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STUDY OF THE CHEMICAL AND BIOCHEMICAL COMPOSITION OF TROPHY VARIETIES

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ANNOTATION

This article presents information about the possibilities and prospects for growing Jerusalem artichoke, its processing and preparation of food products for the national economy, as well as the results of scientific research on this topic.

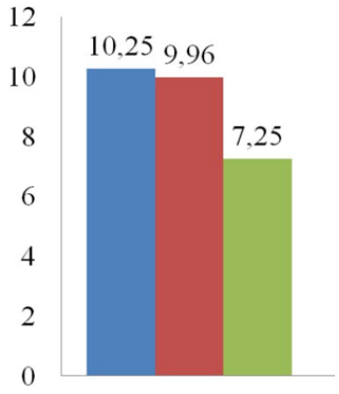
Enter. The agricultural products processing industry is one of the leading branches of the food industry. Canned products are produced from fruits and vegetables grown in this branch of industry. Based on these products, other types of products are also produced. The total volume of products produced by canning industry enterprises is almost 25% of the gross food products prepared in the republic. For this reason, in order to increase the range of products with guaranteed quality and low cost, the problem of introducing effective technologies that allow saving material and energy resources and compact and intensive technological equipment to food industry enterprises is considered urgent. Research development and technology improvement of canned puree recipes based on Jerusalem artichokes for dietary food. As an object of research, the marketable tubers of 3 types of Jerusalem artichoke "Fayz-baraka", "Mo'jiza" and "Itirof" and the technology of watering dietary products were selected[1]. The subject of research is the indicators representing the characteristics of Jerusalem artichoke as a raw material, their evaluation criteria, changes in its biochemical composition, pre-treatment and packaging processes of Jerusalem artichoke tubers before storage[2,3]. Place, object and methods of research. Taking into account that a number of diseases related to the digestive system of children and primarily diseases of the endocrine system, eating disorders and metabolic diseases, including diabetes and obesity, are caused by the lack of biologically active substances in children's diets, when choosing raw vegetables and fruits the following requirements [4] were followed: - first, the raw material should contain the maximum amount of biologically active substances with

hypoglycemic, hypolipidemic, antioxidant, antitoxic and immunomodulating properties; -secondly, raw materials must meet the requirements in terms of quality and safety; - thirdly, raw materials should be cheap from an economic point of view. Based on established requirements [4], we selected plant raw materials, i.e. Jerusalem artichokes, which contain inulin with hypoglycemic properties, antioxidants and antitoxic ingredients. At the first stage of the research, the varieties of this raw material were selected with the maximum amount of macro and microelements with functional properties - hypoglycemic, antioxidant, antitoxic and immunomodulating properties (Table 1).1-жадвал

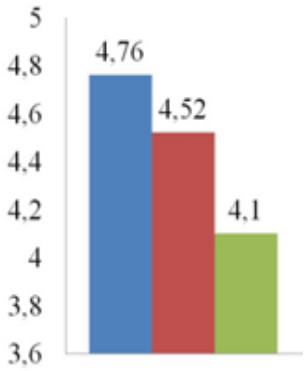
Average values of chemical composition of Jerusalem artichoke varieties

Indicator name	Pointer value by type		
	"Fayz-baraka"	"Mo'jiza"	"E'tirof"
Percentage of dry matter, %	19,95	19,88	19,91
Mass fraction of protein, %	1,95	1,85	1,95
Carbohydrates	16,45	16,40	16,43
Mineral substances	1,45	1,43	1,43
Organic acids	0,10	0,10	0,10

