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IMPROVEMENT OF DRYING PROCESSES FOR FRUIT AND VEGETABLE PASTILLES

Kholikov Muhriddin Mardiqulovich

Basic doctoral student, Navoi State Pedagogical Institute

Nasirova Shaira Narmuradovna

Professor, Navoi State Pedagogical Institute

Annotation: This article provides information on the importance of improving the drying processes of fruit and vegetable lozenges. In order to obtain high-quality fruit and vegetable products, it is necessary to create conditions that ensure their quick and good drying.

Keywords: fruit, vegetable, product, drying, sun, conditions, quality, technology, raw materials, preparation, method.

Globally, the supply of fruit and vegetable products to the population with natural vitamins, micro- and macro elements is increasing day by day, and 47% of the total cultivated products are prepared dried. At the same time, it is important to carry out scientific research on improving the technology of drying all fruits and vegetables in the form of lozenges and creating a systematic analysis. Today, in the world, the production of fruits and vegetables rich in natural vitamins, micro- and macroelements in the form of lozenges using modern technologies and equipment, in which the maximum preservation of natural components, as well as the improvement of the consumption qualities of products, their nutritional safety and biological value increase, it is necessary to carry out scientific researches in the directions of developing technologies for obtaining high-quality dried lozenges.

The tasks of increasing the energy efficiency of the apparatus for drying fruits and vegetables using new methods are also relevant.

The fruit and vegetable sub-branch is an important branch of Uzbekistan's agriculture. This network satisfies the demand of the country's population for food products, and the demand for raw materials of the processing industries. Fruit and vegetable growing is one of the sectors that provides integration to the world agricultural and food markets and foreign currency income for Uzbekistan.

In the action strategy for the further development of the Republic of Uzbekistan, "...development of production sectors, modernization and diversification of industry, application of low-energy energy-saving methods, ensuring the safety of food products, import substitution important tasks for preparation of competitive and exportable products" are defined.

The high temperature and low humidity of the climatic conditions of our republic are very convenient for drying fruits in the sun. Sun-dried products are highly valued in terms of quality compared to artificially dried products. Production of fruit and vegetables, grapes, potatoes and potatoes in districts specializing in fruit and vegetable growing in the republic in order to continuously supply the population with food products, increase processing, export volumes, and ensure price stability in the domestic market it is planned to implement new intensive fruit orchard construction projects.

The ease of natural conditions in our republic allows fruits and vegetables to be ventilated and dried in the sun. The purpose of drying fruits and vegetables is to remove moisture from them and prevent the



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development of microorganisms and various biological processes. There is such a criterion for drying that microorganisms cannot develop if the moisture content drops below that level. This minimum level is 30% for bacteria and 15-20% for yeast bacteria. Therefore, if the humidity of vegetables after drying is 15-25%, they can be stored without rotting.

In order to obtain high-quality fruit and vegetable products, it is necessary to create conditions that ensure their quick and good drying. In Central Asia, vegetables are mainly spread out to dry in the sun. In this situation, in order to obtain a cheap and high-quality product, it is necessary to correctly select and organize drying points, to follow the specified technology, and to use advanced methods in the preparation of raw materials.[1]

The importance of drying fruits and vegetables is very high.

First of all, with the organization of high-quality drying of fruits and vegetables, it is possible to increase the production profitability of farms specializing in horticulture and vegetable growing, increase their competitiveness and further economic development. Because organizing the drying of fruits and vegetables is one of the most inexpensive, simple and popular directions in the field of processing agricultural products.

Secondly, dried fruits and vegetables are sold at much higher prices both in the domestic market and in export compared to their fresh state.

Thirdly, with the organization of high-quality drying of fruits and vegetables, it is possible to increase the production profitability of farms specializing in horticulture and vegetable growing, to increase their competitiveness and further economic development. Because organizing the drying of fruits and vegetables is one of the most inexpensive, simple and popular directions in the field of processing agricultural products.[2]

Fourthly, in our country, during the summer period, many fruits spill over and die (for example, apricots, plums, etc.). And the organization of drying allows to prevent these products from spilling and perishing due to rapid drying.

Therefore, drying fruits and vegetables is a promising direction for farms. To justify the optimal parameters of drying fruit and vegetable pastilles in an unconventional way, to improve the principle scheme of the device and the high-efficiency, energy-saving drying process of obtaining dried pastilles with different composition based on fruits and vegetables with a high moisture level, to determine the technical and economic indicators, serves to reduce the loss of raw materials during processing.

References:

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- 1. Nasirova Sh.N., Holikov M.M., Joʻrayev X.A. The importance of improving the drying processes of fruit and vegetable pastilles // Научный журнал UNIVERSUM: «Технические науки» № 7, 2022, С. 7-4, Россия, 34-38 с.
- 2. Djuraev H.F., Gafurov K.Kh., Saidmuratov U.A. Systemic analysis of the process of thermoprocessing of the nucleus of the fruit bone. VIII International scientific and technical conference Tezisy dokladov "Technology and technology pishchevyx proizvodstv", 2011.