

## DAFTAR PUSTAKA

- Batovska, D.I., Todorova, I.T., Tsvetkova, I.V., and Najdenski, H.M., 2009, Antibacterial Study of The Medium Chain Fatty Acids and Their 1-Monoglycerides: Individual Effects And Synergistic Relationships, *Pol. J. Microbiol.*, 58, 1, 43-47.
- Berg, H.C., 2004, *E. Coli in Motion, Biological and medical physics biomedical engineering*, Springer verlag aip press, New York.
- Bergsson, G., Arnfinnsson, J., Steingrímsson, Ó., and Thormar, H., 2001, *In vitro* killing of *Candida albicans* by fatty acids and monoglycerides, *Antimicrob. Agents Chemother.*, 45, 3209-3212.
- Bornscheuer, U. T., 1995, Lipase-catalyzed syntheses of monoacylglycerols, *Enzyme Microb. Technol.*, 17, 578-586.
- Boyle, E., 1997, Monoglycerides in Food Systems: Current and Future Uses, *Food. Technol.*, 51, 52-59.
- Brahmana, H.R., Dalimunthe, R., dan Ginting, M., 1998, Pemanfaatan Asam Lemak Bebas (ALB) Kelapa Sawit dan Inti Sawit Dalam Pembuatan Nilon 99 dan Ester Sorbitol Asam Lemak, *Laporan Riset Unggulan Terpadu*, Medan.
- Brock, T.D, Madigan, M.T., Martinko, J.M., and Parker J, 1994, *Biology of Microorganisms*, 7<sup>th</sup> ed., Prantice-Hall International Inc., New Jersey.
- Brooks, G.F., Butel, J.S., and Morse, S.A, 2007, Mikrobiologi Kedokteran, Jawetz, Melnick & Adelberg, Terjemahan Staf Pengajar Mikrobiologi FK Unair dari Medical Microbiology, Jakarta.
- Bunková, L., Bunka, F., Janiš, R., Krejčí, J., Doležalková, I., Pospíšil, Z., Ružicka, J., and Tremlová, B., 2011, Comparison of antibacterial effect of seven 1-monoglycerides on food-borne pathogens or spoilage bacteria, *Acta. Vet Brno*, 80, 29 - 39.
- Burgos, C. E., Ayer, D. E., and Johnson, R. A., 1987, A new, asymmetric synthesis of lipids and phospholipids, *J. Org. Chem.*, 52, 4973-4977.
- Campbell-Timperman, K., Choi, J.H., and Jimenez-Flores, R, 1996, Mono- and diglycerides prepared by chemical glycerolysis from a butterfat fraction, *J. Food Sci.*, 61, 44-48.

- Chetpattananondh, P., and Tongurai, C., 2008, Synthesis of high purity monoglycerides from crude glycerol and palm stearin, *Songklanakarin J. Sci. Technol.*, 30 (4), 515-521.
- Conley, A. J., and Kabara, J. J., 1973, Antimicrobial action of esters of polyhydric alcohols, *Antimicrob. Agents Chemother.*, 4, 501–506.
- Davidson, P. M., Sofos, J. N., and Branen, A. L., 2005, Antimicrobials in Food, 3<sup>rd</sup> ed., *CRC Press*, New York.
- Elfman-Börjesson, I., and Härröd, M. Synthesis of Monoglycerides by Glycerolysis of Rapeseed Oil Using Immobilized Lipase, *J. Am. Oil Chem. Soc.*, 76, 701 - 706.
- Fatimah, C., 2004, Uji Aktivitas Antibakteri Ekstrak Daun Angsana (*Pterocarpus indicus Willd.*) Secara *In Vitro* Dan Efek Penyembuhan Sediaan Salap Terhadap Luka Buatan Kulit Marmut Yang Diinfeksi, *Tesis*, Universitas Sumatera Utara, Medan.
- Goldberg, M., Thomas, D., and Legoy, M. D., 1990, The control of lipasecatalysed transesterification and esterification reaction rates. Effects of substrate polarity, water activity and water molecules on enzyme activity, *Eur. J. Biochem.*, 190, 603 - 609.
- Hasenhuettl, G. L., and Hartel, R. W. , 2008, *Food Emulsifiers and Their Applications*, 2<sup>nd</sup> ed., *Springer*, New York.
- Hauerlandová, I., 2012, Antimicrobial Activity of Non-Traditional Monoacylglycerols, *Thesis*, Tomas Bata University In Zlin.
- Hendrayati T.I., 2012, Perubahan Morfologi *escherichia coli* akibat paparan ekstrak etanol biji kakao (*theobroma cacao*) secara *in vitro*, Fakultas Kedokteran, Universitas Jember.
- Huang, CH. B., George, B., and Ebersole, J. L., 2010, Antimicrobial activity of n-6, n-7 and n-9 fatty acids and their esters for oral microorganisms, *Arch. Oral. Biol.*, 55, 555 - 560.
- Hui, Y.H, 1996, *Edible Oil and Fat Products: Processing Technology*, 5<sup>th</sup> ed., John Wiley & Sons, Inc., New York.
- Janiš, R., Klásek, A., and Bobálová, J., 2006, Chromium (III) acetate hydroxide - an efficient catalyst for preparation of 1-monoacylglycerols by the glycidol-fatty acid reaction, *J. Food Lipids*, 13, 199-209.

