

5. DAFTAR PUSTAKA

- Abate, A. R. and Weitz, D. A. (2009) *Multiple emulsions: Small* 18/2009, *Small*. doi: 10.1002/smll.200990090.
- Adebiyi, A. P. and Aluko, R. E. (2011) ‘Functional properties of protein fractions obtained from commercial yellow field pea (*Pisum sativum L.*) seed protein isolate’, *Food Chemistry*, 128(4), pp. 902–908. doi: 10.1016/j.foodchem.2011.03.116.
- Alajaji, S. A. and El-Adawy, T. A. (2006) ‘Nutritional composition of chickpea (*Cicer arietinum L.*) as affected by microwave cooking and other traditional cooking methods’, *Journal of Food Composition and Analysis*, 19(8), pp. 806–812. doi: 10.1016/j.jfca.2006.03.015.
- Alsalman, F. B. *et al.* (2020a) ‘Evaluation and optimization of functional and antinutritional properties of aquafaba’, *Legume Science*, 2(2), pp. 1–15. doi: 10.1002/leg3.30.
- Alsalman, F. B. *et al.* (2020b) ‘Evaluation of factors affecting aquafaba rheological and thermal properties’, *Lwt*, 132, p. 109831. doi: 10.1016/j.lwt.2020.109831.
- Amine, C. *et al.* (2014) ‘Investigation of emulsifying properties and emulsion stability of plant and milk proteins using interfacial tension and interfacial elasticity’, *Food Hydrocolloids*, 39, pp. 180–186. doi: 10.1016/j.foodhyd.2014.01.001.
- Anwar, D. A. *et al.* (2020) ‘Development of eggless cake physical, nutritional and sensory attributes for vegetarian by using wholemeal chia (*Salvia hispanica L.*) flour’, *Middle East Journal of Applied Sciences*, pp. 313–329. doi: 10.36632/mejas/2020.10.2.30.
- Aslan, M. and EertaŞ, N. (2020) ‘Possibility of using “chickpea aquafaba” as egg replacer in traditional cake formulation’, *Harran Tarım ve Gıda Bilimleri Dergisi*, 24(1), pp. 1–8. doi: 10.29050/harraziraat.569397.
- Belorio, M. and Gómez, M. (2020) ‘Gluten-free muffins versus gluten containing muffins: Ingredients and nutritional differences’, *Trends in Food Science and Technology*, 102(May 2019), pp. 249–253. doi: 10.1016/j.tifs.2020.03.015.
- Bernacchia, R., Preti, R. and Vinci, G. (2014) ‘Chemical Composition and Health Benefits of Flaxseed’, *Austin Journal of Nutrition and Food Sciences*, 2(8), pp. 1–

- 9.
- Bhathena, S. J. *et al.* (2002) 'Differential effects of dietary flaxseed protein and soy protein on plasma triglyceride and uric acid levels in animal models', *Journal of Nutritional Biochemistry*, 13(11), pp. 684–689. doi: 10.1016/S0955-2863(02)00227-9.
- Borneo, R., Aguirre, A. and León, A. E. (2010) 'Chia (*Salvia hispanica L.*) Gel Can Be Used as Egg or Oil Replacer in Cake Formulations', *Journal of the American Dietetic Association*, 110(6), pp. 946–949. doi: 10.1016/j.jada.2010.03.011.
- Boye, J., Zare, F. and Pletch, A. (2010) 'Pulse proteins: Processing, characterization, functional properties and applications in food and feed', *Food Research International*, 43(2), pp. 414–431. doi: 10.1016/j.foodres.2009.09.003.
- Brütsch, L. *et al.* (2019) 'Chia seed mucilage - A vegan thickener: Isolation, tailoring viscoelasticity and rehydration', *Food and Function*, 10(8), pp. 4854–4860. doi: 10.1039/c8fo00173a.
- Buhl, T. F., Christensen, C. H. and Hammershøj, M. (2019) 'Aquafaba as an egg white substitute in food foams and emulsions: Protein composition and functional behavior', *Food Hydrocolloids*, 96(October 2018), pp. 354–364. doi: 10.1016/j.foodhyd.2019.05.041.
- Capitani, M. I., Nolasco, S. M. and Tomás, M. C. (2016) 'Stability of oil-in-water (O/W) emulsions with chia (*Salvia hispanica L.*) mucilage', *Food Hydrocolloids*, 61, pp. 537–546. doi: 10.1016/j.foodhyd.2016.06.008.
- Cauvain, S. P. and Young, L. S. (2007) *Baked Products: Science, Technology and Practice*, *Baked Products: Science, Technology and Practice*. doi: 10.1002/9780470995907.
- Cauvain, S. P. and Young, L. S. (2009) 'Cakes', *More Baking Problems Solved*, pp. 128–149. doi: 10.1533/9781845697204.128.
- Chen, H. *et al.* (2014) 'Improved the emulsion stability of phosvitin from hen egg yolk against different pH by the covalent attachment with dextran', *Food Hydrocolloids*, 39, pp. 104–112. doi: 10.1016/j.foodhyd.2013.12.031.
- Chen, H. H., Xu, S. Y. and Wang, Z. (2006) 'Gelation properties of flaxseed gum', *Journal of Food Engineering*, 77(2), pp. 295–303. doi: 10.1016/j.jfoodeng.2005.06.033.

