



## DAFTAR PUSTAKA

- Ali, N., Ting, Z., Khan, YH, Athar, MA, Ahmad, V and Idress, M. (2014). Making Biofuels from Microalgae- a Review of Technologies. *J Food Sci Technol*, 1(2): 7-14.
- Amelia, R., Budiman, A., Nugroho, A. P., & Suyono, E. A. (2023). Influence of Salinity on The Growth and Fatty Acids Production of *Euglena* sp. Local Strain from Dieng Plateau, Indonesia. *Squalen Bulletin of Marine and Fisheries Postharvest and Biotechnology*, 18(3), 202–213. <https://doi.org/10.15578/squalen.812>
- Asiandu, A. P., Nugroho, A. P., Naser, A. S., Sadewo, B. R., Koerniawan, M. D., Budiman, A., Siregar, U. J., Suwanti, L. T., & Suyono, E. A. (2023). The Effect of Tofu Wastewater and pH on the Growth Kinetics and Biomass Composition of *Euglena* sp. *Current Applied Science and Technology*, 23(2). <https://doi.org/10.55003/cast.2022.02.23.010>
- Atiek, N., Eddy, Y., & Tjokronegoro, R. (2016). Stuktur dan Morfologi Elektrolit Apatit Lantanum Silikat Berbahan Dasar Silika Sekam Padi. *Jurnal Material Dan Energi Indonesia*, 06(02), 1–6.
- Bakku, R. K., Yamamoto, Y., Inaba, Y., Hiranuma, T., Gianino, E., Amarianto, L., Mahrous, W., Suzuki, H., & Suzuki, K. (2023). New insights into raceway cultivation of *Euglena gracilis* under long-term semi-continuous nitrogen starvation. *Scientific Reports*, 13(1), 1–11. <https://doi.org/10.1038/s41598-023-34164-1>
- Behrenfeld, M.J., J.T. Randerson, C.R. McClain, G.C. Feldman, S.O. Los, C.J. Beneragama, C. K., Goto, K., & Kodithuwakkuge, V. N. (2021). Photosynthesis, Growth and Dry Biomass Production in *Euglena gracilis* Klebs as Affected by Three Growth Irradiance Levels. *Asian Journal of Research in Agriculture and Forestry*, 50–59. <https://doi.org/10.9734/ajraf/2021/v7i430137>
- Bligh, E. G., & Dyer, W. J. (1959). A Rapid Method of Total Extraction and Purification. *The National Research Council of Canada*, 37(8), 911–917.
- Brahmana, S. S., Achmad, F., Litbang Sumber Daya Air Jln Ir Juanda, P. H., & Utama Teknik Lingkungan Keairan, P. (2012). POTENSI BEBAN PENCEMARAN NITROGEN, FOSFAT, KUALITAS AIR, STATUS TROFIK DAN STRATIFIKASI WADUK RIAM KANAN. In *Jurnal Sumber Daya Air* (Vol. 8, Issue Mei).
- Bray, J. P., Broady, P. A., Niyogi, D. K., & Harding, J. S. (2008). Periphyton communities in New Zealand streams impacted by acid mine drainage. *Marine and Freshwater Research*, 59(12), 1084–1091. <https://doi.org/10.1071/MF08146>
- Buetow, D. E., & Branch, G. (1962). DIFFERENTIAL EFFECTS OF TEMPERATURE ON THE GROWTH OF *EUGLENA GRACILIS*. In *Experimental Cell Research* (Vol. 27).
- Chadir, ZS, PF Hillman and R. Zainul. (2016). Isolation and Identification of Freshwater Microalgae Potentially as Antibacterial from Talago Biru, Koto Baru, West Sumatra. *Der Pharmacia Lettre*, 8 (20) : 157-165.



