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AMOUNTS OF RUTIN AND HYPEROSIDE IN Menyanthes trifoliata

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We have investigated the amounts of rutin and hyperoside in the leaves of Menyanthes trifoliata L. (common bogbean) collected in the flowering period in 1974 in the Usol'e region, Perm oblast [1]. The flavonoids were extracted with 70% ethanol after preliminary treatment of the raw material with chloroform. The combined flavonoids was separated on a column of polyamide sorbent with elution by 50% ethanol and mixtures of ethanol and chloroform. On the basis of the results of a study of acid hydrolysis, alkaline fusion, mixed melting points with authentic samples of rutin and hyperoside, and UV spectroscopy with diagnostic reagents, the two flavonoids isolated were identified as rutin and hyperoside [2-4].

Quantitative determination was performed by the spectrophotometric method after the preliminary separation of the flavonoids by ascending chromatography on "Filtrak" FN No. 3 paper [5, 6]. A standard solution was prepared from rutin and hyperoside which were isolated as described above and recrystallized from ethanol.

Depending on the growth site of the plant, the amounts of rutin and hyperoside were 0.32-0.93% and 0.41-1.15%, respectively (calculated on the absolutely dry weight of the raw material). This is the first time that information has been given on the amounts of rutin and hyperoside in the leaves of the bogbean.

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