- Chen, L. (2015) *Emulsifiers as food texture modifiers, Modifying Food Texture: Novel Ingredients and Processing Techniques*. Elsevier Ltd. doi: 10.1016/B978-1-78242-333-1.00002-4.
- Demark-Wahnefried, W. *et al.* (2008) ‘Flaxseed supplementation (not dietary fat restriction) reduces prostate cancer proliferation rates in men presurgery’, *Cancer Epidemiology Biomarkers and Prevention*, 17(12), pp. 3577–3587. doi: 10.1158/1055-9965.EPI-08-0008.
- Felisberto, M. H. F. *et al.* (2015) ‘Use of chia (*Salvia hispanica L.*) mucilage gel to reduce fat in pound cakes’, *LWT - Food Science and Technology*, 63(2), pp. 1049–1055. doi: 10.1016/j.lwt.2015.03.114.
- Gallo, L. R. dos R. *et al.* (2020) ‘Chia (*Salvia hispanica L.*) Gel as Egg Replacer in Chocolate Cakes: Applicability and Microbial and Sensory Qualities After Storage’, *Journal of Culinary Science and Technology*, 18(1), pp. 29–39. doi: 10.1080/15428052.2018.1502111.
- Ganorkar, P. M. and Jain, R. K. (2013) ‘Flaxseed - A nutritional punch’, *International Food Research Journal*, 20(2), pp. 519–525.
- Guclu-Ustundag, Ö. and Mazza, G. (2007) ‘Saponins: Properties, applications and processing’, *Critical Reviews in Food Science and Nutrition*, 47(3), pp. 231–258. doi: 10.1080/10408390600698197.
- He, Y. *et al.* (2019) ‘Chickpea cultivar selection to produce aquafaba with superior emulsion properties’, *Foods*, 8(12), pp. 1–16. doi: 10.3390/foods8120685.
- Hu, Y., Shim, Y. Y. and Reaney, M. J. T. (2020) ‘Flaxseed gum solution functional properties’, *Foods*, 9(5), pp. 1–13. doi: 10.3390/foods9050681.
- Ixtaina, V. Y., Nolasco, S. M. and Tomás, M. C. (2008) ‘Physical properties of chia (*Salvia hispanica L.*) seeds’, *Industrial Crops and Products*, 28(3), pp. 286–293. doi: 10.1016/j.indcrop.2008.03.009.
- Jarpa-Parra, M. *et al.* (2017) ‘Quality characteristics of angel food cake and muffin using lentil protein as egg/milk replacer’, *International Journal of Food Science and Technology*, 52(7), pp. 1604–1613. doi: 10.1111/ijfs.13433.
- Jin, F. *et al.* (2012) ‘Supplementation of Milled Chia Seeds Increases Plasma ALA and EPA in Postmenopausal Women’, *Plant Foods for Human Nutrition*, 67(2), pp. 105–110. doi: 10.1007/s11130-012-0286-0.

