

PUSTAKA ACUAN

- Achmad, Herliyana, E. N., & Octaviani, E. A. 2013. Influence of pH, Shaked Medium, and Addition of Sawdust on the Growth of *Xylaria* sp. *Jurnal Silvikultur Tropika*, 4(2): 57–61.
- Agustini, N. W. S., & Nadhil, F. 2019. Hidrolisis Biomassa Mikroalga *Porphyridium cruentum* Menggunakan Asam (H₂SO₄ dan HN0₃) Dalam Produksi Bioethanol. *Jurnal Kimia dan Kemasan*. 41(1): 1-10.
<http://dx.doi.org/10.24817/jkk.v41i1.3962>
- Alabi, A. O., Tampier, M., & Bibeau, E. 2009. Microalgae Technologies & Processes for Biofuels/Bioenergy Production in British Columbia. *In seed Science*
- Almutairi, A. W., & Toulbah, H. E. 2017. Effect of Salinity and pH on Fatty Acid Profile of The Green Algae *Tetraselmis suecica*. *J. Pet. Environ. Biotechnol.*, 08(03): 3–8.
- Amaro, H. M., Catarina, G. A., & Xavier, F. M. 2011. Advances and Perspectives in Using Microalgae to Produce Biodiesel. *Applied Energy*, 88 (11): 3402–3410.
- Anam, K. (2010). Pengukuran Kadar Protein dengan Metode Bradford. Bogor: Bioteknologi Sekolah Pascasarjana Institut Pertanian Bogor.
- Andersen, R. A. 2005. *Algal Culturing Technique*. United Kingdom: Elsevier Academic Press.
- Andersen, R.A. 2005. *Algal culturing technique*. Elsevier Academic Press, London.
- Ando, S., Tanaka Y. 1996. Carotenoid Form in the Exoskeleton of Crawfish and Kuruma Prawn. *Mem. Fac. Fish. Kagoshima Univ.* 45: 5-12.
- Assadad, L., Bagus, S, B, U., & Rodiah, N. S. 2010. Pemanfaatan Mikroalga Sebagai Bahan Baku Bioethanol. *Squalen*. 5(2): 51-57.
- Azizah, N., Al-Baarri, A. N., Mulyani, S. 2012. Effect of Fermentation Time on Alcohol Content, pH, and Gas Production in the Fermentation Process of Bioethanol from Whey with Pineapple Skin Substitution. *Jurnal Aplikasi Teknologi Pangan*. 1(2): 72-77.
- Azizullah, A., Richter, P., & Häder, D. P. 2014. *Photosynthesis and Photosynthetic Pigments in the Flagellate Euglena sp. gracilis - As Sensitive Endpoints for*

Toxicity Evaluation of Liquid Detergents. Journal of Photochemistry and Photobiology B: Biology, 133, 18–26.
<https://doi.org/10.1016/j.jphotobiol.2014.02.011>