- Chen, Z., Wang, L., Qiu, S., & Ge, S. (2018). Determination of Microalgal Lipid Content and Fatty Acid for Biofuel Production. *BioMed Research International*, 2018, 1–17. <https://doi.org/10.1155/2018/1503126>
- Constantopoulos' And, G., & Bloch, K. (1967). Isolation and Characterizationi of Glycolipids frone Some Photosynthetic Bacteria. In *JOURNAL OF BACTERIOLOGY* (Vol. 93, Issue 6).
- Cunningham, F. X., & Schiff, J. A. (1986). Chlorophyll-Protein Complexes from *Euglena gracilis* and Mutants Deficient in Chlorophyll b'. *Plant Physiol*, 80, 223–230.
- D'Alessandro, E. B., & Antoniosi Filho, N. R. (2016). Concepts and studies on lipid and pigments of microalgae: A review. In *Renewable and Sustainable Energy Reviews* (Vol. 58, pp. 832–841). Elsevier Ltd. <https://doi.org/10.1016/j.rser.2015.12.162>
- Danilov, R. A., & Ekelund, N. G. A. (2001). Effects of pH on the Growth Rate, Motility and Photosynthesis in *Euglena gracilis*. *Folia Microbiologica*, 46(6), 549–554. <https://doi.org/10.1007/BF02818001>
- El-Qudah, J. M. (2014). Contents of chlorophyll and carotenoid pigments in common thyme (*Thymus vulgaris* L.). *World Applied Sciences Journal*, 29(10), 1277–1281. <https://doi.org/10.5829/idosi.wasj.2014.29.10.2039>
- Eramma, N., Lalita, H. M., Satishgouda, S., Jyothi, S. R., Venkatesh, C. N., & Patil, S. J. (2023). *Zooplankton Productivity Evaluation of Lentic and Lotic Ecosystem*. [www.intechopen.com](http://www.intechopen.com)
- Febrina, ), Sigalingging, A., Padil, ), Sri, ), Muria, R., Program, M., Sarjana, S., Kimia, T., & Jurusan, D. (2019). KULTIVASI MIKROALGA MENGGUNAKAN MEDIA AF6 BERDASARKAN PERBEDAAN VOLUME SOLUTION A MEDIA AF6. In *Jom FTEKNIK* (Vol. 6).
- Furuhashi, T., Ogawa, T., Nakai, R., Nakazawa, M., Okazawa, A., Padermschok, A., Nishio, K., Hirai, M. Y., Arita, M., & Ohta, D. (2015). Wax ester and lipophilic compound profiling of *Euglena gracilis* by gas chromatography-mass spectrometry: toward understanding of wax ester fermentation under hypoxia. *Metabolomics*, 11(1), 175–183. <https://doi.org/10.1007/s11306-014-0687-1>
- Gissibl, A., Sun, A., Care, A., Nevalainen, H., & Sunna, A. (2019). Bioproducts From *Euglena gracilis*: Synthesis and Applications. *Frontiers in Bioengineering and Biotechnology*, 7(108), 1–16. <https://doi.org/10.3389/fbioe.2019.00108>
- Gultom, S. O. (2018). Mikroalga: Sumber Energi Terbarukan Masa Depan. *Jurnal Kelautan: Indonesian Journal of Marine Science and Technology*, 11(1), 95–103. <https://doi.org/10.21107/jk.v11i1.3802>
- Gupta, A., Gupta, R., & Singh, R. L. (2017). Microbes and Environment. In *Principles and Applications of Environmental Biotechnology for a Sustainable Future* (pp. 43–84). Springer Singapore. [https://doi.org/10.1007/978-981-10-1866-4\\_3](https://doi.org/10.1007/978-981-10-1866-4_3)
- Hadiyanto, O. :, & Azim, M. (2012). *MIKROALGA Edisi Pertama*.