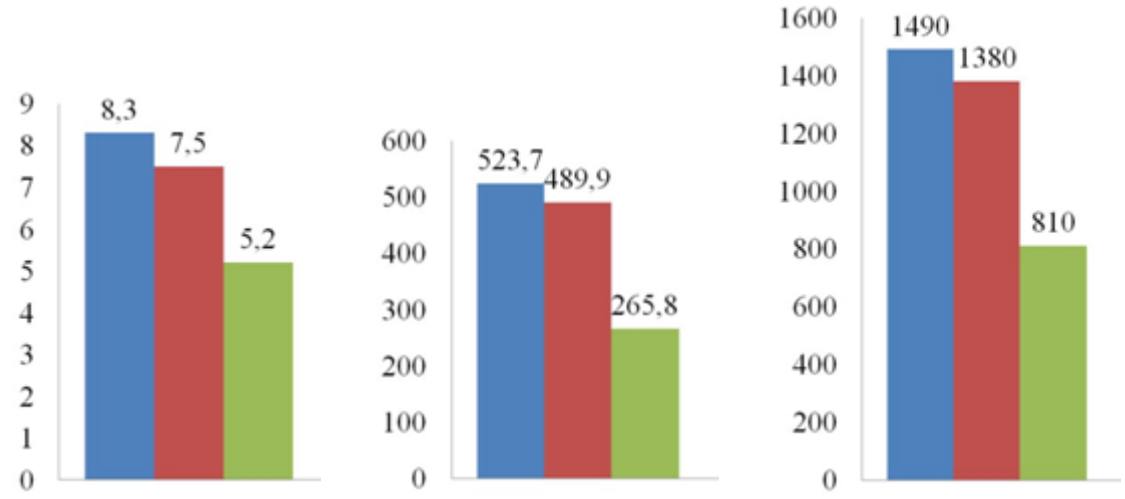
Requirements for the quality of Jerusalem artichoke tubers grown in the conditions of Uzbekistan are noted in the relevant normative technical documents, and all indicators of the experimented varieties corresponded to these standards (Fig. 1). Research results. As can be seen from the given data, the chemical composition of Jerusalem artichoke varieties under study does not differ much from each other. Taking this into account, the composition of the main active functional components such as inulin, nutritional fibers, including water-soluble pectin, as well as devitamins, macro and microelements, was determined in the studied varieties for the selection of Jerusalem artichoke varieties.



a) mass fraction of inulin g/100 g



b) mass fraction of dietary dietary fiber, g/100 g



c) Mass fraction of vitamin C, мg/100 g

d) Mass fraction of macroelements, мg/100 g

e) Mass fraction of macroelements, мg/100 g

-"Fayz-baraka" -" Mo'jiza " -" E'tirof "

Fig. 1. Biochemical composition of tubers of Jerusalem artichoke varieties

As can be seen from the data in Figure 1 above, carbohydrates are the main part of the dry matter in Jerusalem artichokes. Therefore, this product is one of the important raw materials for diet foods. Jerusalem artichokes are an important raw material for the preparation of dietary products for young children and adults, as they have acceptable parameters in terms of composition. It turned out that the quality indicators of Jerusalem artichoke varieties that we tested meet international requirements.

It is desirable to prepare purees made from Jerusalem artichokes by adding different products both in terms of nutrition, in terms of usefulness, and in terms of optimizing their organoleptic indicators. In this regard, several recipes have been developed to recommend for production (Table 2).

Table-2

Jerusalem artichoke-based puree recipes for diet and baby food

№		Recipe №1	Recipe №2	Recipe №3
1	**Jerusalem artichoke, %**	45	45	45
2	**Apple, %**	35	35	25
3	**Carrot, %**	0	20	15
4	**Pumpkin, %**	20	0	15

Table 1 shows recipes for Jerusalem artichoke puree with the addition of other products. In all recipes, the amount of Jerusalem artichoke raw material was 45%, making up the largest number of ingredients used in each. In the first recipe, 45% Jerusalem artichokes, 35% apples and 20% pumpkin fruits were used as raw materials. In the second recipe, 45% Jerusalem artichoke, 35% apple and 20% carrot were used as raw materials. In the third recipe, 45% Jerusalem artichoke, 25% apples, 15% carrots and 15% pumpkin fruits were used as raw materials. **Conclusions.** 1. All studied puree samples have very high ratings. 2. Thus, the developed recipes ensure the production of products

with a balanced composition of physiologically functional ingredients and high organoleptic properties. 3. Based on the above-mentioned indicators, it can be concluded that it is appropriate to use Jerusalem artichoke tubers as a raw material in the preparation of dietary puree.

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