DAFTAR PUSTAKA

Akusu, O. M., and Wordu, G. O. 2019. Physicochemical properties and fatty acid profile of Allanblackia seed oil and African pear pulp oils. *International Journal of Biotechnology and Food Science*, *7*(2), 14-22.

Al Qory, D. R., Ginting, Z., and Bahri, S. 2021. Pemurnian Minyak Jelantah Menggunakan Karbon Aktif dari Biji Salak (Salacca Zalacca) Sebagai Adsorben Alami dengan Aktivator H_2SO_4. *Jurnal Teknologi Kimia Unimal*, *10*(2), 26-36.

Amata, I. A., and Ozuor, E. 2013. The effect of different processing methods on the quality of *Crude Palm Oil* (CPO) in Delta North Agricultural Zone of Delta State, Nigeria. *Journal of Environmental Issues and Agriculture in Developing Countries*, *5*(1), 19-24.

Aminullah, A., and Mardiah, M. 2018. Kandungan total lipid lemak ayam dan babi berdasarkan perbedaan jenis metode ekstraksi lemak. *Jurnal Agroindustri Halal*, 4(1), 094-100.

Ana, Sittenfeld., Maribelle, Vargas., Ethel, Sánchez., Marielos, Mora., Aurelio, Serrano. 2014. Una nueva especie de *Euglena* (Euglenozoa: *Euglena*les) aislada de ambientes extremófilos en las Pailas de Barro del Volcán Rincón de la Vieja, Costa Rica. Revista De Biologia Tropical, 52(1):27-30. doi: 10.15517/RBT.V52I1.14698

Anugrah, P. T., and Wachjar, A. 2018. Pengelolaan Pemanenan dan Transportasi Kelapa Sawit (Elaeis guineensis Jacq.) di Bangun Bandar Estate, Sumatera Utara. *Buletin Agrohorti*, *6*(2), 213-220.

Ardiyanto, A., Ariman, A., and Supriyadi, E. 2021. Alat Pengukur Suhu Berbasis Arduino Menggunakan Sensor Inframerah Dan Alarm Pendeteksi Suhu Tubuh Diatas Normal. *Sinusoida*, *23*(1), 11-21.

Ariyanti, D., and Handayani, N. A. 2012. Mikroalga sebagai sumber biomasa terbarukan: Teknik kultivasi dan pemanenan. *METANA*, *6*(02).

Asmoro, C. P. 2022. Pengaruh Jenis Pelarut Pada Ekstraksi Asam Lemak Dari Mikroalga. *Integrated Lab Journal*, *10*(01).

Awal, J., Tantu, H., and Tenriawaru, E. P. 2015. Identifikasi alga (algae) sebagai bioindikator tingkat pencemaran di Sungai Lamasi Kabupaten Luwu. *Dinamika*, *5*(2).

Azim, M. 2012. Mikroalga Sumber Pangan dan Energi Masa Depan.

Bacovsky, D., Körbitz, W., Mittelbach, M., and Wörgetter, M. 2007.Biodiesel production: technologies and European providers. *IEA task*, *39*, 9.

Bahtiar, E. T., Denih, A., Karlinasari, L., Putra, G. R., Nugroho, N., and Sulistyono, S. (2022). Mengidealisasikan Penampang Lintang Buluh Bambu Menjadi Bentuk Geometri Conic Untuk Menghitung Sifat Penampangnya. Jurnal Penelitian Hasil Hutan, 40(3), 165-188.

Bansfield, D., Spilling, K., Mikola, A., and Piiparinen, J. 2022. Bioflocculation of *Euglena* gracilis via direct application of fungal filaments: A rapid harvesting method. *Journal of Applied Phycology*, *34*(1), 321-334.

Barqi, W. S. 2014. Pengambilan minyak mikroalga *chlorella* sp. dengan metode microwave assisted extraction. *Jurnal Bahan Alam Terbarukan*, *3*(1), 34-41.

Bennion, E. P., Ginosar, D. M., Moses, J., Agblevor, F., and Quinn, J. C. 2015. Lifecycle assessment of microalgae to biofuel: comparison of thermochemical processing pathways. *Applied Energy*, *154*, 1062-1071.

Beyer, R. M., Durán, A. P., Rademacher, T. T., Martin, P., Tayleur, C., Brooks, S. E., ... and Sanderson, F. J. 2020. The environmental impacts of palm oil and its alternatives. *Biorxiv*, 2020-02.

