

"Nutritional and Biological Value of National Fellows With the Use of Plant Extracts"

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ANNOTATION

The article is devoted to the current problem of resource saving, as well as to increasing the nutritional value and safety of the most popular and demanded national bakery products (flat cakes) in the republic. The fruits of jujube (unabi) and the aerial part of Caspian Karelia are universal food fortifiers due to the unique composition of biologically active nutrients. An analysis was made of the influence of the studied additives on the quality indicators, shelf life and food safety of the finished product. The recipe and technology for the preparation of cakes with the use of 6.0% PZ(U) and PC to the prescription amount of flour have been improved. As a result, the consumption of wheat flour was reduced by 1.4...2.0% and white sugar - by 65.7...42.9%, the yield of finished products increased by 2.0%, the shelf life - by 24 hours. The use of PZ(U) and PC in the recipe of cakes led to a decrease in material costs, respectively, by 45490 and 81610, an increase in profits by 5049 and 8961 soums per 1 ton of products, profitability of products - by 1.8 and 3.2%.

KEYWORDS: *Uzbek flatbread, jujube (unabi), Kareliniya Caspian, extract, powder, quality, safety.*

INTRODUCTION

Due to the worldwide trend towards fortification of staple foods essential and minor biologically active nutrients from non-traditional natural raw materials, as well as with the deterioration of the quality of the main raw materials, widely used in production, including bakery, the use of various powdered semi-finished products from medicinal plants, both cultivated and wild. These raw materials have diverse and unique chemical composition, antioxidant and bactericidal properties that can also appear in finished products. All this causes the formation in a huge variety of medicinal plants multi-vector technological properties, allow you to choose promising raw materials sources for solving diverse problems of the baking industry industry [1, p.127; 2, pp. 18-20; 3, pp. 101-107; 4, pp. 113-120; 5, pp. 43-44].

So, these additives allow you to adjust the properties of the raw materials used, influence the technological process of production and give finished products therapeutic, prophylactic and functional value. At the same time, the implementation waste-free technologies and complex processing of raw materials, makes the most expedient use as plant extracts of powdered semi-finished products. The choice of powders from vegetable raw materials is due to convenience storage and dosing of this raw material. One of the main advantages of using powders is also the fact that in the process of drying the raw material is released from a significant the amount of moisture, due to which it acquires a small volume, occurs concentration of biologically active substances [6, p.52-54; 7, pp. 119-120].

In Uzbekistan, large-scale measures are being taken to implement one of the most important tasks of the state in the field of social policy, namely, to protect and improve the health of the population. The share of functional products on the domestic market is currently not large, but this segment is developing dynamically and is very promising as a means of prevention, early correction and

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prophylaxis of various diseases. In recent years, the republic has been implementing consistent reforms for the rational use of natural resources. The search for additional sources of raw materials is also being actively pursued; platforms for their cultivation are being created. Special attention is paid to the plants most adapted to cultivation on marginal lands, tolerating drought well and beginning to bear fruit quickly.

One of the most promising directions for solving these global problems is the use of nontraditional plant raw materials, both cultivated and wild, containing ingredients valuable from the point of view of nutritional physiology, the study of the effect of which on the human body is currently receiving considerable attention from researchers and food manufacturers, especially in high demand among the population. These products primarily include bread, bakery and flour confectionery. Recently, in the production of "enriched" products from highquality wheat flour, products of processing of fruit and berry and vegetable raw materials, as well as phyto-additives from medicinal plants, especially in the form of powdered semifinished products (powders), have become increasingly important. This will make it possible to enrich products with essential food substances and reduce the risk of developing alimentary-dependent diseases, the so-called "diseases of civilization", and the use of additives in the form of powders will solve the problem of the seasonality of raw materials supply [1, p.12-13; 2, p. 3-12; 3, p. 35-37; 4, p. 101-107; 5, p. 4-5; 6, pp. 137-138].

These studies are especially relevant in connection with the Resolutions of the President of the Republic of Uzbekistan No. PP - 4406 dated July 29, 2019 "On additional measures for deep processing of agricultural products and further development of the food industry" and No. PP - 4870 dated April 10, 2020 "On measures for the protection, cultivation, processing of wild medicinal plants and the rational use of available resources ", which provides for" ... the use of advanced scientific achievements in the cultivation and processing of medicinal plants, increasing the export potential of the industry ... ". The development of methods for the production of flour confectionery products using domestic plant raw materials, including wild-growing ones, the biopotential of which has not yet been sufficiently studied, contributes to obtaining perfect types of competitive products and increasing the economic efficiency of confectionery production. The purpose of the work was in the formulation and production technology of biscuits with powders from fat-free extracts of ziziphus (unabi) fruits and the above-ground part of the Caspian Karelinia in order to reduce the prescription amount of sugar. The objects of research were powders from fat-free extracts of fruits of ziziphus (hereinafter PZ (U)) and the above-ground part of the Caspian Karelinia (PC), biscuits "Dairy". Korzhiks are flour confectionery products made from bakery wheat flour of the highest grade with the addition of granulated sugar, fat, egg and dairy products, as well as chemical leavening agents. By the method of molding, they belong to sand-removable products. Currently, the bakery industry produces dairy cakes, which are very popular among preschool and school children. The experimental part of the work was carried out in the laboratories of the food technology department of the Bukhara Engineering and Technological Institute, the Institute of Plant Chemistry of the Academy of Sciences of the Republic of Uzbekistan and the Central Accredited Complex of the Testing Laboratory of the Bukhara Center for Sanitary and Epidemiological Well-being (accreditation certificate UZ.AMT.07.MAI.493). Scientific research on this work was carried out using modern generally accepted methods for studying the properties of raw materials, described in the manuals [7,8]. The quality indicators of the biscuits were determined in accordance with the requirements of O'z DSt 315: 2011 "Milk biscuits. Specifications "in terms of organoleptic and physicochemical indicators. The products of processing of fruits of ziziphus or unabi (*Ziziphus jujuba* Mill.) Of varieties "Yuzhanin" and "Samarkandsky 38" and of the above-ground part of the Caspian Karelinia (*Karelinia caspia*) were studied. *Ziziphus real* - a shrub (Fig. 3.1-a) or a small deciduous tree with small greenish-white flowers and small juicy, fleshy fruits similar to dates, common in Central Asia, belongs to the buckthorn family and has about 50 species. The fruits of ziziphus (Fig. 1-b) have long been used in folk medicine in the treatment of arterial hypertension [9,

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p.31-33; 10, pp. 229-335]. Ziziphus fruits are able to regulate the synthesis of erythropoietin in the liver, stimulate the process of hematopoiesis, the saponins contained in them - jujubosides have cardioprotective properties, polysaccharides have an immunomodulatory effect on the human body [11, p.50-61; 12, p. 813-816; 13, pp. 445-453].

CONCLUSION

Replacing part of the wheat flour with plant extracts in the recipe of Uzbek flatbreads improves the nutritional and biological value of products. The best results are achieved when adding 5% plant extracts based on the weight of the original flour.

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