

REFERENCES

- Abdelaal, F. B., & Rowe, R. K. (2014). Effect of high temperatures on antioxidant depletion from different HDPE geomembranes. *Geotextiles and Geomembranes*, 42(4), 284–301.
<https://doi.org/10.1016/j.geotexmem.2014.05.002>
- Addo-Preko, E., Amissah, J. G. N., & Adjei, M. Y. B. (2023). The relevance of the number of categories in the hedonic scale to the Ghanaian consumer in acceptance testing. *Frontiers in Food Science and Technology*, 3. <https://doi.org/10.3389/frfst.2023.1071216>
- Al-Mamun, M., Chowdhury, T., Biswas, B., & Absar, N. (2018). Food poisoning and intoxication: a global leading concern for human health. In *Elsevier eBooks* (pp. 307–352).
<https://doi.org/10.1016/b978-0-12-814956-0.00011-1>
- Annapure, U., & Pratisha, N. (2021). Psychrozymes: A novel and promising resource for industrial applications. In *Elsevier eBooks* (pp. 185–195).
<https://doi.org/10.1016/b978-0-12-822945-3.00018-x>
- Bhardwaj, R. L., Parashar, A., Parewa, H. P., & Vyas, L. (2024). An alarming decline in the nutritional quality of foods: the biggest challenge for future generations' health. *Foods*, 13(6), 877.
<https://doi.org/10.3390/foods13060877>
- Bustani, Sana & Soni, Shouriehebal. (2023). REVIEW ON THE IMPACT OF PEROXIDE VALUE FROM EDIBLE OIL: INDIAN PERSPECTIVE. 10. 2023.
- C, B., I., & M, O. (2018). Comparative study of oxidative spoilage effect on margarine and palm oil sold in Makurdi Benue State Nigeria. *C I | Chemistry and Materials Research*.
<https://www.iiste.org/Journals/index.php/CMR/article/view/40582>
- Caramia, G., Losi, G., Frega, N., Lercker, G., Cocchi, M., Gori, A., & Cerretani, L. (2012). Milk and butter. From the Neolithic to the current nutritional aspects. *La Pediatria Medica E Chirurgica*, 34(6). <https://doi.org/10.4081/pmc.2012.51>
- Chai, X., Zhang, Y., Shi, Y., & Liu, Y. (2022). Crystallization and structural properties of Oleogel-Based margarine. *Molecules*, 27(24), 8952. <https://doi.org/10.3390/molecules27248952>

- Chicco, D., Warrens, M. J., & Jurman, G. (2021). The coefficient of determination R-squared is more informative than SMAPE, MAE, MAPE, MSE and RMSE in regression analysis evaluation. *PeerJ Computer Science*, 7, e623. <https://doi.org/10.7717/peerj-cs.623>
- Chiu, S., Williams, P. T., & Krauss, R. M. (2017). Effects of a very high saturated fat diet on LDL particles in adults with atherogenic dyslipidemia: A randomized controlled trial. *PLoS ONE*, 12(2), e0170664. <https://doi.org/10.1371/journal.pone.0170664>
- Dhaka, V., Gulia, N., Ahlawat, K. S., & Khatkar, B. S. (2011). Trans fats—sources, health risks and alternative approach - A review. *Journal of Food Science and Technology*, 48(5), 534–541. <https://doi.org/10.1007/s13197-010-0225-8>
- Deosarkar, S., Khedkar, C., & Kalyankar, S. (2015). Butter: manufacture. In Elsevier eBooks (pp. 529–534). <https://doi.org/10.1016/b978-0-12-384947-2.00094-5>
- Emebu, S., Osaikhuiwuomwan, O., Mankonen, A., Udoe, C., Okieimen, C., & Janáčková, D. (2022). Influence of moisture content, temperature, and time on free fatty acid in stored crude palm oil. *Scientific Reports*, 12(1). <https://doi.org/10.1038/s41598-022-13998-1>
- Gantner, M., Kostyra, E., Górská-Horczyzak, E., & Piotrowska, A. (2024). Effect of temperature and storage on coffee's volatile compound profile and sensory characteristics. *Foods*, 13(24), 3995. <https://doi.org/10.3390/foods13243995>
- García, J. M., Giuffrida, D., Dugo, P., Mondello, L., & Osorio, C. (2018). Development and characterisation of carotenoid-rich microencapsulates from tropical fruit by-products and yellow tamarillo (*Solanum betaceum* Cav.). *Powder Technology*, 339, 702–709. <https://doi.org/10.1016/j.powtec.2018.08.061>
- Green, B. G., Alvarado, C., Andrew, K., & Nachtigal, D. (2016). The effect of temperature on umami taste. *Chemical Senses*, 41(6), 537–545. <https://doi.org/10.1093/chemse/bjw058>
- Guillén, M., Ibargoitia, M., & Sopelana, P. (2015). Margarine: Composition and analysis. In Elsevier eBooks (pp. 646–653). <https://doi.org/10.1016/b978-0-12-384947-2.00446-3>

