



# ODESSA NATIONAL ACADEMY OF FOOD TECHNOLOGIES

## DEVELOPMENT OF THE TECHNOLOGY OF THE BABY-FOOD PROTEIN PASTES PRODUCTION

### Purpose and scope

The development of the technology of paste-like protein products for the nutrition of children of 8 months which are partially adapted to the milk of women.

### Main characteristics and the development essence

The advisability of the thermal-acid coagulation of skimmed milk proteins and thermostatic production method for the protein pastes technology were justified. The rational mass fractions of vegetable oils (pumpkin seed oil and high oleic sunflower oil), fructose, lactulose, vitamins and minerals in the baby-food protein pastes were experimentally proved and scientifically grounded. The starter composition components with *B. animalis* Bb-12 monocultures, *L. acidophilus* La-5 monocultures and *L. lactis* ssp. mixed cultures were grounded for the production of the baby-food protein pastes with high probiotic, hypoallergenic and antagonistic properties, moderate acidity and extended storage period; the ratio of cultures in the starter composition is recommended being 1,0 : 0,1 : 1,0 respectively. The biomedical research of the product was fulfilled.

### Comparison with the world's analogues, the main development advantages

The development of the technology of paste-like protein products for the nutrition of children of 8 months and upwards – protein pastes which are partially adapted to the milk of women and have probiotic and hypoallergenic properties and a long shelf life using lactobacteria and bifidobacteria bacterial concentrates of direct application and the complexes of physiologically functional food ingredients. In Ukraine there are no analogues.

### The intellectual property protection status

No patents.

### Demand in the market

Only 36% of women feed their children exclusively breast milk up to six months. Therefore, the problem of providing children with quality and biological value of food can only be solved through their industrial production. The economic impact of the developed technology advancement was ascertained 2175,5 – 2213,9 UAH / t..

### The readiness for development status

Production formulas, normative documents and the innovative baby-food protein pastes technology were developed. Industrial tests of the technique have been conducted at the LLC «Gormolzavod №1» (Odessa). The technology is ready for industrial application.



The baby-food protein pastes

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