

free radical processes, stimulated internal antioxidant defence, normalized metabolism, protein, and ion exchange, reduced inflammation, and exhibited anti-diabetic effects. Melatonin's positive effect on biochemical indicators and restoration of the rat's entire body homeostasis was evident. Thus, our findings advocate for the utilization of melatonin in the prevention and treatment of oxidative stress-related complications in type 2 diabetes.

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THEORETICAL STUDY OF METHODS OF DRYING VEGETABLES

Drying is the optimal way to obtain long-term storage products with maximum preservation of their original quality, without the use of preservatives and food additives. Dried products are a promising raw material for restaurant businesses, especially for fast food outlets, such as bistros and cafés.

The consumers of these types of products are power structures, special contingent (geologists, athletes, astronauts), the population of Ukraine during the war etc.

Therefore, based on theoretical studies, the advantages of drying have been established, as the native properties of plant raw materials are preserved to the maximum extent; the essence of the physical processes that occur during drying has also been highlighted.

It is well-known that the intensity of drying depends on the physical and chemical properties of materials and the driving force of the process. Promising drying methods in terms of preserving nutritional value, as well as ensuring the appropriate restorative properties of dried vegetables and fruits, along with energy consumption, are freeze-drying with cryodestruction, drying with mixed heat supply and cold spray drying.

The problem of ensuring rational human nutrition, as well as its adequacy and balance, is one of the most important tasks of the joint scientific and practical activity of medical practitioners, food technologists, sociologists, system analysts and information system developers.

Vegetables are an integral part of the human diet, as they contain all the essential minerals, vitamins, dietary fiber etc. However, they are a perishable and seasonal product due to their high moisture content (75...95%) [1].

Thus, in order to provide the population with vegetables throughout the year, it is necessary to preserve them. Since the degree of naturality and nutritional value of products is coming to the fore nowadays, drying is the best way to produce long-term storage products while maintaining their original quality, without the use of preservatives and food additives [2].

The scope of usage of dried products can be very wide. The consumers of these types of products include law enforcement agencies, manufacturing industries, special contingents (geologists, athletes, astronauts) etc. The current government policy is aimed at promoting and spreading a healthy lifestyle, including healthy eating, among the country's population.

That is why the researchers often use the additives made from plant materials in order to create new types of products with the increased nutritional value. In most cases, these are powders made from both traditional and non-traditional raw materials.

It should also be noted that the population's awareness of the need for a healthy daily diet contributes to the growth of immediate consumption of dried vegetables and fruits, especially among children and young people of working age.

A characteristic feature of the present time is the rapid development of restaurant business establishments, in particular, restaurants, cafés, especially fast

food ones, as well as health resort, medical, educational, industrial and other institutions.

In order to improve the provision of services, attract new customers and create competitive products, most of these establishments develop menus with a physiological effect on the human body (e.g. "dietary dishes", "vegetarian cuisine", "vitaminised dishes"). This, in turn, requires not only the availability of fresh plant raw materials, but also the presence of high-quality fruit and vegetable additives.

Drying is the process of dehydrating a product by evaporating the liquid retained in it, changing the temperature of the product. Dried vegetables can be sold in a variety of forms: cubes, slices, chips, straws, powders of various dispersion. Vegetable powders can be stored for a long time without deterioration in quality with almost complete preservation of the original nutritional value and can be used in the technologies of convenience foods.

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DETERMINING CHARACTERISTICS OF LIVING ORGANISMS WITH CONSIDERATION FOR VIBRATIONAL PROCESSES

The ambient atmosphere surrounding a person is saturated with physical fields of various natures, including acoustic ones. It affects living organisms both positively and negatively. Simultaneously, when the resonant frequencies of living organisms' individual organs coincide with certain frequencies of acoustic fields, it can have a detrimental effect, at high oscillation amplitudes.

Noteworthy, that it is necessary to know the mass and stiffness of the body of insects in order to have a negative acoustic effect on their body [1, p. 107]. Tissue rupture and biological death of harmful insects under the influence of acoustic vibrations indicate that the resonant frequency of the body or organ has been found. A method of rupturing bodies, organs, or tissues of a biological object can be