THE FLAVONOIDS OF THE FLOWERS OF NARCISSUS TAZETTA

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This paper gives the results of a study of the flavonoid composition of the flowers of Narcissus tazetta L. grown in Apsheron. From an ethanolic extract we have isolated two substances of flavonoid nature.

Substance A, $C_{16}H_{12}O_7$, mp 319–321° C (from aqueous ethanol). The acetylation of this substance led to a tetraacetate $C_{24}H_{20}O_{11}$ with mp 199–200° C.

These facts show that substance A is isorhamnetin. The IR spectra of substance A and isorhamnetin [1] also confirm their identity.

Substance B, $C_{27}H_{32}O_{16}$, mp 175–177° C. The IR spectrum of the substance shows bands at (cm^{-1}) 3320 (OH group), 1660 (carbonyl group of a γ-pyrone), and 1610, 1580, and 1510 (aromatic system). The physicochemical properties of the compound show that it is a glycoside. This is also shown by the results of acid hydrolysis. When the glycoside was treated with 5% aqueous H_2SO_4, glucose, rhamnose, and isorhamnetin were obtained in 46% yield (calculated: 46%).

The methylation of substance B with dimethyl sulfate and subsequent hydrolysis with acid gave a substance $C_{19}H_{18}O_7$, mp 157–159° C, ν_{max}: 3315, 1650, 1620, 1595, and 1510 cm^{-1}. The melting point of the latter and of 3, 7, 3', 4'-tetra-O-methylquercetin were similar. According to the literature, mp 159–160° C [2]. Consequently, the carbohydrate substituents are present at C_5. By comparing our results with literature information, we came to the conclusion that this flavone glycoside was new, and we have called it "tazettin." The IR spectra were taken in paraffin oil on a UR-20 spectrophotometer.

REFERENCES

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