

## DAFTAR PUSTAKA

- Andersen, R. A. 2005. *Algal Culturing Techniques*. Elsevier Academic Press: London
- Bajpai, P. .2019. *Third Generation Biofuels*. Springer Nature Singapore Pte Ltd.: Singapore
- Bogen, C., Klassen, V., Wichmann, J., Russa, M.L., Doebbe, A., Grundman, M., Uronen, P., Kruse, O., and Mussnug, J.H. 2013. Identification of *Monoraphidium contortum* as a promising species for liquid biofuel production. *Bioresource Technology*. 133: 622-626
- Brenner, K., You, L., and Arnold, F.H. 2008. Engineering microbial consortia: a new frontier in synthetic biology. *Trends in Biotechnology*. 26(9):483-489
- Caljon, A. 1983. *Brackish-Water Phytoplankton of The Flemish Lowland*. Dr. W. Junk Publishers: Boston.
- Cho, H.U., Kim, Y.M., and Park, J.M. 2017. Enhanced microalgal biomass and lipid production from a consortium of indigenous microalgae and bacteria present in municipal wastewater under gradually mixotrophic culture condition. *Bioresource Technology*. 228: 290-297
- Chojnacka, K., and Marquez-Rocha, F.J. 2004. Kinetic and stoichiometric relationships of the energy and carbon metabolism in the culture of microalgae. *Biotechnology Advanced*. 3:21–34
- Danquah, M.K., Harun, R., Halim, R., and Forde, G.M. 2010. Cultivation medium design via elemental balancing for *Tetraselmis suecica*. *Chemical and Biochemical Engineering Quarterly*. 24(3):361–9.
- Evert, R. F. and Eichhorn, S. E. 2013. *Raven Biology Of Plants*. W. H. Freeman and Company: New York.
- Fujii, K., Nakashima, H., Hasidzume, Y., Uchiyama, T., Mishiro, K., and Kadota, Y. 2009. Potential Use of The Astaxanthin-producing Microalga, *Monoraphidium* sp. GK12, as a functional aquafeed for prawns. *Journal of Applied Phycology*. 22(3): 363–369
- Gammanpila, A.M., Rupasinghe, C.P., and Subasinghe, S. 2015. Light intensity and photo period effect on growth and lipid accumulation of microalgae *Chlorella vulgaris* and *Nannochloropsis* sp. for biodiesel production. In: *12th ISERD international conference*. Tokyo, Japan.
- Gao, Y., Zhang, Q., Huang, L., Wang, L., and Yu, X. 2014. The influence of various pH values on *Monoraphidium* sp. FXY-10 growth and lipid parameters in autotrophic and heterotrophic conditions. *Advanced Materials Research*. 864:60-66
- Goers, L., Freemont, P., and Polizzi, K.M. 2014. Co-culture Systems and Technologies: Taking Synthetic Biology to The Next Level. *Journal of The Royal Society Interface*. 11(96): 201-205