- Gupta, M. K. (2017). Basic oil Chemistry. In Elsevier eBooks (pp. 7–25).
<https://doi.org/10.1016/b978-1-63067-050-4.00002-7>
- Hae-Soo, K., Palanivel, G., & Al, M. M. (2013). Butter, Ghee, and Cream Products. Milk and Dairy Products in Human Nutrition: Production, Composition and Health, 390–411.
<https://doi.org/10.1002/9781118534168.ch18>
- Hofmann, T. (2025). Journal of Agricultural and Food Chemistry, 73(10).
- Japir, A. A., Salimon, J., Derawi, D., Bahadi, M., Al-Shuja'a, S., & Yusop, M. R. (2017). Physicochemical characteristics of high free fatty acid crude palm oil. OCL, 24(5), D506.
<https://doi.org/10.1051/ocl/2017033>
- Li, Y., Hruby, A., Bernstein, A. M., Ley, S. H., Wang, D. D., Chiuve, S. E., Sampson, L., Rexrode, K. M., Rimm, E. B., Willett, W. C., & Hu, F. B. (2015). Saturated fats compared with unsaturated fats and sources of carbohydrates in relation to risk of coronary heart disease. Journal of the American College of Cardiology, 66(14), 1538–1548.
<https://doi.org/10.1016/j.jacc.2015.07.055>
- Lipscomb, K., Rieck, J., & Dawson, P. (2016). Effect of temperature on the intensity of basic tastes: sweet, salty and sour. Journal of Food Research, 5(4), 1. <https://doi.org/10.5539/jfr.v5n4p1>
- Malekar, S., & Salgaonkar, S. (2023). Extraction of microbial oil from *Aspergillus niger* and preparation of a sustainable growth medium for the same. Research Square (Research Square).
<https://doi.org/10.21203/rs.3.rs-2884031/v1>
- Marcus, J. B. (2013). Lipids Basics: Fats and oils in foods and health. In Elsevier eBooks (pp. 231–277).
<https://doi.org/10.1016/b978-0-12-391882-6.00006-6>
- McCormick, F. (2012). Cows, milk and religion: the use of dairy produce in early societies. Anthropozoologica, 47(2), 101–113. <https://doi.org/10.5252/az2012n2a7>
- Memon, H. D., Mahesar, S. A., Sirajuddin, N., Kara, H., Sherazi, S. T. H., & Talpur, M. Y. (2024). A review: Health benefits and physicochemical characteristics of blended vegetable oils. *Grain & Oil Science and Technology*, 7(2), 113–123. <https://doi.org/10.1016/j.gaost.2024.05.001>

