



## DAFTAR PUSTAKA

- Aggarwal BB, Sundaram C, Prasad S, Kannappan R. 2010 Tocotrienols, the vitamin E of the 21st century: its potential against cancer and other chronic diseases. *Biochem Pharmacol.* 80(11) :1613-1631.
- Aguda, R.M. 2007. Modeling the Solubility of Sclareol in Organic Solvent Using Solubility Parameter. *North Carolina American Journal of Applied Sciences.* 6 (7): 1390-1395.
- Agustin, D.A. dan Wibowo, A.A. 2021. Teknologi Enkapsulasi: Teknik Dan Aplikasinya. *Distilat.* 7 (2) : 202-209
- Almatsier, S . 2009. *Prinsip Dasar Ilmu Gizi.* Jakarta : PT Gramedia Pustaka. Utama.
- Altuna, L., Herrera, M.L., Foresti, M.L., 2018. Synthesis and characterization of octenyl succinic anhydride modified starches for food applications. A review of recent literature. *Food Hydrocolloids* 80 :97–110.
- Alyas, S. A., Abdulah A. & Idris N. A.2006. Changes of  $\beta$ -Carotene Content During Heating of Red Palm Olein. *Journal of Oil Palm Research (2006)* . Special Issue-April:99-102
- Andarwulan, N., Feri, K., dan Dian, K. 2011. *Analisis Pangan. Cetakan Pertama.* Jakarta : PT Dian Rakyat.
- Anggraini, A.R. 2017. Pembuatan Maltodekstrin Dengan Proses Hidrolisa Parsial Pati Umbi Uwi Ungu (*Dioscorea Alata L.*) Menggunakan Pullullanase Dan A-Amilase Secara Bertahap. *Skripsi.* Makassar : Fakultas Pertanian, Universitas Hasanuddin
- Anief. 2000. *Ilmu Meracik Obat, Teori dan Praktek.* Yogyakarta : Gadjah Mada University press.
- AOAC (Association of Official Analytical Chemist). 2000. *Official Methods of Analysis 17th Edition.* Washington D.C : Association of Official Analytical and Chemists, Inc.



- AOAC (Association of Official Analytical Chemist). 2005. *Official Method of Analysis of The Association of Official Analytical of Chemist*. Arlington, Virginia (US): Association of Official Analytical and Chemists, Inc.
- Apriyanto, M., Rujiah,. 2017. *Kimia Pangan*. Yogyakarta: Trussmedia Grafika.
- Arifin,M.A. 2001. Pengeringan Keripik Umbi Iles-Iles Secara Mekanik Untuk Meningkatkan Mutu Keripik Iles. *Tesis*. Bogor : Teknologi Pasca Panen , Institut Pertanian Bogor
- Asghar, A., & Abbas, M. 2012. Dried Egg Powder Utilization, A New Frontier in Bakery Products. *Agriculture and Biology Journal of North America*. 3(13) : 493–505.
- Augustin, M.A.; Sanguansri, L. 2007. *Encapsulation of bioactives. In Food Materials Science*. New York : Springer.
- Aziz, T dan Tambunan, S.N. 2009. Penentuan Massa Optimal Gom Akasia Sebagai Surface Active Agent Pada Pencampuran Minyak Goreng Dengan Air Dan Solar Dengan Air. *Jurnal Teknik Kimia*. 16(3)
- Bae, E.K., & S.J. Lee,. 2008. Microencapsulation of avocado oil by spray drying using whey protein and maltodextrin. *Journal of Microencapsulation*. 25(8): 549-560.
- Ball, G.F.M. 2006. Vitamins in Foods: Analysis, Bioavailability, and Stability. Boca Raton : Taylor and Francis Group
- Basiron, Y., dan Weng, C.K.2004. The Oil Palm and its Sustainability. *Journal of Oil Palm Research*. 16(1): 1-10.
- BeMiller JN. 2009. One hundred years of commercial food carbohydrates in the United States. *J Agric Food Chem*. 57(18):8125– 8129.
- BeMiller, J. & Whistler, R. 2009. *Starch Chemistry and Technology*. NewYork :Elsevier
- Berk, Z. 2009. *Food Process Engineering and Technology*. USA : Elsevier.
- BPS (Badan Pusat Statistik). 2021. *Produksi Tanaman Perkebunan*. Diakses dari <https://www.bps.go.id/indicator/54/132/1/produksi-tanaman-perkebunan.html> pada tanggal 20 Agustus 2022Pukul 07.59 WIB.



