

DAFTAR PUSTAKA

- Andriopoulos, V., Lamari, F. N., Hatziantoniou, S., & Kornaros, M. (2022). Production of Antioxidants and High Value Biomass from *Nannochloropsis oculata*: Effects of pH, Temperature and Light Period in Batch Photobioreactors. *Marine Drugs*, 20(9), 552. <https://doi.org/10.3390/md20090552>
- Ardiansyah, A., Meila, K. D., & Lestari, P. G. (2025). Efektivitas Penerapan Green Transition dan Kebijakan Karbon Pada Sektor Energi: Literature Review. *Jurnal Riset Akuntansi*, 10(02). <https://doi.org/doi.org/10.26486/jramb.v10i2.4590>
- Ariany, N., Mustahal, ., & Syamsunarno, M. B. (2021). The Application of Duckweed Liquid Organic Fertilizer to Cell Populations in the Culture of *Nannochloropsis oculata*. *Torani Journal of Fisheries and Marine Science*, 58–71. <https://doi.org/10.35911/torani.v4i2.13707>
- Banerjee, A., Guria, C., Maiti, S. K., Banerjee, C., & Shukla, P. (2019). Carbon bio-fixation, effect of physicochemical factors and carbon supply strategies by *Nannochloropsis* sp. using flue gas and fertilizer. *Biomass and Bioenergy*, 125, 95–104. <https://doi.org/10.1016/j.biombioe.2019.04.002>
- Binh, M. N., Thuy, N. T. T., & Serrano, A. E. (2021). Effects of initial density, nutrient medium, salinity and light intensity on the growth of microalgae *Nannochloropsis oculata* (Vol. 14). <http://www.bioflux.com.ro/aac1>
- Blanken, W., Postma, P. R., de Winter, L., Wijffels, R. H., & Janssen, M. (2016). Predicting microalgae growth. *Algal Research*, 14, 28–38. <https://doi.org/10.1016/j.algal.2015.12.020>
- Catarina, A., & Xavier, F. (2012). Nutritional Value and Uses of Microalgae in Aquaculture. In *Aquaculture*. InTech. <https://doi.org/10.5772/30576>
- Cheng, J., Yang, Z., Huang, Y., Huang, L., Hu, L., Xu, D., Zhou, J., & Cen, K. (2015). Improving growth rate of microalgae in a 1191m² raceway pond to fix

- CO₂ from flue gas in a coal-fired power plant. *Bioresource Technology*, 190, 235–241. <https://doi.org/10.1016/j.biortech.2015.04.085>
- Converti, A., Casazza, A. A., Ortiz, E. Y., Perego, P., & Del Borghi, M. (2009). Effect of temperature and nitrogen concentration on the growth and lipid content of *Nannochloropsis oculata* and *Chlorella vulgaris* for biodiesel production. *Chemical Engineering and Processing: Process Intensification*, 48(6), 1146–1151. <https://doi.org/10.1016/j.cep.2009.03.006>
- Esteves, M. V., Marques, D. M. C., de Almeida, J. D., Faria, N. T., & Ferreira, F. C. (2025). Marine Microalgae–Microorganism Co-Cultures: An Insight into *Nannochloropsis* sp. Use and Biotechnological Applications. *Foods*, 14(9), 1522. <https://doi.org/10.3390/foods14091522>
- Fábregas, J., Maseda, A., Domínguez, A., & Otero, A. (2004). The cell composition of *Nannochloropsis* sp. changes under different irradiances in semicontinuous culture. *World Journal of Microbiology and Biotechnology*, 20(1), 31–35. <https://doi.org/10.1023/B:WIBI.0000013288.67536.ed>
- Galanakis, C. M. . (2021). *Microalgae : cultivation, recovery of compounds and applications*. Academic Press.
- Gao, K., Xue, C., Yang, M., Li, L., Qian, P., Gao, Z., Gao, Z., & Deng, X. (2022). Optimization of light intensity and photoperiod for growing *Chlorella sorokiniana* on cooking cocoon wastewater in a bubble-column bioreactor. *Algal Research*, 62, 102612. <https://doi.org/10.1016/j.algal.2021.102612>
- Gerotto, C., Norici, A., & Giordano, M. (2020). Toward Enhanced Fixation of CO₂ in Aquatic Biomass: Focus on Microalgae. *Frontiers in Energy Research*, 8. <https://doi.org/10.3389/fenrg.2020.00213>
- Hadiyanto, & Adetya, N. P. (2018). *Biorefinery Mikroalga* (Vol. 1). EF Press Digimedia.
- Hirabayashi, S., Prilutsky, A., & Sadamatsu, H. (2013). Method Of Culturing Algae Capable Of Producing Phototrophic Pigments, Highly Unsaturated Fatty Acids, Or Polysaccharides At High Concentration. *United State Patent, US 6,579,714 B1*.

