

Hydrogenation of the epitorulosol gave the previously undescribed tetrahydroepitorulosol $C_{20}H_{38}O_2$ with mp 77–79°C, $[\alpha]_D^{20} + 18.8^\circ$ (c 2.62; chloroform). IR spectrum: 1020, 3610, 3640 cm^{-1} . The oxidation of tetrahydroepitorulosol with chromic anhydride in pyridine led to a saturated aldehyde $C_{20}H_{36}O_2$. IR spectrum: 1710, 2720 (CO) and 3610 (OH) cm^{-1} .

We obtained the samples of epimanool (mp 36.5–38.5°C) and epitorulosol (mp 109–112°C) from Dr. Rowe (Wood Products Laboratory, Wisconsin, USA).

REFERENCES

1. E. N. Shmidt, A. I. Lisina, and V. A. Pentegova, *Izv. SO AN SSSR*, no. 3, 52, 1964.
2. H. Wienhaus, P. Wolegang, H. Seibt and H. Dässler, *Chem. Ber.*, 93, 2625, 1960.
3. J. Haeuser, *Bull. Chim. Soc. Franc.*, 8–9, 1490, 1961.
4. T. Norin, G. Ohloff and B. Willhalm, *Tetrah. Lett.*, 39, 3523, 1965.
5. J. Haeuser, *Bull. Soc. Chim. Franc.*, 9, 2645, 1965.
6. W. Sandermann and K. Bruns, *Tetrah. Lett.*, 42, 3757, 1965.
7. C. Enzell, *Acta. Chem. Scand.*, 15, 6, 1961.
8. J. W. Rowe and G. H. Scroggins, *J. Org. Chem.*, 29, 1554, 1964.
9. J. W. Rowe and G. W. Shaffer, *Tetrah. Lett.*, 30, 2633, 1965.

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TRITERPENES IN PLANTS OF THE FAMILY ERICACEAE

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In an investigation of the defoliated shoots of Ledum palustre L. var. angustum E. Fisch., collected in the Transbaikalia and Cassandra calyculata Don. collected in Leningrad Oblast, we have found three triterpene compounds in them.

From L. palustre we isolated uvaol, taraxerol, and ursolic acid. The uvaol was identified from its melting point, IR spectrum, and acetylation products. A sample of uvaol for a mixed melting point test was obtained by reducing the acetate of methyl ursolate with lithium aluminum hydride.

The taraxerol was identified from its melting point, mixed melting point, UV spectrum, and the preparation of the acetate. This substance has been found previously [1] in L. palustre L. var. vulgare.

The ursolic acid was identified by a direct comparison with an authentic sample. The methyl ester, the acetate of the methyl ester, and the diol obtained from the acid had properties corresponding to those described in the literature for the corresponding derivatives of ursolic acid.

From Cassandra calyculata Don, in addition to uvaol and ursolic acid we have isolated and identified β -amyrin.

REFERENCE

1. A. A. Ryabinin and L. G. Matyukhina, *ZhOKh*, 31, 1036, 1961.

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