

INNOVATION STRATEGIES OF FUNCTIONAL PLANT MILK PRODUCTION BASED ON HEMP (*CANNABIS SATIVA L.*) SEEDS

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Plant-based milk is a popular product not only for vegans, but also for people with lactose intolerance. Today on the shelves you can find a huge selection of analogs - soy milk, almond, coconut, oatmeal or even rice. But the main question remains whether it can replace cow's milk and which one to give preference to. Having carried out a comparative analysis of the most popular types of plant milk with cow milk, it was established that no plant milk even compares with cow's milk in terms of vitamins and minerals, especially of protein and calcium content, the most important milk nutrients.

The technology of functional plant-milk has been developed based on hemp (*Cannabis sativa L.*) seeds of local origin. The high nutritional value and potential functionality of this local raw material were proved by the presence of a significant amount of polyphenols ($295 \pm 7 \mu\text{g} \cdot \text{ml}^{-1}$) and tannins ($4.25 \pm 0.54\%$) in it. UV/VIS spectra analysis showed that the seeds contain various groups of flavones and flavonoids, the antioxidant activity being more than 88%. *Cannabis sativa L.* seeds stand out from other species in the low content of sugar ($5.71 \pm 0.01\%$), high protein potential ($25.33 \pm 0.13\%$), and a good mineral composition.

As a result of physicochemical studies of the developed plant milk, it was revealed that hemp seed milk contains a large amount of flavones, in particular quercetin, cyanidin and epicatechin. It was found that the protein content in such milk is 8 times higher than in classic oat or rice milk, more precisely 4,68 g / 100 g. This amount is similar to the protein content of cow's milk. It was determined that the acidity level, as well as other quality indicators are in accordance with the regulatory documents permissible limits - $19 \pm 1^{\circ}\text{T}$, and pH - 6.17 ± 0.01 . It was found that the organoleptic characteristics of plant milk based on hemp seeds were highly appreciated by adherents of vegan nutrition.

Keywords: plant milk, local raw material, functional properties, hemp seeds, high protein content

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