- Janiš, R., Krejčl, J., and Klásek, A., 2000, Preparation of 1-monoacylglycerols from glycidol and fatty acids catalyzed by the chromium(III)- fatty acid system, *Eur. J. Lipid Sci. Technol.*, 102, 351-354.
- Jawetz, E., Melnick, J.L., and Adelberg, E.A., 2005, *Mikrobiologi Kedokteran*, Edisi XXII, diterjemahkan oleh Bagian Mikrobiologi Fakultas Kedokteran Universitas Airlangga, Penerbit Salemba Medika, Jakarta.
- Kabara, J.J., Swieczkowski, D.M., Conley, A.J., and Truant, J.P., 1972, Fatty Acids and Derivatives As Antimicrobial Agents, *Antimicrob. Agents Chemother.*, 2, 23-28.
- Kačániová, M., Pavličová, S., Haščík, P., Kociubinski, G., Kňazovická, V., Sudzina, M., Sudzinová, J., and Fikselová, M., 2009, Microbial communities in bees, pollen and honey from Slovakia, *Acta. Microbiol. Immunol. Hung.*, 56, 285-295.
- Ketaren, S., 1986, Pengantar Teknologi Minyak dan Lemak Pangan, Universitas Indonesia, Jakarta.
- Liu, Y.H., Liu, Q.S., and Zhang, Z.H., 2008, Amberlyst-15 as a New and Reusable Catalyst for Regioselective Ring-Opening Reactions of Epoxides to *o*-Alkoxy Alcohols, *J. Mol. Catal. A: Chem.*, 296(1), 42-46.
- Madigan. M. T., Martinko, J. M., and Parker, J, 2000, *Brock Biology of Microorganisms*, 9<sup>th</sup> ed., Prentice – Hall Inc., New Jersey.
- Menger, F.M., and Chu, C.H., 1981, Polymer Catalyted Protection of Alcohols, *J. Org. Chem.*, 46, 5044
- Mouloungui, Z., Rakotondrazafy, V., Peyrou, G., Gachen, CH., and Eychenne, V., 1998, Pure  $\alpha$ -monoglycerides for industrial applications, *Agro. Food. Ind. Hi. Tech.*, 9, 10-14.
- Mukaiyama, T., Ohshima, M., and Murakami, M., 1984, 2-Benzyloxy-1-Propene: A Novel Protective Reagent of Hydroxyl Groups, *Chem. Lett.*, 2, 265.
- Muniyappa, P.R., Brammer, S.C., and Noureddini, H, 1996, Improved conversion of plant oils and animal fats into biodiesel and co-product, *Bioresour. Technol.*, 56, 19-24.
- Nair, M. K. M., Vasudevan, P., Hoagland, P., and Venkitanarayanan, K., 2004, Inactivation of *Escherichia coli O157:H7* and *Listeria monocytogenes* in milk by caprylic acid and monocaprylin, *Food. Microbiol.*, 21, 611-616.

