BRIEF COMMUNICATIONS

POLYSACCHARIDES OF SOME SPECIES OF *Glycyrrhiza*

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Plants of the genus *Glycyrrhiza* L. (family Leguminosae) are the source of a number of valuable substances [1], but their polysaccharides have been studied inadequately.

We have investigated the polysaccharides of the epigeal part of two species of *Glycyrrhiza*: *G. Glabra* L. (common licorice) and *G. aspera* Pall., which are widely distributed in Uzbekistan and the Karakalpak ASSR [2].

The epigeal part was treated with boiling 80% ethanol to eliminate ballast substance and free sugars. The residues of the raw material were dried at room temperature, and the water-soluble polysaccharides (WSPSs) and pectin substances (PSs) were isolated by Afanas'eva's method [3].

The amounts of polysaccharides present (% on the air-dry weight) and the monosaccharide ratios are given below:

	G. glabra		*G. aspera*	
	WSPSs	PSs	WSPSs	PSs
Yield of polysaccharides	0.8	5.8	4.0	5.8
Monosaccharide ratio (according to GLC)				
Rhamnose	13.8	5.0	1.0	2.5
Arabinose	14.8	5.2	1.7	1.7
Mannose	1.0	tr.	1.0	-
Glucose	1.3	1.0	tr.	1.6
Galactose	6.0	1.4	2.0	1.0

The roots of common licorice contain 1.6% of WSPSs consisting of rhamnose, arabinose, mannose, glucose, and galactose, and also 9.7% of total polysaccharides isolated by a mixture of 0.5% solutions of ammonium oxalate and oxalic acid. Aqueous solutions of these polysaccharides give a blue coloration with iodine.

The pectin substances from the epigeal part of common licorice consist of a light brown powder soluble in water with the formation of a viscous solution and containing 2.8% of N and 2.2% of OCH_3. A solution of the pectin (1 g in 50 ml of water) was separated on a column on DEAE-cellulose. Fractions of neutral and acidic polysaccharides (17% and 74%, respectively) were obtained. The uronic anhydride content of the latter was 76%.

The pectin substances of the epigeal part of *G. aspera* contained 5.2% of OCH_3 and no nitrogen. Separation of the PSs by the method described above gave 3.3% of neutral and 58% of acidic fraction containing 48.6% of uronic anhydride. All the pectin substances contained galacturonic acid, in addition to neutral monosaccharides.

Thus, the epigeal parts of common licorice and of *G. aspera* contain 6.6% and 9.8% of combined polysaccharides, respectively.

LITERATURE CITED

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