- Grover, S., Tirkey, S.R., Veeramallegowda, Yadav, S., and Sibi, G. 2020, Improved Biomass Through Mutualistic Co-culturing of *Chlorella vulgaris* with *Nitrobacter* in Sewage Water. *Biotechnology*. 19: 1-9
- Guerrero-Cabrera, L., Rueda, J.A., Garcia-Lozano, H., and Navarro, A.K. 2014. Cultivation of *Monoraphidium* sp., *Chlorella* sp., and *Scenedesmus* sp. algae in Batch culture using Nile Tilapia Effluent. *Bioresource Technology*. 161:455-460
- Hawrot-Paw, M., Koniuszy, A., and Gałczyńska, M. 2020, Sustainable Production of *Monoraphidium* Microalgae Biomass as a Source of Bioenergy. *Energies*. 13(22)
- Hog, S. 2005. *Essential Microbiology*. John Wiley & Sons: West Sussex
- Holbrook, G.P., Davidson, Z., Tatara, R.A., Ziemer, N.L., Rosentrater, K.A. and Grayburn, W.S. 2014. Use of microalgae *Monoraphidium* sp. grown in wastewater as a Feedstock for Biodiesel: Cultivation and Fuel Characteristic. *Applied Energy*. 131: 386-393
- Hu, Q. 2004. Environmental effects on cell composition. In: Richmond A (ed) *Handbook of microalgal culture: biotechnology and applied phycology*. Blackwell Publishing Ltd: Oxford
- IEA. 2019. *World Energy Outlook 2019*. [Online] Retrieved from <https://www.iea.org/reports/world-energy-outlook-2019> at March, 19th 2020
- ITIS. 1996. *Monoraphidium Komárková-Legnerová*. [Online] Retrieved from [https://www.itis.gov/servlet/SingleRpt/SingleRpt?search\\_topic=TSN&search\\_value=5990#null](https://www.itis.gov/servlet/SingleRpt/SingleRpt?search_topic=TSN&search_value=5990#null) at March 18<sup>th</sup>, 2020
- Jacob-lopess, E., Zepka, L. Q. and Queiroz, M. I. 2018. *Energy from Microalgae*. Springer Nature: Santa Maria
- John, D.M., Whitton, B.A., and Brook, A.J. 2002. *Freshwater Algal Flora from British Isles: An Identification Guide to Freshwater and Terrestrial Algae*. Cambridge University Press: Cambridge
- Juneja, A. Ceballos, R.M. Murthy, G.S. 2013. Effects of Environmental Factors and Nutrient Availability on the Biochemical Composition of Algae for Biofuels Production: A Review. *Energies*. 6(9): 4607–4638
- Khan, M. I., Shin, J. H. and Kim, J. D. 2018. The promising future of microalgae: current status, challenges, and optimization of a sustainable and renewable industry for biofuels, feed, and other products. *Microbial Cell Factories*. 17(36): 1–21
- Knothe, G., Krahel, J., and Gerpen, J.V. 2010, *The Biodiesel Handbook*. 2<sup>nd</sup> Edn. AOCS Press: Illinois

- Krishnan, V., Uemura, Y., Thanh, N.T, Khalid, N.A., Osman, N., and Mansor, N. 2015. Three types of Marine microalgae and Nannochloropsis oculata cultivation for potential source of biomass production. *Journal of Physics: Conference Series*. 622:012034
- Ling, J., Nip, S., Cheok, W.L., Toledo, R.A., and Shim, H. 2014. Lipid production by a mixed culture of oleaginous yeast and microalga from distillery and domestic mixed wastewater. *Bioresource Technology*. 173: 132–139
- Markou, G., Angelidaki, I. and Georgakakis, D. 2012. Microalgal carbohydrates: An overview of the factors influencing carbohydrates production, and of main bioconversion technologies for production of biofuels. *Applied Microbiology and Biotechnology*. 95(2): 71–75
- Mendes, L.B.B. and Vermelho, A.B. 2013. Allelopathy as a potential strategy to improve microalgae cultivation. *Biotechnology for Biofuels*. 6(152)
- Mikheev, M.A., Ipatova, V.I., and Spirkina, N.E. 2018. Biotic Interactions Between Two Species of Microalgae in Mixed Culture. *Moscow University Sciences Bulletin*. 73(2): 63-68
- Moheimani, N. R., McHenry, M.P., Boer, K.d., and Bahri, P. 2015. *Biomass and Biofuels from Microalgae*. 2<sup>nd</sup> edn. Springer Berlin Heidelberg: Murdoch
- Perez-Garcia, O., Escalante, F.M.E., De-Bashan, L.E., and Bashan, Y. 2011. Heterotrophic Cultures of Microalgae: Metabolism and Potential Products. *Water Research*. 45 (1)
- Pradana, Y. S., Sudibyo, H., Suyono, E.A., Indarto, Budiman, A. 2017. Oil Algae Extraction of Selected Microalgae Species Grown in Monoculture and Mixed Cultures for Biodiesel Production. *Energy Procedia*. 105: 277–282
- Qin, L., Liu, L., Wang, Z., Chen, W., and Wei, D. 2019. The mixed culture of microalgae *Chlorella pyrenoidosa* and yeast *Yarrowia lipolytica* for microbial biomass production. *Bioprocess and Biosystems Engineering*. 42(9): 40–50
- Rahman, A., Prihantini, N.B., and Nasruddin. 2019. Fatty Acid of Microalgae as a Potential Feedstock for Biodiesel Production in Indonesia. *AIP Conference Proceedings*. 2062
- Rahmawati, B., Ilmi, M., Budiman, A., Suyono, E. A. 2020. Screening of IAA Production on the Interaction of Microalgae and Bacteria in the Glagah Consortium. *Biosciences Biotechnology Research Asia*. 17(1)
- Ramadani, A.H., Wijayanti, A., and Hadisusanto, S. 2013. Komposisi Dan Kemelimpahan Fitoplankton Di Laguna Glagah Kabupaten Kulonprogo Provinsi Daerah Istimewa Yogyakarta. *Proceeding Biology Education Conference*. 10(1)