Bhuyar, P., Sundararaju, S., Rahim, M. H. A., Ramaraj, R., Maniam, G. P., and Govindan, N. 2021. Microalgae cultivation using palm oil mill effluent as growth medium for lipid production with the effect of CO 2 supply and light intensity. *Biomass Conversion and Biorefinery*, *11*, 1555-1563.

Budiman, A., Suyono, E. A., Merdekawati, A., Pradana, Y. S., Sudibyo, H., Seniorita, L., ... and Evasari, E. R. 2023. Mikroalga: Kultivasi, Pemanenan, Ekstraksi, dan Konversi Energi. UGM PRESS.

Cascant, M. M., Breil, C., Garrigues, S., de la Guardia, M., Fabiano-Tixier, A. S., and Chemat, F. (2017). A green analytical chemistry approach for lipid

extraction: computation methods in the selection of green solvents as alternative to hexane. *Analytical and Bioanalytical Chemistry*, *409*, 3527-3539.

Cercado, A. P., Ballesteros Jr, F. C., and Capareda, S. C. 2018. Biodiesel from three microalgae transesterification processes using different homogenous catalysts. *Chemical Engineering*, *9*(4).

Che Man, Y. B., Moh, M. H., and Van de Voort, F. R. 1999. Determination of free fatty acids in *Crude Palm Oil* and refined-bleached-deodorized palm olein using fourier transform infrared spectroscopy. *Journal of the American Oil Chemists' Society*, *76*(4), 485-490.

Cipolatti, E. P., Remedi, R. D., dos Santos Sá, C., Rodrigues, A. B., Ramos, J. M. G., Burkert, C. A. V., ... and de Medeiros Burkert, J. F. 2019. Use of agroindustrial byproducts as substrate for production of carotenoids with antioxidant potential by wild yeasts. *Biocatalysis and Agricultural Biotechnology*, *20*, 101208.

Costa, J. A. V., Freitas, B. C. B., Santos, T. D., Mitchell, B. G., and Morais, M. G. (2019). Open pond systems for microalgal culture. In *Biofuels from algae* (pp. 199-223). Elsevier.

Cramer, M. and Myers, J. 1952. Growth and photosynthetic characteristics of *Euglena gracilis*. *Archiv Fur Mikrobiologie* 17(1-4): 384–402.

Dahlan, I. A. (2022). Klasifikasi Cuaca Provinsi Dki Jakarta Menggunakan Algoritma Random Forest Dengan Teknik Oversampling. *Jurnal Teknoinfo*, *16*(1), 87-92.

Damarani, Z. N., Sholihah, L. M., Zullaikah, S., and Rachimoellah, M. (2019). Pra Desain Pabrik Refined Bleached Deodorized (RBD) Olein dari *Crude Palm Oil* (Oil). *Jurnal Teknik ITS*, *8*(1), F51-F55.

de Winter, L. 2015. *Circadian rhythms in microalgae production* (Doctoral dissertation, Wageningen University and Research).

Dewi, Kurnia., Nadya, Prisdayanti., Lia, Marliani., Idar, Idar., Zeily, Nurochman. (2019). Antiinflammatory Activity from Marine Microalgae Chlorella

vulgaris Extract Used Human Red Blood Cells Stability Method (HRBC). doi: 10.26874/JKK.V2I2.34

EFSA Panel on Food Additives and Nutrient Sources added to Food (ANS), Mortensen, A., Aguilar, F., Crebelli, R., Di Domenico, A., Dusemund, B., and Lambré, C. 2017. Re-evaluation of fatty acids (E 570) as a food additive. *EFSA Journal*, *15*(5), e04785.

Egra, S., Kusuma, I. W., and Arung, E. T. 2018. Kandungan antioksidan pada jamur tiram putih (*Pleurotus ostreatus*). *Jurnal Hutan Tropis*, *2*(2), 105-108.

Elcik, H., Cakmakci, M., and Ozkaya, B. 2016. The fouling effects of microalgal cells on crossflow membrane filtration. *Journal of Membrane Science*, *499*, 116-125.

Escallón-Barrios, M., Castillo-Gomez, D., Leal, J., Montenegro, C., and Medaglia, A. L. 2020. Improving harvesting operations in an oil palm plantation. *Annals of operations research*, 1-39.

