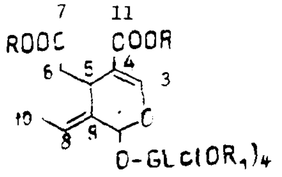
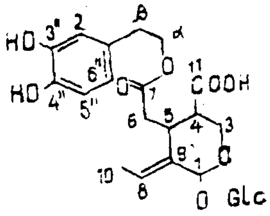
yloleuropein is proposed. The NMR spectra of compounds (I), (III), and (IV) corresponded to those given in the literature [2-7].

We are the first to have isolated compound (II) and (IV) from common lilac bark, (IV) having been isolated previously only from Ligustrum lucidum and L. japonicum L. [2], while demethyloleuropein (II) is a new natural compound.



V $R=R_1=H$

VI $R=CH_3; R_1=Ac$



II

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COMPONENTS OF Artemisia santolinifolia

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Artemisia santolinifolia Turcz. is one of the common species of wormwood growing on Mongolian territory. According to the results of an analysis that we have performed by K. S. Rybalko's method [1], this species contains lactones. To isolate the lactones, the epigeal part of Artemisia santolinifolia (5 kg), gathered in the environs of Gurvan-Saikan Ula, South Gobi aimak, in the flowering stage was extracted four times with chloroform (1:5). The evaporated extract was treated with 50% aqueous ethanol. After the precipitate had been removed, the lactones were extracted from the filtrate with chloroform. The dry residue (68 g) obtained by vacuum evaporation was separated on a chromatographic column containing KSK silica gel (ratio 1:30), with elution by hexane—ethyl acetate solvent systems containing increasing concentrations of the latter. As a result of the chromatographic separation, four crystalline substances were isolated (I-IV):

I) $C_{15}H_{20}O_3$, mp 117-118°C (from hexane), M^+ 248; II) $C_{15}H_{20}O_3$, mp 109-110°C (from hexane), M^+ 248; (III) $C_{29}H_{50}O$. mp 140-141°C (from acetone), M^+ 414; (IV) $C_9H_6O_3$, mp 228-230°C (from benzene), M^+ 162.

The IR spectrum of (I) had absorption bands at (cm^{-1}) 1775 (γ-lactone) and 1715 (C=O in a six-membered ring); the UV spectrum had no maxima characteristic of conjugation; in the PMR spectrum of (I) the signals of three methyl groups were characteristic: a doublet at 1.16 ppm, a singlet at 1.26 ppm (methyls on tertiary and quaternary carbon atoms) and a singlet

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at 1.90 ppm (methyl group on a carbon with a double bond).

The signal of the lactone proton consisted of a doublet at 4.75 ppm with J = 10 Hz, the spin–spin coupling constant of which showed the trans-linkage of the lactone ring.

The structure deduced from the above facts corresponded to the known lactone taurin [2].

Compound (II), obtained in very low yield by the rechromatography of the mother solutions from (I), was a stereoisomer of taurin.

This conclusion followed from the results of a comparison of their mass and PMR spectra. The mass-spectrometric fragmentations of lactones (I) and (II) were completely identical, while the PMR spectra differed mainly by the chemical shifts (CSs) of the signal of the lactone proton: in (I) it was a doublet at 4.75 ppm, J = 10 Hz, and in (II) a doublet at 4.50 ppm, J = 10 Hz. Such a difference in the CSs of the lactone protons is characteristic for lactones differing by the orientation of a methyl group in the γ-lactone ring. With the β-orientation of the methyl group, through the screening effect the signal of the lactone proton is shifted upfield. Consequently compound (II) was the β-isomer of taurin at the C-11 center and corresponded to the lactone 1-oxo-6β,7α,11β-eudesman-6,12-olide [3].

Compound (III) was identified as β-sitosterol [4], and (IV) as 7-hydroxycoumarin (umbelliferone) [5].

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ACID SUCCINATES OF DITERPENE ALCOHOLS – A NEW TYPE OF COMPONENTS OF CONIFER OLEORESINS

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UDC 547.597

In recent years groups of compounds previously unknown for the oleoresins of coniferous plants of the family Pinaceae have been found in them – ferulates of monoterpene alcohols [1], triterpene acids [2], and acid succinates of labdane acids [3, 4].

On continuing an investigation of the chemical composition of the oleoresin of the Schrenk spruce (*Picea schrenkiana* Fisch.) [5], we found that this fraction contained a compact mixture, readily isolated by chromatography in the form of methyl esters, of acid 18-O-succinates of diterpene alcohols – abietinol, palustrol, dehydroabietinol, neoabietinol (the main components, present in approximately equal amounts), levopimarinol, isopimarinol, and pimarinol. A mixture of the methyl esters of these succinates giving a single spot in TLC on SiO_2 and a set of overlapping spots in TLC on SiO_2 + 5% of $AgNO_3$ was isolated by the chromatography on silica gel of the methylated total acids of the oleoresin (yield 1.7% on the total acids).

The IR spectrum of the resulting methyl esters of acid succinates had no absorption band of a free hydroxy group but there was a band at 1730 cm^{-1} of approximately double the intensity of that in the IR spectrum of palustrol acetate. The PMR spectrum (400 MHz, $CDCl_3$) exhibited the signals of the olefinic protons that are characteristic for the above-mentioned alcohols, and also the singlet signal of the protons of the $COOC\underline{H}_3$ group (3.66 ppm), a multiplet due to

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