

## DAFTAR PUSTAKA

- Anonim. (2008). SNI 2323:2009 Standart Mutu Biji Kakao. Badan Standardisasi Nasional. Jakarta
- Anonim. (2009). SNI 3748:2009 Standart Mutu Lemak Biji Kakao. Badan Standardisasi Nasional. Jakarta
- Anonim. (2015). Statistik Perkebunan Indonesia: Kakao 2014-2016. Direktorat Jenderal Perkebunan. Jakarta
- Afoakwa, E. O. (2010). *Chocolate Science and Technology*. John Wiley and Sons: Iowa, USA
- Afoakwa, E. O. (2014). *Cocoa Production and Processing Technology*. CRC Press: Florida
- Afoakwa, E. O., Ofosu-Ansah, E., Takrama, J. F., Budu, A. S. dan Mensah-Brown, H. (2014). Changes in chemical quality of cocoa butter during roasting of pulp pre-conditioned and fermented cocoa (*Theobroma cacao*) beans. *International Food Research Journal* 21: 2221-2227
- Amissah, L., Mohren, G.M.J., Bongers, F., Hawthorne, W. D. dan Poorter, L. (2014) Rainfall and temperature affect tree species distribution in Ghana. *Journal of Tropical Ecology* 30: 435-446
- Araújo, I.S., Filho, G.A., Pereira, M. G., Faleiro, F. G., de Queiroz, V. T., Guimarães, C. T., Moreira, M. A., de Barros, E. G., Machado, R. C. R., Pires, J. L., Schenell, R. dan Lopes, U.V. (2009). Mapping of quantitative trait loci for butter content and hardness in cocoa beans (*Theobroma cacao* L.). *Journal of Plant Molecular Biology and Rep.* 27: 177-183
- Asep, E. K., Jinap, S., Tan, T. J., Russly, A. R., Harcharan, S dan Nazimah, S.A.H. 2008. The effects of particle size, fermentation and roasting of cocoa nibs on supercritical fluid extraction of cocoa butter. *Journal of Food Engineering* 85: 450-458
- Baldini, M., Giovanardi, R., Tahmasebi E. S. dan Vannozzi, G. (2000). *Effect of Different Water Availability on Fatty Acid Composition of The Oil in Standart and High Oleic Sunflower Hybrids*. In: Proceedings of XV<sup>th</sup> International Sunflower Conference Vol I, Toulouse: A79-84
- Bartley, B. G. D. (2002). *The Genetic Diversity Of Cacao And Its Utilization*. UK: Cabi Publishing. Wallingford, UK
- Beckett, S. T. (2008). *The Science of Chocolate, 2<sup>nd</sup> Edition*. RSC Publishing: United Kingdom.
- Beckett, S. T. (2009). *Industrial Chocolate Manufacture and Use, 4<sup>th</sup> Edition*. Blackwell Publishing Ltd: United Kingdom