Eunhye, Yang., Hyunjong, Yu., Jun-Young, Park., Kyung-Min, Park., Pahn-Shick, Chang. 2018. Microfluidic Preparation of Liposomes Using Ethyl Acetate/n-Hexane Solvents as an Alternative to Chloroform. Journal of Chemistry, doi: 10.1155/2018/7575201

Euteneuer, P., and Krueger, R. 2012. *U.S. Patent No. 8,228,600*. Washington, DC: U.S. Patent and Trademark Office.

Fatmawati, S., Umrah, U., and Suwastika, I. N. 2017. Ujiviabiltas Inokulum Jamur Tiram Putih (*Pleurotus ostreatus* (Jacq) P. Kumm) Dalam Bentuk Sediaan Cair. *Biocelebes*, *11*(1).

Fawcett, C. A., and Senhorinho, G. N. A., Laamanen, CA, Scott, JA 2022. Microalgae as an alternative to oil crops for edible oils and animal feed. *Algal Research*, *64, 102663.*

Feliana, K., Mursiti, S., and Harjono, H. 2018. Isolasi dan elusidasi senyawa flavonoid dari biji alpukat (Persea americana Mill.). *Indonesian Journal of Chemical Science*, *7*(2), 153-159.

Gani, P., Sunar, N. M., and Matias-Peralta, H. M. 2020. Cultivation system and harvesting techniques in Microalgae Biomass production. *Quantum Journal of Engineering, Science and Technology*, *1*(1), 33-44.

George, N., Hotos., Despoina, Avramidou., Vlassula, Bekiari. 2020. Calibration Curves of Culture Density Assessed by Spectrophotometer for Three Microalgae (Nephroselmis sp., Amphidinium carterae and Phormidium sp.). doi: 10.24018/EJBIO.2020.1.6.132

Gerardo, M. L., Oatley-Radcliffe, D. L., and Lovitt, R. W. 2014. Integration of membrane technology in microalgae biorefineries. *Journal of Membrane Science*, *464*, 86-99.`

Grehenson, G. 2022. Mahasiswa UGM Kembangkan Mikroalga Jadi Minyak Goreng. Universitas Gadjah Mada. Diakses pada 19 September 2023 dari [https://ugm.ac.id/id/berita/22942-mahasiswa-ugm-kembangkan-mikroalga-jadi-minyak-goreng/].

Gultom, S. O. 2018. Mikroalga: Sumber energi terbarukan masa depan. *Jurnal Kelautan: Indonesian Journal of Marine Science and Technology*, *11*(1), 95-103.

Gurr, M. I., Harwood, J. L., Frayn, K. N., Murphy, D. J., and Michell, R. H. 2016. *Lipids: Biochemistry, biotechnology and health*. John Wiley and Sons.

Hakim, M. N., and Abduh, M. Y. 2019. Produksi propolis Dari lebah Tetragonula laeviceps menggunakan sarang MOTIVE yang dilengkapi dengan sistem instrumentasi. *Jurnal Otomasi Kontrol dan Instrumentasi*, *10*(2), 485831.

Haoyang, C. 2018. Algae-based carbon sequestration. In *IOP Conference Series: Earth and Environmental Science* (Vol. 120, No. 1, p. 012011). IOP Publishing.

Harahap, P. S., Susanto, A. B., Susilaningsih, D., and Rahma, D. Y. 2013. Pengaruh Substitusi Limbah Cair Tahu Untuk Menstimulasi Pembentukan Lipida Pada Chlorella sp. Journal of Marine Research, 2(1), 80-86.

Harahap, R. A., Azhari, A., Meriatna, M., Sulhatun, S., and Suryati, S. 2021. Penurunan Kadar Free Fatty Acid (FFA) Pada *Crude Palm Oil* (Cpo) Dengan Proses Esterifikasi Menggunakan Katalis Asam Sulfat (H2so4). *Chemical Engineering Journal Storage (CEJS)*, *1*(2), 56-63.

Hariz, H. B., and Takriff, M. S. 2017. Palm oil mill effluent treatment and CO 2 sequestration by using microalgae—fsustainable strategies for environmental protection. *Environmental Science and Pollution Research*, *24*, 20209-20240.

Hasibuan, H. A. 2018. Deterioration of bleachability index pada *crude palm oil*: bahan review dan usulan untuk SNI 01-2901-2006. *Jurnal Standardisasi*, *18*(1), 25-34.

