Universitatea Tehnică a Moldovei

TEHNOLOGIA DE FABRICARE A UNUI PRODUS CU GUST DULCE

Student: Benciu Mădălina
Coordonator: Deseatnicova Olga
Dr. prof.univ.

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Teză de master

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REZUMAT

Teza de master abordează integrarea pieliței de struguri, un subprodus al industriei vinicole, în deserturi de tip Panna Cotta, pentru a valorifica potențialul nutrițional și bioactiv al acestui material, contribuind la sustenabilitatea alimentară. Teza este structurată în trei capitole, care urmăresc să analizeze aspectele teoretice, metodologice și experimentale ale cercetării.

Primul capitol reprezintă o revizuire amplă a literaturii, explorând compoziția chimică a pieliței de struguri, bogată în polifenoli, fibre și antioxidanți, și subliniind beneficiile acesteia asupra sănătății. Este detaliată importanța valorificării subproduselor alimentare, în contextul sustenabilității și al economiei circulare, precum și impactul antioxidanților asupra sănătății umane. Capitolul subliniază potențialul pieliței de struguri de a fi integrată în produse alimentare funcționale, punând accent pe principiile analizelor senzoriale în industria alimentară.

Al doilea capitol prezintă materialele și metodele utilizate pentru elaborarea produsului. Este descrisă tehnologia de obținere a Panna Cotta îmbogățită cu pudră din pieliță de struguri în diverse concentrații (1%, 2.5%, 5%, 7.5%). Totodată, sunt detaliate metodele analitice aplicate pentru caracterizarea produselor, inclusiv analizele de culoare, textură, conținut total de polifenoli și activitate antioxidantă. S-au realizat, de asemenea, analize microbiologice și senzoriale pentru a evalua siguranța și acceptabilitatea produselor.

Al treilea capitol prezintă rezultatele obținute și interpretarea acestora. S-a observat că adaosul de pudră de pieliță a influențat pozitiv parametrii cromatici, conținutul de polifenoli și activitatea antioxidantă, atingând valori maxime la concentrații ridicate de pudră. În același timp, analiza texturii a indicat că duritatea și elasticitatea produselor sunt direct influențate de procentul de pudră, iar analiza senzorială a demonstrat o preferință pentru formulele cu 2.5% și 5% pudră. Analiza microbiologică a confirmat siguranța produselor, fără contaminări cu microorganisme patogene.

ABSTRACT

This thesis explores the integration of grape skins, a by-product of the wine industry, into Panna Cotta desserts to harness their nutritional and bioactive potential, contributing to food sustainability. The work is structured into three chapters, analyzing the theoretical, methodological, and experimental aspects of the research.

The first chapter provides an extensive literature review, examining the chemical composition of grape skins, which are rich in polyphenols, fibers, and antioxidants, and highlighting their health benefits. The importance of utilizing food by-products in the context of sustainability and the circular economy is emphasized, along with the impact of antioxidants on human health. This chapter also underlines the potential of grape skins to be incorporated into functional food products, focusing on the principles of sensory analysis in the food industry.

The second chapter describes the materials and methods used to develop the product. The technology for obtaining Panna Cotta enriched with grape skin powder in various concentrations (1%, 2.5%, 5%, 7.5%) is detailed. Analytical methods employed for characterizing the products are described, including color, texture, total polyphenol content, and antioxidant activity analyses. Additionally, microbiological and sensory evaluations were conducted to assess the safety and acceptability of the products.

The third chapter presents the results and their interpretation. It was observed that the addition of grape skin powder positively influenced chromatic parameters, polyphenol content, and antioxidant activity, with maximum values reached at higher powder concentrations. Texture analysis indicated that the hardness and elasticity of the products were directly influenced by the percentage of powder, while sensory analysis revealed a preference for formulas with 2.5% and 5% powder. Microbiological analysis confirmed the safety of the products, with no contamination by pathogenic microorganisms.

CUPRINS

Contents

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