THE CAROTENOID «SUNROLL» BUNS VITAMINIZED BY NATURAL NANOADDITIVES FOR HEALTHFUL NUTRITION

R. Pavlyuk, V. Pogarska, N. Maximova, K. Balabai, S. Loseva, T. Kotyuk

The carotenoid buns «SunRoll» vitaminized by natural nanoadditives with a record content of β-carotene and other BAS are developed for enterprises of restaurant industry and catering enterprises which can be used in health-giving nutrition. It is shown that the developed buns contain a high quantity of natural β-carotene (4.5 – 5.5 mg per 100 g), which covers the daily need of human organism.

It is shown that the natural nanoadditives, which are obtained by cryogenic treatment, steam-thermal processing in a modern apparatus (steam-convection oven) and fine-dispersed grinding of raw materials, differ in a record amount of β-carotene in a free state: in particular, the mass fraction of β-carotene in cryopuree from carotene-containing vegetables is 3.0–3.5 times more than in the raw materials, in the heat-treated nanopuree is 2.0–2.5 times more in comparison with raw materials. It is shown that the nanopuree contains also more low-molecular phenolic compounds and L-ascorbic acid comparing with their amount in the bound (hidden) form in the raw materials.

It is shown that the new carotenoid buns «SunRoll» for healthful nutrition with the use of natural nanoadditives as fortificants by BAS, have a record amount of natural β-carotene, L-ascorbic acid and low-molecular phenolic compounds (almost daily human need in 100 g of product). The carotenoid buns «SunRoll» exceed the world-known analogues by the content of BAS. So, they can be recommended for the population with the purpose of immunoprophylaxis.

Keywords: health-giving buns, natural carotene-containing herbal nanoadditives, β-carotene, vitaminizing, bun, carrot, pumpkin.