Henrard, A. A., da Rosa, G. M., Moraes, L., de Morais, M. G., and Costa, J. A. V. 2015. The cultivation of microalgae Cyanobium sp. and Chlorella sp. in different culture media and stirring setting. *Afr J Microbiol Res*, *9*, 1431-1439.

Hermanto, M. B., Sumardi, L. C. H., and Fiqtinovri, S. M. 2011. Perancangan Bioreaktor Untuk Pembudidayaan Mikroalga. *Jurnal Teknologi Pertanian*, *12*(3), 153-162.

Hidayat, J. P., Hariyadi, A., and Chosta, F. 2022. Unjuk Kinerja Adsorpsi Bentonit dan Arang Aktif Terhadap Karakteristik Minyak Jelantah. *J. Sains dan Teknologi Pangan*, *7*(6), 5600-5614.

Hilt, K. L., Gordon, P. R., Hein, A., Caulfield, J. P., and Falchuk, K. H. 1987. Effects of Iron-, Manganese-, or Magnesium-Deficiency on the Growth and Morphology of *Euglena* gracilis 1. The Journal of protozoology, 34(2), 192-198.

Hodai, Z., Horváth, G., Hanák, L., and Bocsi, R. 2011. Densification Processes of Microalgae Bred for Biodiesel Production. *Hungarian Journal of Industry and Chemistry*, 67-71.

Hu, C., Wang, Q., Zhao, H., Wang, L., Guo, S., and Li, X. 2015. Ecotoxicological effects of graphene oxide on the protozoan *Euglena* gracilis. *Chemosphere*, *128*, 184-190..

Huang, Y., Zhang, D., Xue, S., Wang, M., and Cong, W. 2016. The potential of microalgae lipids for edible oil production. *Applied Biochemistry and Biotechnology*, *180*(3), 438-451.

Ihsanto, E., and Hidayat, S. 2014. Rancang bangun sistem pengukuran pH meter dengan menggunakan mikrokontroller arduino uno. *Jurnal teknologi elektro*, *5*(3), 142372.

Indrastuti, C., Sulardiono, B., and Muskananfola, M. R. 2014. Kajian Intensitas Cahaya yang Berbeda terhadap Konsentrasi Klorofil-a pada Pertumbuhan Mikroalga Spirulina platensis dalam Skala Laboratorium. *Management of Aquatic Resources Journal (MAQUARES)*, *3*(4), 169-174.

Ismanto, A. 2022. Rancang Bangun Pemantauan Ph Air Pada Aquaponik Berbasis Arduino Uno. *Jurnal Portal Data*, *2*(2).

Ivanova, M., Hanganu, A., Dumitriu, R., Tociu, M., Ivanov, G., Stavarache, C., Popescu, L., Ghendov-Mosanu, A., Sturza, R., Deleanu, C. and Chira, N. 2022. Saponification value of fats and oils as determined from H-NMR data: The case of dairy fats. Foods. 11 (1466):1-13.

Jorge, Gustavo, Quintana, Zamora., Fred, Eduardo, Taranto, Moreira., Mercedes, Cleotapra, Moreria, Menéndez., María, Aurora, Parrales, Gallo. 2022. Producción del *Pleurotus ostreatus* utilizando cáscaras de maíz y leguminosas. Ciencia y Tecnología, doi: 10.18779/cyt.v15i2.578

Jumiarni, D. E. W. I. 2018. Kultur Mikroalga dari Rawa Gambut: Studi Pendahuluan Potensi Mikroalga Sebagai Bahan Baku Biodiesel. *Biodidaktika: Jurnal Biologi dan Pembelajarannya*, *13*(1), 47-56.

Kawaroe M, Prartono T, Rachmat A, Sari D, and Augustine D .2012. Laju pertumbuhan spesifik dan kandungan asam lemak pada mikroalga Spirulina platensis dan Porphyridium cruentum Ilmu Kelautan 17 125-131

Kawaroe, M., Prartono, T., Sunuddin, A., Sari, D. W., and Augustine, D. 2019. *Mikroalga potensi dan pemanfaatannya untuk produksi bio bahan bakar*. PT Penerbit IPB Press.

Khaerah, A., and Akbar, F. 2019. Aktivitas Antioksidan Teh Kombucha dari Beberapa Varian Teh yang Berbeda. In *Prosiding Seminar Nasional LP2M UNM* (pp. 472-476).

Kim, J. I., Linton, E. W., Shin, W., Im Kim, J., Linton, E. W., and Shin, W. 2016. Morphological and genetic diversity of *Euglena* deses group (Euglenophyceae) with emphasis on cryptic species. *Algae*, *31*(3), 219-230.