- Kumar, A., Ergas, S., Yuan, X., Sahu, A., Zhang, Q., Dewulf, J., Malcata, F. X., & van Langenhove, H. (2010). Enhanced CO₂ fixation and biofuel production via microalgae: recent developments and future directions. *Trends in Biotechnology*, 28(7), 371–380. <https://doi.org/10.1016/j.tibtech.2010.04.004>
- Layana, A., Silitonga, M. P. R., & Irawan, B. (2025). Rancang Sistem Proses Fotobioreaktor Mikroalga untuk Fiksasi CO₂ dari Vent Stack Amine Regenerator Overhead Accumulator PT XYZ. *Prosiding Seminar Nasional Teknik Mesin*, 15(1), 242–249.
- Malakootian, M., Hatami, B., Dowlatshahi, S., & Rajabizadeh, A. (2015). Optimization of culture media for lipid production by *Nannochloropsis oculata* for Biodiesel production. In *Environmental Health Engineering and Management Journal* (Vol. 2, Number 3). <https://ssrn.com/abstract=2685007>
- Marthia, N. (2020). Pengaruh Jenis Media Kultur Terhadap Konsentrasi Biomassa *Nannochloropsis* sp. *Pasundan Food Technology Journal*, 7(3), 97–101. <https://doi.org/10.23969/pftj.v7i3.3190>
- Minhas, A. K., Gaur, S., & Adholeya, A. (2023). Influence of light intensity and photoperiod on the pigment and, lipid production of *Dunaliella tertiolecta* and *Nannochloropsis oculata* under three different culture medium. *Heliyon*, 9(2), e12801. <https://doi.org/10.1016/j.heliyon.2023.e12801>
- Murtadha, Muh. D., & Cahyonugroho, O. H. (2026). The Effect of CO₂ Concentration and Light Intensity on the Productivity of *Scenedesmus* sp. In Culture Media. *Eduvest - Journal of Universal Studies*, 6(3), 4226–4244. <https://doi.org/10.59188/eduvest.v6i3.52351>
- Nedaei, L., & Shokrkhar, H. (2025). Influence of process factors and photobioreactor design on microalgae cultivation. *Biofuels, Bioproducts and Biorefining*, 19(6), 2433–2456. <https://doi.org/10.1002/bbb.2759>
- Okoro, V., Azimov, U., Munoz, J., Hernandez, H. H., & Phan, A. N. (2019). Microalgae cultivation and harvesting: Growth performance and use of flocculants - A review. *Renewable and Sustainable Energy Reviews*, 115, 109364. <https://doi.org/10.1016/j.rser.2019.109364>

- Palacios, Y. M., Vonshak, A., & Beardall, J. (2018). Photosynthetic and growth responses of *Nannochloropsis oculata* (Eustigmatophyceae) during batch cultures in relation to light intensity. *Phycologia*, 57(5), 492–502. <https://doi.org/10.2216/17-100.1>
- Ramirez-Perez, J. C., & Janes, H. (2021). Impact of salinity on the kinetics of CO₂ fixation by *Spirulina platensis* cultivated in semi-continuous photobioreactors. *Eclética Química Journal*, 46(1), 21–34. <https://doi.org/10.26850/1678-4618eqj.v46.1.2021.p21-34>
- Razzak, S. A., Bahar, K., Islam, K. M. O., Haniffa, A. K., Faruque, M. O., Hossain, S. M. Z., & Hossain, M. M. (2024). Microalgae cultivation in photobioreactors: sustainable solutions for a greener future. *Green Chemical Engineering*, 5(4), 418–439. <https://doi.org/10.1016/j.gce.2023.10.004>
- Razzak, S. A., Ilyas, M., Ali, S. A. M., & Hossain, M. M. (2015). Effects of CO₂ Concentration and pH on Mixotrophic Growth of *Nannochloropsis oculata*. *Applied Biochemistry and Biotechnology*, 176(5), 1290–1302. <https://doi.org/10.1007/s12010-015-1646-7>
- Richmond, A. (2004). Handbook of Microalgal Culture (A. Richmond, Ed.). Wiley. <https://doi.org/10.1002/9780470995280>
- Richmond, A., & Hu, Q. (2013). Handbook of Microalgal Culture (A. Richmond & Q. Hu, Eds.). Wiley. <https://doi.org/10.1002/9781118567166>
- Sanjayasari, D., Rahmasari, F., Khasanah, I., & Imlani, A. (2023). Density and Growth Rate of *Nannochloropsis oculata* with Different Photoperiods. *MAIYAH*, 2(1), 25. <https://doi.org/10.20884/1.maiyah.2023.2.1.8245>
- Sartori, R. B., Deprá, M. C., Dias, R. R., Fagundes, M. B., Zepka, L. Q., & Jacob-Lopes, E. (2024a). The Role of Light on the Microalgae Biotechnology: Fundamentals, Technological Approaches, and Sustainability Issues. *Recent Patents on Biotechnology*, 18(1), 22–51. <https://doi.org/10.2174/1872208317666230504104051>
- Sartori, R. B., Deprá, M. C., Dias, R. R., Fagundes, M. B., Zepka, L. Q., & Jacob-Lopes, E. (2024b). The Role of Light on the Microalgae Biotechnology: Fundamentals, Technological Approaches, and Sustainability Issues. *Recent*

