

DAFTAR PUSTAKA

- Abu-Serie, M.M., Habashy, N.H. & Attia, W.E. 2018. In Vitro Evaluation of the Synergistic Antioxidant and Anti-inflammatory Activities of the Combined Extracts from Malaysian *Ganoderma lucidum* and Egyptian *Chlorella vulgaris*. *BMC Complement Altern Med.* 18, 154.
- Adar, O., Kaplan-Levy, R. N., & Banet, G. 2016. High temperature *Chlorellaceae* (*Chlorophyta*) strains from the Syrian-African Rift Valley: the effect of salinity and temperature on growth, morphology and sporulation mode. *European Journal of Phycology*, 51(4), 387-400.
- Al-fahham, A. A., Abbas, N. I., Jassim, M. M., & Al-jameel, L. S. 2025. Optical Density in Biochemistry: Principles and Applications in Analytical Methods: A Review. *Universal Publication Index e-Library*, 62-69.
- Barathan, M., Zulpa, A. K., Vellasamy, K. M., Mariappan, V., Shivashekaregowda, N. K. H., Ibrahim, Z. A., & Vadivelu, J. 2021. Cytotoxic Activity of Isoniazid Derivative in Human Breast Cancer Cells. *in vivo*, 35(5), 2675-2685.
- Brück, W. M., Alfonso, E., Rienth, M., & Andlauer, W. 2024. Heat Stress Resistance in *Chlorella vulgaris* Enhanced by Hydrolyzed Whey Proteins. *Agronomy*, 14(12), 2854.
- Bold, H. C. 1985. Introduction to the Algae. *Structure and reproduction*, 720.
- Cahyani, F. R., & Isman, H. S. M. 2022. Potency of *chlorella* spp. as an antioxidant and anti-inflammatory agent. *Journal of Vocational Health Studies*, 5(3), 203-211.
- Chaisutyakorn P, Praiboon J, & Kaewsuralikhit C. 2017. The Effect Of Temperature On Growth and Lipid and Fatty Acid Composition On Marine Microalgae Used For Biodiesel Production. *Journal of Applied Phycology*, 30(1), 37-45. 10.1007/s10811- 017, 1186–3.
- Choe, H. W., Kim, D., Choi, Y. J., Koh, H. G., & Park, W. K. 2025. Influence of microalgal cell division tendency on OD to DCW conversion factor and chlorophyll contents. *Journal of Microbiology and Biotechnology*, 35, .
- Contreras, J., Bibiana, J., Martinez, G., & Barajas-Solano, A. F. 2020. Effect of De Carbon/Nitrogen Ratio on the Production of Microalgae Based Carotenoids. *Ingeniería Competividad*, 22, 1-12.
- Del Mondo, A., Smerilli, A., Sané, E., Sansone, C., & Brunet, C. 2020. Challenging Microalgal Vitamins for Human Health. *Microbial Cell Factories*, 19(1), 201.