- Cahyani, P.N.L.S. 2020. Hubungan Konsumsi Pufa Pada Masa Hamil Dengan Status Gizi Dan Lingkar Kepala Bayi Baru Lahir Di Klinik Bersalin Yayasan Bumi Sehat. *Tesis*. Denpasar : Program Sarjana Terapan Jurusan Gizi Program Studi Gizi Dan Dietetika , Politeknik Kesehatan Kemenkes Denpasar
- Champagne, C. P., & Fustier, P. 2007. Microencapsulation for the improved delivery of bioactive compounds into foods. *Food Biotechnology*.18:184-190.
- Choo YM, Yap SC, Ong ASH, Ooi CK, Gog SH.1989. Palm Oil Carotenoid: Chemistry and Technology. *Proceedings of International Palm Oil Conference*. PORIM, Kuala Lumpur : 5-9 September 1989.
- Comuzzo, P. And Calligaris, S., 2019. Potential Applications Of High Pressure Homogenization In Winemaking: A Review. *Beverages*. 5(3): 56.
- Costa, S. S., Machado, B. A. S., Martin, A. R., Bagnara, F., & Alves, A. R. C. 2015. Drying by Spray Drying in The Food Industry: Micro-encapsulation, Process Parameters and Main Carriers Used. *African Journal of Food Science*. 9(9) :462–470.
- Darnoko, D, Siahaan, D., Nuryanto, E., Elisabeth, J., Erningpraja, L., Tobing, P.L., Naibaho, P.M. dan Haryati, T. 2002. *Teknologi Pengolahan Kelapa Sawit dan Produk Turunannya*. Medan : Pusat Penelitian Kelapa sawit.
- Dauqan E, Sani HA, Abdullah A, Muhammad H, Top AGM. 2011. Vitamin E and  $\beta$ -carotene composition in four different vegetable oils. *Am. J. Appl. Sci.* 8: 407-412.
- Desai, K. G. H., & Park, H. J. 2005. Recent Developments in Microencapsulation of Food Ingredients. *Drying Technology* . 23 : 1361-1394
- Dubey, R. Shami ,T.C. and Rao, K.U.B. 2009. Microencapsulation Technology And Applications. *Defence Science Journal*. 59(1) : 82-95.
- Erawati, C.M. 2006. Kendali Stabilitas Beta Karoten Selama Proses Produksi Tepung Ubi Jalar (*Ipomoea batatas* L.). *Tesis*. Bogor : Sekolah Pasca Sarjana, Insitut Pertanian Bogor.