- Bettaieb, I., Zakhama, N., Wannes, W. Aidi., Kchouk, M. E. dan Marzouk, B. (2009). Water deficit effect on *salvia officinalis* fatty acid and essential oil composition. *Scientia Horticulturae* 120: 271-275
- Budryn, G., Zyzelewicz, D., Krysiak, W., Oracz, J. dan Ewa, N. (2013). Influence of addition of green tea and green coffee extract. *Journal of Food Research International* 50: 149-160
- Calliauw, G., Ayala, J. V., Gibon, V., Wouters, J., Greyt, W. D., Foubert, I. dan Koen, D. (2008). Models for FFA-removal and changes in phase behaviour of cocoa butter by packed column steam refining. *Journal of Food Engineering* 89: 274-284
- Chaidamsari, T. (2005). Biotechnology for Cocoa Pod Borer Resistance in Cocoa. Wageningen Universiteit: The Netherlands
- Chaiser, S. dan Dimick, P.S. (1995). Dynamic crystallization of cocoa butter: morphological, thermal and chemical characteristic during crystal growth. *Journal of American Oil Chemical Society* 72: 1497-1504
- Chatib, O.C., Sandra, A., Asbani. dan Meta, H. (2015). Study of equipment presses of cocoa powder to produce quality fat cocoa and analysis of the resulting. *International Journal on Advanced Science, Engineering and Information Technology* 5 (6): 510-517
- Cheesbrough, T. M., (1989). Changes in the enzymes for fatty acid synthesis and desaturation during acclimation of developing soybean seeds to altered growth temperature. *Plant Physiology* 90: 760-764
- Ciftci, O. N., Gogus, F. dan Sibel, F. (2010). Performance of cocoa butter-like fat enzymatically produced from olive pomace oil as a partial cocoa butter replacer. *Journal of American Oil Chemical Society* 87: 1013-1018
- Dag, A., Naor, A., Ben-Gal, A., Harlev, G., Zipori, I., Schneider, D., Birger, R., Peres, M., Gal, Y. and Zohar, K. (2014). The effect of water stress on super high density Koroneiki olive oil quality. *Journal of The Science of Food and Agriculture* 95: 2016-2020
- De Clercq, N., Moens, K., Depypere, F., Ayala, J.V., Calliauw, G., De Greyt, W. dan Dewwetinck, K. (2012). Influence of cocoa butter refining on the milk chocolate. *Journal of Food Engineering* 111: 412-419
- Fisher, F.M., Chui, P.C., Nassr, I.A., Popov, Y., Cunnif, J.C., Lundasen, T., Kharitonenkov, A., Schuppan, D., Flier, J.S. dan Eleftheria, M. (2014). Fibroblast growth factor 21 limits lipotoxicity by promoting hepatic fatty acid activation in mice on methionine and choline-deficient diets. *Gastroenterology* 147(5): 1073-1083
- Gros, G.C., Ravelona, M.R. dan Lanoisell'e, J.L. (2002). *Cocoa Butter Expression From Cocoa Nibs: Effects Of Pre-Treatment And Process Parameters On Expression Yield*, dipresentasikan pada ICEST 2002: International

Conference on Emerging Solids/Liquid Technologies, Oktober 10–11, 2002.

- Gu, F., Ta, L., Wu, H., Fang, Y., Xu, F., Chu, Z. dan Qinghuang, W. (2013). Comparison of cocoa beans from China, Indonesia and Papua New Guinea. *Journal of Foods* 2: 183-197
- Guehi, S. T., Dingkuhn, M., Cros, E., Fourny, G., Ratomahenina, R., Moulin, G. dan Anne, C. V. (2008). Impact of cocoa processing technologies in free fatty acid formation in stored raw cocoa beans. *African Journal of Agricultural Research* 3: 174-179
- Haryadi dan Supriyanto. (2012). *Teknologi Cokelat*. Gadjah Mada University Press: Yogyakarta
- Ishaq, S. dan Laila, J. (2017). Biomedical importance of cocoa (*Theobroma cacao*): significance and potential for the maintenance of human health. *Matrix Science Pharma* 1(1): 1-5
- Jahurul, M.H.A., Zaidul, I.S.M., Norulaini, N.A.N., Sahena, F., Jinap, S., Azmir., Sharif, K.M. dan Mohd, A.K.O. (2013). Cocoa butter fats and possibilities of substitution in food products concerning cocoa varieties, alternative sources, extraction methods, composition, and characteristics. *Journal of Food Engineering* 20: 152-160
- Jahurul, M.H.A., Zaidul, I.S.M., Norulaini, N.A.N., Sahena, F., Abedin, M.Z., Ghafoor, Kashif. dan Mohd, O.A.K.. (2014). Characterization of crystallization and melting profiles of blends of mango seed fat and palm oil mid-fraction as cocoa butter replacer using differential scanning calorimetry and pulse nuclear magnetic resonance. *Food Research International* 55: 103-109
- Kadivar, S., De Clercq, N., Van deWalle, D. dan Dewwetinck, K. (2013). Optimisation of enzymatic synthesis of cocoa butter equivalent from high oleic sunflower oil. *Journal of Science and Food Agriculture* 94: 1325–1331
- Kadouw, D. (2015). *Flavour: Impact and Interplay of Genetic Background Seed Physiology and Post-harvest Processing*. Cocoa and Chocolate Workshop. Gent: Belgium
- Kang, K. K., Jeon, H., Kim, I. dan Byung, H. K. (2013). Cocoa butter equivalents prepared by blending fractionated palm stearin and shea stearin. *Food Science and Biotechnology* 22(2): 347-352
- Kashaninejad, M., Razavi, S.M.A., Tehrani, M. M. dan Mahdi, K. (2016). Effect of extrusion condition and storage temperature on texture, colour and rancidity of butter. *International Journal of Dairy Technology* 69:1-8
- Koko, L. K., Snoeck, D., Lekadou, T. T. dan Assiri, A. A. (2013). Cacao-fruit tree intercropping effects on cocoa yield, plant vigour, and light interception in Cote d'Ivoire. *Agroforestry System* 87: 1043-1052