- Dere, Ş., Gunes, T., & Sivaci, R. 1998. Spectrophotometric determination of chlorophyll-A, B and totalcarotenoid contents of some algae species using different solvents. *Turkish Journal of Botany*, 22(1), 13–18.
- Fakhri, M., Antika, P. W. , Ekawati, A. W. , & Arifin, N. B. 2017. Pertumbuhan, Kandungan Pigmen, dan Protein Spirulina Plantensis yang Dikultur pada $\text{Ca}(\text{NO}_3)_2$ dengan Dosis yang Berbeda. *Journal Of Aquaculture and Fish Health* , 9(1).
- Farkas, A., Pap, B., Zsíros, O., Patai, R., Shetty, P., Garab, G., & Maróti, G. 2023. Salinity stress provokes diverse physiological responses of eukaryotic unicellular microalgae. *Algal Research*, 73, 103155.
- Fernandez-Valenzuela, S., Chávez-Ruvalcaba, F., Beltran-Rocha, J. C., San Claudio, P. M., & Reyna-Martínez, R. 2021. Isolation and culturing axenic microalgae. *The Open Microbiology Journal*, 15(1), 111-119.
- Fusio, J. L. Z., & Subido Alejos, M. 2025. *Chlorella sorokiniana* Biomass as an Alternative Ingredient in Food. *World Academy of Sciences Journal*, 7(5), 80.
- Georgiou, D., Charisis, A., Theocharidou, A., Ritzoulis, C., Papapanagiotou, G., Samara, C., & Kalogianni, E. P. 2024. Foaming Properties of *Chlorella sorokiniana* Microalgal Biomass. *Colloids and Interfaces*, 8(6), 66. 10.3390/colloids8060066
- Gildantia, E., Ferniah, R. S., Budiharjo, A., Suprihadi, A., Zainuri, M., & Kusumaningrum, H. P. 2022. Identifikasi Spesies Mikroalga dari BBPBP Jepara secara Morfologi dan Molekuler menggunakan 18S rDNA. *Buletin Oseanografi Marina*, 11(2), 167-176.
- Goswami R.K., Agrawal, K., Verma, P. 2021. An Overview of Microalgal Carotenoids: Advances in the Production and Its Impact on Sustainable Development. *Wiley*, 105–123.
- Halima, A., Nursyirwani, N., Effendi, I., & Ambarsar, H. 2019. Potential microalga *Chlorella vulgaris* for bioremediation of heavy metal Pb. *Asian Journal of Aquatic Sciences*, 2(3), 224-234.
- Handra, I., Syafrizayanti, S., & Chaidir, Z. (2019). Isolasi dan Identifikasi Mikroalga Sebagai Sumber Antioksidan dari Perairan Tirtasari Sonsang, Agam, Sumatera Barat. *Chimica et Natura Acta*, 7(1), 7-13.
- Hussein, H. J., Naji, S. S., & Al-Khafaji, N. M. S. 2018. Antibacterial properties of the *Chlorella vulgaris* isolated from polluted water in Iraq. *Journal of Pharmaceutical Sciences and Research*, 10(10), 2457-2460.
- Ilhamdy, A. F. (2020). Kultivasi *Spirulina platensis* menggunakan media walne dalam skala laboratorium. *Marinade*, 3(2), 114-120.

- Jelizanur, J., Padil, P., & Muria, S. R. 2019. Kultivasi Mikroalga Menggunakan Media AF6 pada Berbagai pH. *Jurnal Online Mahasiswa fteknik*, 6(2), 1-5.
- Kodihalli, M. H. 2018. Screening of potential microalgae species from different natural environment for biodiesel production. *International Journal of Microbiology Research*, 975-5276.
- Kusnanda, A. J., Perdana, B. A., Dharma, A., & Chaidir, Z. 2021. Isolasi dan Skrining Mikroalga Air Tawar Sebagai Sumber Pigmen Karotenoid. *Jurnal Kimia dan Kemasan*, 43(1), 38-43.
- Lichtenthaler, H. K., & Wellburn, A. R. (1983). Determinations of total carotenoids and chlorophylls a and b of leaf extracts in different solvents. Portland Press Ltd.
- Lizzul, A. M., Lekuona-Amundarain, A., Purton, S., & Campos, L. C. 2018. Characterization of *Chlorella sorokiniana*, UTEX 1230. *Biology*, 7(2), 25.
- Mahardika, G. R., & Pratikno, H. 2018. Analisis Ketahanan Mikroalga pada Material Baja AH 36 dengan Menggunakan Metode Impressed Current Anti Fouling (ICAF). *Jurnal Teknik ITS*, 7(2), G145-G149.
- Marnelisa, E., Azhari, A., Meriatna, M., Ginting, Z., & Suryati, S. 2022. Pembuatan Biodieseldari Minyak Mikroalga *Dunaliella salina* dengan Proses Transesterifikasi Menggunakan Katalis Basa. *Jurnal Teknologi Kimia Unimal*, 11(2), 217-229
- McClure, D.D., Luiz, A., Gerber, B., Barton, G.W., & Kavanagh, J.M. 2018. An Investigation Into the Effect of Culture Conditions on Fucoxanthin Production Using the Marine Microalgae *Phaeodactylum tricornutum*. *Algal Res*, 29, 41–48.
- Minhas, A. K., Hodgson, P., Barrow, C. J., & Adholeya, A. 2016. A Review on the Assessment of Stress Conditions for Simultaneous Production of Microalgal Lipids and Carotenoids. *Frontiers in microbiology*, 7, 546.
- Mohamadnia, S., Thygesen, A., Ghofrani-Isfahani, P., Monachese, A. P., Valverde-Pérez, B., & Angelidaki, I. 2023. Valorization of potato starch wastewater using anaerobic acidification coupled with *Chlorella sorokiniana* cultivation. *Journal of Applied Phycology*, 35(6), 2645-2658.
- Mostafa, H. S., & Hashem, M. M. 2024. Microalgae as a Source of Carotenoids in Foods, Obstacles and Solutions. *Phytochemistry Reviews*, 1-43.
- Mursandi, H., Susanty, D., & Nurlala, N. 2023. Kandungan Proksimat *Chlorella sorokiniana* Hasil Kultur pada Media Limbah Cair Tahu. *Amina*, 5(1), 36-44.
- Mousavian, Z., Safavi, M., Azizmohseni, F., & Mirdamadi, S. 2025. Anticoagulant Activity of Exopolysaccharide Extracted from Two Native Microalgae. *Microbiology, Metabolites and Biotechnology*, 8(2), 73-80.

