

The present paper gives the results of a chemical study of two C-glycosides of flavonoids and of a flavonol bioside first isolated [1, 2] from tick clover and designated (I-III).

Substance (I) has the composition $C_{26}H_{28}O_{14}$, mp 198-203°C. UV spectrum, nm: $\lambda_{\text{max}}^{\text{init}}$ 340, 271; $\lambda_{\text{max}}^{+\text{CH}_2\text{COONa}}$ 336,* 315,† 276; $\lambda_{\text{max}}^{+\text{CH}_3\text{ONa}}$ 400, 336,* 281; $\lambda_{\text{max}}^{+\text{H}_3\text{BO}_3+\text{CH}_3\text{COONa}}$ 358, 325,* 271; $\lambda_{\text{max}}^{+\text{AlCl}_3}$ 390,* 350, 305,* 278. The acetate of substance (I) has the composition $C_{44}H_{46}O_{23}$, mp 208-213°C. In the products of hydrolysis by 0.5% HCl, β -D-xylopyranose and saponaretin (apigenin 6-C- β -D-glucopyranoside) were detected. The results of UV spectroscopy with ionizing reagents showed that the xylose is attached to the glucose of the saponaretin. Substance (I) is not hydrolyzed by rhamnodiastase and absorbs 3 moles of HIO_4 with the liberation of 1 mole of formic acid, which shows a possible 1 → 2 linkage between the xylose and the glucose.

Substance (II) has the composition $C_{26}H_{28}O_{15}$, mp 197-205°C. UV spectrum, nm: $\lambda_{\text{max}}^{\text{init}}$ 350, 272, 256,† 244,*; $\lambda_{\text{max}}^{+\text{CH}_3\text{COONa}}$ 398, 330,† 280, 270; $\lambda_{\text{max}}^{+\text{CH}_3\text{ONa}}$ 404, 338,† 302, 278; $\lambda_{\text{max}}^{+\text{H}_3\text{BO}_3+\text{CH}_3\text{COONa}}$ 373, 266; $\lambda_{\text{max}}^{+\text{AlCl}_3}$ 425, 340,† 278, 272. The products of the hydrolysis of substance (II) with 0.5% HCl were found to contain β -D-xylose and homoorientin (luteolin 6-C- β -D-glucopyranoside). On the basis of the results of chemical and spectral investigations it was found that in substance (II), as in substance (I), the xylose is attached to the glucose of homoorientin by a 1 → 2 bond.

Substance (III) has the composition $C_{27}H_{30}O_{16}$, mp 190-192°C, and it was identified by its physico-chemical properties, UV spectra, and the results of chemical investigations as 3',4',5,7-tetrahydroxyflavone 3- β -D-rutinoside (rutin).

LITERATURE CITED

1. N. V. Chernobrovaya, N. F. Komissarenko, V. S. Batyuk, and D. G. Kolesnikov, *Khim. Prirodn. Soedin.*, 634 (1970).
2. V. S. Batyuk, N. V. Chernobrovaya, and D. G. Kolesnikov, "The phytochemistry of Balkan flora," Abstracts from an International Symposium on Natural Compounds [in Russian], Varna (1971), p. 34.

* Low-intensity absorption band.

† Shoulder.

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