

## TECHNOLOGY AND BIOLOGICAL VALUE OF MILK-EGG CO-PRECIPIRATE

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### Abstract

Today, much is known about the positive effects of milk proteins on the human body, especially of lysozyme, which can cause lysis of bacteria and considered as one of the essential components for baby food. Given today's circumstances, the issue of increasing the resistance of the children body to various diseases is a priority, so it is advisable to create new foods for babies, rich in lysozyme and other immune and bifidogenic components. The aim of this research was to create semi-finished product (milk-egg co-precipitate) for its further use in technologies of baby foods, using lysozyme-rich protein raw materials of natural origin, namely secondary milk raw materials and eggs.

The sample of created milk-egg co-precipitate was analyzed in comparison with 5% fat cottage cheese, taken as a control sample. The total chemical composition of foods was determined by standard methods. Amino acid composition of proteins was studied on hydrolyzate "Aminochrome II" type OE-914, the relative biological value - by testing on infusorium *Tetrahymena pyriformis* strain H-14. The fatty acid composition was determined by gas-liquid chromatography. The technology of new semi-finished food product, namely milk-egg co-precipitate, was developed. The general chemical composition of the developed product was analyzed and characterized by an increase in the content of proteins and fats in comparison with the control. The amino acid composition, the degree of digestibility and the relative biological value of the developed foods were analyzed.

Analysis of the obtained data showed that the proteins of the developed foods were characterized by a high degree of pepsin and trypsin hydrolysis. Total digestibility degree for developed foods is 6.33 µg/eq, % higher than for the control sample. The fatty acid composition of milk-egg co-precipitate was studied and it was determined that the content of essential polyunsaturated fatty acids in it is 12.01%, which indicates the high biological value of fat. Among the saturated fatty acids, a significant content accounts for palmitic acid.

The developed product is characterized by improved nutritional and biological value. Its use in technologies of baby foods can help to improve the health of the population.

**Key words:** Milk-egg co-precipitate, Baby foods, Lysozyme, Biological value.