

## THE STRUCTURE OF HEDERACAUCASIDE B, A SAPONIN FROM HEDERA CAUCASIGENA

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Of the two triterpene glycosides isolated previously [1] from Hedera caucasigena, we have identified hederacaucaside D as kalopanax saponin B [2].

This paper gives the results of a study of the chemical composition of the other, less polar, glycoside, hederacaucaside B.

The complete acid hydrolysis of hederacaucaside B yielded oleanolic acid, D-glucose, and L-rhamnose.

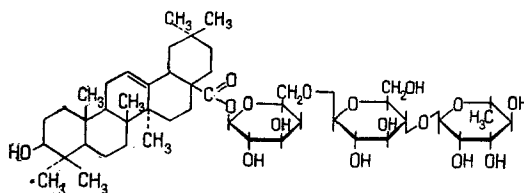
The gas-liquid chromatographic analysis [3] of the silylated methyl glycosides of the sugars present in hederacaucaside B showed that the ratio of glucose to rhamnose was 2 : 1 (2.00 : 0.942).

The glycoside and its acetate were treated with diazomethane and the products were then hydrolyzed. In both cases oleanolic acid was identified, which shows the presence of an O-acylglycoside bond in the glycoside.

We obtained further information on the structure of the glycoside by exhaustive methylation according to Kuhn [4]. The chromatographically homogeneous permethylated product was subjected to acid hydrolysis. The following methylated monosaccharides were identified in the hydrolysate: 2, 3, 4-tri-O-methyl-D-glucose, 2, 3, 6-tri-O-methyl-D-glucose, and 2, 3, 4-tri-O-methyl-L-rhamnose.

Since the glycoside has been shown to contain an O-acylglycoside bond, this carbohydrate fragment, by analogy with other triterpene glycosides [5-8], may possibly be attached to position 28 of the genin.

On the basis of all that has been said above, we propose the following as a probable structure for hederacaucaside B.



## REFERENCES

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