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ASSESSMENT OF THE ECONOMIC EFFICIENCY OF THE PRODUCTION OF WELDED SEMI-FINISHED PRODUCTS FOR HEALTH PURPOSES

Summary

The article considers the theoretical principles and outlines the practical aspects of assessing the economic efficiency of introducing custard pastries using rice flour and transglutaminase enzyme in restaurant facilities. The results of calculations of the cost of raw materials, production costs and selling prices for the manufacture of custard cakes are presented. The price characteristics of the developed products are analyzed and their competitiveness is assessed. The social effect of the implementation of the proposed technology of gluten-free custard pastries is determined.

The purpose of the study is to calculate the cost of custard semi-finished product using rice flour and transglutaminase enzyme; justify the economic efficiency and social effect of their use in restaurants. The criteria for economic efficiency were calculated using regulations and calculation articles adopted and approved in accordance with the current legislation of Ukraine.

The results of the calculations found that the selling price of the developed gluten-free custard semi-finished product with rice flour and transglutaminase enzyme is 4.03 UAH higher compared to the control sample. The increase in the selling price for gluten-free custard semi-finished product with rice flour and transglutaminase enzyme is due to the use of specialized ingredients that improve its nutritional value. Despite the increase in price, the product has a significant social effect, as it expands the range of useful and affordable gluten-free products for consumers with gluten intolerance.

Practical value. The developed technology of custard cakes using rice flour and transglutaminase enzyme will improve the nutrition of consumers in restaurant facilities. The prospect of further research is to calculate the cost of finished semi-finished products using psyllium powder for the developed custard semi-finished.

Keywords: costs, raw materials, flour, gluten, brewed products, economic efficiency, social effect.

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References:

1. Sorokina, A.M. (2023). Trends in the development of the modern confectionery industry of Ukraine. *Problemy suchasnykh transformatsij. Serii: ekonomika ta upravlinnia [Problems of modern transformations. Series: Economics and Management]*, vol. 7. DOI : <https://doi.org/10.54929/2786-5738-2023-7-04-15> (in Ukr.).
2. Barkar', Ye., Lubova, O. (2024). Development of innovative technologies in the food industry. *Collection of Scientific Papers «Scientia»*, pp. 79–82. URL : <https://previous.stsientia.report/indekh.php/archive/artitsle/viev/2130> (in Ukr.).
3. Majkova, S., Vivcharuk, O., Bomba, M. (2021). Prospects for the production of dishes with preventive properties with the introduction of non-traditional raw materials. *Innovatsii ta tekhnolohii v sferi posluh i kharchuvannia [Innovation and technology in services and nutrition]*, no. (1-2(3-4)), pp. 66-74. DOI : [https://doi.org/10.24025/2708-4949.1-2\(3-4\).2021.242689](https://doi.org/10.24025/2708-4949.1-2(3-4).2021.242689) (in Ukr.).
4. Neschadym, L.M. (2021). Innovative methods and technologies for the preparation of dessert products. *Innovatsii ta tekhnolohii v sferi posluh i kharchuvannia [Innovations and technologies in the field of services and nutrition]*, no. 1-2 (3-4), pp. 59-65. URL : <https://dspatse.udpu.edu.ua/handle/123456789/14242> (in Ukr.).
5. Fedorova, D., Zykova, Ye. (2021). Custard semi-finished products with fillers: technology and quality. *Tovary i rynky [Goods and markets]*, no. 3, pp. 126-140. URL : <http://tr.knute.edu.ua/files/2021/03/12.pdf> (in Ukr.).
6. Vdovichen, O.G. (2018). The main approaches and features of the formation of effective brand loyalty programs. *Visnyk Chernivets'koho torhovel'no-ekonomichnoho instytutu [Bulletin of the Chernivtsi Institute of Trade and Economics]*, Issue 69-70 (1-2), pp. 69–79. URL : <http://herald.chite.edu.ua/tsontent/download/archive/2018/12.pdf> (in Ukr.).
7. Losheniuk, I., Zeleniuk, O. (2023). Modern marketing tools for promoting goods and services. *Marketynh i lohistyka [Marketing and Logistics]*, Issue I (89), pp.130-140 (in Ukr.).
8. Vdovichen, O., Palamarek, K.V. (2024). The role of world innovative technologies in the development of hotel and restaurant business. *Innovatsii ta tekhnolohii v sferi posluh i kharchuvannia [Innovation and technology in services and nutrition]*, no. 2 (12), pp. 22–27. DOI: [https://doi.org/10.32782/2708-4949.2\(12\).2024.3](https://doi.org/10.32782/2708-4949.2(12).2024.3) (in Ukr.).
9. Simakhina, H.O., Naumenko, N.V. (2015). Innovations in food technology. *Tovary i rynky [Goods and markets]*, no. 1, pp. 189–201. URL : http://nbuv.gov.ua/UJRN/tovary_2015_1_24 (in Ukr.).
10. Bomba, M.Ya., Dzhuryk N., R-J., Ivashkiv, L.Ya., Majkova, S.V. ta in. (2013). Modern problems and trends in the development of health nutrition, safety and quality of products. *Visnyk NAN Ukrainy [Bulletin of the National Academy of Sciences of Ukraine]*, Liha-Pres, L'viv, 264 p. (in Ukr.).
11. Macdalyna, E.R., Khairi, Zainol, Hasmadi, Mamat (2021). A review on the recent applications of gluten-free flour, functional ingredients and novel technologies approach in the development of gluten-free bakery products. *Food Research*, vol. 5(5), pp. 43-54.
12. Barsby, J.P., Cowley, J.M., Leemaqz, S.Y., Grieger, J.A., McKeating, D.R., Perkins, A.V., Bastian, S.E.P., Burton, R.A., Bianco-Miotto, T. (2021). Nutritional properties of selected superfood extracts and their potential health benefits. *PeerJ*, 9, Article e12525. DOI : <https://doi.org/10.7717/peerj.12525>.
13. Coffino, J.A. (2018). A Default Option to Enhance Nutrition Within Financial Constraints: A Randomized, Controlled Proof-of-Principle Trial. *Obesity: Clinical Trials and Investigations*, vol. 26(6), pp. 961-967.
14. Polozhyshnykova, L.O., Sutkovych, T.Yu., Olijnyk, N.V. (2023). Expanding the range of gluten-free flour confectionery products. *Naukovyj visnyk Poltav's'koho*

