

DAFTAR PUSTAKA

- Abdurahman, N. H., Khoo, G. C., Azhari, N. H. (2011). Production of Virgin Coconut Oil (VCO) by Centrifugation Method. ICCEIB -SOMChE 2011
- Akhtar, M., & Dickinson, E. (2007). Whey protein-maltodextrin conjugates as emulsifying agents: An alternative to gum arabic. *Food Hydrocolloids*, 21(4), 607–616. <https://doi.org/10.1016/j.foodhyd.2005.07.014>
- Albano, K. M., Cavallieri, Â. L. F., & Nicoletti, V. R. (2019). Electrostatic interaction between proteins and polysaccharides: Physicochemical aspects and applications in emulsion stabilization. *Food Reviews International*, 35(1), 54–89. <https://doi.org/10.1080/87559129.2018.1467442>
- Cho, Y. H., & McClements, D. J. (2009). Theoretical stability maps for guiding preparation of emulsions stabilized by protein-polysaccharide interfacial complexes. *Langmuir*, 25(12), 6649–6657. <https://doi.org/10.1021/la8006684>
- Dickinson, E. (2010). Flocculation of protein-stabilized oil-in-water emulsions. *Colloids and Surfaces B: Biointerfaces*, 81(1), 130–140. <https://doi.org/10.1016/j.colsurfb.2010.06.033>
- Donato, L., Schmitt, C. (2009). Mechanism of Formation of Stable Heat Induced betalactoglobulin Microgels. *Int Dairy Journal* 19: 295 – 306
- Habibah, W. (2018). Konjugasi Konsentrat Protein Blondo – Maltodekstrin: Pengaruh Waktu Reaksi dan Rasio Konsentrat Protein : Maltodekstrin Terhadap Sifat Emulsi. Skripsi : FTP UGM
- Handayani, R., Sulistyo, J., Rahayu, D. (2009). Extraction of Coconut Oil (*Cocos nucifera* L.) through Fermentation System. *Biodiversitas ISSN 2085-4722* (10) 151 – 157
- Hoffman, MAM., Roef, V. (1999). Aggregation of Beta lactoglobulin studied by in situ light scattering. *J Dairy Res* 63 : 423 – 40
- Hoffmann, H., & Reger, M. 2014. Emulsions with unique properties from proteins as emulsifiers. *Advances in Colloid and Interface Science*, 205: 94 - 104.
- Hong, Y., McClements, D. (2007). Formation of Hydrogel Particle by Thermal Treatment of beta lactoglobulin – chitosan complexes. *J Agric Food Chem* 55 : 5653 – 60
- Hogg, R. (2012). Bridging flocculation by polymers. *KONA Powder and Particle Journal*, 30(30), 3–14. <https://doi.org/10.14356/kona.2013005>



- Huang, G. Q., Xiao, J. X., Wang, S. Q., & Qiu, H. W. (2015). Rheological properties of O-carboxymethyl chitosan - gum Arabic coacervates as a function of coacervation pH. *Food Hydrocolloids*, 43, 436–441.
- Huang, L., Ding, X., Li, Y., & Ma, H. (2019). The aggregation, structures and emulsifying properties of soybean protein isolate induced by ultrasound and acid. *Food Chemistry*, 279(301), 114–119.
- Jaramillo, D. P., Roberts, R. F., & Coupland, J. N. (2011). Effect of pH on the properties of soy protein-pectin complexes. *Food Research International*, 44(4), 911–916. <https://doi.org/10.1016/j.foodres.2011.01.057>
- Jiao, B., Shi, A., Liu, H., Sheng, X., Liu, L., Hu, H., Adhikari, B., & Wang, Q. (2018). Effect of electrostatically charged and neutral polysaccharides on the rheological characteristics of peanut protein isolate after high-pressure homogenization. *Food Hydrocolloids*, 77, 329–335. <https://doi.org/10.1016/j.foodhyd.2017.10.009>
- Jones, O., Decker, E. A., & McClements, D. J. (2010). Thermal analysis of β -lactoglobulin complexes with pectins or carrageenan for production of stable biopolymer particles. *Food Hydrocolloids*, 24(2–3), 239–248.
- Jones, O. G. (2009). Fabrication of protein-polysaccharide particulates through thermal treatment of associative complexes. *Graduate School of the University of Massachusetts Amherst*, 145, 257.
- Jones, O. G., Decker, E. A., & McClements, D. J. (2010). Comparison of protein-polysaccharide nanoparticle fabrication methods: Impact of biopolymer complexation before or after particle formation. *Journal of Colloid and Interface Science*, 344(1), 21–29. <https://doi.org/10.1016/j.jcis.2009.12.017>
- Jones, O. G., Lesmes, U., Dubin, P., & McClements, D. J. (2010). Effect of polysaccharide charge on formation and properties of biopolymer nanoparticles created by heat treatment of β -lactoglobulin-pectin complexes. *Food Hydrocolloids*, 24(4), 374–383. <https://doi.org/10.1016/j.foodhyd.2009.11.003>
- Jones, O. G., & McClements, D. J. (2008). Stability of biopolymer particles formed by heat treatment of β -lactoglobulin/beet pectin electrostatic complexes. *Food Biophysics*, 3(2), 191–197. <https://doi.org/10.1007/s11483-008-9068-5>
- Jones, O. G., & McClements, D. J. (2011). Recent progress in biopolymer nanoparticle and microparticle formation by heat-treating electrostatic protein-polysaccharide



complexes. *Advances in Colloid and Interface Science*, 167(1–2), 49–62.
<https://doi.org/10.1016/j.cis.2010.10.006>

