

DAFTAR PUSTAKA

- AOAC. 2005. Official Method of Analysis Association of Official Analytical Chemist. Benjamin Franklin Station. Washington
- A'yun, Q., Azzahrani, I. N., Huyst, A., de Neve, L., Martins, J. C., van Troys, M., Hidayat, C., & Van der Meeren, P. 2020. Heat stable whey protein stabilised O/W emulsions: Optimisation of the whey protein concentrate dry heat incubation conditions. *Colloids and Surfaces A: Physicochemical and Engineering Aspects*, 603(June), 125192. <https://doi.org/10.1016/j.colsurfa.2020.125192>
- Abbas S, Hayat K, Karangwa E, Bashari M, Zhang XM. 2013. An overview of ultrasound assisted food-grade nanoemulsions. *Food Eng Rev*. 5:139–57.
- Akcay, H. dan Anagun A.S. 2013. Multiresponse Optimization Application on A Manufacturing Factory. *Mathematical Application*. 18(3):531-538.
- Akhtar, M. dan E. Dickinson. 2007. *Whey protein-maltodextrin conjugates as emulsifying agents: An alternative to gum arabic*. *Food Hydrocolloids*. **21**(4): p. 607-616.
- Amanlou, Y., & Zomorodian, A. 2010. Applying CFD for designing a new fruit cabinet dryer. *Journal of Food Engineering*, 101(1), 8–15. <https://doi.org/10.1016/j.jfoodeng.2010.06.001>
- Amaya, D. B. R. 2016. Natural food pigments and colorants, *Current Opinion in Food Science*, 7, 20 – 26.
- Arena, S., Renzone, G., D'Ambrosio, C., Salzano, A. M., & Scaloni, A. 2017. Dairy products and the maillard reaction: A promising future for extensive food characterization by integrated proteomics studies. *Food Chemistry*, 219, 477–489.
- Ariviani S., Atmaka W., Raharjo S. 2018. Karakterisasi dan Uji Stabilitas Digestif Nanoemulsi β -Karoten yang Dibuat dengan Metode Emulsifikasi Spontan. *Agritech*, 38 (1) 2018, 30-38.
- Bezerra, M.A., Santelli, R.E., Oliveira, E.P., Viliar, L.S and Escaleira, L.A. 2008. Response surface methodology (RSM) as a toll for optimization in analytical chemistry. *Talanta*, 76, 965-977.
- Boland M.J. J.P. Hill, K.C. Higss, N.W. Haggarty, M.E.P. Campanella. 2000. Process for Controlling Maillard-type Glycation of Whey Proteins and Products With Enhanced Functional Properties, WO2000018249. WO 00/18249, Retrieved from World Intellectual Property Organization. <https://patentscope.wipo.int/search/en/detail.jsf?docId=WO2000018249&tab=PCTBIBLIO&maxRec=1000>.

- Broersen, K., A.G.J. Voragen, R.J. Hamer, H.H.J. De Jongh. 2004. Glycoforms of β -lactoglobulin with improved thermostability and preserved structural packing, *Biotechnol. Bioeng.* 86 78–87, <https://doi.org/10.1002/bit.20030>.
- Chang C, Tu S, Ghosh S, Nickerson MT. 2015. Effect of pH on the inter-relationships between the physicochemical, interfacial and emulsifying properties for pea, soy, lentil and canola protein isolates. *Food Res Int.* 77:360–7.
- Chandi, G. K., Gill, B. S. 2011. Production and characterization of microbial carotenoids as an alternative to synthetic colors: A review, *International Journal of Food Properties*, 14, 503 – 513.
- Chen, H., Wang, P., Wu, F., Xu, J., Tian, Y., Yang, N. 2013. Preparation of phosvitin–dextran conjugates under high temperature in a liquid system. *International Journal of Biological Macromolecules*, 55, 258–263.