- Barsanti, Vismara, L. R., Passarelli, V., & Gualtieri, P. 2001. Paramylon (β -1,3-glucan Content in Wild Type and WZSL Mutant of *Euglena* sp. gracilis Effect of Growth Conditions. *Journal of Applied Phycology*. 13: 59 – 65.
- Biswas, A. K., Chatli, J. S. M. K. 2011. A simple UV-Vis spectrophotometric method for determination of beta carotene content in raw carrot, sweet potato &supplemented chicken meat nuggets. *LWT - Food Science &Technology* 44: 1809.
- Bligh, E. G., Dyer, W. J. 1959. A rapid method of total lipid extraction &purification. *Canadian Journal of Biochemistry &Physiology* 37: 911-917.
- Borowitzka, M.A. and L.J. Borowitzka. 1988. *Microalgal Biotechnology*. Cambridge University Press. Cambridge.
- Brown, S. W. Jeffrey, J.K. Volkman, G.A. Dunstan. 1997. Nutritional Properties of Microalgae for Mariculture. *Aquaculture*, 151:315-331.
- Chisti, Y. 2007. Biodiesel from microalgae. *Biotechnology Advances* 25: 294-306.
- Chu, F.E., J.L. Dupuy, & K.L. Webb. 1982. Polysaccharide composition of five algal species used as food larvae of the American oyster, orassostrea virginica. *Aquaculture*, 29:241-252.
- Cramer, M., & Myers. J. 1952. Growth and Photosynthetic Characteristics of *Euglena* sp. gracilis. *Archiv Fur Mikrobiologie*, 17(4): 384–402. doi: 10.1007/BF00410835.
- Danilov, R. A., & Ekelund, N. G. A. 2001. Effects of pH on the Growth Rate, Motility and Photosynthesis in *Euglena* sp. gracilis. *Folia Microbiologica*, 46(6): 549–554. <https://doi.org/10.1007/BF02818001>.
- Danilov, R., & Ekelund, N. 2000. Applicability of growth rate, cell shape, and motility of *Euglena* sp. gracilis as physiological parameters for bioassess-ment at lower concentrations of toxic substances: an experimental approach. *Environmental Toxicology*. 16: 7.

- Dimara, L., Tuririday, H., Tien, D., Yenusi, N. B. 2012. Identification and Photodegradation of Chlorophyll Pigments in Seaweed *Caulerpa racemosa* (Forsskal) J. *Agardh. Jurnal Biologi Papua*, 4(2): 47-53.
- Dubois, M., Gilles, K. A., Hamilton, J. K., Rebers, P. A., & Smith, F. 1956. *Colorimetric Method for Determination of Sugars and Related Substances*, 350–56
- Gissibl, A., Sun, A., Care, A., Nevalainen, H., Sunna, A. 2019. Bioproducts From *Euglena* sp. *gracilis*: Synthesis & Applications. *Bioeng Biotechnol.* 7:108.
- Gupta, M. K., Rathod, D. R., & Patel, M. P. 2013. Paramylon: a potential candidate as an antioxidant and immunostimulant. *Journal of Pharmacy Research*, 6(6), 641-647.
- Hader, D., Jaoudat, F., Michael, L., Peter, R., Martin, S., Roland, R., Sebastian, M. S., Viktor, D. 2011. Investigation of Gravitaxis & Phototaxis in *Euglena* sp. *gracilis*. *Advances in Life Sciences*. 4: 118.
- Hader, D.P., M. Iseki. 2017. Photomovement in *Euglena* sp.. In: Schwartzbach, S.D., Shigeoka, S. (Eds). *Euglena* sp.: *Biochemistry, Cell and Molecular Biology*. Springer International Publishing, Cham. pp. 207-235.
- Halim, R., Michael, K. D., Paul, A. W. 2012. Extraction of oil from microalgae for biodiesel production: A review. *Biotechnology Advances*. 30(3): 710.
- Hill, H. Z., Schiff, J. A., Epstein, H. T. 1966. Factors Influencing The Decay of Phtoreactivability of Green Colony Formation. *Biophysical Journal*. 6: 363.
- Hu, W. 2014. Dry Weight & Cell Density of Individual Algal & Cyanobacterial Cells for Algae Research & Development. Naskah Thesis. Columbia. pp: 8.
- Integrated Taxonomic Information System (ITIS). 2011. *Euglena* sp. sp. <https://www.itis.gov/>. Diakses tanggal 4 Agustus 2023.
- Isnansetyo, A. Kurniastuty. 1995. *Teknik Kultur Phytoplankton Zooplankto : Pakan Alam untuk pembenihan Organisme Laut*. Kanisius. Yogyakarta. pp: 20.
- Jin, L. 2010. *Genetic Engineering of Chlorella zofingiensis For Enhanced Astaxanthin Biosynthesis & Assessment of The Algal Oil for Biodiesel Production*. University of Hongkong. Hongkong. pp: 3-57.
- Jin, L., Z. Sun, & H. Gerken. 2014. Recent Advances in Microalgal Biotechnology. *Omics Group Foster City*. pp: 4-10.