- Fajri, I. 2002. Mempelajari Proses Pembuatan Tepung dari Whey Tahu dengan Pengering Semprot dan Pengering Beku serta Analisis Sifat Fungsional Tepung yang Dihasilkan. *Tesis*. Bogor: Program Pasca Sarjana, Institut Pertanian Bogor.
- Fardiaz, D. 1989. *Hidrokoloid*. Bogor: Pusat Antar Universitas Pangan dan Gizi, Institut Pertanian Bogor
- Fasikhatun, T. 2010. Pengaruh Konsentrasi Maltodekstrin Dan Gum Arab Terhadap Karakteristik Mikroenkapsulat Minyak Sawit Merah Dengan Metode Spray Drying. *Skripsi*. Bogor : Fakultas Teknologi Pertanian, Institut Pertanian Bogor.
- Fellows, PJ. 2000. *Food Processing Technology, Principles and Practice*. Cambridge : Woodhead Publishing Ltd. Cambridge
- Gennadios A, Weller CL, Gooding CH. 1994. Measurement errors in water vapor permeability of highly permeable, hydrophilic edible films. *Journal of Food Engineering*. 21(4): 395-409.
- Gharsallaoui, A.; Roudaut, G.; Chambin, O.; Voilley, A.; Saurel, R. 2007. Applications of Spraydrying in microencapsulation of food ingredients: An overview. *Food Res. Int.* 40 : 1107–1121.
- Glicksman, M. dan Sand, RE. 1973. *Industrial gums, Polysaccharide and their derivative*. New York : Academic Press.
- Goodman's dan Gillman's. 1991. *The Pharmacological Basis of Therapeutics. 8th Edition. Vol.1*. United States : McGraw- Hill Companies.
- Gorsek. 2002. Weight Loss Composition Containing Green Tea, Hydroxycitric Acid, 5-Hydroxytryptophan, Glucomannan, Picolinate, and Lactobacillus. *United States Patent, May 7: US 6,383,482 B1*
- Grune, T., G. Lietz, A. Palou, A.C. Ross, W. Stahl, G. Tang, D. Thurnham, S.A. Yin, and H.K. Biesalski. 2010.  $\beta$ -Carotene is an Important Vitamin A Source for Humans. *Journal of Nutrition*. 140 : 2268–2285
- Gurusmatika, S., Harmayani, E., Pranoto. Y, Sugahara. T. 2017 . Immunomodulatory Activity of Octenyl Succinic Anhydride Modified Porang (*Amorphophallus oncophyllus*) Glucomannan on Mouse



Macrophage-Like J774.1 Cells and Mouse Primary Peritoneal Macrophages. *Molecules*. 22(7): 1187

Guzmán-Chozas, M., Vicario-Romero, I.M. & Guillén-Sans, R. 1998. 2-thiobarbituric acid test for lipid oxidation in food: Synthesis and spectroscopic study of 2-thiobarbituric acid-malonaldehyde adduct. *J Amer Oil Chem Soc*. 75: 1711–1715.

Hariyadi, P.2013. Freeze Drying Technology : for Better Quality & Flavor of Dried Products. *Foodreview Indonesia*. 7(2). 52-58.

Harmayani, E., Aprilia, V., dan Marsono, Y. 2014. Characterization of Glucomannan from Amorphophallus oncophyllus and Its Prebiotic Activity In Vivo. *Carbohydrate Polymers*. 112 : 475-479

Hasenhuettl GL, Hartel, R.W., 2008. *Food Emulsifiers and Their Applications*. New York (USA) : Springer Science.

Hattrem, M. N., Molnes, S., Haug, I.J. & Draget, K.J. (2015). Interfacial and rheological properties of gelatin based solid emulsions prepared with acid or alkali pretreated gelatins. *Food Hydrocolloids*. 43 : 700-707.

Henrikson, R. 2009. *Earth Food Spirulina How This Remarkable Blue-Green Algae Can Transform Your Health And Our Planet*. Hawaii : Ronore Enterprises Inc.,

Herlina, N. & Ginting, M. H. S., 2010. Lemak dan Minyak. Medan : USU Press  
Herman, M., Alimuddin, A.H., Ardiningsih, P. Perbandingan Aktivitas Antioksidan dan Stabilitas Enkapsulat Ekstrak Etanol Batang Sepang (Caesalpinia Sappan L.) dengan Variasi Teknik Pengeringan. *Orbital*. 1(2): 31-43.