- Julio, L. M. *et al.* (2019) ‘Chia (*Salvia hispanica*) protein fractions: characterization and emulsifying properties’, *Journal of Food Measurement and Characterization*, 13(4), pp. 3318–3328. doi: 10.1007/s11694-019-00254-w.
- Julio, L. M., Ixtaina, V. Y. and Tomás, M. C. (2020) ‘Development and Characterization of Functional O/W Emulsions with Chia Seed (*Salvia hispanica* L.) by-Products’, *Proceedings*, 53(1), p. 20. doi: 10.3390/proceedings2020053020.
- Kajla, P., Sharma, A. and Sood, D. R. (2015) ‘Flaxseed—a potential functional food source’, *Journal of Food Science and Technology*, 52(4), pp. 1857–1871. doi: 10.1007/s13197-014-1293-y.
- Kaur, M., Singh, V. and Kaur, R. (2017) ‘Effect of partial replacement of wheat flour with varying levels of flaxseed flour on physicochemical, antioxidant and sensory characteristics of cookies’, *Bioactive Carbohydrates and Dietary Fibre*, 9(December 2016), pp. 14–20. doi: 10.1016/j.bcdf.2016.12.002.
- Kaur, R. and Kaur, M. (2018) ‘Microstructural, physicochemical, antioxidant, textural and quality characteristics of wheat muffins as influenced by partial replacement with ground flaxseed’, *LWT - Food Science and Technology*, 91(September 2017), pp. 278–285. doi: 10.1016/j.lwt.2018.01.059.
- Kaushik, P. *et al.* (2016) ‘Preparation, characterization and functional properties of flax seed protein isolate’, *Food Chemistry*, 197, pp. 212–220. doi: 10.1016/j.foodchem.2015.09.106.
- Kaushik, P. *et al.* (2017) ‘Effect of extraction temperature on composition, structure and functional properties of flaxseed gum’, *Food Chemistry*, 215, pp. 333–340. doi: 10.1016/j.foodchem.2016.07.137.
- Kim, M. *et al.* (2020) ‘The Natural Course of Immediate-Type Cow’s Milk and Egg Allergies in Children’, *International Archives of Allergy and Immunology*, 181(2), pp. 103–110. doi: 10.1159/000503749.
- Kuhn, K. R. *et al.* (2014) ‘Assessing the potential of flaxseed protein as an emulsifier combined with whey protein isolate’, *Food Research International*, 58, pp. 89–97. doi: 10.1016/j.foodres.2014.01.006.
- Lafarga, T. *et al.* (2019) ‘Optimisation of the pH and boiling conditions needed to obtain improved foaming and emulsifying properties of chickpea aquafaba using a response surface methodology’, *International Journal of Gastronomy and Food*

- Science*, 18(August), p. 100177. doi: 10.1016/j.ijgfs.2019.100177.
- Lan, Y. *et al.* (2020) ‘Physicochemical properties and aroma profiles of flaxseed proteins extracted from whole flaxseed and flaxseed meal’, *Food Hydrocolloids*, 104(February), p. 105731. doi: 10.1016/j.foodhyd.2020.105731.
- Lee, P. E. and Choo, W. S. (2015) ‘Characterization of flaxseed oil emulsions’, *Journal of Food Science and Technology*, 52(7), pp. 4378–4386. doi: 10.1007/s13197-014-1495-3.
- López, D. N. *et al.* (2019) ‘Adsorption of chia proteins at interfaces: Kinetics of foam and emulsion formation and destabilization’, *Colloids and Surfaces B: Biointerfaces*, 180(May), pp. 503–507. doi: 10.1016/j.colsurfb.2019.04.067.
- Lorenzo, L. K. (2008) ‘Yellow Mustard Precipitated Protein Isolate in Acidic Aqueous Solutions’, p. 157.
- Martínez-Cervera, S. *et al.* (2012) ‘Rheological, textural and sensorial properties of low-sucrose muffins reformulated with sucralose/polydextrose’, *LWT - Food Science and Technology*, 45(2), pp. 213–220. doi: 10.1016/j.lwt.2011.08.001.
- McClements, D. J. (2016) *Food Emulsions 3rd Edition Principles, Practices, and Techniques*. 3rd edn. Edited by L. Taylor & Francis Group. Taylor & Francis Group.
- McClements, D. J., Bai, L. and Chung, C. (2017) ‘Recent Advances in the Utilization of Natural Emulsifiers to Form and Stabilize Emulsions’, *Annual Review of Food Science and Technology*, 8(January), pp. 205–236. doi: 10.1146/annurev-food-030216-030154.
- Monfort, S. *et al.* (2012) ‘Physicochemical and functional properties of liquid whole egg treated by the application of Pulsed Electric Fields followed by heat in the presence of triethyl citrate’, *Food Research International*, 48(2), pp. 484–490. doi: 10.1016/j.foodres.2012.04.015.
- Mustafa, R. *et al.* (2018) ‘Aquafaba, wastewater from chickpea canning, functions as an egg replacer in sponge cake’, *International Journal of Food Science and Technology*, 53(10), pp. 2247–2255. doi: 10.1111/ijfs.13813.
- Mustafa, R. and Reaney, M. J. T. (2020) ‘Aquafaba, from Food Waste to a Value-Added Product’, *Food Wastes and By-products*, pp. 93–126. doi: 10.1002/9781119534167.ch4.

