

RUTIN FROM *Achillea millefolium*

I. D. Neshta, N. A. Kaloshina,
G. G. Zapesochnaya, and A. I. Ban'kovskii

UDC 547.972

The flowers of *Achillea millefolium* L. (common yarrow) have been shown previously to contain 7-glycosides of apigenin and of luteolin, and also caffeic and chlorogenic acids [1, 2].

We have studied the leaves of this plant collected in the budding phase in the environs of Vitebsk. The flavonoids were extracted with ethanol at 60°C, the ethanol was distilled off, and the residue was mixed with polyamide powder and chromatographed in a column which was washed with water and 10% ethanol. Elution with 20% ethanol gave light yellow crystals with the composition $C_{27}H_{30}O_{16} \cdot H_2O$ with mp 187-189°C, $[\alpha]_D^{20} - 21.8^\circ$ (c 0.55; formamide), λ_{max} 258, 361 nm (log ϵ 4.41, 4.33).

Acid hydrolysis with 5% sulfuric acid gave equimolar amounts of aglycone, D-glucose, and L-rhamnose. The sugars were identified by paper chromatography, and the aglycone ($C_{15}H_{10}O_7$, mp 309-311°C) was identified by the products of its alkaline cleavage (phloroglucinol and protocatechuic acid) and by a direct comparison with quercetin. The bathochromy and NMR spectrum [3] of this substance were also studied; they showed it to be rutin.

LITERATURE CITED

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Vitebsk State Medical Institute. All-Union Scientific-Research Institute of Medicinal Plants. Translated from Khimiya Prirodnikh Soedinenii, No. 5, pp. 676-677, September-October, 1972. Original article submitted April 10, 1972.

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