- Hakim, W. H. A., Erfianti, T., Dhiaurahman, A. N., Maghfiroh, K. Q., Amelia, R., Nurafifah, I., Kurnianto, D., Siswanti, D. U., Suyono, E. A., Marno, S., & Devi, I. (2023). The Effect of IAA Phytohormone (Indole-3-Acetic Acid) on the Growth, Lipid, Protein, Carbohydrate, and Pigment Content

- in *Euglena* sp. *Malaysian Journal of Fundamental and Applied Sciences*, 19(4), 513–524. <https://doi.org/10.11113/mjfas.v19n4.2884>
- Haraguchi, A., & Zheng, J. (2021). Effect of pH on Photosynthesis of *Euglena mutabilis* Schmitz, an Acidophilic Benthic Flagellate. *Hydrobiology*, 1(1), 2–9. <https://doi.org/10.3390/hydrobiology1010002>
- Harmoko, Triyanti, M., & Aziz, L. (2018). EKSPLORASI MIKROALGA DI SUNGAI MESAT KOTA LUBUKLINGGAU. *Jurnal Biologi Dan Pembelajarannya*, 13(2), 19–23.
- Hartati, R., Endrawati, H., Yudiatyi, E., & Iriani, V. R. (2011). Pengaruh Pengurangan Konsentrasi Nutrien Fosfat dan Nitrat Terhadap Kandungan Lipid Total *Nannochloropsis oculata* Pendahuluan. 16(1), 24–29. [www.ijms.undip.ac.id](http://www.ijms.undip.ac.id)
- Imran, D. H., Jamin, F. S., Muhammad Azis, dan A., Jurusan Agroteknologi Fakultas Pertanian Universitas Negeri Gorontalo, M., & Jurusan Agroteknologi Fakultas Pertanian Universitas Negeri Gorontalo, D. (2021). Kandungan Unsur Hara Makro N, P, K, Serta Kualitas Air di Bendungan Alale, Lomaya, dan Alopuhu. *Soil Environment*, 21(3), 34–39.
- Inui, H., Ishikawa, T., & Tamoi, M. (2017). Wax ester fermentation and its application for biofuel production. *Advances in Experimental Medicine and Biology*, 979, 269–283. [https://doi.org/10.1007/978-3-319-54910-1\\_13](https://doi.org/10.1007/978-3-319-54910-1_13)
- Inwongwan, S., Kruger, N. J., Ratcliffe, R. G., & O’neill, E. C. (2019). *Euglena* central metabolic pathways and their subcellular locations. *Metabolites*, 9(6), 1–24. <https://doi.org/10.3390/metabo9060115>
- Isnandar, F., Elystia, S., Muria, R., Program, M., Lingkungan, S. T., Dosen, ), Lingkungan, T., Kimia, T., Pencegahan, L., Pengendalian, D., & Lingkungan, P. (2020). Pengaruh Kecepatan Pengadukan pada Sistem High Rate Algae Reactor terhadap Spesific Growth Rate Mikroalga dan Mixed Liquor Suspended Solid dalam Palm Oil Mill Efluent. *JOM FTEKNIK*, 7(1), 1–7.
