of the 2-phenylbenzo-γ-pyrone nucleus. The substitution of the lateral phenyl radical by the carbohydrate component at position 4' was confirmed by the methylation of the glycoside followed by the hydrolysis and alkaline degradation of the resulting methylated genin, which formed p-hydroxybenzoic acid.

On the basis of the facts given, the structure of the aglycone can be represented as 4',5,7,8-tetrahydroxyflavone (isoscutellarein), with the sugar component attached at position 4'. The order of attachment of the D-mannose and D-glucose in the bioside, and also the configurations of the glycosidic bonds were determined as described for stachyflaside [2], since the sugar components of these compounds were identical.

Thus, the structure of isostachyflaside can be represented as 4'-O-[O-β-D-mannopyranosyl-(1→2)-β-D-glucopyranosyl-5,7,8-trihydroxyflavone.

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POLYPHENOLS OF *Lonicera microphylla*

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UDC 547.972

We have studied the leaves of *Lonicera microphylla* for their polyphenol content. The air-dry raw material subjected to preliminary treatment with benzene was extracted with 80% methanol and ethyl acetate. Seven individual substances were isolated from the ethyl acetate extract by column chromatography.

By a comparison of physicochemical constants and spectral characteristics, substances (I) and (II) were identified as luteolin and quercetin, respectively. A substance with the composition $C_{21}H_{20}O_{11}$, mp 240-242°C, R_f 0.22-0.24, λ_{max} 352, 256 nm, $[\alpha]_D^{20}$ −84.6° (c 0.3; methanol) was split by hydrolysis with 10% sulfuric acid into luteoline and galactose in a molar ratio of 1:1.

Spectral investigations in the UV region showed that the sugar in substance (III) was located at C_7 [1]. The results of a comparison of the $[M]_D$ value of the glycoside under investigation with that of phenyl galactoside showed the presence of a furanose ring and of the β linkage of the galactose [2]. These results were confirmed by those of differential spectroscopy in the IR region (890, 1030, 1069 cm^{-1}), and of the NMR spectrum of the TMS ether in CCl_4: δ = 4.70 ppm (1 H, J = 7 Hz) [3]. Thus, flavonoid (III) is 3',4',5,7-tetrahydroxyflavone 7-O-β-D-galactofuranoside.

By qualitative reactions and the results of chromatography with known materials, substances (IV-VII) were identified as p-hydroxybenzoic, protocatechuic, vanillic, and p-coumaric acids [4].

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FLAVONOIDS OF *Dianthus pseudosquarrosus*

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We have investigated the epigeal part of *Dianthus pseudosquarrosus*, family Caryophyllaceae. The air-dry raw material was exhaustively extracted with 50% ethanol. The extract was evaporated until the ethanol had been driven off, and the aqueous residue was treated with chloroform. The purified extract was evaporated, the residue was dissolved in ethanol, and saponins were precipitated with a mixture of acetone and ether (1:1).

Chromatography of the extract in various solvent systems showed that the plant contained not less than 12 flavonoids giving dark brown fluorescence in UV light. When the spots were treated with a solution of zirconium nitrate, they fluoresced dull yellow, and on subsequent treatment with ammonia vapor the color intensified and differentiated into light green, yellow-orange, or lemon yellow. Some of the flavonoids were isolated by column chromatography on polyamide sorbent and "hydrocellulose" and also by preparative paper chromatography.

In the investigation of the compounds isolated we used: UV spectroscopy with diagnostic reagents [1], acid and enzymatic hydrolyses, comparison of the compounds isolated in various systems of solvents with authentic specimens of known flavonoids, and also literature information [2]. In a study of the aglycones, the acid hydrolysis of the extract and of the individual glycosides with 15% hydrochloric acid and with Kiliani's mixture [3] was performed.

The results of the investigations showed that flavonoids 1, 2, and 3 belonged to the flavone class with apigenin as the aglycone. The absorption bands in the ultraviolet spectra of alcoholic solutions were in the 270-275 and 330-335-nm ranges. Substance 1 with mp 235-236°C was identified as isosaponarin, substance 2 with mp 258-260°C as saponaretin, and substance 3 with mp 264-265°C as vitexin.

Ethanolic solutions of flavonoids 4, 5, and 6 had absorption bands in the UV region of the spectrum at 275-280 and 340-350 nm, and in all cases there was a "shoulder" in the 255-260-nm region, which is characteristic for luteolin derivatives. This conclusion was also confirmed by the results of acid hydrolysis. An investigation of the compounds mentioned enabled them to be identified as luteolin 7-glucoside (substance 4, mp 253-254°C), luteolin 7-diglucoside (substance 5, mp 248-250°C), and luteolin 5-glucoside (compound 6, mp 280-281°C).

The study of the plant is continuing.

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