- Kaulmann, A., Bohn, T., & Carle, R. 2018. Contribution of carotenoids to the prevention of chronic diseases. *Subcellular Biochemistry*, 85, 207-239.
- Kawaroe, M., Prartono, T. A. Sunuddin, S. D., Wulan, & Augustine, D. 2010. *Mikroalga Potensi dan Pemanfaatannya untuk Produksi Bio Bahan Bakar*. Bogor, IPB Press.
- Kim, Y. S., Jung, C. J., & Kang, K. H. 2020. Antioxidant and anti-inflammatory activities of paramylon extracted from *Euglena* sp. gracilis. *Food Science and Biotechnology*, 29(3), 335-341.
- Ko, S., Sarah, S., Nancy, W. 2020. The Effect of Temperature on the Growth Rate of *Euglena* sp. gracilis. *The Expedition*. 9: 1.
- Krinsky, N. I. Goldsmith T. H. 1960. The carotenoids of the flagellated alga, *Euglena* sp. gracilis. *Archives of Biochemistry & Biophysics*. 91(2):271.
- Kumar, R. R., Polur, H. R., Muthu, A. 2015. Lipid Extraction methods from microalgae: a comprehensive review. *Frontiers in Energy Research*. 2(61): 2.
- Mlodzinska, E. 2009. Survey of Plant Pigments: Molecular & Environmental Determinants of Plant Colors. *Acta Biologica Cracoviensia Series Botanica*. 51(1): 7-16.
- Morimura, Y. 1959. Synchronous Culture of Chlorella. *Plant Physiol*. pp: 49-62.
- Muller, F. L., Lustgarten, M. S., Jang, Y., Richardson, A., Van, R. H. 2007. Trends in Oxidative Aging Theories. *Free Radical Bio Med*. 43: 477-503.
- Nagaki, Y., Mihara, M., Tsukuhara, H., & Suzuki, S. 2013. The supplementation effect of astaxanthin on accommodation and asthenopia. *Journal of Clinical Therapeutics & Medicines*, 29(6), 617-622.
- Naguib, Y. M. 2015. Antioxidant activities of astaxanthin and related carotenoids. *Journal of Agricultural and Food Chemistry*, 63(12), 2884-2892.
- Nakahara, Y., Sato, E. F., Inoue, M., Yasui, H., Kizaki, H., & Oh-ishi, S. 2018. Paramylon, a β -1, 3-D-glucan isolated from *Euglena* sp. gracilis Z inhibits inflammation in human health. *Journal of Clinical Biochemistry and Nutrition*, 63(2), 121-127.
- Nuhamunada, M. 2014. Produksi Lipid dan Biomassa Mikroalga Kultur Tunggal Chlorella zofingiensis Donz dan Kultur Campuran Isolat Glagah dalam Raceway Pond. Naskah Skripsi. Fakultas Biologi UGM. Yogyakarta. pp: 9.