- Issarapayup, K., Powtongsook, S., & Pavasant, P. (2009). Flat panel airlift photobioreactors for cultivation of vegetative cells of microalga *Haematococcus pluvialis*. *Journal of Biotechnology*, 142(3–4), 227–232. <https://doi.org/10.1016/j.jbiotec.2009.04.014>
- Jalal, K. C. A., Shamsuddin, A. A., Rahman, M. F., Nurzatul, N. Z., & Rozihan, M. (2013). Growth and total carotenoid, chlorophyll a and chlorophyll b of tropical microalgae (*Isochrysis* sp.) in laboratory cultured conditions. *Journal of Biological Sciences*, 13(1), 10–17. <https://doi.org/10.3923/jbs.2013.10.17>
- Jena, J., Nayak, M., Sekhar Panda, H., Pradhan, N., Sarika, C., Ku. Panda, P., V. S. K Rao, B., B. N. Prasad, R., & Behari Sukla, L. (2012). Microalgae of Odisha Coast as a Potential Source for Biodiesel Production. *World Environment*, 2(1), 12–17. <https://doi.org/10.5923/j.env.20120201.03>
- Jorquera, O., Kiperstok, A., Sales, E. A., Embiruçu, M., & Ghirardi, M. L. (2010). Comparative energy life-cycle analyses of microalgal biomass production in open ponds and photobioreactors. *Bioresource Technology*, 101(4), 1406–1413. <https://doi.org/10.1016/j.biortech.2009.09.038>

- Khatiwada, B., Sunna, A., & Nevalainen, H. (2020). Molecular tools and applications of *Euglena gracilis*: From biorefineries to bioremediation. In *Biotechnology and Bioengineering* (Vol. 117, Issue 12, pp. 3952–3967). John Wiley and Sons Inc. <https://doi.org/10.1002/bit.27516>
- Kishore, G., Kadam, A. D., Kumar, U., & Arunachalam, K. (2018). Modeling *Euglena* sp. growth under different conditions using an artificial neural network. *Journal of Applied Phycology*, 30(2):955-967.
- Kim, H., Villareal, J., Liu, K., & Ling, M. (2021). *Investigating the effects of temperature on Euglena gracilis growth rate*.
- Kim, S., Wirasnita, R., Lee, D., Yu, J., & Lee, T. (2021). Enhancement of growth and paramylon production of *euglena gracilis* by upcycling of spent tomato byproduct as an alternative medium. *Applied Sciences (Switzerland)*, 11(17). <https://doi.org/10.3390/app11178182>
- Kitaya, Y., Azuma, H., & Kiyota, M. (2005). Effects of temperature, CO<sub>2</sub>/O<sub>2</sub> concentrations and light intensity on cellular multiplication of microalgae, *Euglena gracilis*. *Advances in Space Research*, 35(9 SPEC. ISS.), 1584–1588. <https://doi.org/10.1016/j.asr.2005.03.039>
- Ko, S., Speckmaier, S., & Wang, N. (2019). *The Effect of Temperature on the Growth Rate of Euglena gracilis*.
- Krajčovič, J., Matej Vesteg, & Schwartzbach, S. D. (2015). Euglenoid flagellates: A multifaceted biotechnology platform. *Journal of Biotechnology*, 202, 135–145. <https://doi.org/10.1016/j.jbiotec.2014.11.035>
- Krishnan, V., Uemura, Y., Thanh, N. T., Khalid, N. A., Osman, N., & Mansor, N. (2015). Three types of Marine microalgae and *Nannochloropsis oculata* cultivation for potential source of biomass production. *Journal of Physics: Conference Series*, 622(1). <https://doi.org/10.1088/1742-6596/622/1/012034>
- Kulandaisamy VENIL, C., Lakshmanaperumalsamy, P., Kulandaisamy Venil, C., & Lakshmanaperumalsamy, P. (2013). An Insightful Overview on Microbial Pigment, Prodigiosin. *An Insightful Overview on Microbial Pigment, Prodigiosin Article in Electronic Journal of Biology*, 5(3), 49–61. <https://www.researchgate.net/publication/250918164>
- Kurniawan, M., Izzati, M., Nurchayati, Y., Struktur, L. B., Tumbuhan, F., Biologi, J., & Matematika, F. (2010). Kandungan Klorofil, Karotenoid, dan Vitamin C pada Beberapa Spesies Tumbuhan Akuatik. In *Buletin Anatomi dan Fisiologi: Vol. XVIII* (Issue 1).
- Kyohei, Y., Yamada, K., Suzuki, K., & Takunaga, E. (2023). Method for growing edible *Euglena gracilis* in an inexpensive medium with tomato juice to a high cell density equivalent to the density in KH medium. *Sustainable Food Technol*, 1, 709–721. <https://doi.org/10.1039/d3FO00086a>
- Lahenda, S., Ellyke, & Khoiron. (2015). The Use of *Eichornia Crassipes* to Reduce Mercury (Hg) Levels on Liquid Waste in Illegal Gold Mines. *E-Jurnal Pustaka Kesehatan*, 3(2), 356–361.