- Ramadhani, N. 2014. *Kandungan Protein Mikroalga Kultur Tunggal Chlorella zofingiensis Donz dan Kultur Campuran Isolat Glagah dalam Skala Laboratorium dan Raceway Pond*. Skripsi. Universitas Gadjah Mada. Fakultas Biologi
- Rai, M.P., Gautom, T., Sharma, N. 2015. Effect of salinity, pH, light intensity on growth and lipid production of microalgae for bioenergy application. *OnLine Journal of Biological Sciences*. 15(4):260-267
- Raven, J.A. and Beardall, J. 2004. Carbohydrate metabolism and respiration in algae. In: Larkum, A.W.D., Douglas, S.E., Raven, J.A. (eds) *Advances in photosynthesis and respiration: Photosynthesis in algae*. vol 14. Springer. Netherlands. p. 205–224
- Rawat, I., Kumar, R.R., Mutanda, T. and Bux, F. 2011. Dual Role of Microalgae: Phycoremediation of Domestic Wastewater and Biomass Production for Sustainable Biofuels Production. *Applied Energy*. 88: 3411-3424
- Rawat, I., Kumar, R.R., Mutanda, T., and Bux, F. 2013. Biodiesel from microalgae: A critical evaluation from laboratory to large scale production. *Applied Energy*. 103: 444–467
- Reece, J.B., Urry, L.A., Cain, M.L., Wasserman, S.A., Minorsky, P.V., and Jackson, R.B. 2014. *Campbell Biology*. Tenth Edition. Pearson Education Inc.: Glenview
- Reyes, Y., Chenard, G., Aranda, D., Gorgonio, C., Duarte, A., Joao, R., Balcellar, L. and Fortes, M. 2012. Biodiesel Production by Hydroesterification of Microalgal Biomass Using Heterogeneous Catalyst. *Natural Science*. 4: 778-783
- Richmond, A. and Hu, Q. 2013. *Handbook of Microalgal Culture*. 2<sup>nd</sup> edn. John Wiley & Sons, Ltd.: West Sussex
- Rocha, D. N., Martins, M. A., Soares, J., Vaz, M.G.M.V., Leite, M.d.O., Covell, L. and Mendes, L.B.B. 2019. Combination of Trace Elements and Salt Stress in Different Cultivation Modes Improves the Lipid Productivity of *Scenedesmus* spp. *Bioresource Technology*. 289(121644)
- Safi, C., Frances, C., Ursu, A.V., Laroche, C., Pouzet, C., Vaca-Garcia, C. and Pontalier, P.-Y. 2015. Understanding the Effect of Cell Disruption Methods on the Diffusion of *Chlorella vulgaris* Proteins and Pigments in the Aqueous Phase. *Algal Research*. 8: 61–68
- Sharma, K.K., Schuhmann, H., and Schenk, P.M. 2012. High Lipid Induction in Microalgae for Biodiesel Production. *Energies*. 5:1532-1553
- Singh, P., Gupta, S.K., Guldhe, A., Rawat, I., and Bux, F. 2015. *Handbook of Marine Microalgae: Biotechnology Advances*. Elsevier Inc.: New Delhi

