

VITEXIN - A NEW FLAVONE GLYCOSIDE OF

Adonis vernalis

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The isolation from the epigeal part of *Adonis vernalis* L. (spring adonis) of a xyloside of homoorientin called adonivernith has been reported in the literature [1]. It was later established [2] that this flavonoid glycoside is a xyloside of orientin and not of homoorientin. Xylosides of orientin [3, 4] and of homoorientin [5] have also been isolated by other workers. We called the xyloside of orientin adonivernith and the xyloside of homoorientin homoadonivernith [6]. Orientin, homoorientin [1], and luteolin [7] have been found in small amounts in the herb spring adonis. All the flavonoid glycosides mentioned from this species are derivatives of the aglycone luteolin.

We have studied the flavonoid composition of individual parts of adonis by paper chromatography. By the treatment with ammonia vapor of moist chromatograms sprayed with zirconyl chloride a substance fluorescing green was found, while under such conditions luteolin glycosides fluoresce orange [8]. The greatest amount of this substance was found in the stamens, from which it was isolated by preparative chromatography. The compound has R_f 0.23 (15% acetic acid) and 0.29 [butan-1-ol-acetic acid-water (4:1:2)], λ_{max} (in ethanol 268 and 340 nm). By UV spectroscopy, free hydroxy groups were found in positions 4', 5, and 7 [9]. The results of a chemical study of this flavonoid show that it is of C-glycosidic nature [6]. The substance underwent acid hydrolysis only after the action upon it of 15% hydrochloric acid for 6 h. The hydrolysis products were found to contain two substances, one of which was the initial substance while the second, with R_f 0.51 (15% acetic acid) was identified as saponaretin [10]. Hydrolysis with Kiliani's mixture [11] gave the aglycone apigenin. In the carbohydrate fraction we found D-glucose with a small amount of D-arabinose.

On the basis of the physicochemical investigation performed and by a comparison with an authentic sample, the flavonoid isolated was identified as vitexin. Thus, a C-glucoside of apigenin - vitexin - has been isolated from the flowers of the spring adonis for the first time.

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