- Chen, W., Lv, R., Wang, W., Ma, X., Muhammad, A. I., Guo, M., & Liu, D. 2019. *Time effect on structural and functional properties of whey protein isolate-gum acacia conjugates prepared via Maillard reaction. April.* <https://doi.org/10.1002/jsfa.9735>
- Dickinson, E. 2008. Interfacial structure and stability of food emulsions as affected by protein polysaccharide interactions. *Soft Matter.* 4(5), 932e942.
- De Jong, S., & van de Velde, F. 2007. Charge density of polysaccharide control micro-structure and large deformation properties of mixed gels. *Food Hydrocolloids*, 21, 1172–1187.
- Edem, D.O. 2002. Palm oil: biochemical, physiological, nutritional, hematological, and toxicological aspects: a review. *Plant foods Hum. Nutr.* 57, 319e341.
- Evans, M., Ratcliffe, I., Williams, P.A. 2013. *Emulsion Stabilisation Using Polysaccharide-protein Complexes.* *Current Opinion in Colloid & Interface Science* 18: 272-282.
- Farshi Parastou, Mahnaz Tabibiazar, Marjan Ghorbani , Mohammadamin Mohammadifar, Maryam Bannazadeh Amirkhiz , Hamed Hamishehkar. 2019. Whey protein isolate-guar gum stabilized cumin seed oil nanoemulsion. *Food Bioscience* 28 49–56. <https://doi.org/10.1016/j.fbio.2019.01.011>
- Farhadi, G.B., Khosravi-Darani, K., Nasernejad, B. 2012. Enhancement of xanthan production on date extract using response surface methodology. *Asian J. Chem.* 24 (9) (0000-0000).
- Ferreira, S.L.C ; Bruns, R.E; Ferreira, H.S; Matos, G.D; David, J.M; Brandao, G.C; Da Silva, E.G.P; Portugal, L.A; Reis, P.S D; Souza, A.S. dan Dos Santos, W.N.L. 2007. Box-Behnken Design: An Alternative for the Optimization of Analytical Methods.

- Fitriani,S. 2008. Pengaruh suhu dan lama pengeringan terhadap beberapa mutu manisan belimbing wuluh (*Averrhoa Bilimbing L*). Kering. Jurnal Sagu. Laboratorium Pengolahan Hasil Pertanian Fakultas Pertanian Universitas Riau Vol 7. No 1 hal :32-37.
- Hakansson A, Hounslow MJ. 2013 Simultaneous determination of fragmentation and coalescence rates during pilot-scale high-pressure homogenization. *J Food Eng*; 116:7–13.
- Hakansson A, Innings F, Tragardh C, Bergenstahl B. 2013. A high-pressure homogenization emulsification model-improved emulsifier transport and hydrodynamic coupling. *Chem Eng Sci*; 91:44–53.
- Hakansson A, Tragardh C, Bergenstahl B. 2012. A method for estimating effective coalescence rates during emulsification from oil transfer experiments. *J Colloid Interface Sci*; 374:25–33.
- Kato, A. 2002. Industrial applications of Maillard-type protein-polysaccharide conjugates. *Food Science and Technology Research*. 8(3): p. 193-199.
- Komaiko JS, McClements DJ. 2016. Formation of food-grade nanoemulsions using low-energy preparation methods: a review of available methods. *Compr Rev Food Sci Food Saf*; 15:331–52.
- Kusumaningtyas, R., N. 2018. Optimasi suksinilasi konsentrat protein blondo untuk peningkatan kemampuan emulsinya. Tesis. FTP UGM
- Kwon, K. S., Bae, D., Park, K. H., dan Rhee, K. C. 1996. Aqueous extraction and membrane techniques improve coconut protein concentrate functionality. *Journal of Food Science* 61.
- Lam, R.S.H. dan M.T. Nickerson, 2013. *Food proteins: A review on their emulsifying properties using a structure-function approach*. *Food Chemistry*. 141(2): p. 975-984.