- Slivka, R.M., Chinn, M.S., and Grunden, A.M. 2011. Gasification and synthesis gas fermentation: an alternative route to biofuel production. *Biofuels*. 2(4)
- Smedes, F., and Thomasen, T.K. 1996. Evaluation of the Bligh & Dyer Lipid Determination Method. *Marine Pollution Bulletin*. 32(1): 681–688
- Sudibyo, H., Pradana, Y.S., Samudra, T.T., Budiman, A., Indarto, and Suyono, E.A. 2017. Study of cultivation under different colors of light and growth kinetic study of *Chlorella zofingiensis* Dönn for biofuel production. *Energy Procedia*. 105: 270-276
- Sudigyo, D. 2016. *Pengaruh Penambahan Nitrogen dan Fosfor dalam Medium Limbah Cair Bioetanol Terhadap Pertumbuhan, Kandungan Klorofil, Karbohidrat, Dan Lipid Pada Kultur Campuran Mikroalga Strain Glagah*. Skripsi. Universitas Gadjah Mada. S1 Biologi
- Suyono, E.A., Fahrunnida, Nopitasari, S., and Utama, I.V. 2016. Identification of Microalgae Species and Lipid Profiling of Glagah Consortium for Biodiesel Development from Local Marine Species. *Asian Research Publishing Network Journal of Engineering and Applied Sciences*. 11(16): 9970-9973
- Suyono, E.A, Haryadi, W., Zusron, M., Nuhamunada, M., Rahayu, S., dan Nugroho, A.P. 2015. The effect of Salinity on Growth, Dry Weight and Lipid Content of The Mixed Microalgae Culture isolated from Glagah as Biodiesel Substrate. *Journal of Life Sciences*. 9: 229-233
- Suyono, E. A., Muavatun, U., Husna, F., Khotimah, H., Pratiwi, I., Husna, R., Cahyani, F., Purwanti, Y. and Samudra, T. T. 2016. The effect of nitrogen stress in medium for increasing carbohydrate as a bioethanol source and carotenoid as an antioxidant from *Chlorella zofingiensis* culture. *Journal of Engineering and Applied Sciences*. 11(4): 2698-2701
- Suyono, E.A., Nopitasari, S., Zusron, M., Khoirunnisa, P., Islami, D.A., and Prabeswara, C.B. 2016. Effect of Silica on Carbohydrate Content of Mixed Culture *Phaeodactylum* sp. and *Chlorella* sp. *Biosciences Biotechnology Research Asia*. 13(1): 109-114
- Suyono, E.A., Retnaningrum, E., and Ajjah, N. 2018. Bacterial Symbionts Isolated from Mixed Microalgae Culture of Glagah Strains. *International Journal of Agriculture & Biology*. 20(1): 33-36
- Taiz, L. and Zeiger, E. 2010. *Plant Physiology*. 5th edn. Sinauer Associated Inc.: Los Angeles
- Takagi, M., Watanabe, K., Yamaberi, K., and Yoshida, T. (2000). Limited feeding of potassium nitrate for intracellular lipid and triglyceride accumulation of *Nannochloris* sp. UTEX LB1999. *Applied Microbiology and Biotechnology*. 54: 112e117

- Vonshak, A. 2002. *Spirulina platensis* (*Arthrospira*): Physiology, cellbiology and biotechnology. Taylor & Francis: London
- Wilhelm, C. and Jakob, T. 2011. From photons to biomass and biofuels : evaluation of different strategies for the improvement of algal biotechnology based on comparative energy balances. *Applied Microbiology and Biotechnology*. 92: 909–919
- Yu, X., Zhao, P., He, C., Li, J., Tang, X., Zhou, J., and Huang, Z. 2012. Isolation of a novel strain of *Monoraphidium* sp. and characterization of its potential application as biodiesel feedstock. *Bioresource Technology*. 121: 256–262
- Yuarrina, W.P., Pradana, Y.S., Budiman, A., Majid, A.I., Indarto, and Suyono, E.A. 2018. Study of cultivation and growth rate kinetic for mixed cultures of local microalgae as third generation (G-3) bioethanol feedstock in thin layer photobioreactor. *Journal of Physics*. 1022: 012051
- Zeng, X., Danquah, M.K., Chen, X.D., and Lu, Y. 2011. Microalgae bioengineering: From carbon dioxide fixation to biofuel production. *Renewable and Sustainable Energy Reviews*. 15:3252–60
- Zhao, P., Yu, X., Li, J., Tang, X., and Huang, Z. 2014. Enhancing lipid productivity by co-cultivation of *Chlorella* sp. U4341 and *Monoraphidium* sp. FXY-10. *Journal of Bioscience and Bioengineering*. 118(1): 72–77
- Zhao, Y., Li, D., Ding, K., Che, R., Xu, J-W., Zhao, P., Li, T., Ma, H., Yu, X. 2016. Production of biomass and lipids by the oleaginous microalgae *Monoraphidium* sp. QLY-1 through heterotrophic cultivation and photo-chemical modulator induction. *Bioresource Technology*. 211:669-676
- Zhu, C.J. and Lee, Y.K. 1997. Determination of biomass dry weight of marine microalgae. *Journal of Applied Phycology*. 9:189-194
- Zhu, L., Li, Z., and Hiltunen, E. 2016. Strategies for lipid production improvement in microalgae as a biodiesel feedstock. *BioMed Research International*. 2016:8