

TRANSESTERIFICATION OF MIXTURES OF OILS AND FATS - A PROMISING METHOD FOR OBTAINING COCOA BUTTER SUBSTITUTES

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DOI: 10.5958/2249-7137.2022.00856.4

ABSTRACT

This article presents the results of scientific and experimental data, the best modes of obtaining a substitute for cocoa butter from cotton palmitin by the method of its transesterification in a mixture with other liquid oils are obtained. For experimental studies, modern methods of physicochemical analysis were used.

KEYWORDS: *Tansesterification, Cocoa, Oil, A Substitute, Fat-Acid Structure, Triglyceride, Intensification, Hydrogenation, Salomas, Triglyceridhydrogenizate, Raw Materials, Catalyst.*

REFERENCES

1. Collection of recipes and technological instructions for the development of national varieties of bakery products / Minpishcheprom, Uprkheleb, VNIKhP. - M.: "Food industry", 1975. - 264 p.
 2. Decision of the All-Union Conference of Oil and Fat Industry Workers "Main Directions for the Development of the Oil and Fat Industry for 1986-1990, Nalchik, 15.05.85. - Nalchik, 1986, pp. 25-28.
 3. Kazanowski C., Iakubouski A. Przeustryfikowanieolejrzepokowegouwodorionymsmalcemwierprzowym. - TfuszczeiSrodkiPiorace, 1965, no. 2, s. 65-70.
 4. Kazanowski C., Iakubouski A. TfuszczeisrodkiPiorace. - Institute of Fat Industry, Poland, 1962, No. 1, p. 1-10.
 5. Tarasova L.P., Puchkova L.I. and other Use of interesterified fats in bakery. – In: Catalytic hydrogenation and interesterification of fats. – Scientific Tr. All-Union. n.-i. in-t fats, 1973, no. 30, p. 63-70.
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6. A.S. Patent 503574. A method of obtaining edible fats from a mixture of vegetable oils and animal fats / A.G. Sergeev, N.L. Melamud et al. - Publ c. B.I., 1976, No. 7.
7. Goryacheva A.F. Influence of interesterified fat on the quality of bread. - Abstract Sat. / TsNIITEIPishcheprom: Bakery and pasta industry, 1972, no. I.
8. Pat. 2460769. Gate positioning mechanism for hulling machines / A. Schwarz, N.Y. Snyder. – Appl. 06/11/47. No. 753929, publ. 1.02.49 (146-285).
9. G.N. Bafoyeva, F.B. Ashurov, E.O. Xamroyev, S.A. Abduraximov//[Compatibility of cotton confectionary fat with natural cocoa butter](#)// Austrian Journal of Technical and Natural Sciences//Food industry, (2018), с.8-13.
10. Г.Н. Бафоева, Ф.Б. Ашуров, С.А. Абдурахимов//Хлопковый пальмитин-ценное сырье для получения заменителя масла какао//Масложировая промышленность,2012 г. с 29-30.
11. С.А. Абдурахимов, Г.Н. Бафоева, И.Ш. Садыков//Разработка Совместимости И Снижение Объема Заменителей Масла Какао//Инновации в индустрии питания и сервисе, 2020.г.с 256-259.
12. Г.Н. Бафоева, С.А. Абдурахимов, К.Х. Мажидов, М.Н. Рахимов//Новые направления в технологии каталитической гидрогенизации хлопкового масла//Масложировая промышленность, 2015 г.с.14-16.
13. Г.Н. Бафоева, Ф.Б. Ашуров, С.А. Абдурахимов//Выбор оптимальных технологических режимов получения заменителя масла какао//Масложировая промышленность, 2012г.с.20-23
14. K.S.Rakhmonov. Influence of leavens of spontaneous fermentation and phytoadditives on the provision of microbiological safety of bread // T. I. Atamuratova, N. R. Djuraeva, I. B. Isabaev, L. N. Haydar-Zade//Journal of Critical Reviews //2020, Vol.7, Issue 5, pp. 850-860.
15. S.K. Jabborova.Application of products of processing mulberries and roots of sugar beet in the production of cupcakes // I.B.Isabaev., N.R. Djuraeva., M.T. Kurbanov.,I.N. Khaydar-Zade., K.S. Rakhmonov //Journal of Critical Reviews //2020, Vol.5, Issue 5, pp. 277-286.
16. K.S.Rakhmonov. Application of phito supplements from medicinal vegetable raw materials in the production of drugs // T. I. Atamuratova., M.E. Mukhamedova., N.K.Madjidova., I.Sh. Sadikov //Journal of Critical Reviews //2020, Vol.7, Issue 12, pp. 934-941.
17. Djurayeva N, Mixtures of Vegetable Fat as a Potential Raw Material for Bakery// Barakayev N, RakhmonovK,Atamuratova T, Mukhamedova M, MuzaffarovaKh. // International Journal of Current Research and Review// october 2020, Vol.12, Issue 19, pp. 140-148. DOI: <http://dx.doi.org/10.31782/IJCRR.2020.12192>
18. Djurayeva N, Plant-fat mixtures as a potential raw material for bakery production// Rakhmonov K, Barakayev N, Atamuratova T, Mukhamedova M, MuzaffarovaKh. // Plant Cell Biotechnology and Molecular Biology 2020 21(45-46), pp. 29-42
19. Ravshanov S.S, The impact of ultrasonic activated water on hydrothermal processing of wheat grains grown in dry climate conditions // Rakhmonov K.S., Amanov B.N. // Plant Cell Biotechnology and Molecular Biology 2020 21(45-46), pp. 29-42

