BRIEF COMMUNICATIONS

POLYSACCHARIDES OF THE BERRIES OF ELEUTHEROCOCCUS SENTICOSUS

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We have previously [1] described polysaccharides present in the roots of plants of the family Araliaceae. In this paper we give the general characteristics of the water-soluble polysaccharide fraction extracted from the berries of Eleutherococcus senticosus collected in October 1968 in the Maritime Territory.

We investigated the previously comminuted and methanol-defatted berries by extraction with dil acetic acid (pH 4–5), water, and 0.5% ammonium oxalate solution. The polysaccharides were precipitated from these solutions by the addition of four volumes of methanol. After reprecipitation with ethanol, dialysis, and freeze-drying, the total polysaccharide fraction (TPF) was obtained. Yield 17–20% (of the weight of the air-dry raw material), $[\alpha]_D^{20}$ +180° (in water).

A negative iodine reaction showed the absence of starch from the fractions isolated. The total polysaccharide fraction contained 1.16% of ash and 11% of proteinaceous impurities [2], and on acid hydrolysis, it formed galactose, glucose, xylose, arabinose, rhamnose, and galacturonic acid, its content of the latter being 64% [3]. Chromatography on DEAE-cellulose [4] showed two peaks, which indicated the presence in the TPF of mainly acidic polysaccharides. On partial hydrolysis of the TPF we isolated a polysaccharide giving on further hydrolysis only galacturonic acid (polygalacturonan). The production of this fragment and the high content of galacturonic acid showed that the TPF belonged to the class of pectin substances.

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