Hernani, Mulyono, E. dan Ramadhan, K. 2016 Pemanfaatan Monodiasilglicerol (Mdag) Hasil Sintesa Dari Butter Biji Pala Dan Gliserol Sebagai Emulsifier Pada Kualitas Produk Sosis Ayam. *Jurnal Penelitian Pascapanen Pertanian*.13 (1): 74 – 81.

Hidayat, R., Dewanti, D., dan Hartojo. 2013. *Tanaman Porang (Karakter, Manfaat dan Budidaya)*. Yogyakarta : Graha Ilmu.



- Husnah, dan Nurlela. 2020. Analisa Angka Anisidine Terhadap Kualitas Minyak Goreng Sebelum dan Sesudah Dipakai Berulang. *Jurnal PGRI Palembang* . 5 (1) : 66-71.
- IFOS. 2011. *Fish Oil Purity Standard*. Diakses dari [http://www.omegavia.com/best\\_fishoilsupplement-3](http://www.omegavia.com/best_fishoilsupplement-3) pada tanggal 27 September 2022 pukul 13.55 WIB
- IKA. 2015. *Ultra Turrax® Dispersers*. Diakses dari [http://imlab.be/imlab\\_FR/ika/fragmentation.html](http://imlab.be/imlab_FR/ika/fragmentation.html) pada tanggal 21 Agustus 2022 Pukul 19.53 WIB
- Imeson, A. 1992. *Food Stabiliser, Thickeners, and Gelling Agents*. London : John Wiley & Sons Publisher.
- IUPAC (International Union on Pure an Applied Chemistry). 1987. *Standart method for the analysis of oils arld fats an derivatives, 7th edn, ed. C. Paquot and A. Hautfebbe*. Oxford (UK): Blackwell Scientific Publishing Ltd
- Jadhav, S.J., Ninbalkar, S.S., Kulkarni, A.D., dan Mahari, D.L. 1996. *Lipid Oxidation in Biological and Food System*. New York : AP Press
- Jatmiko, A., D. Siahaan, 1997. Sifat Nutisional Karotenoida Minyak Sawit. *Warta PPKS Medan*. 5(1):21-27.
- Kartika, B., Pudji, H., Wahyu, S. 1988. *Pedoman Uji Indrawi Bahan Pangan*. Yogyakarta : UGM Press.
- Kaushik P, Dowling K, Barrow CJ, Adhikari B. 2015. Microencapsulation of omega-3 fatty acids: a review of microencapsulation and characterization methods. *J Funct Food*. 19:868–881
- Kelly PM, Keogh MK. 2000. *Nutritional studies on dried functional food ingrediens containing omega-3 polyunsaturated fatty acids (Fish oil powder ingredien)*. The Dairy Products Research Centre Moorepark : Fermoy, Co. Cork.
- Kennedy, J.F., Knill, C.J. & Taylor, D.W. 1995. *Maltodextrins*. In Dziedzic, S.Z. & Kearsley, M.W. (eds). *Handbook of Starch Hydrolysis Products and their Derivatives*. US :Springer
- Ketaren, S. 1986. *Pengantar Teknologi Minyak dan Lemak Pangan*, Jakarta : UI Press.