- Nawangsasi, I. R. *et al.* (2018) 'Water-in-Oil-in-Water (W/O/W) Double Emulsion Morphology and Its Degradation on Instant Noodle Seasoning', *Agritech*, 38(2), p. 151. doi: 10.22146/agritech.27550.
- Nikbakht Nasrabadi, M. *et al.* (2019) *Plant based Pickering stabilization of emulsions using soluble flaxseed protein and mucilage nano-assemblies, Colloids and Surfaces A: Physicochemical and Engineering Aspects*. Elsevier B.V. doi: 10.1016/j.colsurfa.2018.12.004.
- Nilsson, L. *et al.* (2007) 'Competitive adsorption of proteins from total hen egg yolk during emulsification', *Journal of Agricultural and Food Chemistry*, 55(16), pp. 6746–6753. doi: 10.1021/jf070631d.
- Norn, V. (2015) *Emulsifiers in Food Technology: Second Edition, Emulsifiers in Food Technology: Second Edition*. doi: 10.1002/9781118921265.
- Nwachukwu, I. D. and Aluko, R. E. (2018) 'Physicochemical and emulsification properties of flaxseed (*Linum usitatissimum*) albumin and globulin fractions', *Food Chemistry*, 255, pp. 216–225. doi: 10.1016/j.foodchem.2018.02.068.
- Oomah, B. D., Mazza, G. and Cui, W. (1994) 'Optimization of protein extraction from flaxseed meal', *Food Research International*, 27(4), pp. 355–361. doi: 10.1016/0963-9969(94)90191-0.
- Ortiz, D. E. (2015) *Cakes, Muffins and Bagels*. 2nd edn, *Encyclopedia of Food Grains: Second Edition*. 2nd edn. Elsevier Ltd. doi: 10.1016/B978-0-12-394437-5.00118-2.
- Pham, L. B. *et al.* (2019) 'Complexation between flaxseed protein isolate and phenolic compounds: Effects on interfacial, emulsifying and antioxidant properties of emulsions', *Food Hydrocolloids*, 94(March), pp. 20–29. doi: 10.1016/j.foodhyd.2019.03.007.
- Poudyal, H. *et al.* (2013) 'Effects of ALA, EPA and DHA in high-carbohydrate, high-fat diet-induced metabolic syndrome in rats', *Journal of Nutritional Biochemistry*, 24(6), pp. 1041–1052. doi: 10.1016/j.jnutbio.2012.07.014.
- Puertas, G. and Vázquez, M. (2021) 'Evaluation of the composition and functional properties of whole egg plasma obtained by centrifugation', *International Journal of Food Science and Technology*, pp. 0–2. doi: 10.1111/ijfs.15124.
- Punia, S. and Dhull, S. B. (2019) 'Chia seed (*Salvia hispanica* L.) mucilage (a