- Novianti, T., Zainuri, M., & Widowati, I. 2019. Kandungan Betakaroten dari Mikroalga *Chlorella vulgaris* yang Dikultur dengan Perlakuan Sumber Cahaya dan Kepadatan Awal Inokulum (KAI) yang Berbeda. *Jurnal Biologi dan Pendidikan Biologi*, 4(1), 46-61.
- Oktora, A. R. , Ma'ruf, W. F. , & Agustini, T. W. 2016. Pengaruh Penggunaan Senyawa Fiksator terhadap Stabilitas Ekstrak Kasar Pigmen β -karoten. *Jurnal Pengolahan Hasil Perikanan Indonesia*, 19(3), 206-13.
- Prabaningtyas, S., Zain, F., Amelia, D., Kusumaningayu, R. R. R., Aridhowi, D., Rodiansyah, A., Saputri, D. A. E. 2025. Optimization Media for the Growth of *Chlorella vulgaris* in Co-Culture with Bacteria. *Jurnal Ilmiah Sains*, 25(2), 161–172. 10.35799/jis.v25i2.61326
- Pakaya, M. S., Akuba, J., Papeo, D. R. P., Makkulawu, A., & Puspitadewi, A. A. 2022. Isolasi dan Karakterisasi Bakteri Endofit dari Akar Pare (*Momordica charantia* L.). *Journal Syifa Sciences and Clinical Research*, 4(1).
- Papapostolou, H., Kachrimanidou, V., Alexandri, M., Plessas, S., Papadaki, A., & Kopsahelis, N. 2023. Natural Carotenoids: Recent Advances on Separation from Microbial Biomass and Methods of Analysis. *Antioxidants (Basel, Switzerland)*, 12(5), 1030. 10.3390/antiox12051030
- Phyo, M. M., Yin, Z. Z., & Aung, M. 2021. The Effects of Carbon and Nirtogen Sources for the Growth of Soil Fungus MPF-7 and Its Fermentantation Optimazation. *Journal Myanmar Acad.* 19(4), 57-66.
- Prihanto, A. A., Jatmiko, Y. D., Nurdiani, R., Miftachurrochmah, A., & Wakayama, M. 2022. Freshwater Microalgae as Promising Food Sources: Nutritional and Functional Properties. *The Open Microbiology Journal*, 16(1).
- Putri, D. S., Marianah, M., & Ihromi, S. 2019. Isolasi Mikroalga Laut dari Pantai Mapak Pulau Lombok. *Jurnal Agrotek Ummat*, 5(2), 91-96.
- Rani, K., Sandal, N., & Sahoo, P. K. 2018. A comprehensive review on chlorella- its composition, health benefits, market and regulatory scenario. *The Pharma Innovation Journal*, 7(7), 584-589.
- Rosic, N., Delamare-Deboutteville, J., & Dove, S. 2024. Heat stress in symbiotic dinoflagellates: Implications on oxidative stress and cellular changes. *Science of The Total Environment*, 944, 173916.
- Sadewo, R. P., Hidhayati, N., Ambarsari, L., & Anam, K. 2022. CO2 sequestration using sodium hydroxide and its utilization for *Chlorella sorokiniana* biomass production. *Biosaintifika: Journal of Biology & Biology Education*, 14(3), 391-399.
- Safitri, L. N., Susanty, D., Nurlela, N., & Oksari, A. A. 2023. Metabolit Sekunder Ekstrak *Chlorella sorokiniana* Hasil Kultur pada Media Limbah Tahu dengan Variasi Waktu Panen. In *Prosiding Seminar Nasional Sinergi Riset dan Inovasi*, 1(1) 1, 44-55.