- Nurafifah, I., Muhammad A. H, Tia E, Ria A & Khusnul Q. M. 2023. The Effect of Acidic pH on Growth Kinetics, Biomass Productivity, and Primary Metabolite Contents of *Euglena* sp. *Makara Journal of Science* 27(2):97-105
- Ogbonna, J. C., S. Tomiyama, & H. Tanaka. 1998. Heterotrophic Cultivation of *Euglena* sp. *Gracilis* Z for Efficient Production of α -Tocopherol. *Journal of Applied Phycology*, 10 (1):67–74.
- Perumal, P., B.B. Prasath, P. Santhanam, S. Ananth, A.S. Devi, & S.D. Kumar. 2015. Isolation and Culture of Microalgae. *Advances in Marine and Brackishwater Aquaculture*. Springer, New Delhi.
- Pohl, P. Wagner, H. 2014. Control of Fatty Acid & Lipid Biosynthesis in *Euglena* sp. *gracilis* by Ammonia, Light & DCMU. *Zeitschrift fur Naturforschung B*. 27(1): 53 & 60.
- Pratama, I. 2011. *Pengaruh Metode Pemanenan Mikroalga terhadap Biomassa dan Kandungan Esensial Chlorella vulgaris*. Skripsi. Fakultas Teknik Program Sarjana. Universitas Indonesia, Depok.
- Pratiwi. 2007. *Protein Vitamin Dan Bahan Pangan*. Gajah Mada University Press, Yogyakarta.
- Prihantini, B. N., Putri, B., Yuniati, R. 2005. Pertumbuhan *Chlorella* spp. dalam Medium Ekstrak Tauge (met) dengan Variasi pH Awal. *Makara Science*, 9 (1) :1-6.
- Punchard, N. A. 2001. *Haemocytometer Instruction Sheet (for improved Neubauer Haemocytometer)*. University of East London. London:UK.
- Ribeiro, D. M., Gessica, T. Z., Maria, H. M. J., Tathiana, E. M., Jane, M. L. N. G., Gustavo, G. F. 2019. Effect of different culture media on growth of *Chlorella sorokiniana* & the influence of microalgal effluents on the germination of lettuce seeds. *Journal of Applied Biology & Biotechnology*. 7(1): 7.
- Sforza, E., D. Simionato, G. M. Giacometti, A. Bertuccio, T. Morosinotto. 2012. Adjusted Light & Dark Cycles can Optimize Photosynthetic Efficiency in Algae Growing in Photobioreactors. *PLoS ONE*. 7(6): 1-10.
- Shehata, T. E. Kempner, E. S. 1977. *Growth & Cell Volume of Euglena* sp. *gracilis* in Different Media. *Applied & Environmental Microbiology*. 33 (4): 875-876.

- Singh, D. P., Khattar, J. S., Rajput, A., Chaudhary, R., Singh, R. 2019. High production of carotenoids by the green microalga *Asterarcys quadricellulare* PUMCC 5.1.1 under optimized culture conditions. *PLoS ONE*. 14(9): 1-2
- Sostaric, M., Golob, J., Bricelj, M., Klinar, D., Pivec, A. 2009. Studies On The Growth of *Chlorella vulgaris* In Culture Media With Different Carbon Source. *Biochemical Engineering*. 23(4): 471-477.
- Stinco, C. M., Benítez, V. N., & Vico, M. V. 2017. Natural dyes from lichens and their stability under different pH and temperature conditions. *Journal of Applied Phycology*, 29(3), 1379-1386.
- Sumida, S., Harvard, L., Nobuhiko, K., & Tetsuaki, O. 2007. Mechanism of Conversion from Heterotrophy to Autotrophy in *Euglena* sp. *gracilis*. *Cytologia*. 72(4): 447.
- Sun, H., Zhang, C., & Wang, J. 2016. Research progress in microalgal biofuels as alternative resources for biodiesel production. *Journal of Agricultural Science and Technology*, 18(5), 1-11.
- Suyono, E. A., & Samudra, T. T. 2015. Growth and Lipid Content of Microalgae *Tetraselmis* sp. Culture using Combination of Re-Blue Light and Nitrogen Starvation as an Effort to Increase Biodiesel Production. *Journal of Microbiology Biotechnology Engineering*, 1: 1-7.
- Suzuki, K. 2017. Large-Scale Cultivation of *Euglena* sp.. *Euglena* sp.: Biochemistry, Cell and Molecular Biology.p:285–293.
- Suzuki, K., Mitra, S., Iwata, O., Ishikawa, T., Kato, S., & Yamada, K. 2015. Selection and Characterization of *Euglena* sp. *anabaena* var. *Minor* as a New Candidate *Euglena* sp. Species for Industrial Application. *Bioscience, Biotechnology and Biochemistry*, 79 (10): 1730–1736.
<https://doi.org/10.1080/09168451.2015.1045828>
- Takahashi, Y., Ohta, A., & Masukawa, H. 2016. Accumulation of paramylon in *Euglena* sp. *gracilis* under anaerobic conditions. *Frontiers in Energy Research*, 4, 28.
- Tanumihardjo, S. A., Palacios, N., Pixley, K. V., Provitamin A, & Carotenoid Bioavailability Evaluation Consortium. 2010. Provitamin A carotenoid

