OP3. EXTRACTION OF POLYSACCHARIDES FROM NATURAL RESOURCES

S.A. MAULYANOV[1], A.E. ESHBEKOV[1], PHD, S.Q. SIDDIKOVA[1]*

[1]National University of Uzbekistan, Chemistry faculty, Tashkent 100174, Uzbekistan.

*Corresponding Author. E-mail: sevinch.siddikova@inbox.ru

The article presents the results of a study of the polysaccharide composition of cucumismelo peels. It has been established that the carbohydrate complex of *Cucumis melo* represented by water-soluble polysaccharides, pectins and hemicellulose, their monosaccharide composition has been established.

Polysaccharides are common biomacromolecules in nature and are widely found in plants, animals and microorganisms. In recent years, numerous studies had revealed that polysaccharides from natural sources had various bioactive functions. Therefore, the chemical study of the composition of this plant is one of the relevant topics.

Uzbekistan the largest zones of melon cultivation in Central Asia. Sugar content in Central Asian melons can reach up to 14–16%. This fact adds to relevance to the use of melons asa health food and as medicinal plants. Pharmacologically it has a stimulating, diuretic, choleretic, anti-inflammatory, laxative, normalizes metabolism in the body [1]. For our scientific work, we chose Torpedo (summer variety) and Kassaba (winter variety), then various polysaccharides were sequentially isolated from melon peels: alcohol-soluble sugars (ASS), water-soluble polysaccharides (WSP), pectin substances (PS), hemicelluloses (HMC).

The presence of glucose, fructose and sucrose was detected in the alcohol extract of melon. Sucrose in smaller quantities. Water-soluble polysaccharides (WSP) were isolated in two ways: by extraction of raw materials with cold water (WSP-c) at room temperature andhot water at a temperature of 80-90 ^{o} C (WSP-h). Pectin substances (PS) were isolated bya mixture of 0.5% solutions of oxalic acid and ammonium oxalate, hemicellulose (HMC) – 5% KOH solution [2]. Among Torpedo polysaccharides, PS was dominant (3.7%), whilethe content of WSP-c was 3.5%, WSP-h and HMC were 2% and 1.95%, respectively, among Kassaba polysaccharides, WSP was dominant (9.4%), while the content of PS was 5%, and HMC was in smaller quantities – 2%.

Abbreviations: WSP: water-soluble polysaccharides; PS: pectin substances; HMC: hemicellulose.

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