- Lee W. J., Chin P. T, Rabiha S, Richard L, S. Jr., Gun H. C., 2017. Microencapsulation of red palm oil as an oil-in-water emulsion with supercritical carbon dioxide solution-enhanced dispersion. *Journal of Food Engineering*. 222 100-109
- Lee LL, Niknafs N, Hancocks RD, Norton IT. 2013. Emulsification: mechanistic understanding. *Trends Food Sci Technol*; 31:72–8.
- Leela, J.K. dan Sharma, G. 2000. Studies on xanthan production from *Xanthomonas campestris*. *Bioprocess. Eng*. 23 (6), 687–689.

- Lesmes, U., & McClements, D. J. 2012. Controlling lipid digestibility: Response of lipid droplets coated by β -lactoglobulin-dextran maillard conjugates to simulated
- Lestari N, Samsuar, Novitasari E., dan Rahman K. 2020. Kinerja Cabinet Dryer pada Pengeringan Jahe Merah dengan Memanfaatkan Panas Terbuang Kondensor Pendingin Udara. *Jurnal Agritechno*, Vol. 13 (1): 57-70. <https://doi.org/10.20956/at.v13i1.250>
- Li, C., Huang, X., Peng, Q., Shan, Y., Xue, F., 2014. Physicochemical properties of peanut protein isolate-glucomannan conjugates prepared by ultrasonic treatment. *Ultrason. Sonochem.* 21 (5), 1722–1727. <https://doi.org/10.1016/j.ultsonch.2014.03.018>.
- Li Y., Fang Z., Wei J., Wallace Y., Charles F. S, Song Z, Wenshui X. 2013. Functional properties of Maillard reaction products of rice protein hydrolysates with mono-, oligo- and polysaccharides. *Food Hydrocolloids* 30 53-60.
- Li R., Hettiarachchy N., Rayaprolu S, Davis M., Eswaranandam S., Jha A., Chen P. 2015. Improved functional properties of glycosylated soy protein isolate using D-glucose and xanthan gum. *J Food Sci Technol*. DOI 10.1007/s13197-014-1681-3.
- Maindarkar SN, Hoogland H, Henson MA. 2015. Achieving target emulsion drop size distributions using population balance equation models of high-pressure homogenization. *Ind Eng Chem Res*; 54:10301–10.
- Mba, O.I., Dumont, M.-J., Ngadi, M., 2015. Palm oil: processing, characterization and utilization in the food industry e a review. *Food Biosci.* 10, 26e41.
- McGee Harold. 2004. *On Food and Cooking: The Science and Lore of The Kitchen*. ISBN 978-0-684-80001-1
- McClements DJ. 2015. *Food emulsions: principles, practices, and techniques*. Third edition ed. Boca Raton, FL: CRC Press.
- McClements DJ. 2015. Reduced-fat foods: the complex science of developing diet-based strategies for tackling overweight and obesity. *Adv Nutr*; 6: 338S–52S.
- McClements, D., J. dan Jafari S., M. 2018. Improving emulsion formation, stability and performance using mixed emulsifiers: A review. *Advances in Colloid and Interface Science* 251 55–79
- McClements DJ. 2011. Edible nanoemulsions: fabrication, properties, and functional performance. *Soft Matter*; 7:2297–316.

- McClements, David Julian dan Gumus, Cansu Ekin. 2016. *Natural Emulsifiers-Biosurfactants, Phospholipids, Biopolymers and Colloidal Partical: Molecular and Physicochemical Basis of Functional Performance*. Advances in Colloid and Interface Science 234 :3-26.
- Meirinna. 2006. *Pemanfaatan Blondo Minyak Kelapa sebagai Kelapa sebagai Pengemulsi Dalam Pembuatan Sosis*. Skripsi. Jurusan Kimia. Fakultas Matematika dan Ilmu Pengetahuan Alam. Universitas Gadjah Mada, Yogyakarta.