- Krause, A.J., Miracle, R.E., Sanders, T.H., Dean, L.L. dan Drake, M.A. (2008). The effect of refrigerated and frozen storage on butter flavour and texture. *Journal of Dairy Science* 91:455-465
- Lima, L., Almeida, M.H., Rob Nout, M. J. dan Zwietering, M.H. (2011). *Theobroma cacao* L., “The Food of Gods”: Quality determinants of commercial cocoa beans, with particular reference to the impact fermentation. *Critical Reviews in Food Science and Nutrition* 51(8): 731-761
- Liu, K., Chang, H. dan Kuan-Miao, L. (2007). Enzymatic sythesis of cocoa butter analog through interesterification of lard and stearin in supercritical CO<sub>2</sub> by lipase. *Journal of Food Chemistry* 100: 1303-1311
- Maurer, N. E dan Rodrigues-Saona, L. (2013). Rapid assessment of quality parameters in cocoa butter using ATR-MIR spectroscopy and multivariate analysis. *Journal of American Oil Chemical Society* 90: 475-481
- McMahon, P., Bin Purung, H., Lambert, S., Mulia, S., Nurlaila., Susilo, A. W., Sulistyowati, E., Sukanto, S., Israel, M., Saftar, Ashar., Amir, A., Purwantara, A., Iswanto, A., Guest, D. dan Keane, P. (2015). Testing local cocoa selection in three provinces in sulawesi: productivity and resistance to cocoa pod borer and phytophthora pod rot. *Crop Production* 70: 28-39
- Menezes, A., Tavares, G., Batista, N. N., Ramos, C. L., Adriana, R., Silva, A., Efraim, P., Pinheiro, A.C.M. dan Schwan, R. F. (2016). Investigation of chocolate produced from four different Brazilian varieties of cocoa (*Theobroma cacao* L.) inoculated with *Saccharomyces cerevisiae*. *Journal of Food Research International* 81 : 83–90
- Meursing, E.H. (2008). *De Zaan: Cocoa Manual and Analaysis*. ADM Cocoa: Switzerland
- Nadeem, M., Abdullah, M. dan Hussain, I. (2014). Improvement of the oxidative stability of butter oil by blending with moringa oleifera oil. *Journal of Food Processing and Preservation* 38(4): 1491-1500
- Norton, J.E., Fryer, P.J. dan Cox, P.W. (2009). Development and characterisation of tempered cocoa butter emulsions containing up to 60% water. *Journal of Food Engineering* 95: 172-178
- O’Brian, R. (2009). *Fat and Oils: Formulating and Processing for Applications* 2nd Ed. ISBN-13: 987-4200-6166-6. CRC Press, Taylor and Francis Group: Florida, USA
- Ohlrogge, J. B., (1994). Design of New Plant Products: Engineering of Fatty Acid Metabolism. *Plant Physiology* 104:821-826