Kim, S., Im, H., Yu, J., Kim, K., Kim, M., and Lee, T. 2023. Biofuel production from *Euglena*: Current status and techno-economic perspectives. *Bioresource Technology*, *371*, 128582. https://doi.org/10.1016/j.biortech.2023.128582

Kings, A. J., Raj, R. E., Miriam, L. R. M., and Visvanathan, M. A. 2017. Cultivation, extraction and optimization of biodiesel production from potential microalgae *Euglena* sanguinea using eco-friendly natural catalyst. *Energy Conversion and Management*, *141*, 224–235. https://doi.org/10.1016/j.enconman.2016.08.018

Kishore, G., Kadam, A. D., Kumar, U., and Arunachalam, K. 2018. Modeling *Euglena* sp. growth under different conditions using an artificial neural network. *Journal of Applied Phycology*, *30*, 955-967.

Kumar, R. R., Polur, H. R., and Muthu, A. 2015. Lipid Extraction methods from microalgae: a comprehensive review. *Frontiers in Energy Research* 2(61): 2.

Kumar, V. S., Sarkar, S. D., Das, B. K., Sarkar, D. J., Gogoi, P., Maurye, P., ... and Samanta, S. 2022. Sustainable biodiesel production from microalgae Graesiella emersonii through valorization of garden wastes-based vermicompost. *Science of The Total Environment*, *807*, 150995.

Kurnia, D., Rosliana, E., Juanda, D., and Nurochman, Z. 2020. Aktivitas Antioksidan dan Penetapan Kadar Fenol Total dari Mikroalga Laut Chlorella vulgaris. *Jurnal Kimia Riset*, *5*(1), 14-21.

Kurniawan, R., Azzahra, S. F., and Yohaningsih, N. T. 2023. Pengaruh Jenis Adsorben pada Proses Bleaching di Pemurnian *Crude Palm Oil* (CPO)

sebagai Bahan Baku pada Proses Green Fuel. *Rekayasa Hijau: Jurnal Teknologi Ramah Lingkungan*, *7*(2), 101-111.

Kusmayadi, A., Suyono, E.A., Nagarajan, D., Chang, J.S. and Yen, H.W., 2020. Application of computational fluid dynamics (CFD) on the raceway design for the cultivation of microalgae: a review. *Journal of Industrial Microbiology and Biotechnology*, *47*(4-5), pp.373-382. https://doi.org/10.1007/s10295-020-02273-9.

Kusnanda, A. J., Perdana, B. A., Dharma, A., and Chaidir, Z. 2021. Isolasi Dan Skrining Mikroalga Air Tawar Sebagai Sumber Pigmen Karotenoid. *Jurnal Kimia dan Kemasan*, *43*(1), 38-43.

Lee, M. K., Hashim, H., Ho, C. S., Ho, W. S., and Lim, J. S. 2017. Economic and Environmental Assessment for Integrated Biogas Upgrading with CO 2 Utilization in Palm Oil Mill. *Chemical Engineering Transactions*, *56*, 715-720.

Lestari, S. T. 2022. Analisis Peran Dinas Koperasi dan Perdagangan dalam Menjaga Stabilitas Harga Bahan Pokok. *JIKEM: Jurnal Ilmu Komputer, Ekonomi dan Manajemen*, *2*(1), 374-381.

Li, G., Xiao, W., Yang, T., and Lyu, T. 2023. Optimization and process effect for microalgae carbon dioxide fixation technology applications based on carbon capture: A comprehensive review. *C*, *9*(1), 35.

Li, H., and Zhang, E. 2021. A coupled sampling design for parameter estimation in microalgae growth experiment: Maximizing the benefits of uniform and non-uniform sampling. *Water*, *13*(21), 2996.

Low, S. S., Bong, K. X., Mubashir, M., Cheng, C. K., Lam, M. K., Lim, J. W., ... and Show, P. L. 2021. Microalgae cultivation in palm oil mill effluent (POME) treatment and biofuel production. *Sustainability*, *13*(6), 3247.

Ma'rufatin, A. 2016. Pengaruh pemanenan mikroalga (Chlorella sp.) secara kontinyu terhadap pertumbuhannya di dalam fotobioreaktor. *Jurnal Rekayasa Lingkungan*, *9*(1), 19-30.

