

# DEVELOPMENT OF MATZO MADE OF WHOLEMEAL RYE FLOUR AND ITS IMPLEMENTATION IN THE INDUSTRY

Zita Boglárka Zakupszki, Antal Véha, Balázs P. Szabó

Department of Food Engineering, Faculty of Engineering, University of Szeged, Szeged, Hungary  
*z.zita@mk.u-szeged.hu*

## **Abstract**

Bakery products are one of the most important food sources of the population. In the baking industry, continuous development of products is required because consumers with different nutritional needs are pushing for new requirements for food. Along with the low caloric content, there is growing attention to the functional effects of foods. In our work, we focused to increase the fibre content in a special bakery product which is one of the main trends in the development of food in the baking industry.

The aim of our work is the development of a matzo made of wholemeal rye flour, which helps in healthy nutrition for the customer's and more economical from production's point of view.

We chose the matzo for our work because, thank for its simple recipe and technology, it's very suitable for product development for consumers with different nutritional needs. The main aim of the product development in our project is to increase the nutrient content by the raise of mineral and fibre content.

In the first part of our work we performed basic measurements with flours used during product development. We measured the quantity and quality of gluten protein with Glutomatic-Gluten Index System, the activity of amylase enzymes with Falling Number 1400 and we did a complex dough monitoring with METEFÉM Valorigraphe FQA 205 of BL80, BL160, RL90 and RLTK flours. In the course of the studies we have found that BL80 and BL160 contain large amount of strong gluten proteins and each flour is low in enzyme content. In the baking industry flours with low enzyme content have negative impacts on the properties of the product but this feature doesn't matter to the matzo. In the dough monitoring it was found that each flour is suitable for matzo making, but RL90 is only slightly recommended because the large amount of water it absorbs reduces the efficiency of production.

In the second part of our project we compare the basic matzo with matzos made of 3 different recipes. We measured the ash content, the acid content and fibre content with 2010 Fibertec System of samples. Then we made an economic calculation.

Based on results of examinations it can be ascertain that the new product shows more advantageous values of the fibre content's and the prime cost's point of view.

*Key words: trend, development, nutrition, matzo*