Abstract

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Selected aspects of the use of sprouted seeds in food production

Beata Biernacka

University of Life Sciences in Lublin, Poland

Abstract

The sprouted seeds of many plants are among the potential natural sources of substances that can be used to supplement food and increase its functionality. They are a rich source of vitamins as: vitamins A, B, C, E, H, minerals and antioxidants, and their production is relatively easy. They contain large amounts of calcium, iron, sulfur, magnesium, potassium and zinc, selenium, as well as micronutrients - lithium, chromium. In addition, germinated seeds are characterized by an intense metabolism that can be modified to produce specific ingredients or compounds. The constantly growing technological possibilities allow the use of this type of raw materials not only as functional food intended for consumption. An innovative solution is the production of snacks enriched with the addition of sprouted seeds with the use of barothermic treatment. Extrusion-cooking process is based on HTST (High Temperature Short Time). According to increase in consumer awareness about well-being and healthy lifestyle some new types of snacks products were developed supplemented with addition of sprouted soybeen. Potato-based and cereal compositions were used as control mixtures and fresh sprouted soybeen was used as nutritionally valuable additive and natural colorant in various amount. Selected physical and chemical analyses were performed as well as texture and structure evaluation. Expanded snacks supplemented with sprouted soybeen showed increased nutritional value, improved taste and visual attractiveness.

These results are part of the research project LIDER/29/0158/L-10/18/NCBR/2019 entitled “Development of a Comprehensive Technology of Obtaining High-Quality Extruded Snacks Based on Minimally Processed Vegetable and Animal Raw Materials”.

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Biography

Beata Biernacka has completed her PhD at the age of 30 years from University of Life Sciences in Lublin. She is an assistant professor. Her scientific activity is focused on food fortification, and particular interests are focused on enriching pasta products with natural additives derived from plants. Scientific and research achievements include 35 scientific papers and 22 conference proceedings.