THE STUDY OF CHEMICAL STRUCTURE OF THE ARMENIAN FLORA'S APRICOT GUM

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Abstract

Recently in industrial purposes there is a wide use of gelatin, modified cellulose, dextrins and their synthetic analogues, which are anyway imperfect and have side effects. In this point of view the plantar polysaccharides become a plot of increasing interest of researchers. These substances make up the main moiety of a man nutritional range and because of that are widely applicable in the food and confectionary production. It comprises multiple common groups of organic compounds, which are together with proteins and fats are of vital significance for activity of all the living organisms.

Nowadays, there is a necessity to develop specific methods of standardization of the apricot gum, Gummi Armeniacae (GA). Usage of GA of native origin is as an alternative for Gummi Arabicae, known for its significance as an effective emulsifier, stabilizer and the dietary fiber in medicine and food industry. Because of that we set forth an aim to investigate the GA chemical structure and, so, to develop its new standardization method for GA Specification creation.

By means of the column chromatography the gum polar fraction's (placed onto Al2O3 of IV activity) purification rational method was developed, what could be also used for the gums other polar (arabinic and basorinic) fractions purification and identification purposes.

By means of the HPLC method the GA was standardized. The following monosaccharides: arabinose, galactose, glucose, xylose and ramnose neutral sugars and the glucuronic sugar were identified in the GA hydrolyzate.

In the native GA the low-molecular substances (catechol, hydroquinone and pyrogallol) were detected, what testify about the cambium layer participation in the tree's gum formation process.