

## PP31. POLYSACCHARIDES OF *CROCUS SATIVUS*

F.A. KODIRALIEVA<sup>1\*</sup>, R.K. RAKHMANBERDIEVA<sup>1</sup>, S.Z. NISHANBAEV<sup>1</sup>

<sup>1</sup>Institute of Chemistry of Plant Substances. acad. S.Yu. Yunusov AS RUz  
Tashkent, Uzbekistan

\*Corresponding Author. E-mail: [fatimahon.82@mail.ru](mailto:fatimahon.82@mail.ru)

Crocus (saffron) is a herbaceous plant from the family. Iridaceae. Saffron tea is known to help with atherosclerosis, flatulence, and some intestinal disorders. We have studied the petals and stigmas of *Crocus sativus* growing in Uzbekistan for the content of various groups of polysaccharides according to the previously described method. water-soluble polysaccharides (WSPS), pectin substances (PS) and hemicelluloses (HMC) were isolated, their monosaccharide compositions were established. The content and monosaccharide composition of the isolated polysaccharides are shown in Table 1. According to chromatographic analysis, alcohol-soluble sugars are represented by glucose, sucrose.

Table 1. Yield of polysaccharides and their monosaccharide composition

Type PS	Exit, %	Ratio of monosaccharide residues						UA, PC
		Rha	Ara	Xyl	Man	Glc	Gal	
<i>Crocus sativus</i> petals								
WSPS	6.8	+	+	+	-	-	+	+
PS	2.7	+	+	+	-	-	+	+
HMC-A	1.4	+	+	+	-	-	+	+
HMC-B	0.8	+	+	+	-	+	+	+
<i>Crocus sativus</i> stigmas								
WSPS	5.3	+	+	-	+	+	+	-
PS	3.2	+	+	+	+	+	+	+
HMC-A	2.1	+	+	-	+	+	+	+
HMC-B	1.6	+	+	-	+	+	+	+

As can be seen from Table 1, the dominant polysaccharides in the petals are WSPS (6.8%), and in the stigmas - PS (3.2%) and HMC (3.7%), and the latter are characterized by the presence of galactose, arabinose and xylose. In all samples, isolated polysaccharides contain a sufficient amount of galactose, arabinose, xylose, rhamnose, and uronic acids. It should be noted that, in contrast to the polysaccharides of *C. sativus* petals, the presence of mannose and the absence of xylose are observed in the stigma polysaccharides in the monomeric composition, and the absence of uronic acid in WSPS. Xylose was observed only in PS. Therefore, the WSPS of the stigma is a neutral polysaccharide.

Thus, the carbohydrate composition of the petals and stigma of *C. sativus* was studied and their qualitative monosaccharide composition was established.