

## DAFTAR PUSTAKA

- Apriyantono, A., Fardiaz, D., Puspitasari, N.L., Sedarnawati, Budiyanto, S., 1989, Analisis Pangan: Petunjuk Laboratorium. Bogor: PAU Pangan dan Gizi IPB.
- Balat, M., Balat, H., Oz, C., 2008, Progress in bioethanol processing Progress Energy Combustion Science 34: 551–573.
- Chen C.Y., Yeh K.L., Aisyah R., Lee D.J., Chang J.S., 2011, Cultivation, photobioreactor design and harvesting of microalgae for biodiesel production: a critical review, Bioresource Technology, 102: 71–81.
- Chen C.Y., Zhaob X.Q., Yenc H.W., Hod S.H., Chengd C.L., Lee D.J., Baib F.W., Chang J.S., 2013, Microalgae-based carbohydrates for biofuel production Biochemical Engineering Journal 78:1– 10
- Choi S.P., Nguyen M.T., Sim S.J., 2010, Enzymatic pretreatment of Chlamydomonas reinhardtii biomass for ethanol production, Bioresource Technology 101: 5330–5336.
- Domozych D.S., Ciancia M., Fangel J.U., Mikkelsen M.D., Ulvskov P., Willats W.G.T., 2012, The cell walls of green algae: a journey through evolution and diversity, Front Plant Science 3: 82.
- Eshaq, F.S., Ali, M.N., Mohd, M.K., 2010, Spirogyra biomass a renewable source for biofuel (bioethanol) production. Engineering Science Technology 2 (12): 7045–7054.
- Fessenden, J.R., and Fessenden, S.J., Kimia Organik, diterjemahkan oleh Aloysius Hadyana Pudjaatmaka, Penerbit Airlangga, jilid 1, Edisi 3
- Harun R., Danquah M.K., Forde G.M., 2010, Microalgal biomass as a fermentation feedstock for bioethanol production, Journal Chemical Technology Biotechnology, 85: 199–203.
- Harun R., Michael K. Danquah M.K., 2011, Enzymatic hydrolysis of microalgal biomass for bioethanol production, Chemical Engineering Journal 168: 1079–1084
- Ho S.H., Chen C.Y., Lee D.J., Chang J.S., 2011, Perspectives on microalgal CO<sub>2</sub>-emission mitigation systems – a review, Biotechnology Advanture 29: 189–198.

- Ho S.H.,Huang S.W.,Chen C.Y., Hasunuma T.,Kondo A., Chang J.S., 2013, Bioethanol production using carbohydrate-rich microalgae biomass as feedstock, *Bioresource Technology* 135: 191–198
- Inn S.T.,Man K.L.,Keat T.L., 2013, Hydrolysis of macroalgae using heterogeneous catalyst for bioethanol production *Carbohydrate Polymers* 94: 561– 566.
- Jegannathan,K.R.,Chan, E.S., & Ravindra, P., 2009, Harnessing biofuels: A global Renaissance in energy production *Renewable and Sustainable Energy Reviews*, 13: 2163–2168
- Jefriadi, Hidayat M., Sutijan, 2015, Hidrolisis Enzimatis Mikroalga *Tetraselmis chuii* menggunakan Enzim Selulase, Alfa-amilase, dan Glukoamilase menghasilkan Glukosa sebagai Bahan Baku Bioetanol, Seminar Nasional Teknik Kimia Indonesia
- John R.P., Anisha G.S., Nampoothiri K.M., Pandey A., 2011, Micro and macroalgal biomass: A renewable source for bioethanol , *Bioresource Technology* 102: 186–193
- Karthika,K., Arun,A.B., & Rekha,P.D., 2012, Enzymatic hydrolysis and characterization of lignocellulosic biomass exposed to electron beam irradiation. *Carbohydrate Polymers*, 90: 1038–1045
- Kumoro,A.C., Ngoh,G.C., Hasan, M., Ong,C.H., and Teoh,E.C.,2008, Conversion of fibrous sago (Metroxylan sago) waste into fermentable sugar via acid and enzymatic hydrolysis, *Asian Journal of Scientific Research*, 1(4): 412-420
- Lee,O.K.,Oh,Y.K., and Lee,E.Y., 2015,Bioethanol production from carbohydrate-enriched residual biomass obtained after lipid extraction of *Chlorella* sp. KR-1, *Bioresource Technology*, 196: 22-27
- Libessart, Maddelein N., Koornhuysen M.L., Decq N., Delrue A., Mouille B., Hulst G.,D., Ball, C.S., 1995, Storage, photosynthesis and growth: the conditional nature of mutations affecting starch synthesis and structure in *Chlamydomonas* *Plant Cell* 7:1117–1127.
- Li X.,Yang H.,Roy B.,Wang D.,Yue W.,Jiang L.,Park E.Y.,Miao Y., 2009, The most stirring technology in future: cellulase enzyme and biomass utilization, *African Journal Biotechnology* 8: 2418–2422.
- Lynd, L.R.,Weimer, P.J., van Zyl, Pretorius W.H., 2002, Microbial cellulose utilization: fundamentals and biotechnology. *Microbiology Molecular Biology Reviews*, 66 (3): 506–577