- Mepba, H.D., Achinewhu, S.C. dan Ademiluyi, T. 2008. Solubility, emulsion and foaming poroperties of coconut (*Cocos nucifera*) protein concentrates. *African Journal of Food Agriculture, Nutrition and Development Online* 8(2): 170-191.
- Minj S. and Anand S. 2020. Whey Proteins and Its Derivatives: Bioactivity, Functionality, and Current Applications: A Review. *Dairy*. 1, 233–258; doi:10.3390/dairy1030016
- Mu, L. 2011 *Physicochemical Properties of Soy Protein Isolates-Acacia Gum Conjugates*. Czech Journal of Food Sciences. 29(2): p. 129-136.
- Mu'awanah, I.A.U. 2006. *Pengaruh Larutan Garam dan Jumlah Blondo Terhadap Sifat Fisika Kimia Kecap Blondo*. Skripsi. Jurusan Kimia. Fakultas Matematika dan Ilmu Pengetahuan Alam. Universitas Gadjah Mada, Yogyakarta.
- Myers, R. H., Montgomery, D. C., Anderson, C. M. 2009. *Response Surface Methodology Process and Product Optimization Using Experiment*, 3rd edition, John Wiley and Sons, Inc., Canada.
- Naik, A., Raghavendra, S. N., & Raghavarao, K. S. M. S. 2012. Production of coconut protein powder from coconutwet processing waste and its characterization. *Applied Biochemistry and Biotechnology*, 167(5), 1290–1302. <https://doi.org/10.1007/s12010-012-9632-9>
- Narchi, I., Vial, C., & Djelveh, G. 2009. Effect of protein–polysaccharide mixtures on the continuous manufacturing of foamed food products. *Food Hydrocolloids*, 23, 188–201
- Nelson, D., and Cox, M.; W.H. Freeman and Company. 2005. *Lehninger Principles of Biochemistry* (4th Ed.). New York, 1216 pp., ISBN 0-7167-4339-6.
- Niknezhad, S. V., Asadollahi, M. A., Zamani, A., & Biria, D. 2016. Production of xanthan gum by free and immobilized cells of *Xanthomonas campestris* and *Xanthomonas pelargonii*. *International Journal of Biological Macromolecules*, 82, 751–756.
- Niknezhad, S. V., Asadollahi, M. A., Zamani, A., Biria, D., & Doostmohammadi, M. 2015. Optimization of xanthan gum production using cheese whey and response surface methodology. *Food Science and Biotechnology*, 24(2), 453–460.

- Nooshkam, M., & Varidi, M. 2020. Maillard conjugate-based delivery systems for the encapsulation, protection, and controlled release of nutraceuticals and food bioactive ingredients: A review. *Food Hydrocolloids*, 100, 105389. <https://doi.org/10.1016/j.foodhyd.2019.105389>.
- O'Brien, J., Morrissey, P. A., & Ames, J. M. 1989. Nutritional and toxicological aspects of the Maillard browning reaction in foods. *Critical Reviews in Food Science and Nutrition*, 28(3), 211–248.
- O'Mahony, James A., Drapala, Kamil P., Mulcahy, Eve M., Mulvihill, Daniel M. 2016. *Controlled Glycation of Milk Proteins and Peptides: Functional Properties*. *International Dairy Journal* 67: 16-34.
- Oliveira, F. C., Coimbra, J. S. D. R., de Oliveira, E. B., Zuñiga, A. D. G., & Rojas, E. E. G. 2016. Food protein-polysaccharide conjugates obtained via the maillard reaction: A review. *Critical Reviews in Food Science and Nutrition*, 56(7), 1108–1125.
- Onsaard, Ekasit., Vittayanont, Manee., Srigam, Sukoncheun., McClements, D. Julian. 2006. *Comparison of Properties of oil-in-water Emulsion Stabilized by Coconut Cream Protein with Those Stabilized by Whey Protein Isolate*. *Food Research international* 39:78-86.