- Lavens, P., & Sorgeloos, P. (1996). *Manual on the Production and Use of Live Food for Aquaculture* (P. Lavens & P. Sorgeloos, Eds.; 361st ed.). FAO

- | Fisheries   | Technical   | Paper. |
|---|---|--------|
|   | <a href="https://www.researchgate.net/publication/285237285">https://www.researchgate.net/publication/285237285</a> |        |
| Lichtenthaler, H. K., & Buschmann, C. (2001). Chlorophylls and Carotenoids: Measurement and Characterization by UV - VIS Spectroscopy . <i>Current Protocols in Food Analytical Chemistry</i> , 1(1).   | <a href="https://doi.org/10.1002/0471142913.faf0403s01">https://doi.org/10.1002/0471142913.faf0403s01</a>           |        |
| Maghfiroh, K. Q., Erfianti, T., NurAfifah, I., Amelia, R., Kurnianto, D., Sadewo, B. R., Maggandari, R., Aji, B. R., Budiman, A., & Suyono, E. A. (2023). The effect of photoperiodism on nutritional potency of <i>Euglena</i> sp. Indonesian strains. <i>Malaysian Journal of Nutrition</i> , 29(3), 453–466. <a href="https://doi.org/10.31246/mjn-2023-0004">https://doi.org/10.31246/mjn-2023-0004</a>     |   |        |
| Marian Cramer, B., & Myers, J. (1952). Growth and Photosynthetic Characteristics of <i>Euglena graecilis</i> . <i>Bd</i> , 17, 384–402.   |   |        |
| Metsoviti, M. N., Papapolymerou, G., Karapanagiotidis, I. T., & Katsoulas, N. (2019). Comparison of growth rate and nutrient content of five microalgae species cultivated in greenhouses. <i>Plants</i> , 8(279), 1–13. <a href="https://doi.org/10.3390/plants8080279">https://doi.org/10.3390/plants8080279</a>  |   |        |
| Mohamed, H. E., Van De Meene, A. M. L., Roberson, R. W., & Vermaas, W. F. J. (2005). Myxoxanthophyll is required for normal cell wall structure and thylakoid organization in the cyanobacterium <i>Synechocystis</i> sp. strain PCC 6803. <i>Journal of Bacteriology</i> , 187(20), 6883–6892. <a href="https://doi.org/10.1128/JB.187.20.6883-6892.2005">https://doi.org/10.1128/JB.187.20.6883-6892.2005</a> |   |        |
| Monfils, A.K., R.E. Triemer, E.F. Bellairs. (2011). Characterization of paramylon morphological diversity in photosynthetic euglenoids (Euglenales, Euglenophyta). <i>Phycologia</i> , 50:156-169.  |   |        |
| Morten, B. C., Scott, R. J., & Avery-Kiejda, K. A. (2016). Comparison of three different methods for determining cell proliferation in breast cancer cell lines. <i>Journal of Visualized Experiments</i> , 115, 1–11. <a href="https://doi.org/10.3791/54350">https://doi.org/10.3791/54350</a>  |   |        |
| Myrstener, E., Ninnes, S., Meyer-Jacob, C., Mighall, T., & Bindler, R. (2021). Long-term development and trajectories of inferred lake-water organic carbon and pH in naturally acidic boreal lakes. <i>Limnology and Oceanography</i> , 66(6), 2408–2422. <a href="https://doi.org/10.1002/lno.11761">https://doi.org/10.1002/lno.11761</a>  |   |        |