Mahmud, S. F. 2019. Proses Pengolahan CPO (Crude Palm Oil) menjadi RBDPO (Refined Bleached and Deodorized Palm Oil) di PT XYZ Dumai. *Jurnal Unitek*, *12*(1), 55-64.

Mangal, V., Donaldson, M. E., Lewis, A., Saville, B. J., and Guéguen, C. 2022. Identifying *Euglena* Gracilis Metabolic and Transcriptomic Adaptations in Response to Mercury Stress. *Frontiers in Environmental Science*, 162.

Manikandan, G., and Rajasekaran, R. 2013. Transesterification of algal oil using nano CaO catalyst. *International Journal of Chemical Sciences*, *11*(1), 591-597.

Manisalidis, I., Stavropoulou, E., Stavropoulos, A., and Bezirtzoglou, E. *2020. Environmental and health impacts of air pollution: a review. Frontiers in public health, 8, 14.*

Margit, M.K., Nass., Lea, Schori., Yehuda, Ben-Shaul., Marvin, Edelman. 1974. Size and configuration of mitochondrial DNA in *Euglena* gracilis. Biochimica et Biophysica Acta, doi: 10.1016/0005-2787(74)90249-4

Meijaard, E., Brooks, T. M., Carlson, K. M., Slade, E. M., Garcia-Ulloa, J., Gaveau, D. L., ... and Sheil, D. 2020. The environmental impacts of palm oil in context. *Nature plants*, *6*(12), 1418-1426.

Miriam, L. R. M., Kings, A. J., Raj, R. E., and Viswanathan, M. A. 2021. Algal oil extraction-cum-biodiesel conversion in a novel batch reactor and its compatibility analysis in IC engine at various CRs. *Fuel*, *293*, 120449. https://doi.org/10.1016/j.fuel.2021.120449

Molina, D., de Carvalho, J. C., Júnior, A. I. M., Faulds, C., Bertrand, E., and Soccol, C. R. 2019. Biological contamination and its chemical control in microalgal mass cultures. *Applied microbiology and biotechnology*, *103*, 9345-9358.

Mujahidah, U. 2020. *Efek Variasi pH Medium dan Temperatur Lingkungan Terhadap Kandungan Karbohidrat, Lipid serta Protein pada Optimasi*

Perlakuan Kultivasi Euglena Sp. Skripsi. Fakultas Biologi. Universitas Gadjah Mada Yogyakarta.

Mustafa, R. 2022. Pengaruh Harga CPO (Crude Palm Oil) Di Global Market Terhadap Harga Minyak Goreng di Pasar Domestik. *SIBATIK JOURNAL: Jurnal Ilmiah Bidang Sosial, Ekonomi, Budaya, Teknologi, dan Pendidikan*, *1*(8), 1565-1574.

Mumtazah, N. I., Nuriana, N., and Suparti, S. 2017. Media Alternatif Pertumbuhan Miselium Bibit F2 Jamur Tiram (*Pleurotus ostreatus*) dan Jamur Merang (Volvariella Volvaceae) dengan Batang Jagung dan Batang Pisang. *URECOL*, 287-294.

Negara, B. F. S., Irfandi, I., Nursalim, N., and Herliany, N. E. (2019). Potensi Nannochloropsis oculata dan Tetraselmis chuii sebagai bahan baku bioetanol. *Jurnal Laot Ilmu Kelautan*, *1*(2), 71-76.

Noor, E., and Isdianti, F. (2013). Ultrafiltrasi Aliran Silang untuk Pemurnian Gula Stevia. *Jurnal Teknologi Industri Pertanian*, *21*(2), 73-80.

Novelena, T. A., and Komari, N. (2022). Analisis Hubungan Antar Parameter Kualitas *Crude Palm Oil* di PT. Laguna Mandiri Rantau Factory. *Jurnal Natural Scientiae*, *2*(1).

Nurlela, N. (2020). Analisa Bilangan Peroksida Terhadap Kualitas Minyak Goreng Sebelum Dan Sesudah Dipakai Berulang. *Jurnal Redoks*, *5*(1), 65-71.

Nurulain, S., Aziz, N. A., Najib, M. S., Salim, M. R., and Manap, H. 2021. A review of free fatty acid determination methods for palm cooking oil. In *Journal of Physics: Conference Series* (Vol. 1921, No. 1, p. 012055). IOP Publishing.

