

A new generation of extruded snacks with the addition of cricket flour

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Abstract

Nowadays more and more consumers are looking for new innovative products that play an important role in nutrition and allow to obtain a proper nutritional balance. The fundamental function of food is to provide the body with energy, nutrients and satisfaction that comes directly from eating it. The changing needs of customers are results of the fast pace of life and the lack of time to prepare meals. Another trend that will also develop at such a dynamic pace is the consumption of healthy snacks. The extrusion-cooking process makes it possible to obtain innovative and healthy products. Already, there are many voices that using insects into the daily diet can largely solve the global problems related to access to food in the poorest parts of the world. This raw materials can be ensure a higher coverage of the daily requirement for valuable nutrients like protein, fats and other nutrients.

Potato and cereal compositions were used for control mixtures and cricket flour was used as nutritionally valuable additive in various amount. The Polish prototype of single screw extruder-cooker Zamak Mercator type EXP-45-32 was used during extrusion-cooking process. Selected chemical analyses were completed as well as protein, fat and fibers content. Additionally, the antioxidant activity was compared. Expanded in hot oil snacks with cricket flour addition showed increased nutritional value and antioxidant activity.

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

Maciej Combrzyński has completed his PhD at the age of 28 years from University of Life Sciences in Lublin. He is an assistant professor. He is a Head of the research project LIDER X 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". He is an author and co-author of over 50 scientific papers and over 40 conference proceedings. His scientific activity is focused on funtional food and ecological biopolymers.