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Adding innovative ingredients to traditional bread - Bread with beetroot and sunflower seeds

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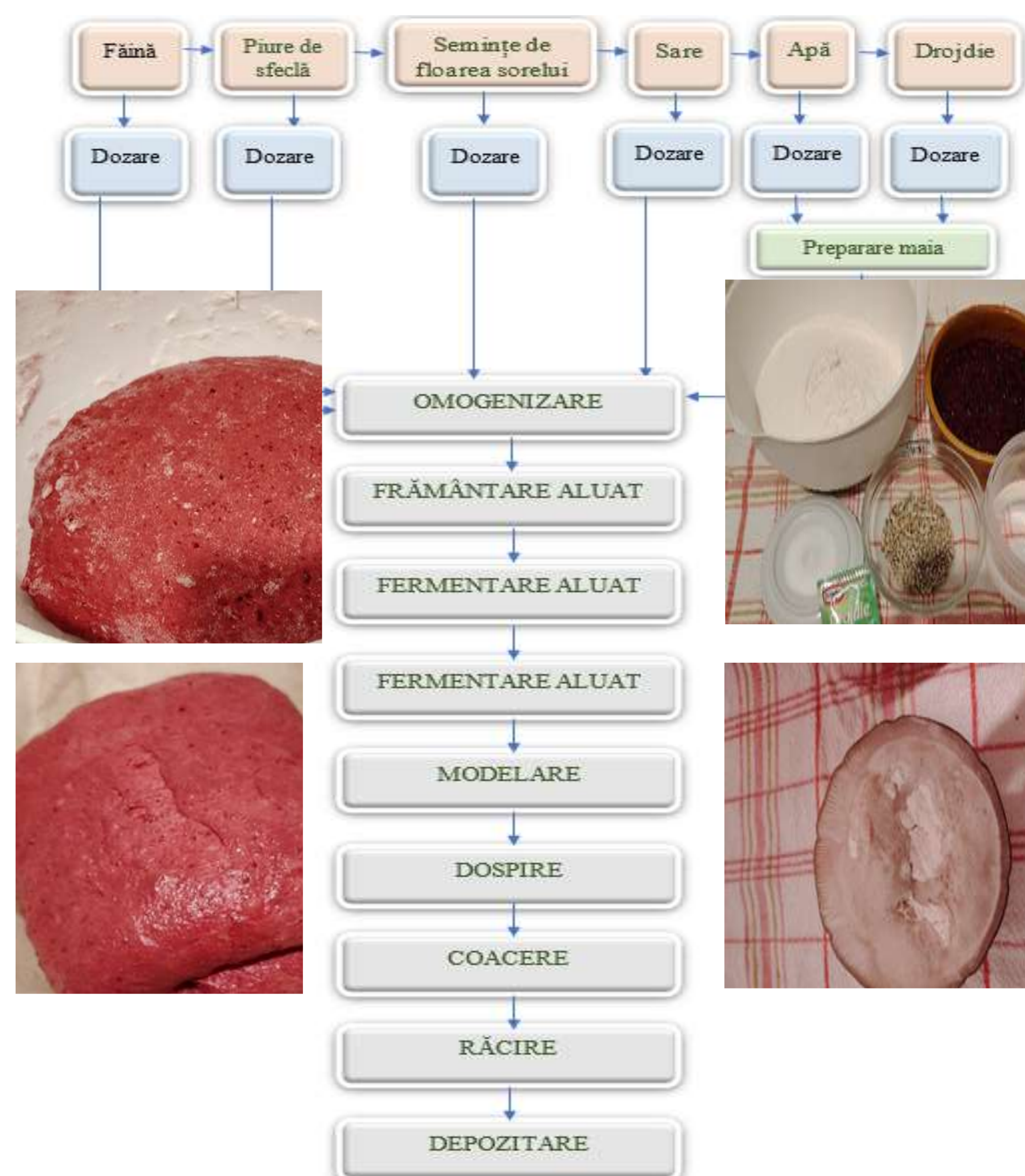
Abstract: The present work aims to present a basic food product → bread, using for the production of this product, basic ingredients characteristic of this type of dough, but also an addition of ingredients with an important nutritional value for the body. It is known that traditional bread, made from wheat flour, yeast, water and salt, has a low content of micronutrients, therefore there is an increased interest in adding ingredients that would increase the nutritional value and meet the demands of modern consumers. Studies on compounds in beetroot have found numerous positive effects in preventing chronic diseases, but also in reducing the toxic effects of various substances in the body. The addition of beetroot to bread increases the nutritional value of the final product due to the increased content of polyphenols, including flavonoids and phenolic compounds, and mainly betalains. Sunflower seeds are rich in healthy fats, beneficial plant compounds, but they are also a rich source of: Vitamin E, Vitamin B1, Vitamin B6, Selenium, Iron, Copper, Manganese, Zinc, Potassium. The increased interest in oilseeds, as an ingredient in bakery products, is a result of all the research in the field, which has demonstrated that these seeds have a high content of: vegetable proteins, polyunsaturated fatty acids, vitamins, minerals and phytoestrogens.

• Introduction

The bibliographic study focuses on the utilization of beetroot and sunflower seeds in the baking industry. To highlight the contribution of these innovative ingredients in the final product, studies were presented on the compounds in beetroot and sunflower seeds.

The work includes the presentation of the raw materials used, the manufacturing recipe, the technological scheme, the description of the technological process, the analysis of nutritional value, and sensory evaluation according to the hedonic scale.

• Material and method



• Results and discussions

As time has passed and discoveries have been made in the food industry, consumer needs and requirements have changed considerably, so that bread is no longer a simple subsistence food. This work demonstrates that adding ingredients such as beets and sunflower seeds can enrich the final product in terms of: visual appearance, color, taste, and nutritional value.

The high content of: flavonoids, betalaines, phenolic compounds, Vit. E, Vit. B1, Vit. B6, Selenium, Iron, Copper, Manganese, Zinc, and Potassium, in these ingredients, increases the nutritional value of the final product and, consequently, provides health benefits to the consumer.

The results show that bread with beetroot and sunflower seeds has a lower carbohydrate and lipid content, as well as a lower energy value. Following the evaluations made by the 10 tasters, it was observed that the bread with beetroot and sunflower seeds was most appreciated in terms of texture, chewing behavior and overall acceptability.

Proprietăți	Valoare / 100 g produs
Valoare energetică	202 kcal
Proteine	7,33 g
Glucide	40 g
Lipide	1,66 g
Fibre	2,3 g

• Conclusions

In conclusion, this work demonstrates the importance of adding innovative ingredients to a basic food product in order to obtain a final product that meets the current needs and requirements of consumers. Therefore, bread with beetroot and sunflower seeds can be considered a healthy food, containing quality ingredients and providing nutritional value and health benefits to those who consume it.



Acknowledgement: beetroot, sunflower seeds, polyphenols, flavonoids, phenolic compounds, betalains, positive effects, chronic diseases, toxic effects, research, baking industry, innovative ingredients, nutritional value, health benefits, consumers.