

Thus, this arrangement of a compound of the caryophyllene type into a compound of the selinane type, the first ever performed, has shown a possible biogenetic link of the sesquiterpenoids of these structural types.

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TRITERPENOIDS OF THE BARK AND TWIGS OF Betula dahurica

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In connection with the complex utilization of raw material, a chemical study has been made of an extract of the outer bark (0.5 kg) [1]. and of the twigs (0.7 kg) of Betula dahurica.

The bark was exhaustively extracted with diethyl ether. The combined ethereal extract was evaporated (24 g) and chromatographed on silica gel L 100/160 μ m. Six substances of triterpene nature (I, II, IV-VII) and β -sitosterol (III) were isolated. All the compounds and also their derivatives, obtained by the usual methods, gave no depression of the melting points in admixture with authentic samples.

	Substance	mp, °C	Yield, %
I.	Oleanolic acid acetate	262-265 [2]	0.6
	Methyl oleanolate acetate	219-220 [2]	
II.	Lupeol	212-213 [2]	0.04
	Lupeol acetate	218-220 [2]	
III.	β -Sitosterol	138-139 [3]	0.03
	β -Sitosterol acetate	145-147 [3]	
IV.	Allobetulin	279-280 [4]	0.02
	Allobetulin acetate	284-284.5 [4]	
V.	Betulin	258-260 [2]	0.08
	Betulin diacetate	221-223 [2]	
VI.	Oleanolic acid	306-308 [2]	0.4
	Methyl oleanolate	198-200 [2]	

The structure of triterpene (VII) is being studied.

From an ethereal extract of the twigs we isolated and identified β -sitosterol (III) (0.07%), oleanolic acid acetate (I) (0.06%); oleanolic acid (VI) (0.002%), and fatty acids (0.01%). The fraction containing the fatty acids was methylated and studied by the GLC method. The methyl esters were identified on a Shimadzu LC-5A chromatograph with Supelcoport, 100-120 mesh, impregnated with 3% of Carbowax 20M, under isothermal conditions (215°C). It was established that the fatty acid fraction consisted of a mixture of three main acids: palmitic, oleic, and linoleic.

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