- Koç, M, S.Y Mazer and F.K. Erfekin. 2010. Use of Gelatin, Pullulan, Lactose and Sucrose as Coating Material for Microencapsulation of Fish Oil by Freeze Drying. *Research Paper*. Turkey : University Faculty of Engineering Department of Food Engineering İzmir.
- Liu Z, Li Y, Cui F, Ping L, Song J, Ravee Y, et al. 2008. Production of Octenyl succinic anhydride-modified waxy corn starch and its characterization. *J Agric Food Chem.* 56(23):11499–506.
- Manorama R, Brahmam GNV, Rukmini C. 1996. Red palm oil as a source of  $\beta$ -carotene for combating vitamin A deficiency. *Plant Food for Human Nutrition.* 49: 75-82.
- Marliyanti, S.A., Rimbawan, Harianti, R. 2021. Karakteristik Fisikokimia Dan Fungsional Minyak Sawit Merah Physicochemical And Functional Characteristics Of Red Palm Oil. *JGMI: The Journal of Indonesian Community Nutrition.* 10(1)
- Marsono, Y., A. Murdiati, dan S. Naruki. 2007. Substitusi Minyak Jagung dengan MSM dalam Produksi Susu Bubuk Rekombinasi: Pengaruhnya pada Sifat Fisik dan Gizi. *Jurnal Teknologi Pangan dan Gizi.* 6 : 41–48.
- Martin, A., J. Swarbrick, dan A. Cammarata. 1993. *Farmasi Fisik: Dasar-dasar Farmasi Fisik dalam Ilmu Farmasetik. Edisi Ketiga.* Penerjemah: Yoshita. Jakarta: UI-Press.
- Mason, W. R. 2009. *Starch use in foods. In J. BeMiller, & R. Whistler (Eds.), Starch chemistry and technology (3rd ed. pp. 745-795).* Burlington: Academic Press
- McCabe, Warren L & Smith, J.C. 1999. *Unit operations of chemical engineering.* New York : McGraw-Hill.
- McClements, DJ. 2004. Food Emulsions Principles, Practices, and Techniques ed 2. New Tork (US): CRC Press.
- Meng, F.; Zheng, L.; Wang, Y.; Liang, Y.; Zhong, G. 2014. Preparation and properties of konjac glucomannan octenyl succinate modified by microwave method. *Food Hydrocoll.* 38 : 205–210.



- Meng, F.B., Li, Y.C., Liu, D.Y., Zhong, G., Guo, X.Q., 2018. The characteristics of konjac glucomannan octenyl succinate (KGOS) prepared with different substitution rates. *Carbohydr. Polym.* 181 : 1078–1085.
- Miller, D. M. 2012. Oxidation of food grade oils. *Plant and Food Research*. Vol. 29.
- Minemoto, Y., Adachi, S. and Matsuno, R. 1997. Comparison of oxidation of methyl linoleate encapsulated with gum arabic by hot-air drying and freeze drying. *J. Agric. Food Chem.*, 45 :4530–4534.
- Mollet, H., dan Grubermann, A. 2001. *Formulation Technology: Emulsions, Suspensions, Solid Form*. Toronto : Wiley-Vch
- Muchtadi, T.R., N. Wulandari, Hunaefi, D., Darmawati, E., Andrianto, M.S., Sukmawati, Y. 2015. Prospek Industrialisasi Produk Hilir Minyak Kelapa Sawit. *Prosiding Seminar Hasil-Hasil PPM IPB 2015*. Bogor 2015. Vol. 1:159–180.
- Mufarida, N.A. 2016. *Perpindahan Panas & Massa pada Spray Dryer*. Jember : Penerbit Pustaka Abadi
- Mukherjee, S., and Mitra, A. 2009. Health Effects of Palm Oil. *J. Hum. Ecol.* 26(3): 97-203.
- Nareswari, N., Estiasih, T dan Murtini, E.S. 2006. Aktivitas Antioksidan Ekstrak Ubi Jalar Kuning Varietas Daya Dengan Berbagai Rasio Pelarut Heksana:Etanol. *Jurnal Teknologi Pertanian*. 7(3):150-158.
- Nguyen, T.T.T, Le, T.V.A., Dang, N.N., Nguyen, D.C., Nguyen, P.T.N. , Tran, T.T., Nguyen, Q.V., Pham, D.T.N. 2021. Microencapsulation of Essential Oils by Spray-Drying and Influencing Factors. *Journal of Food Quality*. 2021 : 1-15.
- Njoku, P.C., Egbukole, M.O and Enenebeaku, C.K. 2010. Physio-Chemical Characteristics and Dietary Metal Levels of Oil from Elaeis guineensis Species. *Pakistan Journal of Nutrition*. 9(2): 137-140
- Novia, S. 2009. Stabilitas Mikroenkapsulat MSM Hasil Pengeringan Lapis Tipis Selama Penyimpanan .*Skripsi*. Bogor : Fakultas Teknologi Pertanian, Institut Pertanian Bogor