| Nazir, M., Muyassir, M., & Syakur, S. (2017). Pemetaan Kemasaman Tanan dan Analisis Kebutuhan Kapur di Kecamatan Keumala Kabupaten Pidie. <i>Jurnal Ilmiah Mahasiswa Pertanian</i> , 2(1), 21–30. <a href="https://doi.org/10.17969/jimfp.v2i1.2149">https://doi.org/10.17969/jimfp.v2i1.2149</a>   |   |        |
| Nelson, D. R., & Viamajala, S. (2016). One-pot synthesis and recovery of fatty acid methyl esters (FAMEs) from microalgae biomass. <i>Catalysis Today</i> , 269, 29–39. <a href="https://doi.org/10.1016/j.cattod.2015.11.048">https://doi.org/10.1016/j.cattod.2015.11.048</a>   |   |        |
| Nezbrytska, I., Shamanskyi, S., Pavliukh, L., & Gorbunova, Z. (2022a). Application of <i>Euglena gracilis</i> in wastewater treatment processes. <i>Biotechnologia</i> , 103(4), 323–330. <a href="https://doi.org/10.5114/bta.2022.120702">https://doi.org/10.5114/bta.2022.120702</a>   |   |        |
| Nezbrytska, I., Shamanskyi, S., Pavliukh, L., & Gorbunova, Z. (2022b). Application of <i>Euglena gracilis</i> in wastewater treatment processes. <i>Biotechnologia</i> , 103(4), 323–330. <a href="https://doi.org/10.5114/bta.2022.120702">https://doi.org/10.5114/bta.2022.120702</a>   |   |        |

- Niswati, A., & Mas Achmad Syamsul Arif, dan. (2008). Perubahan Populasi Protozoa dan Alga Dominan pada Air Genangan Tanah Padi Sawah yang Diberi Bokashi Berkelanjutan. *J. Tanah Trop*, 13(3), 225–231.
- Nugroho, A. S., Djalal Tanjung, S., Hendrarto, B., Doktor, P., Lingkungan, I., Semarang, U., Biologi, F., Gadjah, U., Yogyakarta, M., Perikanan, F., & Kelautan, I. (2014). Distribusi Serta Kandungan Nitrat dan Fosfat di Perairan Danau Rawa Pening. *Bioma*, 3(1), 27–41.
- Nur, F., Erfianti, T., Andeska, D. P., Putri, R. A. E., Nurafifah, I., Sadewo, B. R., & Suyono, E. A. (2023). Enhancement of Microalgal Metabolite Production through *Euglena* sp. Local Strain and Glagah Strain Consortia. *Biosaintifika*, 15(1), 36–47. <https://doi.org/10.15294/biosaintifika.v15i1.41895>
- Nurafifah, I., Hardianto, M. A., Erfianti, T., Amelia, R., Maghfiroh, K. Q., Kurnianto, D., Siswanti, D. U., Sadewo, B. R., Maggandari, R., & Suyono, E. A. (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. <https://doi.org/10.7454/mss.v27i2.1506>
- Prayitno, J. (2016). Pola Pertumbuhan dan Pemanenan Biomassa dalam Fotobioreaktor Mikroalga untuk Penangkapan Karbon Growth Pattern and Biomass Harvesting in Microalgal Photobioreactor for Carbon Sequestration. *Jurnal Teknologi Lingkungan*, 17(1), 45–52.
- Ramadhan, I., Made Maya, N., Safrilia, S., Kurniasari, L., Hidayah, E. N., & Farahdiba, A. U. (2021). Potensi Biofuel Pada Mikroalga dengan Variasi Limbah Menggunakan Oxidation Ditch Algae Reactor. *Jurnal Envirous*, 1(2), 93–101.
