

Development of Multifunctional Diet Supplements Containing Alpha-Ketoglutaric Acid

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α -Ketoglutaric acid (KGA) is an organic compound containing both a carboxyl and a ketone group. KGA, also referred to as 2-oxoglutamate, 2-ketoglutaric acid, 2-oxoglutaric acid, is a rate-determining intermediate in the tricarboxylic acid cycle and amino acid metabolism and has a crucial role in cellular energy metabolism. The aim of this project was to develop a new line of probiotics aimed at 5 groups of recipients - athletes, people after antibiotic therapy and chemotherapy, future mothers and children with gut and psychology syndrome (GAPS).

The developed products are multi-component liquids and gels, which makes them a novelty on the market, as most probiotic supplements are dry. Bacteria and bacterial metabolites (including KGA), vitamins and minerals and plant extracts with proven health-promoting properties are the functional ingredients of the products. Combination of probiotic bacteria and KGA is another reason that makes the developed product assortment unique on domestic market of functional food.

Four research tasks related to the development of the microbiological process of KGA synthesis and the production technology of new probiotic products containing KGA were undertaken in order to achieve the assumed goal.

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Biography:

Paulina Maciejewska graduated from Poznan University of Life Sciences in Poland, where she received M.S. degree in Biotechnology on the Faculty of Agriculture and Bioengineering in 2017. She works at University of Life Sciences in Poland, Faculty of Food Science and Nutrition, Department of Biotechnology and Food Microbiology as a microbiologist. She is involved in the development of microbiological synthesis of alpha-ketoglutaric acid. She is interested in industrial biotechnology and food microbiology.