RUTIN FROM Laurus nobilis

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The leaves of Laurus nobilis L. (1.6 kg) were exhaustively extracted with 80% ethanol. The residue after the distillation of the extract was dissolved in hot water, and the flavonoids were extracted with ethyl acetate. A chromatographic analysis showed that the ethyl acetate extract contained five flavonoids. The ethyl acetate was distilled off and the residue was chromatographed on a Kapron column, a flavonoid glycoside being desorbed with 30% ethanol. When the eluates were evaporated and left in the refrigerator for 15 days, this glycoside precipitated. After recrystallization from a mixture of ethanol and water (1 : 1) it had mp 192-193° C.

Acid hydrolysis with 2% H_2SO_4 gave D-glucose and L-rhamnose, and also the aglycone, which was identified as quercetin from the products of its alkaline degradation, chromatographic behavior, the absence of a melting point in admixture with an authentic sample, the melting point of the acetyl derivative, and IR and UV spectra.

Its chromatographic behavior, the absence of a melting point in admixture with an authentic sample and the identity of their IR spectra, and also the nature of the bathochromic shifts of the maxima in the UV region of the spectrum in the presence of ionizing and complex-forming reagents [1] enabled the glycoside isolated to be characterized as 3',4',5,7-tetrahydroxyflavone 3-rutinoside (rutin), and its aglycone as 3,3',4',5,7-pentahydroxyflavone.

LITERATURE CITED

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