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THE TECHNOLOGY OF OBTAINING AN GLUTEN-FREE PRODUCT ENRICHED WITH
BIOACTIVE PRINCIPLES FROM CRANBERRIES

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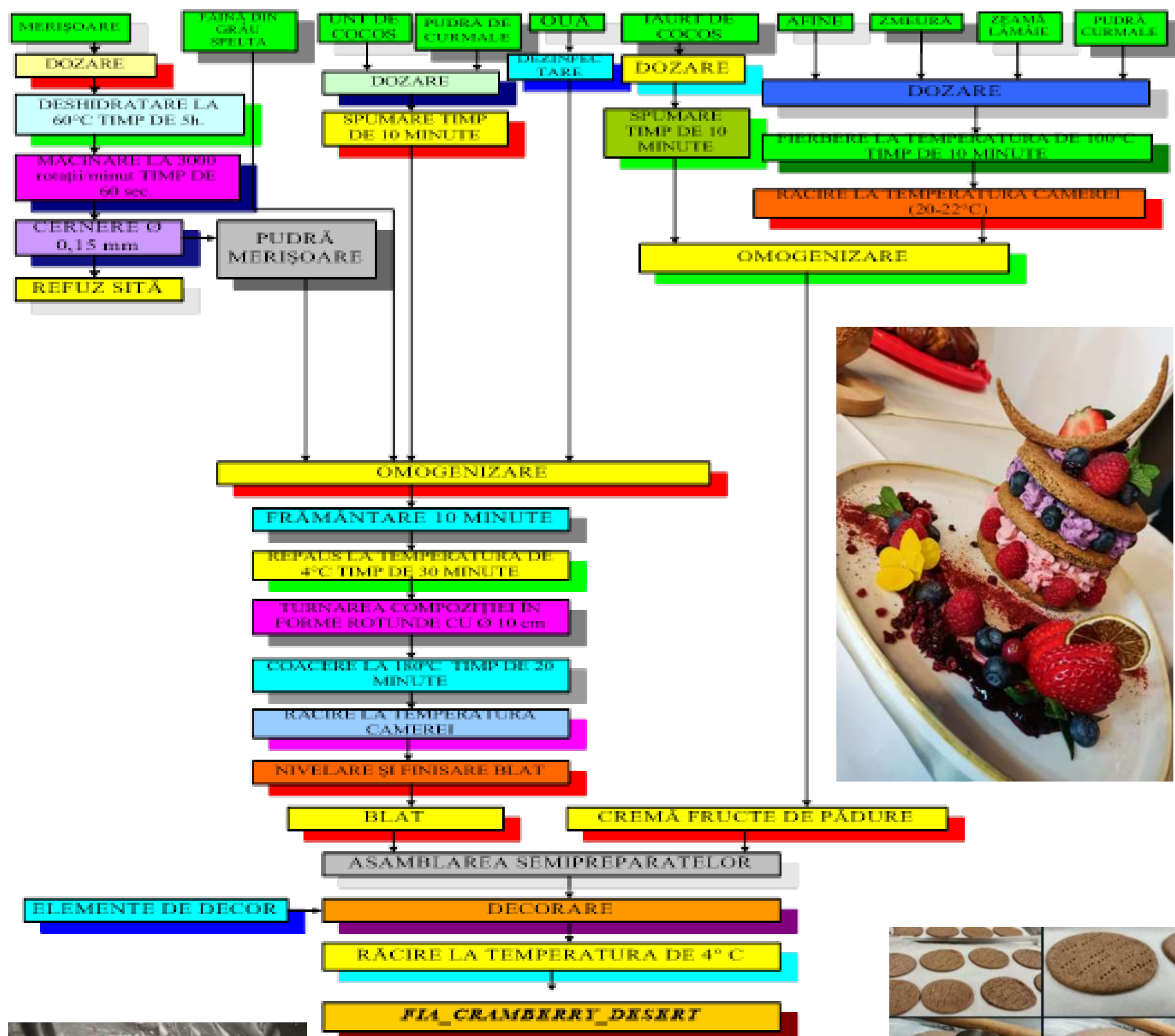
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Abstract: The work aims to develop an innovative gluten-free pastry, intended for people with gluten intolerance, based on buckwheat and cranberry flour, fruits recognized for their high content of bioactive compounds and their antioxidant properties. In a context in which the incidence of autoimmune diseases and interest in functional nutrition is increasing, the theme of the paper is part of the current trends of the food industry oriented towards sustainability and health. The introductory part highlights the role of gluten in traditional bakery products and its negative impact on sensitive people, justifying the need to formulate gluten-free alternative products. The literature review addresses the nutritional and functional properties of buckwheat flour and cranberries, highlighting their potential to improve the nutritional and functional value of food products. His own contributions consist in the development of the technology for obtaining the product FIA_CRANBERRY_DESERT, a gluten-free dessert with a layered structure (buckwheat and cranberry flour top, coconut and raspberry yogurt cream, respectively coconut and blueberry yogurt cream). The technological stages, characteristics of raw materials, manufacturing scheme, nutritional value and sensory analysis were described.