- Nugraheni, B., Setyopuspito, A., Advistasari, Y.D. 2018. Identifikasi Dan Analisis Kandungan Makronutrien Glukomanan Umbi Porang (*Amorphophallus onchophyllus*). *Jurnal Ilmu Farmasi dan Farmasi Klinik (JIFFK)*. 15 (2) :77-82
- Nurlela, Andriani, D., Arizal, R. 2020. Ekstraksi Glukomanan Dari Tepung Porang (*Amorphophallus muelleri Blume*) dengan Etanol. *Jurnal Sains dan Terapan Kimia*. 14 (2) : 88-98
- Obón JM, Castellar MR, Alacid M, Fernández-López JA. 2009. Production of a red-purple food colorant from *Opuntia stricta* fruits by spray drying and its application in food model systems. *J Food Eng*. 90(4): 471-479.
- Oetjen, G. W. dan P. Haseley. 2004. *Freeze Drying* . Weinheim :Wiley VGH.
- Pawlak, A. K., Fryer, P. J., & Norton, I. T. 2013. *Formulation Engineering of Foods*.West Sussex: Wiley Blackwell.
- Plazzotta, S.; Manzocco, L. 2018. Effect of ultrasounds and high pressure homogenization on the extraction of antioxidant polyphenols from lettuce waste. *Innovative Food Science & Emerging Technologies*. 50 : 11-19.
- Pourashouri, P., Shabani, B., Razavi, S. H., Jafari, S. M., Shabani, A., & Aubourg, S. P. (2014). Impact of Wall Materials on Physicochemical Properties of Microencapsulated Fish Oil by Spray Drying. *Food and Bioprocess Technology*. 7(8) :2354–2365.
- Putri C.A.2019. Uji Kandungan β-Karoten Dan Uji Daya Terima Pada Pembuatan Minuman Instan Daun Kemangi (*Sanctum Ocimum L*) Dengan Jahe (*Zingiber Officinale*). *Skripsi*. Surakarta :Institusi Teknologi Sains Dan Kesehatan PKU Muhammadiyah Surakarta
- Putri, A., Rusli, M.A., dan Setyaningsih, D. 2020. Enkapsulasi Campuran Minyak Atsiri Sebagai Produk Sediaan Aromaterapi dengan Teknik Koaservasi Kompleks. *Jurnal Teknologi Industri Pertanian*. 30 (3): 299-307.
- Rahayu, W. P. 2001. *Penuntun Praktikum Penilaian Organoleptik*. Bogor : Jurusan Teknologi Pangan dan Gizi. Fakultas Teknologi Pertanian. IPB.
- Richana, N., Nursyafira, F., Pujoyuwono dan Herawati, H. 2016. Optimasi Proses Produksi Maltodextrin Dari Tapioka Menggunakan Spray Dryer.



*Prosiding Seminar Nasional Teknologi Inovasi Pascapanen untuk Pengembangan Industri Berbasis Pertanian.* Balai Besar Penelitian dan Pengembangan Pascapanen Pertanian 2016. Hal. 313-322

Risch, SJ. 1995. *Encapsulation and Controlled Release of Food Ingredients.* American. Washington DC : Chemical Society.

Rizqiati, H., Jenie, B.S., Nurhidayat, N., Nurwitri, C.2009. Microcapsul characteristics of probiotic Lactobacillus plantarum encapsulated by skim. J. Indones. *Trop. Anim. Agric* 34 : 139–144.

Rodiyanti., Ginting, S dan Yusraini, E. 2017. Pengaruh Perbandingan Bubur Mentimun dengan Bubur Brokoli dan Presentase Gum Arab terhadap Mutu Vegetable Leather. *Jurnal Rekayasa dan Teknologi Pangan.* 5(4):660-664.

