which almost completely acidified the sn-1- and sn-2-positions, respectively. Among the unsaturated acids, the 18:1 species predominated, and in the PE the 18:2 acid. A feature of the acid fraction of the phosphono-PE is high, in comparison with the PE, proportion of the 16:0 acid, and also the presence in it of appreciable amounts of the 18:3 acids. This difference in the composition of the FAs is possibly due to the particular role of individual molecular species of different varieties of ethanolamine-containing lipids in the cell membranes of kenaf seeds.

Thus, the structures of plant phosphonophosphatidylethanolamines and their substrate, spectral, and chromatographic properties have been elucidated for the first time.

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PHYTOCHEMICAL STUDY OF Lagochilus proskorjacovii

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The genus Lagochilus, family Lamiaceae, consists of 44 species, and 38 species of this plant grow in Central Asia [1].

We have investigated the epigeal part of Lagochilus proskorjacovii Ikram., collected at the time of flowering in the Fergana province (1984). The comminuted air-dry raw material (0.65 kg) was extracted with three-liter portions of chloroform five times. The chloroform extracts were combined and distilled, and the residue was evaporated to dryness and was chromatographed on a column of type L 100/160 silica gel. Elution was performed with hexane–ether (2:1). This led to the isolation of six individual substances.

Substance (I), oily, $C_{28}H_{44}O_9$, $[\alpha]_D^{20}$ +17.8°. Its IR spectrum contained absorption bands at 1735 and 1095 cm^{-1} and the mass spectrum contained the peaks of ions with m/z 524 (M^+), 282, 269, and 256. The alkaline hydrolysis of (I) formed lagochilin with mp 167-168°C.

From its IR and mass spectra and the results of chemical transformations, and also by comparison with an authentic sample, it was established that compound (I) was tetraacetyllagochilin [2].

Substance (II) – $C_{20}H_{36}O_5$, mp 167-168°C (from acetone) was lagochilin (mixed melting point) [2].

Substance (III) – $C_{17}H_{14}O_5$, mp 173-174°C (from acetone). On the basis of the results of mass spectroscopy, qualitative reactions, and a comparison with an authentic sample, it was established that substance (III) was 5-hydroxy-4',7-dimethoxyflavone [3, 4].

Substance (IV) – $C_{17}H_{14}O_6$, mp 230-232°C (from benzene). The IR spectrum had absorption bands at 1614, 1650, and 3130 cm^{-1}. In the mass spectrum there were peaks of ions with m/z 315 (M^+), 285, and 271.

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On acetylation, substance (IV) formed a diacetyl derivative with mp 160-162°C (from petroleum ether). According to the results of IR, PMR, and mass spectroscopy and of chemical transformations it was established that substance (IV) was 5,7-dihydroxy-3,4'-dimethoxyflavone [5].

Substance (V) – $C_{29}H_{60}$, mp 63°C (from petroleum ether) had physicochemical constants corresponding to those of nonacosane [3].

Substance (VI) – $C_{29}H_{50}O$, mp 137-138°C (from methanol) – corresponded to β-sitosterol [3]. This is the first time that any of the substances isolated have been detected in Lagochilus proskorjacovii Ikram., and the first time that 5,7-dihydroxy-3,4'-dimethoxyflavone has been detected in the genus Lagochilus. The flavonoid has been found previously only as a component of propolis [5].

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PHENOLCARBOXYLIC ACIDS OF Organum vulgare

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Common origanum, Origanum vulgare L., contains an essential oil, flavonoids, tanning substances, and ascorbic acid [1], and oleanolic and ursolic acids and heteropolysaccharides [2]. In the phenolic complex, flavonoids make up 2.45%, phenolcarboxylic acids 5.32% and tanning substances 4.66%. We have previously reported a study of the composition of the flavonoids [3].

The phenolcarboxylic acids of common origanum have been studied inadequately. To obtain the total phenolcarboxylic acids, the raw material was extracted with 70% ethanol. The ethanol was distilled off and the aqueous extract was purified with chloroform. Then the acids were extracted with ethyl acetate, after the distillation of which an amorphous mass was obtained which was treated with hot water. The total phenolcarboxylic acids obtained after the water has been distilled off possessed an antimicrobial action.

The total phenolcarboxylic acids were separated on a column of polyamide sorbent in combination with paper chromatography. The column was washed with increasing concentrations of ethanol. The compositions of the eluate were investigated by paper chromatography in system: 1) 2% CH_3COOH and 2) butan-1-ol–CH_3COOH–H_2O (4:1:2). Recrystallization was carried out from mixtures of ethanol and chloroform.

The phenolcarboxylic acids were identified from their chromatographic behavior, melting points, the results of alkaline fusion and hydrolysis and of elementary analysis, and their UV and IR spectra. Comparison with authentic samples led to the identification of cinnamic, caffeic, chlorogenic, p-hydroxybenzoic, vanillic, syringic, and protocatechuic acids.

This is the first time that cinnamic, p-hydroxybenzoic, vanillic, syringic, and protocatechuic acids have been isolated from common origanum.

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