- Pardede, T.R., 2013, Sintesis Surfaktan 3,4 Dilauroil D-Sorbitol Melalui Ketalisasi D-Sorbitol, *Jurnal Online Universitas Darma Agung*, XXII.
- Pelczar. M. J., and Chan, E. S., 1986, *Dasar – Dasar Mikrobiologi*, UI Press, Jakarta.
- Petschow, B. W., Batema, R. P., and Ford, L. L., 1996, Susceptibility of *Helicobacter pylori* to bactericidal properties of medium-chain monoglycerides and free fatty acids, *Antimicrob. Agents Chemother.*, 40, 302-306.
- Reddy, B., Reddy, V. R., Giridhar, D., 2001, Eco-friendly Pt–Mo/ZrO<sub>2</sub> solid acid catalyst for selective protection of carbonyl compounds, *Synth. Commun.*, 31, 1819 – 1823.
- Sartori, G., Ballini, R., Bigi, F., Bosica, G., Maggi, R., and Righi P., 2004, Protection (and Deprotection) of Functional Groups in Organic Synthesis by Heterogeneous Catalysis, *Chem. Rev.*, 104, 199-250.
- Schuchardt, U., Serchelia, R., and Vargas, R.M., 1998, Transesterification of Vegetable Oils: a Review, *J. Braz. Chem. Soc.*, 9, 199-210.
- Shan, G., Zheng, L.X., Juan, W.W., Ping, C.W., and Guo, Y.J., 2007, High Efficient Acetalization of Carbonyl Compounds with Diols Catalyzed by Novel Carbon-Based Solid Strong Acid Catalyst, *Chin. Sci. Bull.*, 52, 2892-2895.
- Sulistyo, 1971, *Farmakologi dan Terapi*, EKG, Yogyakarta.
- Sun, C. Q., and O'Connor, CH. J., 2002, The antimicrobial properties of milkfat after partial hydrolysis by calf pregastric lipase, *Chem. Biol. Interact.*, 140, 185 - 198.
- Takaku, H., Ito, T., and Imai Kazuaki, 1986, Use of 3,4-Dimethoxy Benzyl Group as a Protecting Group for the 2-Hydroxyl Group in the Synthesis of Oligoribonucleotides, *Chem Lett.*, 6, 1005.
- Thompson, L., Cockayne, A., and Spiller, R. C., 1994, Inhibitory effect of polyunsaturated fatty acids on the growth of *Helicobacter pylori*: a possible explanation of the effect of diet on peptic ulceration, *Gut*, 35, 1557- 1561.
- Wang, L. L., and Johnson, E. A., 1992, Inhibition of *Listeria monocytogenes* by fatty acids and monoglycerides, *Appl. Environ. Microbiol.*, 58, 624 - 629.
- Whitehurst, R. J., 2004, *Emulsifiers in food technology*, Wiley-Blackwell Publishing, New York.

- Widiyarti, G., Hanafi, M., and Soewarso, W.P., 2009, Study on The Synthesis of Monolaurin As Antibacterial Agent Againsts *Staphylococcus aureus* Kajian Awal Sintesis Monolaurin sebagai Antibakteri *Staphylococcus aureus*, *Indones. J. Chem.*, 9 (1), 99 – 106.
- Yang, Y.C., Vali, S.R., and Ju, Y.H., 2003, A Process for Synthesizing High Purity Monoglyceride, *Chin. Inst. Chem. Engrs.*, 34, 617-623.
- Yu, C.C., Lee, Y.S., Cheon, B.S., Lee, S.H., 2003, Synthesis of Glycerol Monostearate with High Purity, *Bull. Korean Chem. Soc.*, 24, 8, 1229 – 1231.
- Zare, M.A., Rohani, S.M.R., Raeisi, M., Hosseini, S.H.J., and Hashemi, M., 2014, Antibacterial Effects of Monolaurin, Sorbic Acid and Potassium Sorbate on *Staphylococcus aureus* and *Escherichia coli*, *J. Food Qual. Hazards Control.*, 1, 52-55.