- heteropolysaccharide): Functional, thermal, rheological behaviour and its utilization', *International Journal of Biological Macromolecules*, 140, pp. 1084–1090. doi: 10.1016/j.ijbiomac.2019.08.205.
- Safdar, B. *et al.* (2019) 'Flaxseed gum: Extraction, bioactive composition, structural characterization, and its potential antioxidant activity', *Journal of Food Biochemistry*, 43(11), pp. 1–11. doi: 10.1111/jfbc.13014.
- Sakiyan, O. *et al.* (2004) 'Influence of fat content and emulsifier type on the rheological properties of cake batter', *European Food Research and Technology*, 219(6), pp. 635–638. doi: 10.1007/s00217-004-1020-4.
- Sari, D. K. (2014) 'Tanda gejala dan bahaya hiperkolesterolemia', *Tanda gejala dan bahaya hiperkolesterolemia*, Vol.3, pp. 1–8.
- Segura-Campos, M. R. *et al.* (2014) 'Chemical and functional properties of chia seed (*Salvia hispanica L.*) gum', *International Journal of Food Science*, 2014. doi: 10.1155/2014/241053.
- Sharif, H. R. *et al.* (2018) 'Current progress in the utilization of native and modified legume proteins as emulsifiers and encapsulants – A review', *Food Hydrocolloids*, 76, pp. 2–16. doi: 10.1016/j.foodhyd.2017.01.002.
- Shim, Y. Y. *et al.* (2018) 'Composition and properties of aquafaba: Water recovered from commercially canned chickpeas', *Journal of Visualized Experiments*, 2018(132), pp. 1–14. doi: 10.3791/56305.
- Singh, B. (2017) 'Nutritional Value and Physical Properties of Eggless Muffin', *International Journal of Science, Environment and Technology*, 6(2), pp. 1309–1314.
- Stantiall, S. E. *et al.* (2018) 'Application of pulses cooking water as functional ingredients: the foaming and gelling abilities', *European Food Research and Technology*, 244(1), pp. 97–104. doi: 10.1007/s00217-017-2943-x.
- Sudha, M. L., Begum, K. and Ramasarma, P. R. (2010) 'Nutritional characteristics of linseed/flaxseed (*linum usitatissimum*) and its application in muffin making', *Journal of Texture Studies*, 41(4), pp. 563–578. doi: 10.1111/j.1745-4603.2010.00242.x.
- Suwannasom, N. *et al.* (2020) 'Riboflavin: The health benefits of a forgotten natural vitamin', *International Journal of Molecular Sciences*, 21(3). doi:

- 10.3390/ijms21030950.
- Tan, M. C. *et al.* (2014) ‘Improvement of Eggless Cake Structure Using Ultrasonically Treated Whey Protein’, *Food and Bioprocess Technology*, 8(3), pp. 605–614. doi: 10.1007/s11947-014-1428-1.
- Thushan Sanjeewa, W. G. *et al.* (2010) ‘Characterization of chickpea (*Cicer arietinum* L.) flours and application in low-fat pork bologna as a model system’, *Food Research International*, 43(2), pp. 617–626. doi: 10.1016/j.foodres.2009.07.024.
- Timilsena, Y. P., Adhikari, R., Kasapis, S., *et al.* (2016) ‘Molecular and functional characteristics of purified gum from Australian chia seeds’, *Carbohydrate Polymers*, 136, pp. 128–136. doi: 10.1016/j.carbpol.2015.09.035.
- Timilsena, Y. P., Adhikari, R., Barrow, C. J., *et al.* (2016) ‘Physicochemical and functional properties of protein isolate produced from Australian chia seeds’, *Food Chemistry*, 212, pp. 648–656. doi: 10.1016/j.foodchem.2016.06.017.
- Uhlman, J. and Schumacher, J. (2014) ‘Sensory and Objective Evaluation of Pumpkin Bars using Ground Flaxseed or Sweet Potato Baby Food as Egg Replacers’, *International Journal of Advanced Nutritional and Health Science*, 2(1), pp. 89–97. doi: 10.23953/cloud.ijanhhs.151.
- Urbizo-Reyes, U. *et al.* (2019) *Physicochemical characteristics of chia seed (*Salvia hispanica*) protein hydrolysates produced using ultrasonication followed by microwave-assisted hydrolysis*, *Food Hydrocolloids*. Elsevier Ltd. doi: 10.1016/j.foodhyd.2019.105187.
- Wang, B. *et al.* (2010) ‘Effect of concentrated flaxseed protein on the stability and rheological properties of soybean oil-in-water emulsions’, *Journal of Food Engineering*, 96(4), pp. 555–561. doi: 10.1016/j.jfoodeng.2009.09.001.
- Yazici, G. N. and Ozer, M. S. (2021) ‘A review of egg replacement in cake production: Effects on batter and cake properties’, *Trends in Food Science and Technology*, 111(October 2020), pp. 346–359. doi: 10.1016/j.tifs.2021.02.071.
- Zayas, J. F. (1997) ‘Solubility of Proteins. Functionality of Proteins in Food’, pp. 1–21.
- Zhou, W. *et al.* (2014) *Bakery Products Science and Technology Bakery Products Science*.