

BRIEF COMMUNICATIONS

OLIGOSACCHARIDES OF *Hedera pastuchovii*

G. B. Iskanderov

UDC 547.917+639.64

We have studied the carbohydrate composition of the water-soluble polysaccharide fraction of the fruit of *Hedera pastuchovii*. The plant was collected in July 1968 in the Lenkoran' region of Azerbaidzhan.

The dried and comminuted raw material was successively deresinified with chloroform, petroleum ether, and ethanol, and was then extracted with water. After concentration of the aqueous solution, the polysaccharides were precipitated with acetone and were then dried. This gave a fraction containing polysaccharides and triterpene glycosides. In order to free the polysaccharides from the glycosides, the aqueous solution was extracted with butan-1-ol and evaporated to dryness.

When the polysaccharide fraction was hydrolyzed, the following sugars were found by paper chromatography in the butan-1-ol-acetic acid-water (4:1:5) system: galactose, glucose, arabinose, fructose, and an unidentified sugar.

By chromatography on cellulose powder, the polysaccharide fraction yielded two individual compounds which have been provisionally called substances A and B.

Substance A was identical in its physicochemical constants, the results of hydrolysis, and chromatographically with an authentic sample of raffinose.

Substance B was a white amorphous powder with the composition $C_{23}H_{40}O_{20}$, mp 230-232°C, $[\alpha]_D^{20} + 241^\circ$ (c 1.8; water). It was hydrolyzed by mineral acids, forming L-arabinose and D-galactose in a ratio of 1:3.

The results of methylation with methyl iodide in dimethylformamide [1] and periodate oxidation, the stability of the oligosaccharide to the action of dilute alkalis, and also information on the rate of partial hydrolysis show that the oligosaccharide has the linear structure O-D-galactopyranosyl-(1→3)-O-D-galactopyranosyl-(1→3)-O-D-galactopyranosyl-(1→1) L-arabopyranoside.

LITERATURE CITED

1. R. Kuhn, H. Trischmann, and I. Low, *Angew. Chem.*, **67**, 32 (1955); R. Kuhn, *Ber.*, **88**, 504 (1955); *Ber.*, **89**, 2514 (1956).

N. Narimanov Azerbaidzhan State Medical Institute. Translated from *Khimiya Prirodnykh Soedinenii*, No. 4, pp. 514-515, July-August, 1971. Original article submitted March 12, 1971.

© 1973 Consultants Bureau, a division of Plenum Publishing Corporation, 227 West 17th Street, New York, N. Y. 10011. All rights reserved. This article cannot be reproduced for any purpose whatsoever without permission of the publisher. A copy of this article is available from the publisher for \$15.00.