- Maarel M.J.E.C., Veen B., Uitdehaag J.C.M., Leemhuis H., Dijkhuizen L., 2002, Properties and applications of starch converting enzymes of the alpha-amylase family, *Journal Biotechnology* 94: 137–155.
- Marsalkova, B., Sirmirova, M., Kurec, M., Branyik, T., Branyikova, I., Melzoch, K., Zachleder, V., 2010, Microalgae *Chlorella* sp. as an alternative source of fermentable sugars *Chemical Engineering Transactions*. 21: 1279–1284.
- Moscoso J.L.G., Obeid W., Kumar S., Hatcher P.G., 2013, Flash hydrolysis of microalgae (*Scenedesmus* sp.) for protein extraction and production of biofuels intermediates, *Journal of Supercritical Fluids*, 82: 183–190.
- Mussnug J.H., Klassen V., Schluter A., Kruse O., 2010, Microalgae as substrates for fermentative biogas production in a combined biorefinery concept, *Journal Biotechnology* 150: 51–56.
- Nigam, P.S., Singh, A., 2011, Production of liquid biofuels from renewable resources, *Progress Energy Combustion Science* doi:10.1016/j.pecs.: 01.003.
- Nugroho T., 2017, Strategi pengembangan biofuel di Pertamina, Seminar Nasional Teknologi Bioproses, Jakarta 1 Desember 2017
- Ohse S., Derner R.B., Ozorio R.A., Correa R.G., Furlong E.B., Cunha P.C.R., 2014, Lipid content and fatty acid profiles in ten species of microalgae, N. 1. *IDESIA (Chile)*, Volumen 33:93-101
- Park, J.H., Hong, J.Y., Jang, H.C., Oh, S. G., Kim, S.H., Yoon, J.J., & Kim, Y. J. 2011, Use of *Gelidium amansii* as a promising resource for bioethanol: A practical approach for continuous dilute-acid hydrolysis and fermentation. *Bioresource Technology*, 108: 83–88
- Presecki, A.V., Blazeck, Z.F., and Vasic-Racki, D., 2013, Mathematical modeling of starch liquefaction catalyzed by  $\alpha$ -amylase from *Bacillus licheniformis*: effect of calcium, pH and temperature, *Bioprocess Biosyst Engineering*, 36:117-126
- Richana N., 2002, Produksi dan Prospek Enzim Xilanase dalam Pengembangan Bioindustri di Indonesia, *Buletin Agrobio* Vol 5, No. 1: 29-36.
- Rodrigues, M.A., Elba, P., Bon, S., 2011, Evaluation of *Chlorella* (chlorophyta) as source of fermentable sugars via cell wall enzymatic hydrolysis. *Enzyme Res.*, 1–5.