Sadeghi A, Shahidi F, Mortazavi SA, Mahalati N. 2008. Evaluation of different parameters effect on maltodextrin production by  $\alpha$ -amilase termamyl 2-x. *World Appl Sci Journal* .3 (1): 34-39.

Sarkar, S.; Singhal, R.S. 2014. Esterification of guar gum hydrolysate and gum Arabic with n-octenyl succinic anhydride and oleic acid and its evaluation as wall material in microencapsulation. *Carbohydr. Polym.* 86 :1723–1731.

Shahidi, F., & Han, X. Q. 1993. Encapsulation of food ingredients. *Critical Reviews in Food Science and Nutrition.* 33(6) :501–547.

Siddick, S.A dan D, Ganesh S. 2013. Spray Drying Parameters For The Maximum Recovery Of Fruit Powder From Different Tomato Varieties Grown In Dindigul District. *Jurnal Internasional Publikasi Ilmiah dan Penelitian* 3(2): 1-2.

Siddick, S.A dan D, Ganesh S. 2013. Spray Drying Parameters For The Maximum Recovery of Fruit Powder From Different Tomato Varieties Grown In Dindigul District. *Jurnal Internasional Publikasi Ilmiah dan Penelitian.* 3(2): 1-2.

Soekarto, S. T. 1990. *Dasar-dasar Pengawasan dan Standardisasi Mutu Pangan.* Bogor :PAU Pangan dan Gizi, IPB



Standarisasi Nasional Indonesia. 2013. SNI No 3741:2013. Minyak Goreng. *Badan Standardisasi Nasional*. Jakarta

Suave J. 2006. Microencapsulação: inovação em diferentes áreas. *Revista Saúde e Ambiente/Health and Environment Journal*. 7(2): 12-20.

Supriati, Y. 2016. Keanekaragaman Iles-Iles (*Amorphophallus* spp.) dan Potensinya Untuk Industri Pangan Fungsional, Kosmetik, dan Bioetanol. *Jurnal Litbang Pertanian*. 35(2) : 69 - 80

Susanto T., 1995. Kemungkinan Pemanfaatan Tulang Ternak Sebagai Bahan Baku Gelatin. *Prosiding seminar sehari aspek-aspek agribisnis bidang peternakan*. Surabaya 1995.

Sutrisno, E. 2021. *Porang, Si Liar Komoditas Ekspor*. Diakses dari <https://indonesia.go.id/kategori/keanekaragaman-hayati/2591/porang-si-liar-komoditas-ekspor> pada tanggal 23 Agustus 2022 pukul 16.26 WIB.

Tanito, M., Itoh, N., Yoshida, Y., Hayakawa, Y., Ohira, A., Niki, E. 2004. Distribution of Tocopherols and Tocotrienols to Rat Ocular Tissues After Topical Ophthalmic Administration. *Lipids*. 39(5): 469-474.

Tarladgis, B. G., A. M. Pearson, and L. R. Dugan, 1964. Chemistry of the 2-thiobarbituric acid test for determination of oxidative rancidity in foods II. Formation of the TBA-malonaldehyde complex without acid-heat treatment. *J. Sci. Food Agric.* 15:620-607.

Tesch, S. 2002. *Charakteristieren meschanischer Emulgienverfahren: Herstellen und Stabilisieren von tropfen als Teilschritte*. Frankfurt : Universitat Karlsruhe

Thevenet, F. 1988. *Acacia gums, stabilisers for flavor encapsulation, in Flavor Encapsulation, ch. 5 (eds S.J. Risch and G.A. Reineccius)*. Washington DC : American Chemical Society.

Tjahyono, A.E. 2004. *Grand strategy of the development of starch based agro industries. Symposium Direction of strarch Innovation*. Bandung 26 Januari 2004.