Nwoba, E. G., Ayre, J. M., Moheimani, N. R., Ubi, B. E., and Ogbonna, J. C. 2016. Growth comparison of microalgae in tubular photobioreactor and open pond for treating anaerobic digestion piggery effluent. *Algal Research*, *17*, 268-276.

Octavia, Y., And Chrisnasari, R. (2019). Ekstrak Daun Teh Hijau (Camellia Sinensis) Sebagai Xantioksidan Alami Minyak Kelapa (Cocos Nucifera). *Calyptra*, *7*(2), 4562-4580.

Padang, A., La Dari, A. and Latuconsina, H., 2013. Pengaruh Intensitas Cahaya yang Berbeda terhadap Pertumbuhan *Navicula* sp. Skala Laboratorium. *Bimafika*, 5(1):560–565.

Panjaitan, J. R. H., Nurhasanah, N., Atikasari, L. F., and Ponilawati, P. 2022. Efisiensi dan Fouling Factor Sealtube Heat Exchanger Pada Proses Pendinginan Refined Bleached Deodorized Palm Oil. *Rekayasa*, *15*(1), 29-35.

Parsy, A., Bidoire, L., Saadouni, M., Bahuaud, M., Elan, T., Périé, F., and Sambusiti, C. 2021. Impact of seasonal variations on Nannochloropsis oculata phototrophic productivity in an outdoor pilot scale raceway. *Algal Research*, *58*, 102375.

Patty, A. L., Tandisalla, J., Popoko, S., and Hunila, E. 2022. Analysis of Physico-Chemical Properties and Antioxidant Activity of Virgin Coconut Oil (VCO) Using Ordinary Tall Coconut Cultivars of North Halmahera. *JURNAL AGRIKAN (Agribisnis Perikanan)*, *15*(2), 710-715.

Peng, L., Fu, D., Chu, H., Wang, Z., and Qi, H. 2020. Biofuel production from microalgae: a review. *Environmental Chemistry Letters*, *18*, 285-297.

Perković, L., Djedović, E., Vujović, T., Baković, M., Paradžik, T., and Čož-Rakovac, R. 2022. Biotechnological Enhancement of Probiotics through Co-Cultivation with Algae: Future or a Trend?. *Marine Drugs*, *20*(2), 142.

Picard, N., Boyemba Bosela, F., and Rossi, V. 2015. Reducing the error in biomass estimates strongly depends on model selection. *Annals of forest Science*, *72*, 811-823.

Praharyawan, S., and Putri , S., A. 2017. Optimasi efisiensi flokulasi pada proses panen mikroalga potensial penghasil biodiesel dengan flokulan ion magnesium. *Biopropal Industri*, *8*(2), 89–98. https://doi.org/10.36974/jbi.v8i2.3300

Praharyawan, S., and Putri, S. A. 2017. Optimasi Efisiensi Flokulasi Pada Proses Panen Mikroalga Potensial Penghasil Biodiesel Dengan Flokulan Ion Magnesium-(Optimization of Flocculation Efficiency in the Harvesting

Process of Potential Biodiesel Producing Microalgae by Using Magnesium Ions). *Biopropal Industri*, *8*(2), 89-98.

Prakash, N., Parvathy, M. S., Nair, G. G., Nassar, A. M., and Daniel, D. K. 2023. Potential aspects of microalgae cultivation-A review. International Journal of Trend in Scientific Research and Engineering (IJTSRE), 6(1), 1-9.

Prasad, V., Kadam., Kavita, Yadav., A., S., Karanje., Manohar, J., Patil. 2023. Pharmacognostic, Chemical Characterization Studies on Oyster Mushroom (*Pleurotus ostreatus*). Pharmacognosy Research, doi: 10.5530/pres.15.3.054

Prasetyo, B. 2013. Lingkungan Fisik Dan Kekayaan Mikroalga Di Danau Universitas Terbuka, Tangerang Selatan. *Jurnal Matematika Sains dan Teknologi*, *14*(2), 119-127.

Prasetyo, D. A. 2023. Arang Kulit Biji Kakao (Theobroma cacao L) sebagai Adsorben untuk Menurunkan Kadar Asam Lemak Bebas pada Pembuatan Biodiesel dari Minyak Jelantah. *Jurnal Teknik Terapan*, *2*(1).

Putra, P. G., Muin, A., and Yusro, F. 2008. Studi Asosiasi Fungi Mikoriza Arbuskula (FMA) pada Tegakan Eucalyptus (Eucalyptus pellita) di Lahan Gambut. *Tengkawang: Jurnal Ilmu Kehutanan*, *2*(2).

