substance that we had isolated with those of the triterpene alcohol, from *Centaurea squarrosa* [1, 2] showed their identity.

LITERATURE CITED

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