- Ubaldi, A., G. Delbono, A. Fusari dan P. Serventi. 2005. Quick HPLC method to determine vitamin E concentration in cow's milk. *Ann. Fac. Medic. Vet. di Parma*. 25: 101-110.
- Wahyuningtyas, D. 2010. Uji Organoleptik Hasil Jadi Kue Menggunakan Bahan Non Instant Dan Instant. *Binus Business Review*. 1 (1)116-125
- Ward, A. G. & Courts, A. (1977). The Science and Technology of Gelatin. London : Academic Press.
- Warner, K. 2004. Chemical and physical reactions in oil during frying. *Frying technology and practices*. 16-28.
- Widarta, I.W.R., Rukmini, A., Santoso, U., Supriyadi , Raharjo,S. 2022. Optimization of oil-in-water emulsion capacity and stability of octenyl succinic anhydride-modified porang glucomannan (*Amorphophallus muelleri Blume*). *Heliyon* .8(5) : 1-9
- Wijaya, O.C.E.D. 2021. Karakteristik Dan Stabilitas Oksidatif Nanostructured Lipid Carrier Minyak Sawit Merah Yang Dienkapsulasi Menggunakan Maltodekstrin, Xanthan Gum Dan Arabic Gum. . *Skripsi*. Yogyakarta : Fakultas Teknologi Pertanian, Universitas Gadjah Mada
- Winarno, F. G. 2002. *Kimia Pangan dan Gizi*. Jakarta : Gramedia Pustaka
- Winarsi, H.. 2007. *Antioksidan Alami dan Radikal Bebas*. Yogyakarta : Kanisius.
- Wulandari, R., Indriana, D., Amalia A.N., 2019. Kajian Penggunaan Hidrokoloid Sebagai Emulsifier. *Jurnal Industri Hasil Perkebunan*.14(1) : 28-40
- Yang, xiaoqing, Robin A. Boyle. 2016. *Oxidative Stability and Shelf Life of Food Containing Oils and Fats*. Rockville : AOCS Press, Elsevier Inc
- Yanuriati I, Marseno DW, Rochmadi, Harmayani E. 2017. Characteristics of glucomannan isolated from fresh tuber of Porang (*Amorphophallus muelleri Blume*). *Cabohyd Polym*.156: 56-63.
- Yudha, K.B. 2008. Optimasi Formula Mikroenkapsulat Minyak Sawit Merah Menggunakan Pektin, Gelatin, Dan Maltodekstrin Melalui Proses Thin Layer Drying. *Skripsi*. Bogor : Fakultas Teknologi Pertanian, Institut Pertanian Bogor.



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Karakteristik Emulsi Minyak Sawit Merah yang Distabilkan dengan Porang Glukomanan Oktenil

Suksinat

Anhidrat dan Dienkapsulasi dengan Maltodekstrin

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Yuliarti, N. 2007. *Awas Bahaya di Balik Lezatnya Makanan*. Yogyakarta : Penerbit Andi

Yuliasari S, Fardiaz D, Andarwulan N, Yuliani S. 2014. Karakteristik emulsi Minyak Sawit Merah diperkaya  $\beta$ -karoten. *J. Littri*. 20 (3): 111-121.

Yuliasari S, Hamdan. 2012. Karakterisasi nanoemulsi minyak sawit merah yang disiapkan dengan high pressure homogenizer. *Proseding Insinas*. Bogor 2020. hal. 25-28.

Yuliasari, S., Fardiaz, D., Andarwulan, N., Yuliani, S. 2016. Karakteristik Enkapsulat Minyak Sawit Merah Dengan Pengayaan B-Karoten. *Jurnal informatika Pertanian*.25(1):107 – 116.

Zhang C. Chen JD. Yang FQ. 2014. Konjac glucomannan, a promising polysaccharide for OCDDS. *Carbohydrate Polymer* 104: 175-181.