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## Biotechnology of functional natural milk products with biologically active additives from marine algae

Onsidering the unfavorable ecological situation in the world and the acute deficiencies of macro-and micronutrients in both adults and children, leading to various diseases and as a result, reducing life expectancy, the development of functional products and their introduction into (large scale) production is currently relevant. Dairy products (milk, ice cream) are quite promising in this regard, as they are not only widely consumed by all sections of the population, but are also a source of riboflavin, retinol and also contain other vitamins and beneficial, biologically active substances: Enzymes, hormones, immuno biological compounds and pigments (lactoflavin). The aim of the work was the development of dairy products with the addition of polysorbate, carrageenan and Fukolam from the Pacific shelf. The studied objects were, dairy drinks with the addition of biologically active substances, pasteurized milk, carrageenan, Fukolam C and polysorbate a polysaccharide obtained by the esterification of pectins from lime). The production technology of dairy drinks with polysaccharides of seaweed and terrestrial plant-based pectins differed from the standard scheme of milk production by adding additives after the pasteurization stage, before cooling. The quality assessment of the developed dairy drink with the addition of functional ingredients from seaweed was carried out according to organoleptic, physico-chemical and safety indicators in accordance with the code of alimentation. Thus, a composition was developed for three new dairy drinks with an optimum ratio of components for organoleptic and health effects; new technologies for the production of milk drinks, enriched with seaweed polysaccharides and terrestrial plant-based pectins have been described. The quality and safety of dairy products developed were studied.

## Biography

Wojciech Piekoszewski is a Professor of Medical Sciences with second degree of specialization in Toxicology. He is the Head of the Toxicological and Pharmaceutical Analysis Group and the Head of the Laboratory of High-Resolution Mass Spectrometry, of the Faculty of Chemistry, Jagiellonian University, Krakow, Poland. He is also the Chief Researcher of the Laboratory of Food Biotechnology and Pharmaconutriology. His research and scientific interests are in the application of metabolomics, proteomics and lipidomics as tools for diagnosis (biomarkers) of mental and neurodegenerative disorders, food safety, security, analysis of drugs and medicaments in biological materials.