- Patents on Biotechnology*, 18(1), 22–51.
<https://doi.org/10.2174/1872208317666230504104051>
- Schuessler, S., J. A. Roebroek, E., Hazewinkel, S. H. E., & Hazewinkel, O. J. H. (2016). METHOD AND BIOREACTOR FOR THE CULTIVATION OF MICROORGANISMS. *United State Patent, US 9,382,508 B2*.
- Sforza, E., Simionato, D., Giacometti, G. M., Bertucco, A., & Morosinotto, T. (2012). Adjusted Light and Dark Cycles Can Optimize Photosynthetic Efficiency in Algae Growing in Photobioreactors. *PLoS ONE*, 7(6), e38975.
<https://doi.org/10.1371/journal.pone.0038975>
- Shene, C., Chisti, Y., Bustamante, M., & Rubilar, M. (2016). Effect of CO₂ in the aeration gas on cultivation of the microalga *Nannochloropsis oculata*: Experimental study and mathematical modeling of CO₂ assimilation. *Algal Research*, 13, 16–29. <https://doi.org/10.1016/j.algal.2015.11.005>
- Spolaore, P., Joannis-Cassan, C., Duran, E., & Isambert, A. (2006). Optimization of *Nannochloropsis oculata* growth using the response surface method. *Journal of Chemical Technology & Biotechnology*, 81(6), 1049–1056.
<https://doi.org/10.1002/jctb.1529>
- Taisir, M., Teo, C. L., Idris, A., & Yusuf, A. M. (2016). Cultivation of *Nannochloropsis* sp. using narrow beam angle light emitting diode in an internally illuminated photobioreactor. *Bioresources and Bioprocessing*, 3(1), 35. <https://doi.org/10.1186/s40643-016-0113-9>
- Tamburic, B., Evenhuis, C. R., Suggett, D. J., Larkum, A. W. D., Raven, J. A., & Ralph, P. J. (2015). Gas Transfer Controls Carbon Limitation During Biomass Production by Marine Microalgae. *ChemSusChem*, 8(16), 2727–2736.
<https://doi.org/10.1002/cssc.201500332>
- Tamburic, B., Guruprasad, S., Radford, D. T., Szabó, M., Lilley, R. M., Larkum, A. W. D., Franklin, J. B., Kramer, D. M., Blackburn, S. I., Raven, J. A., Schliep, M., & Ralph, P. J. (2014). The Effect of Diel Temperature and Light Cycles on the Growth of *Nannochloropsis oculata* in a Photobioreactor Matrix. *PLoS ONE*, 9(1), e86047. <https://doi.org/10.1371/journal.pone.0086047>

- Wahidin, S., Idris, A., & Shaleh, S. R. M. (2013). The influence of light intensity and photoperiod on the growth and lipid content of microalgae *Nannochloropsis* sp. *Bioresource Technology*, 129, 7–11. <https://doi.org/10.1016/j.biortech.2012.11.032>
- Zulfahmi, I., Meria, R., & Puspitasari, W. (2021). Teknik Kultur *Nannochloropsis* Sp. Skala Laboratorium di Balai Perikanan Budidaya Air Payau Ujung Batee, Aceh Besar. *KENANGA Journal of Biological Sciences and Applied Biology*, 1(1), 31–38. <https://doi.org/10.22373/kenanga.v1i1.800>