- Nogala-Kalucka, M., & Gogolewski, M. (2000). Alteration of fatty acid composition, tocopherol content and peroxide value in margarine during storage at various temperatures. *Molecular Nutrition Food Research*, 44(6), 431–433.
[https://onlinelibrary.wiley.com/doi/10.1002/1521-3803\(20001201\)44:6%3C431::AID-FOOD431%3E3.0.CO;2-D](https://onlinelibrary.wiley.com/doi/10.1002/1521-3803(20001201)44:6%3C431::AID-FOOD431%3E3.0.CO;2-D)
- Oteng, A., & Kersten, S. (2019). Mechanisms of Action of trans Fatty Acids. *Advances in Nutrition*, 11(3), 697–708. <https://doi.org/10.1093/advances/nmz125>
- Pădureț, S. (2022). The quantification of fatty acids, color, and textural properties of locally produced bakery margarine. *Applied Sciences*, 12(3), 1731. <https://doi.org/10.3390/app12031731>
- Ravotti, R., Worlitschek, J., Pulham, C. R., & Stamatiou, A. (2020). Triglycerides as Novel Phase-Change Materials: A Review and Assessment of their thermal properties. *Molecules*, 25(23), 5572. <https://doi.org/10.3390/molecules25235572>
- Riley, W. W., Nickerson, J. G., Mogg, T. J., & Burton, G. W. (2023). Oxidized B-Carotene is a novel phytochemical immune modulator that supports animal health and performance for Antibiotic-Free production. *Animals*, 13(2), 289. <https://doi.org/10.3390/ani13020289>
- Rios, R. V., Pessanha, M. D. F., De Almeida, P. F., Viana, C. L., & Da Silva Lannes, S. C. (2014). Application of fats in some food products. *Food Science and Technology*, 34(1), 3–15.
<https://doi.org/10.1590/s0101-20612014000100001>
- Seuvre, A., Turci, C., & Voilley, A. (2007). Effect of the temperature on the release of aroma compounds and on the rheological behaviour of model dairy custard. *Food Chemistry*, 108(4), 1176–1182. <https://doi.org/10.1016/j.foodchem.2007.04.031>
- Silva, T. J., Barrera-Arellano, D., & Ribeiro, A. P. B. (2021). Margarines: Historical approach, technological aspects, nutritional profile, and global trends. *Food Research International*, 147, 110486. <https://doi.org/10.1016/j.foodres.2021.110486>

- Sunooj, K. V., & Radhakrishna, K. (2013). Physico-Chemical Changes in Ready to Eat Pineapple Chicken Curry during Frozen Storage. *Food and Nutrition Sciences*, 04(02), 119–125.
<https://doi.org/10.4236/fns.2013.42016>
- Vicentini-Polette, C. M., Ramos, P. R., Gonçalves, C. B., & De Oliveira, A. L. (2021). Determination of free fatty acids in crude vegetable oil samples obtained by high-pressure processes. *Food Chemistry X*, 12, 100166. <https://doi.org/10.1016/j.fochx.2021.100166>
- Wang, D., Xiao, H., Lyu, X., Chen, H., & Wei, F. (2023). Lipid oxidation in food science and nutritional health: A comprehensive review. *Oil Crop Science*, 8(1), 35–44.
<https://doi.org/10.1016/j.ocsci.2023.02.002>
- Yan, X., Ma, C., Cui, F., McClements, D. J., Liu, X., & Liu, F. (2020). Protein-stabilized Pickering emulsions: Formation, stability, properties, and applications in foods. *Trends in Food Science & Technology*, 103, 293–303. <https://doi.org/10.1016/j.tifs.2020.07.005>
- Zaeromali, M & Maghsoudlou, Yahya & Aryaey, P. (2014). Effect of storage time on table margarine characterization in refrigerated temperature. *European Journal of Experimental Biology*. 4. 182-184.
- Zheng, Y., Sun, J., Luo, Z., Li, Y., & Huang, Y. (2024). Emerging mechanisms of lipid peroxidation in regulated cell death and its physiological implications. *Cell Death and Disease*, 15(11).
<https://doi.org/10.1038/s41419-024-07244-x>
- Zhu, T., Liu, Q., Weng, H., Li, B., Zhang, X., Zong, M., & Wu, H. (2017). Effect of temperature on the crystallization behavior and physical properties of fast-frozen special fat during storage. *Journal of Food Engineering*, 223, 53–61. <https://doi.org/10.1016/j.jfoodeng.2017.12.002>