- Sanda, E. Y. S., Indriyawati, N., Fauriah, S. N., & Supriyanto, S. 2026. Pengaruh Variasi Salinitas Terhadap Fase Pertumbuhan Mikroalga Tetraselmis chuii. *Jurnal Kelautan Tropis*, 29(1), 104-112.
- Sathasivam, R., & Ki, J. S. 2018. A review of the biological activities of microalgal carotenoids and their potential use in healthcare and cosmetic industries. *Marine drugs*, 16(1), 26.
- Schieber, M., & Chandel, N. S. 2014. ROS function in redox signaling and oxidative stress. *Current biology*, 24(10), R453-R462.
- Sekatresna, Widiyanti, Abdi Dharma, Rahmiana Zein, and Zulkarnain Chaidir. 2016. Identification of Blue-Green Algae Uncultured *Oscillatoria* Sp IPOME-4 Isolated from Local Industry Effluent with The Potential as β - Carotene Feedstock. *Der Pharma Chem.* 8(12): 110–17.
- Serra-Maia, R., Bernard, O., Gonçalves, A., Bensalem, S., & Lopes, F. 2016. Influence of Temperature on *Chlorella vulgaris* Growth and Mortality Rates in a Photobioreactor. *Algal research*, 18, 352-359
- Setiyono, E., Pringgenies, D., Heriyanto, H., & Shioi, Y. 2016. Analisa Pigmen Karotenoid Pada Bakteri *Erythrobacter flavus*. *Marine Drugs*, 17(6), 349-356.
- Shafiq, N., Ghafar, S. N., Sung, Y. Y., Zakeri, H. A., Wahid, M. E. A., & Yusuf, N. 2023. Oxidative Stress and Antioxidant Activities of *Parachlorella kessleri* At Different Growth Phases. *Journal of Sustainability Science and Management*, 18(7), 137-150.
- Sibi, G., Yadav, S., Bansal, S., & Chaithra, M. L. 2020. Assessment of optimal growth conditions for specific carotenoids production by *Chlorella vulgaris*. *Journal of Applied and Natural Science*, 12(4), 550.
- Siregar, R. C. 2023. Blue Energy dari Mikroalga *Chlorella* sp. sebagai Bahan Baku Biodiesel. *Jurnal Riset Kelautan Tropis (Journal Of Tropical Marine Research)(J- Tropimar)*, 5(2), 79-85.
- Sirohi, P., Verma, H., Singh, S. K., Singh, V. K., Pandey, J., Khusharia, S., & Kumar, A. 2022. Microalgal Carotenoids: Therapeutic Application and Latest Approaches to Enhance the Production. *Current Issues in Molecular Biology*, 44(12), 6257-6279.
- Taenzer, L., Toth, G., & Hansel, C. M. 2024. Assessment of hydrogen peroxide as a bioindicator of stress in seaweed aquaculture. *Scientific Reports*, 14(1), 1956.
- Tan, X. B., Lam, M. K., Uemura, Y., Lim, J. W., Wong, C. Y., & Lee, K. T. 2018. Cultivation of Microalgae for Biodiesel Production: a Review on Upstream and Downstream Processing. *Chinese Journal of Chemical Engineering*, 26(1), 17-30.

- Vítek, P., Ascaso, C., Artieda, O., & Wierzechos, J. 202. Carotenoids dispersed in gypsum rock as a result of algae adaptation to the extreme conditions of the Atacama Desert. *Scientific Reports*, 14, 23939.
- Widyatama, A., Al Fajry, Z., Widyatama, S. A., Mulyati, A. H., & Stiawan, E. 2024. The Utilization of Two Commercial Indonesian Fertilizers as Microalgal Growth Medium for *Chlorella pyrenoidosa* and *Botryococcus braunii* Cultivation. *Jurnal Kartika Kimia*, 7(1), 19-24.
- Wong, C. Y., Teoh, M. L., Phang, S. M., Lim, P. E., & Beardall, J. 2015. Interactive Effects of Temperature and UV Radiation on Photosynthesis of *Chlorella* Strains. *Plos One*, 10(10).
- Yang, L., Chen, J., Qin, S., Zeng, M., Jiang, Y., Hu, L., & Wang, J. 2018. Growth and lipid accumulation by different nutrients in the microalga *Chlamydomonas reinhardtii*. *Biotechnology for biofuels*, 11(1), 40.
- Yisimayi, N., Yang, L., Sun, M., Tang, X., Chen, L., Tuheti, A., & Chen, Y. 2026. Study on the Short-Term High-Temperature Response Mechanisms and Ethanolamine Metabolic Regulation in Desert *Chlorella*. *Phycology*, 6(1), 13.