O-ACYLATED FLAVONOID GLYCOSIDES OF *Sedum kamtschaticum*

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The supplementary chemical study of the flavonoids of the epigeal part of *Sedum kamtschaticum* Fisch. (Kamchatka stonecrop) has shown that, in addition to the myricetin 3-glucoside and myricetin 3-galactoside described previously [1], the plant contains their galloyl derivatives: compound (I) with mp 210-216°C (decomp.) and compound (II) with mp 220-224°C (decomp.).

The two compounds have similar maxima in the UV spectrum (nm): MeOH 265, 300 sh., 365; MeONa 270, 328, 410; NaOAc 273, 395; NaOAc + H_3BO_3 263, 300, 388; $AlCl_3$ 268, 444; $AlCl_3$ + HCl 272, 370, 410 sh. The acid hydrolysis of (I) and (II) formed equimolar amounts of myricetin (M^+ 318) and gallic acid (M^+ 170); glucose was detected in a hydrolyzate of (I) and galactose in (II). On saponification in a methanolic solution of ammonia under the conditions described by Collins et al., [2], (I) and (II) were converted, respectively, into myricetin 3-glucoside and myricetin 3-galactoside, which were identified by comparison with authentic samples. The acetylation of (I) and (II) (Ac_2O, C_5H_5N) led to undecaacetates in the PMR spectra of which there were the signals of eight aromatic (2.46-2.14 ppm, 24 H) and three aliphatic (2.05-1.83 ppm, 9 H) acetoxy groups.

The PMR spectra of the TMS ethers (100 MHz, CCl_4) of compounds (I) and (II) were practically identical, containing two two-proton singlets at 7.0 and 6.92 ppm (H-2',6' and H-2''', 6'''), and two doublets of meta protons with J = 2.5 Hz at 6.3 (H-8) and 6.06 ppm (H-6). The signal of the anomeric proton (doublet with J = 7 Hz at 5.75 ppm) is characteristic for 3-β-D-glucopyranosides and 3-β-D-galactopyranosides. The remaining protons of the hexose residue formed a group of overlapping signals at 3.7-3.2 ppm (4 H) and two signals with J_{gem} = 12 Hz at 4.36 (1 H) and 4.0 ppm (1 H).

The fact that compounds (I) and (II) are esters (ν_{CO} 1700 and 1706 cm^{-1}, respectively) and the paramagnetic shift of the signals of the two geminal protons in their PMR spectra corresponding to the acylation of the CH_2OH group permit the following structures to be suggested: (I) — myricetin 3-O-(6"-O'-galloyl-β-D-glucopyranoside); and (II) — myricetin 3-O-(6"-O-galloyl-β-D-galactopyranoside).

The isolation of these compounds from *Tellima grandiflora* together with ten groups of galloyl derivatives of flavonol glycosides has been reported in the literature [2]. However, no constants were given apart from R_f values and UV spectra.

The lability of compounds (I) and (II) must be mentioned; when their trimethylsilyl ethers were decomposed, in some cases the splitting out of the acyl residue also took place.

LITERATURE CITED

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2. F. W. Collins, B. A. Bohm, and C. K. Wilkins, Phytochemistry, 14, 1099 (1975).

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