Міністерство освіти та науки, молоді та спорту України
Міністерство охорони здоров'я
Сумський державний університет
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# АКТУАЛЬНІ ПИТАННЯ ТЕРЕТИЧНОЇ ТА ПРАКТИЧНОЇ МЕДИЦИНИ

# Topical Issues of Clinical and Theoretical Medicine

**Збірник тез доповідей**
III Міжнародної науково-практичної конференції
Студентів та молодих вчених
(Суми, 23-24 квітня 2015 року)

Суми
Сумський державний університет
2015

mg%, the amount of acetone used for the extraction of the pigments was 490,00 ± 10,00 ml. After the disintegration of the biomass increased yield of carotenoids, which was 3920,00 ± 20,00 mg% and decreased the amount of extractant used to 250,00 ± 15,00 ml. Therefore mechanical disintegration Blakeslea trispora biomass yield increased carotenoid pigments to 8.80% and reduced costs extracting almost doubled. Similar results were obtained with corn leaf disintegration, Jerusalem artichoke, grape and raspberry (before disintegration amount of carotenoids in the leaves of Jerusalem artichoke - 63,50 ± 5,50 mg% in the leaves of corn- 54,00 ± 3,40 mg% in the leaves raspberry - 43,40 ± 1,00 mg% in the leaves of grape - 49,70 ± 1,20 mg% and after disintegration - Jerusalem artichoke - 70,30 ± 6,00 mg%, corn - 64,50 ± 7,00 mg%, 57.80 mg% raspberries, grapes - 53,00 ± 1,00 mg%). The disintegration of plant facilities to increase the yield of carotenoids from 6.60% (grape leaves) to 33.20% (raspberry leaves). As a result, consumption and reduced disintegration extractant 35,00 ± 3,00 ml (raspberry leaves) to 11,50 ± 1,0 ml (corn leaves).

The refore mechanical disintegration of natural objects containing carotenoid pigments shows promise for the pre-processing of raw materials.

## A DEVELOPMENT OF STANDARD CONTENT OF THE MAIN CHEMICAL COMPOUNDS FOR THE PRODUCTION OF WHOLE MILK SUBSTITUTE (WMS) WITH THE INCLUSION OF BIOTECH PRODUCTS

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Modern technologies of milk production focus primarily on meeting the nutritional needs of people. A population's consumption of Milk is one of the indicators of the level the life and economic development of a country. People drink so much milk that it ranks second after the consumption of water, while not being a natural resource of Nature.

Nature has created the best food for newborn mammals - mammary secretion (colostrum, milk). Milk is a complex product; not only because of the fact that it contains about 250 individual chemical components, but also due to the content variation created during lactation. It is well known that Lactation to some extent is a "continuation" of pregnancy; the chemical composition of milk changes to meet the needs of a growing newborn.

The purpose of the developing technology to produce WMS is to release natural milk for human consumption and process it in other foods. WMS should best meet the chemical composition of milk and contain its basic properties. While producing WMS it is essential to remember that natural milk contains unique natural components such as casein proteins, lactalbumin and lactose. These components of solid milk occur naturally in such amounts only in mammary secretions and it is not possible to replace them 100%

Casein proteins - complete animal proteins, containing a complete set of amino acids necessary for intensive protein synthesis for growing tissues. Casein proteins from milk, under certain conditions (such as in the stomach of newborns) can easily form a clot of food, which is subjected to "attack" digestive enzymes, normalizes the process of digestion of the newborn. Lactose - a unique disaccharide milk. The primary purpose of lactose is being transformed to the gastrointestinal tract to create conditions for symbiotic microflora, which in turn should provide a smooth transition from the milk supply to the adult diet.

Our calculations show that dry milk substitute should contain from 244.58 g / kg to 250.60 g / kg protein. The amino acid composition of this protein would be as follows (%) - methionine + cystine - 3.67 lysine - 8.57, threonine - 5.03, tryptophan - 1.55, valine - 7.54. The amount of fat in milk substitute should be between 296.46 to 303.74 g / kg, and the amount of lactose - 370.57 - 379.70 g / kg. Ratio is very important for nutrients and minerals in milk substitute: protein - fat - 1: 1.21; protein - lactose - 1: 1.52; fat - lactose - 1: 1.25; calcium - phosphorus - 1: 0.75.

Promising sources of micronutrients, antioxidants, vitamins and other biologically active substances can be products of disintegration biokar, biolava, milk and soy beans.