20. Kuliev N.SH, Udk 664.8 baking properties and quality expertise wheat flour// Rakhmonov K.S. // European Journal of Molecular & Clinical Medicine, 2020, Volume 7, Issue 2, Pages 6333-6340
21. Ravshanov S.S, The Effect Of Drinking And Activated Water On Field Scales Of Wheat Grains Grown In Arid Climatic Conditions// Rakhmonov K.S. Ergasheva H.B., Yuldasheva Sh. J.// European Journal of Molecular & Clinical Medicine, 2020, Volume 7, Issue 3, Pages 3065-3070.
22. Rakhmonov K.S., Confectionery Products for Therapeutic and Preventive Purpose with Medicinal Herbs Uzbekistan// L.N. Khaydar-Zade., N.SH. Kuliev, G.H.Sulaymonova // Annals of the Romanian Society for Cell Biology, Vol. 25, Issue 2, 2021, Pages. 4126 – 4140.
23. Ravshanov S.S., Influence of the Use of Activated Water during Hydrothermal Treatment on the Quality of Bread// Rakhmonov K.S., Radjabova V.E., Pardayev Z.T. // Annals of the Romanian Society for Cell Biology, Vol. 25, Issue 2, 2021, Pages. 4091 – 4102
24. Azim Oltiev., The role of catalysts in fat transesterification technology// MatlubaKamalova., KakhramonRakhmonov., OrifjonMamatqulov// IOP Conf. Series: Earth and Environmental Science 848(2021) 012220
25. Rakhmonov KS, Spontaneous fermentation starter cultures - an effective means of preventing the potato disease of bread // Isabaev IB. // Journal "Storage and processing of agricultural raw materials" .- M., 2011.- No. 12.- P.23-25.
26. Rakhmonov KS, Influence of the substrate of the nutrient medium on the composition of the populations of microorganisms in the starter cultures of spontaneous fermentation // Isabaev IB, Akhmedova ZR // Journal "Storage and processing of agricultural raw materials". M, 2012 ..- No. 9.- P.40-43
27. Rakhmonov KS, Analysis of typical sources of microbial contamination of bread // Buxorodavlatuniversitetiilmiyaxboroti. // 2014.- No. 3.- P.37-43.
28. Rakhmonov K.S. Potato Bread Disease and a Method for Its Prevention // T.I. Atamuratova // Russian Bakery Magazine. M, 2014.- No. 5.- P.37-38.
29. Rakhmonov KS, Biotechnological aspects of ensuring the microbiological purity of bread // E. Muratov, T.I. Atamuratova // Kimyovakimyotexnologiyasi. 2015.- No. 2.- P.64-68.
30. Rakhmonov K.S. Wheaten ferments spontaneous fermentation in biorechnological methods// Isabayev I.B. // Austrian Journal of Technical and Natural Sciences. 2016. - № 7-8. - P. 9-12.
31. Rakhmonov KS, Methods for improving the composition of the nutrient medium of sourdough cultures for bakery products from wheat flour // T.I. Atamuratova. Isabaev I.B. // Bakery of Russia. 2016. –№2. - P.22-24.
32. Rakhmonov KS, Optimization of the recipe composition of wheat breads using spontaneous fermentation starter cultures // Isabaev IB, U.M. Ibragimov, Molchanova E.N. // Bakery of Russia. 2018. –№3. - S. 33-37.