- Rosgaard L., Andric P., Johansen D.K., Pedersen S., Meyer A.S., 2007, Effects of substrate loading on enzymatic hydrolysis and viscosity of pretreated barley straw, *Applied Biochemical Biotechnology* 143:27–40.
- Ross, A. B., Jones, J. M., Kubacki, M. L., & Bridgeman, T., 2008, Classification of macroalgae as fuel and its thermochemical behaviour. *Bioresource Technology*, 99:6494–6504
- Saha, B.C., Cotta, M.A., 2007, Enzymatic hydrolysis and fermentation of lime pretreated wheat straw to ethanol, *Journal Chemical Technology. Biotechnology*. 82 :913–919.
- Shewale, S.D. and Pandit, A.B., 2007, Hydrolysis of soluble starch using *Bacillus licheniformis*  $\alpha$ -amylase immobilized on superporous CELBEADS, *Carbohydrate Polymers*, 342: 997-1008
- Shuler M.L., Kargi F., 1992, “*Bioprocess Engineering Basic Concepts*”, Prentice-Hall International Inc., New Jersey.
- Soni R., Nazir A., Chadha B.S., 2010, Optimization of cellulase production by a versatile *Aspergillus fumigatus* fresenius strain (AMA) capable of efficient deinking and enzymatic hydrolysis of Solka floc and bagasse, *Indian Crop Production* 3:277–283
- Sudiyani Y., Waluyo J., Riandy A.P., Primandaru P., Novia, 2015, *Jurnal Teknik Kimia* No. 4, Vol. 21, Desember, 47-56.
- Sudarmadji, S., Haryono, B., Suhardi., 1997, *Prosedur Analisis Untuk Bahan Makanan Dan Pertanian*, Yogyakarta: Liberty.
- Sze, P., A., 1998, *Biology of the Algae*, third ed. WCB/McGraw-Hill Inc., Boston, Massachusetts.
- Takizawa F.F., Silva, G.O., Konkel, F.E., and Demiate I.M., 2004, Characterization of Tropical Starches Modified with Potassium Permanganate and Lactic Acid, *Brazilian Archives of Biology and Technology*, 45,6:921-931
- Tester R.F. and Sommerville M.D., 2003, The Effects of Non-Starch Polysaccharides on the Extent of Gelatinization, Swelling and  $\alpha$ -Amylase Hydrolysis of Maize and Wheat Starches, *Food Hydrocolloids*, 17: 41-45
- Ueda R., Hirayama S., Sugata K., Nakayama H., 1996, Process for the production of ethanol from microalgae. US Patent 5,578,472.

- Wang, X., Liu, X.H., Wang, G.Y., 2011, Two-stage hydrolysis of invasive algal feedstock for ethanol fermentation *Journal Integrated Plant Biology*, 53 (3): 246–252
- Wijffels R.H., Barbosa M.J., 2010, An outlook on microalgal biofuels, *Science* 329:796–799
- Wong D.W.S. and Robertson G.H., Whitaker J.R., 2003, alfa amylases in Enzyme-Catalyzed Reactions Experimental Factors that Affect Rates, 43-48
- Yagui C.D.R., Danesi E.D.G., Carvalho J.C.M., Sato S., 2004, Chlorophyll production from *Spirulina platensis*: cultivation with urea addition by fed-batch process, *Bioresource Technology*, 92:133–141
- Yamada T., Sakaguchi K., 1982, Comparative studies on *Chlorella* cell walls – induction of protoplast formation, *Archives Microbiology* 132: 10–13
- Yazdi H.R., Haznedaroglu B.Z., Bibby K., Peccia J., 2011, Transcriptome sequencing and annotation of the microalgae *Dunaliella tertiolecta*: pathway description and gene discovery for production of next-generation biofuels, *BMC Genomics* 12:148.
- Yeh A.I., Huang Y.C., Chen S.H., 2010, Effect of particle size on the rate of enzymatic hydrolysis of cellulose, *Carbohydrate Polymer* 79:192–199.
- Yongfeng A., 2013, Structures, properties, and digestibility of resistant starch, *Graduate Theses and Dissertations*, Paper 13558