- Ortiz de Bertorelli, L., Grazini de Farinas, L. dan Gevraise R.L. (2009). Influencia de varios factores sobre características del grano de cacao fermentado y secado al sol. *Agronomica Tropical* 59(2): 119-127.
- Petcu, E., Arsintescu, A. dan Stanciu, D. (2001). The effect of drought stress on fatty acid composition on some romanian sunflower hybrids. *Romanian Agricultural Research* 15: 39-42
- Petropous, S. A., Dimitra, D., Polissiau, M.G. dan Passam, H.C. (2008). The effect of water deficit stress on the growth, yield and composition of essential oil of parsley. *Scientia Horticulturae* 115: 393-397
- Ribeiro, A.P.B., Basso, R. C., dos Santos, A. O., Andrade, G. C., Cardoso, L. P. dan Kieckbush, T.G. (2013). Hardfats as crystallization modifiers of cocoa butter. *European Journal of Lipid Science and Technology* 115: 1462-1473
- Ruf, F dan Putranto, P.S. (1993). *Cocoa Cycles: The Economic of Cocoa Supply*. Woodhead Publishing Limited
- Running, C.A., Hayes, J.E. dan Ziegler, G.R. (2017). Degree of free fatty acid saturation influences chocolate rejection in human assessors. *Chemical Senses* 42(2): 161-166
- Samet-Bali, O., Ayadi, M.A. dan Attia, H. (2009). Traditional Tunisian butter: physicochemical and microbial characteristics and storage stability of the oil fraction. *Journal of Food Science and Technology* 42: 899-905
- Sira, E. P. (2015). *Chocolate: Cocoa Byproduct Technology, Rheology, Styling, and Nutrition*. Nova Publisher: New York
- Sunoj, S., Igathinathane, C. dan Visvanathan, R. (2016). Nondestructive determination of cocoa bean quality using FT-NIR spectroscopy. *Journal of Computer and Electronics In Agriculture* 124: 234-242
- Sonwai, S., Kaphueakngam, P. dan Flood, A. (2014). Blending of Mango Kernel Fat and Palm Oil Mid-Fraction To Obtain Cocoa Butter Equivalent. *Journal of Food Science and Technology* 51: 2357-2369
- Svanberg, L., Ahrné, L., Lorén, N. dan Windhab, E. (2011). Effect of sugar, cocoa particles and lecithin on cocoa butter crystallisation in seeded and non-seeded chocolate model systems. *Journal of Food Engineering* 104: 70–80
- Tabtabaei, S., Hajar, B., Chen, B. King. dan Diosady, L.L. (2017). Functional properties of protein isolates produces by aqueous extraction of dehulled yellow mustard. *Journal of the American Oil Chemists` Society* 94 (1): 149-160
- Torbica, A., Jovanovic, O. dan Pajin, B. (2005). The advantages of solid fat content determination in cocoa butter and cocoa butter equivalents by the karlshamns method. *European Food Research and Technology* 222: 385–391

- Upchurch, R. G. (2008). Fatty acid unsaturation, mobilization and regulation in the response of plant to stress. *Biotechnology Letter* 30: 967-977
- Vannice, G. dan Rasmussen, H. (2014). Position of the academy of nutrition and dietetic: dietary fatty acids for healthy adults. *Journal of the Academy of Nutrition and Dietetic* 114 (1): 136-153
- Venter, M.J., Schouten, N., Hink, R., Kuipers, N.J.M. dan de Haanb, A.B. (2007). Expression of cocoa butter from cocoa nibs. *Journal of Separation and Purification Technology* 55: 256–264
- Vieira, L., Efraim, P., Van de Walle, D., De Clercq, N. dan Dewettinck, K. (2015). Influence of Brazilian Geographic Region and Organic Agriculture on The Composition and Crystallization Properties of Cocoa Butter. *Journal of American Chemical Society* 92:1579-1592
- Wei, Y., Siwers, V. dan Nielsen, J. (2017). Cocoa butter-like lipid production ability of non-oleaginous and oleaginous yeast under nitrogen-limited culture conditions. *Journal of Applied Microbiology and Biotechnology* 101: 3577-3585
- Zaidu, ISM., Nik Norulaini, N.A., Mohd, O.A.K. dan Smith, R.L. Jr. (2007). Blending of supercritical carbondioxide (SC-CO<sub>2</sub>) extracted palm kernel oil fraction and palm oil to obtain cocoa butter replacers. *Journal of Food Engineering* 78:1397-1409
- Ziegler, G. (2015). *A New Look At Chocolate Bloom*. Cocoa and Chocolate Wokshop. Gent: Belgium
- Zyzelewicz, D., Budryn, G., Krysiak, W., Oracz, J., Nebesny, E. dan Bojczuk, M. (2014)<sup>a</sup>. Influence of roasting condition on fatty acid composition & oxydative changes. *Journal of Food Research International* 63: 328-343
- Żyzelewicz, D., Krysiak, W., Budryn, G., Oracz, J. dan Nebesny, E. (2014)<sup>b</sup>. Tocopherols in cocoa butter obtained from cocoa bean roasted in different forms and under various process parameters. *Journal of Food Research International* 63: 390–399