Jourdain, L., Leser, M. E., Schmitt, C., Michel, M., & Dickinson, E. (2008). Stability of emulsions containing sodium caseinate and dextran sulfate: Relationship to complexation in solution. *Food Hydrocolloids*, 22(4), 647–659.
<https://doi.org/10.1016/j.foodhyd.2007.01.007>

Kato, A. (2002). Industrial applications of maillard type protein – polysaccharide conjugates. *Food science and technology* 8:193 – 199

Lam, R., Nickerson, M. (2013). Food Protein : A review on their Emulsifying Properties Using a Structure – Function. *Food Chemistry* 141 : 975 – 984

Lowry, O., Nira, J. (1951). Protein Measurement with Phenol Reagent. *The Journal of Biological Chemistry* 193 : 265 – 275

Lan, Y., Chen, B., & Rao, J. (2018). Pea protein isolate–high methoxyl pectin soluble complexes for improving pea protein functionality: Effect of pH, biopolymer ratio and concentrations. *Food Hydrocolloids*, 80, 245–253.

Liu, S., Elmer, C., Low, N. H., & Nickerson, M. T. (2010). Effect of pH on the functional behaviour of pea protein isolate-gum Arabic complexes. *Food Research International*, 43(2), 489–495.

Marina, A. M., Che Man, Y. B., & Amin, I. (2009). Virgin coconut oil: emerging functional food oil. *Trends in Food Science & Technology* (20) 481 - 487.

Markman, G., Livney, Y. 2012. Maillard-conjugate based core–shell co-assemblies for nanoencapsulation of hydrophobic nutraceuticals in clear beverages. *Food Function* 3 (3) : 262 – 270

Martinez-Alvarenga, E.Y. Martinez-Rodriguez, L.E. Garcia-Amezquita, G.I. Olivas, P.B. Zamudio-Flores, C.H. Acosta-Muniz, D.R. Sepulveda. (2014). Effect of Maillard reaction conditions on the degree of glycation and functional properties of whey protein isolate – Maltodextrin conjugates. *Food Hydrocolloids* 38 : 110 – 118

Mepba, H. D., & Achnewhu, S. C. (2003). Effects of processing on protein nutritive quality of coconut Cocos nucifera products. *Plant Foods for Human Nutrition*, 58: 15 - 25.

Moschakis, T., Murray, B. S., & Biliaderis, C. G. (2010). Modifications in stability and structure of whey protein-coated o/w emulsions by interacting chitosan and gum arabic mixed dispersions. *Food Hydrocolloids*, 24: 8 - 17.



- Ma, X., Yan, T., Hou, F., Chen, W., Miao, S., & Liu, D. (2019). Formation of soy protein isolate (SPI)-citrus pectin (CP) electrostatic complexes under a high-intensity ultrasonic field: Linking the enhanced emulsifying properties to physicochemical and structural properties. *Ultrasonics Sonochemistry*, 59(August). <https://doi.org/10.1016/j.ultsonch.2019.104748>
- Mao, Y., & McClements, D. J. (2012). Modulation of emulsion rheology through electrostatic heteroaggregation of oppositely charged lipid droplets: Influence of particle size and emulsifier content. *Journal of Colloid and Interface Science*, 380(1), 60–66. <https://doi.org/10.1016/j.jcis.2012.05.007>
- Maroziene, A., & De Kruif, C. G. (2000). Interaction of pectin and casein micelles. *Food Hydrocolloids*, 14(4), 391–394.
- Naik, A., Raghavendra, S. N., & Raghavarao, K. S. M. S. (2012). Production of coconut protein powder from coconut wet processing waste and its characterization. *Applied Biochemistry and Biotechnology*, 167(5), 1290–1302. <https://doi.org/10.1007/s12010-012-9632-9>
- Ngouémazong, E. D., Christiaens, S., Shpigelman, A., Van Loey, A., & Hendrickx, M. (2015). The Emulsifying and Emulsion-Stabilizing Properties of Pectin: A Review. *Comprehensive Reviews in Food Science and Food Safety*, 14(6), 705–718. <https://doi.org/10.1111/1541-4337.12160>
- Oduse, K., Campbell, L., Lonchamp, J., & Euston, S. R. (2018). Electrostatic complexes of whey protein and pectin as foaming and emulsifying agents. *International Journal of Food Properties*, 20(3), S3027–S3041. <https://doi.org/10.1080/10942912.2017.1396478>
- Onsmaard, E., Vittayanont, M., Srigam, S., & McClements, D. J. (2005). Properties and stability of oil-in-water emulsions stabilized by coconut skim milk proteins. *Journal of Agricultural and Food Chemistry*, 53(14), 5747–5753.
- Onsmaard, E., Vittayanont, M., Srigam, S., & McClements, D. J. (2006). Comparison of properties of oil-in-water emulsions stabilized by coconut cream proteins with those stabilized by whey protein isolate. *Food Research International*, 39(1), 78–86. <https://doi.org/10.1016/j.foodres.2005.06.003>
- Patil, U., Benjakul, S. 2017. Characteristics of albumin and globulin from coconut meat and their role in emulsion stability without and with proteolysis. *Food Hydrocolloids* 69 : 220- 228