- Salimah, S., Amintarti, S., Ajizah, A., Jalan, M., & Hasan Basry, B. (2023). Kajian Keragaman Mikroalga Di Kawasan Rawa Komplek Persada Permai Baru III Sebagai Booklet Pada Materi Protista Kelas X SMA (Salimah). *Jurnal Ilmu Sosial Dan Pendidikan (JISIP)*, 7(1), 2598–9944. <https://doi.org/10.58258/jisip.v7i1.4100/http>
- Santoso, A. (2016). A Study on Biodiesel Production from Microalgae Biomass (Comparison of Energy Budget and Environmental Cost Value). *Jurnal Teknologi Lingkungan*, 17(2), 66–72.
- Schagerl, M., Pichler, C., & Donabaum, K. (2003). Patterns of major photosynthetic pigments in freshwater algae. 2. Dinophyta, euglenophyta, chlorophyceae and charales. *Annales de Limnologie*, 39(1), 49–62. <https://doi.org/10.1051/limn/2003005>
- Schagerl, M., Siedler, R., Konopáčová, E., & Ali, S. S. (2022). Estimating Biomass and Vitality of Microalgae for Monitoring Cultures: A Roadmap for Reliable Measurements. *Cells*, 11(15), 1–17. <https://doi.org/10.3390/cells11152455>
- Silva, D. A., Cardoso, L. G., de Jesus Silva, J. S., de Souza, C. O., Lemos, P. V. F., de Almeida, P. F., Ferreira, E. de S., Lombardi, A. T., & Druzian, J. I. (2022). Strategy for the cultivation of Chlorella vulgaris with high biomass production and biofuel potential in wastewater from the oil industry. *Environmental Technology and Innovation*, 25, 1–17. <https://doi.org/10.1016/j.eti.2021.102204>



- Sudibyo, H., Purwanti, Y., Pradana, Y. S., Samudra, T. T., Budiman, A., & Suyono, E. A. (2018). Modification of growth medium of mixed-culture species of microalgae isolated from southern Java coastal region. *MATEC Web of Conferences*, 154. <https://doi.org/10.1051/matecconf/201815401001>
- Takeyama, H., Kanamaru, A., Yoshino, Y., Kakuta, H., Kawamura, Y., & Matsunaga, T. (1997). Production of antioxidant vitamins, beta-carotene, vitamin C, and vitamin E, by two-step culture of *Euglena gracilis*. *Z. Biotechnology and bioengineering*, 53(2), 185–190. [https://doi.org/10.1002/\(SICI\)1097-0290\(19970120\)53:2<185::AID-BIT8>3.0.CO;2-K](https://doi.org/10.1002/(SICI)1097-0290(19970120)53:2<185::AID-BIT8>3.0.CO;2-K)
- Torihara, K., & Kishimoto, N. (2015). Evaluation of Growth Characteristics of *<I>Euglena gracilis</I>* for Microalgal Biomass Production Using Wastewater. *Journal of Water and Environment Technology*, 13(3), 195–205. <https://doi.org/10.2965/jwet.2015.195>
- Tossavainen, M., Ilyass, U., Ollilainen, V., Valkonen, K., Ojala, A., & Romantschuk, M. (2019). Influence of long term nitrogen limitation on lipid, protein and pigment production of *Euglena gracilis* in photoheterotrophic cultures. *PeerJ*, 2019(4). <https://doi.org/10.7717/peerj.6624>
- Trenkenshu, R. P. (2019). Calculation of the specific growth rate of microalgae. *Marine Biological Journal*, 4(1), 100–108. <https://doi.org/10.21072/mbj.2019.04.1.09>
- Tsuchikane, Y., Hamaji, T., Ota, K., & Kato, S. (2018). Establishment of a clonal culture of unicellular conjugating algae. *Journal of Visualized Experiments*, 2018(137), 1–7. <https://doi.org/10.3791/57761>
- Udayan, A., Pandey, A. K., Sirohi, R., Sreekumar, N., Sang, B. I., Sim, S. J., Kim, S. H., & Pandey, A. (2023). Production of microalgae with high lipid content and their potential as sources of nutraceuticals. *Phytochemistry Reviews*, 22(4), 833–860. <https://doi.org/10.1007/s11101-021-09784-y>
- Uliesther, N., Nurafifah, I., Rohmawati, I., Putri, R. A. E., Erfianti, T., & Suyono, E. A. (2023). Different carbon source alternative medium improves *Euglena* sp. growth and paramylon production. *Biogenesis: Jurnal Ilmiah Biologi*, 11(1), 102–113. <https://doi.org/10.24252/bio.v11i1.35221>
- Ummadi, K., Hifnalisa, & Sufardi. (2023). Ketersediaan N, P, dan K pada Lahan Sawah di Kecamatan Labuhan Haji Barat Kabupaten Aceh Selatan. *Jurnal Ilmiah Mahasiswa Pertanian*, 8(4), 698–708.
