

DEVELOPMENT OF CAPSULES WITH JERUSALEM ARTICHOKE POWDER

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One of the most important ways to solve the nutrition imbalance problem is the use of certain biologically active supplements. To improve the health condition, productivity and life expectancy of the population it is necessary to ensure its proper nutrition with a balanced set of amino acids, to eliminate the deficiency of vitamins, minerals, trace elements, and also to develop and improve production technology, providing high quality of food products. One of such promising sources for food additives is Jerusalem artichoke (*Helianthus tuberosus* L.), which tubers comprise 15-20% of inulin, 2.5-3.5% fructose, about 2% of protein, pectin, hemicellulose, fats, iron and phosphorus compounds, potassium, magnesium, B vitamins, carotene, pantothenic acid, vitamins E and C.

In this context, the aim of the work was the development of hard capsules with dried powder of Jerusalem artichoke tubers.

As an object of research used fresh tubers of Jerusalem artichoke, which were purified from dirt, crushed and dried in an oven. When selecting the composition of excipients to develop capsules conventional methods according to the recommendations of the State Pharmacopoeia of Ukraine have been used.

Dried parts of tubers milled in a coffee grinder. The resulting powder is light gray in color, has a sweet taste and characteristic smell. The substance has low technological parameters on the flowability and bulk density. To eliminate these drawbacks binders should be used.

As binders for the given powder 2, 5 and 10% starch paste and 96% ethyl alcohol were chosen. The composition humidified with abovementioned binders and granulated through a sieve of diameter 1000 μ m, and then dried at a temperature of 40 ° C. Studied the technological characteristics of the resulting mass. As a result it has been found that the mass does not meet the requirements for disintegration. Therefore, in the encapsulation mass added dry starch in an amount of 5% which provides the required hard capsules disintegration rates.

Furthermore, we have studied the amino acid and trace element composition of Jerusalem artichoke tubers.