- Ozturk B, Argin S, Ozilgen M, McClements DJ. 2014. Formation and stabilization of nanoemulsion-based vitamin E delivery systems using natural surfactants: Quillaja saponin and lecithin. *J Food Eng*; 142:57–63.
- Ozturk B, Argin S, Ozilgen M, McClements DJ. 2015. Formation and stabilization of nanoemulsion-based vitamin E delivery systems using natural biopolymers: whey protein isolate and gum arabic. *Food Chem*; 188:256–63.
- Pawlik, Aleksandra K dan Ian T. Norton. 2014. Bridging Benchtop Research and Industrial Processed Foods: Structuring of Model Food Emulsion. *Journal of Food Structure* (1): 24-38.
- Pearce, K.N., dan Kinsella J.E. 1978. Emulsifying properties of proteins: evaluation of turbidimetric technique. *Journal of Agricultural and Food Chemistry*; 26: 716–723.
- Petri D.F.S. 2015. Xanthan gum: A versatile biopolymer for biomedical and technological applications: A Review. *J of Applied Polymer Sci*. Received 11 November 2014; accepted 1 January 2015 DOI:10.1002/app.42035.
- Phoebe X. Q, Yingping X, Edward D. W. 2017. Changes in physical, chemical and functional properties of whey protein isolate (WPI) and sugar beet pectin (SBP) conjugates formed by controlled dry heating. *Food Hydrocolloids* 69 (2017) 86-96.

- Piorkowski, D.,T. and D.J. McClements. 2013. Beverage emulsions: recent developments in formulation, production, and applications. *J. Food Hyd.* XXX: 1-37. doi: 10.1016/j.foodhyd.2013.07.009. In press.
- Pirestani, S., Nasirpour, A., Keramat, J., & Desobry, S. 2017. *Preparation of chemically modified canola protein isolate with gum Arabic by means of Maillard reaction under wet-heating conditions*. *Carbohydrate Polymers*. 155, 201–207.
- Prajina, N.V. 2013. Multiresponse Optimization of CNC End Milling Using Response Surface Methodology and Desirability Function. *International Journal of Engineering Research and Technology*. 6(6):739-746.
- Permatasari, S., Hastuti, P., Setiaji, B., Hidayat, C. 2015. Functional Properties of Protein Isolates of Blondo (Coconut Presscake) from Side Products of Separation of Virgin Coconut Oil by Various Methods. *Agritech* 35 :4
- Raika NB, Bhatia SR, Malone MF, McClements DJ, Henson MA. 2011. Predicting the effect of the homogenization pressure on emulsion drop-size distributions. *Ind Eng Chem Res*; 50: 6089–100.
- Rao, A.V. dan Rao, L.G. 2007. Carotenoids and human health. *Pharmacol. Res.* 55, 207-216.
- Rosalam, S., & England, R. 2006. Review of xanthan gum production from unmodified starches by *Xanthomonas comprestis* sp. *Enzyme and Microbial Technology*, 39(2), 197–207.
- Setiaji, B. dan Prayugo, S. 2006. *Membuat VCO Berkualitas Tinggi*. Penebar Swadaya Jakarta.
- Setiowati, A. D., Saeedi, S., Wijaya, W., & Van der Meeren, P. 2017. Improved heat stability of whey protein isolate stabilized emulsions via dry heat treatment of WPI and low methoxyl pectin: Effect of pectin concentration, pH, and ionic strength. *Food Hydrocolloids*, 63, 716–726. <https://doi.org/10.1016/j.foodhyd.2016.10.025>
- Sandford, P. A., Watson, P. R., & Knutson, C. A. 1978. Separation of xanthan gums of differing pyruvate content by fractional precipitation with alcohol. *Carbohydrate Research*, 63, 253–256.