- bioavailability: what really matters?. *International Journal for Vitamin and Nutrition Research*, 80(4-5), 336-350.
- Taw. 1990. *Instructions for maintaining Pure and Mass Microalgae Culture*. United Nations Development Programme. Food and Agriculture Organisations of the United Nations.
- Thrane, J., Kyle, M., Striebel, M., Haande, S., Grung, M., Rohrlack, T., & Andersen, T. 2015. Spectrophotometric Analysis of Pigments: A Critical Assesment of a High-Throughput Method for Analysis of Algal Pigment Mixtures by Spectral Deconvolution. *PloS ONE*. 10 (9): 1-24
- Toyama, T., Hanaoka, T., Yamada, K., Suzuki, K., Tanaka, Y., Morikawa, M., & Mori, K. 2019. Enhanced Production of Biomass and Lipids by *Euglena* sp. *Gracilis* Via Co-Culturing with A Microalga Growth-Promoting Bacterium, *Emticicia* sp. EG3. *Biotechnology for Biofuels*, 12(1): 1–12. <https://doi.org/10.1186/s13068-019-1544->
- Vonshak, A. 1997. *Spirulina platensis* (Arthrospira): Physiology, Cell Biology and Biotechnology. UK: Taylor & Francis Ltd.
- Vonshak, A., S.A. Boussiba, A. Abieliovich & A. Richmond. 2004. Production of *Spirulina platensis* biomass: Maintenance of monoalgal culture outdoors. *Biotechnology and Bioengineering*, 25(2):341-349
- Wang, Y., Cui, R., Xiao, Y., Fang, J., Xu, Q. 2015. Effect of Carotene and Lycopene on the Risk of Prostate Cancer: A Systematic Review and Dose– Response Meta-Analysis of Observational Studies. *PLoS One* 10: e0137427
- Wang, Y., Seppänen, L. T., Rischer, H., & Wiebe, M. G. 2018. *Euglena* sp. *gracilis* Growth and Cell Composition Under Different Temperature, Light and Trophic Conditions. *PLoS ONE*, 13(4): 1–17. <https://doi.org/10.1371/journal.pone.0195329>
- Wijanarko, A., Dianursanti, Gozan, M., Andika, S. M. K., Widiastuti, P., Hermansyah, H., Witarto, A. B., Asami, K., Soemantojo, R.W., Ohtaguchi, K., & Song, S. K. 2006. Enhancement of Carbondioxide Fixation by Alteration of Illumination during *Chlorella vulgaris* Buitenzorg's Growth. *Biotechnology and Bioprocess Engineering*, 11: 484-488.

- Zeb, A. Mehmood, S. 2004. Carotenoids from Various Sources & Their Potential Health Applications. *Pakistan Journal of Nutrition*. 3(3): 199-204.
- Zhang, Y., Ye, X., Guo, J., & Hu, Z. 2017. Paramylon from *Euglena* sp. gracilis induces apoptosis in human lung cancer cells through activating p53 pathway. *Biomedicine & Pharmacotherapy*, 91, 775-780.
- Zimorski, V., C. Rauch, J.J. Van, A.G.M. Tielens, & W.F. Martin. 2017. *Euglena* sp.: *Biochemistry, Cell and Molecular Biology*. Springer, New York.