- 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
- Peinado, I., Lesmes, U., Andrés, A., & McClements, J. D. (2010). Fabrication and morphological characterization of biopolymer particles formed by electrostatic complexation of heat treated lactoferrin and anionic polysaccharides. *Langmuir*, 26(12), 9827–9834. <https://doi.org/10.1021/la1001013>
- Raei, M., Rafe, A., & Shahidi, F. (2018). Rheological and structural characteristics of whey protein-pectin complex coacervates. *Journal of Food Engineering*, 228, 25–31. <https://doi.org/10.1016/j.jfoodeng.2018.02.007>
- Ro'diat. 2018. Pengaruh Suhu dan pH Reaksi Konjugasi Konsentrasi Protein Blondo – Maltodekstrin Terhadap Sifat Emulsi. Skripsi : FTP UGM
- Salminen, H., & Weiss, J. (2014a). Effect of Pectin Type on Association and pH Stability of Whey Protein-Pectin Complexes. *Food Biophysics*, 9(1), 29–38.
- Salminen, H., & Weiss, J. (2014b). Electrostatic adsorption and stability of whey protein-pectin complexes on emulsion interfaces. *Food Hydrocolloids*, 35, 410–419. <https://doi.org/10.1016/j.foodhyd.2013.06.020>
- Schmitt, C., Bovay, C., Rouvet, M. (2007). Whey Protein Soluble Aggregates From Heating with NaCl : Physicochemical, Interfacial and Foaming Properties. *Langmuir* 23 : 4155 – 66
- Schmitt, C., & Turgeon, S. L. (2011). Protein/polysaccharide complexes and coacervates in food systems. *Advances in Colloid and Interface Science*, 167(1–2), 63–70. <https://doi.org/10.1016/j.cis.2010.10.001>
- Setiaji, B dan Prayugo, S. 2006. Membuat VCO Berkualitas Tinggi. Jakarta: Penebar Swakarya
- Suzana, N. 2006. Sifat Kimia dan Fisika pada Biskuit dari Blondo Hasil Samping Minyak Kelapa Murni. Skripsi : Jurusan Kimia FMIPA UGM
- 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.
- Setiowati, A. D., Vermeir, L., Martins, J., De Meulenaer, B., & Van der Meeren, P. (2016). Improved heat stability of protein solutions and O/W emulsions upon dry heat treatment of whey protein isolate in the presence of low-methoxyl pectin.



Colloids and Surfaces A: Physicochemical and Engineering Aspects, 510, 93–103. <https://doi.org/10.1016/j.colsurfa.2016.05.034>

- Thaipanit, S., Schleining, G., Anprung, P. (2016). Effects of coconut (*Cocos nucifera* L.) protein hydrolysates obtained from enzymatic hydrolysis on the stability and rheological properties of oil-in-water emulsions. *Food Hydrocolloids* 60 : 252 – 264
- Thaipanit, S., & Anprung, P. (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.
- Tolstoguzov, VB. (2006). *Ingredient Interactions: Aggregation and Phase Separation*. Cambridge: Woodhead
- Trujillo-Ramírez, D., Lobato-Calleros, C., Román-Guerrero, A., Hernández-Rodríguez, L., Alvarez-Ramirez, J., & Vernon-Carter, E. J. (2018). Complexation with whey protein hydrolysate improves cacao pods husk pectin surface active and emulsifying properties. In *Reactive and Functional Polymers* (Vol. 123, pp. 61–69). <https://doi.org/10.1016/j.reactfunctpolym.2017.12.011>
- Wang, W., Zhong, Q. (2014). Improved thermal stability of whey protein maltodextrin conjugates at pH 5.0 by D-Glucose, sucrose, D-cellobiose, and lactose. *Food Hydrocolloids* 41 : 257 : 264
- Winarno, F. G. (2004). *Kimia Pangan dan Gizi*. Jakarta : Gramedia
www.fao.org access on 3 September 2018
- Xia, J., Yan, HY., Jian, Y. (2011). Microencapsulation of Sweet Orange Oil by Complex Coacervation With Soybean Protein Isolate – Gum Arabic. *Food Chemistry* 25 : 1267 – 1272
- Xiao – Ying, Q., Zeng, P. (2011). Preparation of Lutein Microencapsulation by Complex Coacervation Method and its Physicochemical Properties and Stability
- Yi, J., Li, Y., Zhong, F. (2014). The physicochemical stability and in vitro bioaccessibility of beta-carotene in oil-in-water sodium caseinate emulsions. *Food Hydrocolloids* 35 : 19 – 27