- Sedaghat Doost, A., Nikbakht Nasrabadi, M., Wu, J., A'yun, Q., & Van der Meeren, P. 2019. Maillard conjugation as an approach to improve whey proteins functionality: A review of conventional and novel preparation techniques. *Trends in Food Science and Technology*, 91(June), 1–11. <https://doi.org/10.1016/j.tifs.2019.06.011>

- Shah, P; Bhalodia, D; Shelat, P. 2010. *Nanoemulsion: A pharmaceutical review. Systematic Reviews in Pharmacy, 1(1), 24–*. doi:10.4103/0975-8453.59509
- Smith, I. H., Symes, K. C., Lawson, C. J., & Morris, E. R. 1981. Influence of the pyru- vate content of xanthan on macromolecular association in solution. *International Journal of Biological Macromolecules, 3(2), 129–134*.
- Sumarna Deny. 2014. Studi metode pengolahan minyak sawit merah (Red Palm Oil) dari *Crude Palm Oil (CPO)*. Conference Paper. See discussions, stats, and author profiles for this publication at: <https://www.researchgate.net/publication/319628819>
- Suzana, N. 2006. Sifat Kimia dan Fisika pada Biskuit dari Blondo Hasil Samping Pengolahan Minyak Kelapa Murni. Skripsi. Jurusan Kimia Fakultas Matematika dan Ilmu Pengetahuan Alam, Universitas Gadjah Mada.
- Takaichi, A. 2013. Distributions, biosynthesis and functions of carotenoids in algae, *Agro Food Industry Hi Tech.*, 24.
- Tekindal, Mustafa Agah. 2012. Box-Behnken Experinmental Design In Faktorial Experinments : The Importance of Bread For Nutrition and Health. Faculty of Medicine. Baskent University : Turkey.
- Thaiphanit, Somruedee, dan Pranee Anprung. 2016. Physicochemical and emulsion properties of edible protein concentrate from coconut (*Cocos nucifera*L.) processing by-products and the influence of heat treatment. *Food Hydrocolloids, 52:756-765*.
- Vhangani, L. N., & Van Wyk, J. 2013. Antioxidant activity of Maillard reaction products (MRPs) derived from fructose–lysine and ribose–lysine model systems. *Food Chemistry, 137(1–4), 92–98*.
- Vhangani, L. N., & Van Wyk, J. 2016. Antioxidant activity of Maillard reaction products (MRPs) in a lipid-rich model system. *Food Chemistry, 208, 301–308*.
- Viebke, C. 2005. Order–disorder conformational transition of xanthan gum. In S. Dumitriu (Ed.), *Polysaccharides: Structural diversity and functional versatility* New York, NY: Marcel Dekker., 2, 459–474.
- Wang, W. D., Li, C., Bin, Z., Huang, Q., You, L. J., Chen, C., Fu, X., & Liu, R. H. 2020. Physicochemical properties and bioactivity of whey protein isolate-inulin conjugates obtained by Maillard reaction. *International Journal of Biological Macromolecules, 150, 326–335*. <https://doi.org/10.1016/j.ijbiomac.2020.02.086>
- Winarno. 2004. *Kimia Pangan dan Gizi*. PT Gramedia Pustaka Utama. Jakarta

- Wrolstad, R. E., Culver, C. A. 2012. Alternatives to those artificial FD&C food colorants, *Annu. Rev. Food Sci. Technol.*, 3, 59 – 77.
- Yang, Y., & McClements, D. J. 2013. Vitamin E bioaccessibility: influence of carrier oil type on digestion and release of emulsified α -tocopherol acetate. *Food Chemistry*, 141(1), 473–81. <http://doi.org/10.1016/j.foodchem.2013.03.033>.
- Zhu, D., S. Damodaran, and J.A. Lucey. 2010. *Physicochemical and Emulsifying Properties of Whey Protein Isolate (WPI)-Dextran Conjugates Produced in Aqueous Solution*. *Journal of Agricultural and Food Chemistry*. 58(5): p. 2988-2994.