• Introduction

The present work aims to develop a gluten-free bakery product, based on buckwheat flour and enriched with cranberries, with the aim of obtaining an innovative food, safe for consumers with dietary restrictions and with valuable functional properties. By combining technological, nutritional and functional aspects, this research responds to the real needs of a changing population and contributes to diversifying the range of healthy products available on the market. In this sense, buckwheat (*Fagopyrum esculentum*), although often confused with a cereal, is a gluten-free pseudo-cereal, rich in high-quality proteins, dietary fibers and bioactive compounds with antioxidant and anti-inflammatory effects. This represents a valuable solution for the formulation of gluten-free products, as it contributes to improving the nutritional value without compromising functionality.

• Material and method



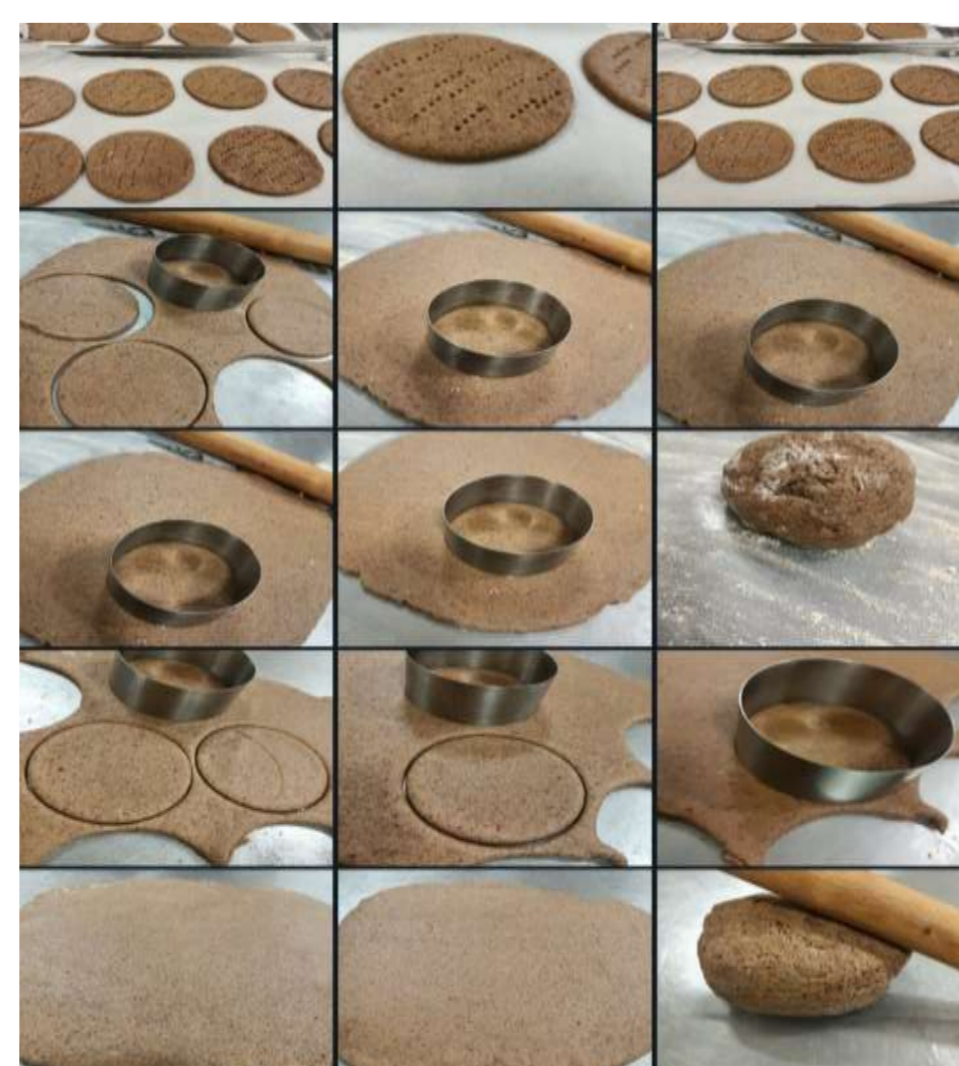
• Results and discussions

The results obtained highlighted that the cake obtained with the addition of cranberries and the incorporation of buckwheat flour in the recipe brought additional benefits from a technological and nutritional point of view. Buckwheat, being a naturally gluten-free pseudocereal, allowed the creation of a product suitable for people diagnosed with celiac disease or for those who adopt a gluten-free diet. The analyses confirmed that buckwheat flour contributes through its high content of dietary fiber, high-quality proteins and bioactive compounds (rutin, flavonoids), favoring a more stable glycemic response and prolonged satiety. Thus, the association of cranberries with buckwheat flour not only improved the nutritional profile of the product, but also strengthened the functional character of the hypoglycemic cake, transforming it into a viable alternative for consumers at risk of diabetes and gluten intolerance.

Properties	Value nutritional / 100 g product
Core moisture (g)	41.74
Protein (g)	4,6
Lipid (g)	6,7
Fiber (g)	5,6
Carbohydrates (g)	24
Energy value, (kcal)	167
Salt content (g)	0.9

• Conclusions

Following the approach to this topic, emphasis can be placed on the possibility of developing a gluten-free confectionery product, formulated based on buckwheat flour and enriched with bioactive principles from cranberries, thus responding to a real and pressing need to diversify the range of functional foods intended for people with dietary restrictions, especially those suffering from celiac disease or non-celiac gluten sensitivity.



Acknowledgement: cranberry flour, innovative gluten-free products, gluten-free product, cranberries, buckwheat flour, bioactive compounds.