QUINCE (*CYDONIA OBLOGNA*) PASTE: FUNCTIONAL INGREDIENT FOR PASTRIES

Natalia Suhodol[1]*, Eugenia Covaliov[1], Aurica Chirsanova[1], Vladislav Resitca[1], Olga Deseatnicova[1]

[1]Faculty of Food Technology, Technical University of Moldova, 168 Stefan cel Mare blvd., Chisinau, Republic of Moldova

*Corresponding author: natalia.suhodol@toap.utm.md

The aim of this research is to obtain functional pastry products with quince paste as texture agent.

Modern foods are characterized by deficiencies of essential nutrients (vitamins, minerals), and the current trends of consumers regarding healthy eating, is manifested by the privilege of food products, which in addition to basic nutritional principles, contain biologically active substances with beneficial effects on maintaining health and which could also prevent or reduce the risk of disease.

The paper presents functional pastry preparations with the addition of quince paste, which come to diversify the range of pastries and contribute to increasing the nutritional value of these products due to the rich content of vitamins, dietary fiber, minerals, etc., which are found in quince. The pastries (sunflower oil-based cake, butter-based cake, butter-based cookie) were prepared with the addition of quince paste in concentrations of 30%, 20% for cakes and 25% for cookies.

The analysis of the organoleptic properties showed that the addition of 20% quince paste to wheat flour, improves its appearance, taste, smell and color. The physico-chemical indices (dry matter, antioxidant capacity, polyphenol content, density, number of pcs / kg) of the products with the addition of quince paste also attest to the positive effect of its incorporation in the pastries formulation.

The ability of quince paste pastry to inhibit hydrogen peroxide was investigated. It was found that in all cases the samples with the addition of quince paste show an increased capacity to inhibit hydrogen peroxide (22.9 - 27.6%) compared to the control samples (21.7 - 25.2%). Microbiological analysis of quince paste pastries showed that they can be stored for up to 5 days - for cakes, and up to 45 days for cookies.

Keywords: quince paste, antioxidant capacity, pastry, cakes, cookies

Acknowledgment: The research was funded by State Project 20.80009.5107.09. "Improvement of food quality and safety by biotechnology and food engineering", running at Technical University of Moldova.

IMPACT OF USING CHIA FLOUR (*SALVIA HISPANICA* L.) FOR BREAD MANUFACTURING

Carolina Grosu[1*], Eugenia Covaliov[1], Rodica Siminiuc[1], Olga Gutium[1]

[1]*Faculty of Food Technology, Technical University of Moldova, 168 Stefan cel Mare blvd., Chisinau, Republic of Moldova*

[*]Corresponding author: gcarol@mail.ru

The research is based on the use of chia seed (*Salvia hispanica* L.) flour in the manufacture of bread. The advantage of chia flour is the lack of gluten, so it can be used to obtain products for people with gluten intolerance, it has a low-calorie content, a high content of unsaturated fatty acids, vitamins and minerals.

Existing studies demonstrate the physico-chemical composition and nutritional importance of chia seeds (*Salvia hispanica* L.) with a high dietary fiber content. Thus, all this makes it possible to use chia seed flour in order to adjust the composition and properties of confectionery products. Today the flour is obtained by grinding chia seeds, the feasibility of its use in the production of bakery products, is also due to the ease of use and the lack of any further processing.

The research objective was to modify the bread recipe by partially replacing wheat flour with chia seed flour (*Salvia hispanica* L.), developing the technological scheme of the new type of product.

Incorporation of chia seed flour in the bread recipe for 10% not substantially altered the chemical, chemical (acidity, leavening, elasticity, porosity, etc.) and sensory properties of the dough and bread, which allows the diversification of the product ranges of existing bakery on the market.

Keywords: Chia - *Salvia hispanica* L., bread, functional properties, functional foods

Acknowledgment: The research was funded by State Project 20.80009.5107.10, nr. PS-62 "Personalized nutrition and intelligent technologies for my well-being", running at Technical University of Moldova.