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Continuing an investigation of the mixture of flavonoids from the epigeal part of *Ortantha lutea* (L.) Kern [1], we have isolated three individual substances, A, B, and C, the flavonoid nature of which was confirmed by the appropriate reactions [2].

From its  $R_f$  values in various systems and Bryant's cyanidin reaction, flavonoid A was shown to be an aglycone and flavonoids B and C glycosides. Substance A,  $C_{16}H_{12}O_6$ , has mp 330-331°C (from aqueous methanol),  $R_f$  0.49 in the benzene-ethyl acetate-acetic acid (70:30:2) system [paper impregnated with formamide-methanol (1:4)].

The absence of a depression of the melting point shows that substance A is 4',5,7-trihydroxy-3'-methoxyflavone, or chrysoeriol. This is the first time that this substance has been isolated from *Ortantha lutea*.

Substance B,  $C_{28}H_{31}O_{16}$ , mp 265-267°C (from aqueous methanol) and substance C,  $C_{28}H_{30}O_{17}$ , mp 234-236°C, have  $R_f$  0.28 and 0.48 in 15% acetic acid and 0.42 and 0.54 in the butan-1-ol-acetic acid-water (4:1:2) system.

UV spectra of substance B (nm):  $\lambda_{\max}^{C_2H_5OH}$  350, 270, and 250;  $\lambda_{\max}^{C_2H_5ONa}$  420, 260;  $\lambda_{\max}^{CH_3COONa}$  350, 270, and 250;  $\lambda_{\max}^{ZrOCl_2}$  400, 280;  $\lambda_{\max}^{H_3BO_3}$  350, 270, and 250. UV spectra of substance C (nm):  $\lambda_{\max}^{C_2H_5OH}$  365, 265, and 255;  $\lambda_{\max}^{C_2H_5ONa}$  425, 275;  $\lambda_{\max}^{CH_3COONa}$  385, 275;  $\lambda_{\max}^{ZrOCl_2}$  415, 255;  $\lambda_{\max}^{H_3BO_3}$  365, 265, and 255.

The IR spectra of substances B and C contain bands characteristic for flavonoid glycosides [3, 4]: 1662  $cm^{-1}$  (C=O of a  $\gamma$ -pyrone), 1595, 1578  $cm^{-1}$  (conjugated double bonds), 3300, 3340, and 3270  $cm^{-1}$  (phenolic hydroxyls), 2850  $cm^{-1}$  ( $-OCH_3$ ), 890  $cm^{-1}$  ( $\beta$ -configuration of a glycosidic bond), and 1050, 1074, and 1089  $cm^{-1}$  (pyranose form of sugars).

The stepwise acid hydrolysis of the glycosides studied formed D-galactose (substance B) and D-glucose (substance C), and also intermediate compounds which under severe conditions of hydrolysis split into D-galactose and chrysoeriol, and D-galactose and isorhamnetin, respectively. Hydrolysis of the substances with rhamnodiastase permits the assumption that the sugars in these compounds are attached to one another in the 1-6 position.

On the basis of the results of chemical and chromatographic studies and spectroscopy, substance B was characterized as chrysoeriol 7- $\beta$ -D-galactobioside (ortanthoside) and substance C as isorhamnetin 3- $\beta$ -D-galacto-1,6- $\beta$ -D-glucopyranoside. Both substances are new flavonoid glycosides.

#### LITERATURE CITED

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