- Urbanová, K., Vrkoslav, V., Valterová, I., Háková, M., & Cvačka, J. (2012). Structural characterization of wax esters by electron ionization mass spectrometry. *Journal of Lipid Research*, 53(1), 204–213. <https://doi.org/10.1194/jlr.D020834>
- Van Vuuren, S. J., Taylor, J., Van Ginkel, K., & Gerber, E. (2006). *Easy identification of the most common freshwater algae: a guide for the identification of microscopic algae in South African freshwaters*. Resource Quality Services (RQS).

- Verma, S., Bagul, S. Y., Choudhary, P., Chakdar, H., Das, S., Siddiqui, N., & Saxena, A. K. (2021). Microscope Assisted Uni-algal isolation through Dilution (MAU-D): a simple modified technique for tapping diverse cyanobacteria. *3 Biotech*, 11(7). <https://doi.org/10.1007/s13205-021-02890-w>
- Wang, Y., Seppänen-Laakso, T., Rischer, H., & Wiebe, M. G. (2018). *Euglena 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>
- Wibawati, W., Mulyanto, D., & Munawar, A. (2024). Status Hara N, P, dan K Pada Tanah Sawah Irigasi di Kapanewon Prambanan, Kabupaten Sleman, Daerah Istimewa Yogyakarta. *Jurnal Tanah Dan Sumberdaya Lahan*, 11(1), 215–222. <https://doi.org/10.21776/ub.jtsl.2024.011.1.23>
- Wolkers, H., M. Barbosa, D.M. Kleinegris, R. Bosma, R.H. Wijffels. (2011). *Microalgae: the green gold of the future*. Propress, Wageningen
- Wu, M., Li, J., Qin, H., Lei, A., Zhu, H., Hu, Z., & Wang, J. (2020). Pre-concentration of microalga *Euglena gracilis* by alkalescent pH treatment and flocculation mechanism of Ca<sub>3</sub>(PO<sub>4</sub>)<sub>2</sub>, Mg<sub>3</sub>(PO<sub>4</sub>)<sub>2</sub>, and derivatives. *Biotechnology for Biofuels*, 13(1), 1–13. <https://doi.org/10.1186/s13068-020-01734-8>
- Zainuddin, Zuraida, & Jufri, Y. (2019). Evaluasi Ketersediaan Unsur Hara Fosfor (P) pada Lahan Sawah Intensif Kecamatan Sukamakmur Kabupaten Aceh Besar. *Jurnal Ilmia Mahasiswa Pertanian*, 4(4), 603–609.
- Zhu, J., Chen, W., Chen, H., Zhang, X., He, C., Rong, J., & Wang, Q. (2016). Improved productivity of neutral lipids in *Chlorella* sp. A2 by minimal nitrogen supply. *Frontiers in Microbiology*, 7(APR). <https://doi.org/10.3389/fmicb.2016.00557>
- Zhu, Z., Sun, J., Fa, Y., Liu, X., & Lindblad, P. (2022). Enhancing microalgal lipid accumulation for biofuel production. *Frontiers in Microbiology*, 13, 1–11. <https://doi.org/10.3389/fmicb.2022.1024441>