universytetu ekonomiky i torhivli. Serija «Tekhnichni nauky» [Scientific Bulletin of Poltava University of Economics and Trade. Series "Technical Sciences"], no. 3, pp. 20-27. DOI : <https://doi.org/10.37734/2518-7171-2022-3-4> (in Ukr.).

15. Odarchenko, D.M., Karbivnycha, T.V., Spodar, K.V. (2024). Expanding the range of gluten-free flour confectionery products and assessing their quality. *Tavrijs'kyj naukovyj visnyk. Serija: Tekhnichni nauky* [Tauride Scientific Bulletin. Series: Technical Sciences], no. 1, pp. 138-144. DOI : <https://doi.org/10.32782/tnv-tech.2024.1.16> (in Ukr.).

16. Khytrova, O. (2022). Hotel and restaurant business in wartime: challenges and directions of recovery. *Visnyk Chernivets'koho torhovel'no-ekonomichnoho instytutu* [Bulletin of the Chernivtsi Institute of Trade and Economics], Issue 3 (87), pp. 70-84. DOI : <http://doi.org/10.34025/2310-8185-2022-3.87.05> (in Ukr.).

17. Vdovichen, A., Kyfyak, V. (2022). The sphere of hospitality of Ukraine: recovery in the post-war period. *Scientia fructuosa*, no. 143(3), pp. 68-77. DOI : [https://doi.org/10.31617/visnik.knute.2022\(143\)05](https://doi.org/10.31617/visnik.knute.2022(143)05) (in Ukr.).

18. Karpova, V. Sobivartist' produktsii : holovne v kal'kuliuvanni. *Liha: Zakon*. 2021. URL : https://ips.ligazakon.net/document/reader/BZ013276?q=%D0%BF%D0%B5%D1%80%D0%B5%D0%B2%D1%96%D1%80%D0%BA%D0%B8&bl=&hide=true&snippet_id=snippet_9784 (in Ukr.).