## FLAVONOIDS OF THE GENUS Oxytropis

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We have made a phytochemical investigation of 12 samples of the genus Oxytropis D.C. (crazyweed) of Transbaikal for the biologically active substances present in them. From an ethanolic extract of the epigeal part of Oxytropis komarovii Vass. neoisorutin and quercetin have been isolated previously, and  $\beta$ -sitosterol has been isolated from the roots [1, 2]. Continuing a study of the flavonoids by paper and column chromatography on polyamide, we have isolated another three substances.

The first substance [composition  $C_{15}H_{10}O_6$ , mp 274-276°C (from methanol), mp of the acetate 179-180°C;  $\lambda_{\text{max}}$  (ethanol - CH<sub>3</sub>OH) 360, 267 nm] was identified by the results of alkaline degradation, UV and IR spectroscopy, a mixed melting point and other comparisons with an authentic sample as kaempferol.

The second substance [composition  $C_{21}H_{20}O_{10}$ ,  $\lambda_{max}$  (ethanol-CH<sub>3</sub>OH) 360, 260 nm,  $[\alpha]_D^{20}$ +13.3 (c 0.1; methanol)] is kaempferol 7-O- $\beta$ -L-rhamnopyranoside.

The third substance [composition  $C_{27}H_{30}O_{16}$ , mp 222-225°C,  $[\alpha]_D^{20}-25^\circ$  (c 0.1; methanol),  $\lambda_{max}$  (ethanol-CH<sub>3</sub>OH) 350, 260 nm]. Its acid hydrolysis gave L-rhamnose, D-glucose, and kaempferol. A densitometric analysis of the carbohydrates showed that the L-rhamnose and D-glucose were present in a ratio of 1:1. The results of enzymatic hydrolysis showed the existence of a glycosidic bond and of a 1,6- linkage between the monosaccharide units. The results of physicochemical investigations and a polarimetric analysis made it possible to characterize this substance as kaempferol 3-O-[ $\alpha$ -L-rhamnopyranoside-( $6 \rightarrow 1$ )- $\beta$ -D-glucopyranoside], i.e., nicotiflorin. This is the first time that these flavonoid compounds have been isolated from representatives of the genus Oxytropis.

## LITERATURE CITED

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