33. I.B. Isabaev, The use of feed flour as a substrate for the nutrient medium of wheat starter cultures in the production of bread // T. I. Atamuratova., Rakhmonov K.S. // Buxorodavlatuniversitetiilmiyaxboroti.- 2018. No. 2.- P.24-30.
34. Ravshanov S.S, Radjabova V.E, Rakhmonov K.S, Pardayev Z.T. Influence of the Use of Activated Water during Hydrothermal Treatment on the Quality of Bread // Journal Annals of the Romanian Society for Cell Biology - Romania, 2021. Vol. 25, №2 ISSN: 1583-6258, pp. 4091-4102.
35. Ravshanov S.S, Rakhmonov K.S, Ergasheva H.B, YuldashevaSh.J. The Effect Of Drinking And Activated Water On Field Scales Of Wheat Grains Grown In Arid Climatic Conditions // European Journal of Molecular & Clinical Medicine. Volume 07. Issue 03. 2020. -pp 3065-3070.
36. Н.Ш Кулиев, ЗМ Амонова/Структура мягкого мороженого с фруктово-овощными стабилизаторами/ Пищевая промышленность №5/2014 С74-76
37. Аманова З.М. Использование продуктов переработки айвы в хлебопечении Текст. / Мажидов К.Х., Музаффаров Д.Ч. // Хлебопечение России. 1998. - №4. - С.26.
38. Аманова З.М., Мажидов К.Х., Музаффаров Д.Ч. //Влияние айвовых добавок на процесс созревания теста и качество хлеба из пшеничной муки Текст. // Бух. технол. ин-т пищ. и легк. пром-сти. Бухара, 1996. - С. 9.
39. З.М. Амонова., С.О. Элмурадова//Выпечка мучных изделий с применением ИК-излучения// Хранение и переработка сельхозсырья, 2000.
40. B.N Amanov, Z.M Amonova, L.N Khaidar-Zade, A.R Fayzullaev//Prospects for Using Tomato Processing Products in the Production of Rye Bread// Annals of the Romanian Society for Cell Biology 2021/5/2 1009-1022.
41. BN Amanov, IB Isabaev, ZM Amanova, LN Khaidar-Zade// Methods Of Application Of Probiotic Bacterial Preparations In The Production Of Rye Bread// Nveo-natural volatiles & essential oils Journal| NVEO 2021 pp 8152-8165
42. ЗМ Амонова// Технологические особенности выпечки мучных изделий с применением ИК-излучения// Хранение и переработка сельхозсырья, 2001
43. Z.M Amanova., K.K. Mazhidov, D.C Muzaffarov// Nitrates in products of quince processing// Pishchevaiapromyshlennost'-MOSKVA ..., 1997.
44. Z.M Amanova., K.K. Mazhidov, D.C. Muzaffarov// Utilization of quince processing products in baking// Pishchevaiapromyshlennost'-moskva ..., 1997.