Putri, F. D., Pratama, A. S., El Sauzsa, F., and Setyawardhani, D. A. 2021. Pemurnian Minyak Biji Kesambi (Schleichera oleosa) Sebagai Bahan Baku Pembuatan Minyak Goreng. *Equilibrium Journal of Chemical Engineering*, *5*(2), 75-81.

Putri, A. D. 2022. *Pengaruh Variasi pH Terhadap Pertumbuhan, Biomassa, Klorofil, Karotenoid, Dan Lipid pada Kultur Euglena sp.* Skripsi. Fakultas Biologi. Universitas Gadjah Mada Yogyakarta.

Qiu, R. *et al*. 2017. Effects of pH on cell growth, lipid production and CO_2 addition of microalgae Chlorella sorokiniana", Algal Research. Elsevier, 28(May), pp. 192–199. doi: 10.1016/j.algal.2017.11.004.

Rachmat, Rachmat, Rachmat., P., Hamzah., Syaifuddin, Syaifuddin., Rachmat, Adiputra., Muhammad, Alfalyzi. 2023. Penambahan tepung tongkol

jagung dalam media tanam jamur tiram putih (*Pleurotus ostreatus*). Composite, doi: 10.37577/composite.v5i1.494

Rahardjo, A. P., Manaf, Y. N., Ambarita, M. D., and Nusantoro, B. P. 2021. *Minyak goreng untuk pengolahan pangan*. UGM PRESS.

Rahayu, R. N. 2022. Kenaikan harga minyak goreng kelapa sawit di indonesia: sebuah analisis berita kompas on line. *Jurnal Ekonomi, Sosial and Humaniora*, *3*(08), 26-37.

Rahman, H., Sitompul, J. P., and Tjokrodiningrat, S. 2022. The composition of fatty acids in several vegetable oils from Indonesia. *Biodiversitas Journal of Biological Diversity*, *23*(4).

Rajvanshi, S., and Sharma, M. P. 2012. Microalgae: a potential source of biodiesel. *Journal of Sustainable Bioenergy Systems*, *2*(03), 49.

Rengga, W. D. P., Prayoga, A. B., Asnafi, A., and Triwibowo, B. 2019. Ekstraksi minyak mikro-algae Skeletonema costatum dengan bantuan gelombang ultrasonik. *J. Rekayasa Bahan Alam dan Energi Berkelanjutan*, *3*(1), 1-5.

Robla, J., García-Hierrro, J., Alguacil, F. J., Dittami, S. M., Marie, D., Villa, E., ... and Medlin, L. K. 2021. Determination of the efficiency of filtration of cultures from microalgae and bacteria using hollow fiber filters. *Environmental Science: Water Research and Technology*, *7*(7), 1230-1239.

Salim, S., Bosma, R., Vermuë, M. H., and Wijffels, R. H. 2011. Harvesting of microalgae by bio-flocculation. *Journal of applied phycology*, *23*(5), 849-855.

Saragih, F., Majid, M. S. A., Nasution, A. W., and Ritonga, P. 2022. Kelangkaan dan Lonjakan Harga Minyak Goreng di Indonesia Dalam Perspektif Ekonomi Islam. *Ekonomikawan: Jurnal Ilmu Ekonomi dan Studi Pembangunan*, *22*(2), 75-86.

Shamsuddin, N., Das, D. B., and Starov, V. M. 2015. Filtration of natural organic matter using ultrafiltration membranes for drinking water purposes:

Circular cross-flow compared with stirred dead end flow. *Chemical Engineering Journal*, *276*, 331-339.

Silas, K., Kwaji, H. B., and Gutti, B. 2015. Lipid extraction and transesterification techniques of microalgae A review. *International Journal of Recent Research in Physics and Chemical Sciences (IJRRPCS)*, *2*, 26-37.

Sobari, R., Susanto, A. B., Susilaningsih, D., and Rahma, D. Y. 2013. Kandungan lipid beberapa jenis sianobakteria laut sebagai bahan sumber penghasil biodiesel. *Journal of Marine Research*, *2*(1), 112-119.

Sopianti, D. S., Herlina, H., and Saputra, H. T. 2017. Penetapan kadar asam lemak bebas pada minyak goreng. *Jurnal Katalisator*, *2*(2), 100-105.

Sri, A. Z. 2015. *Isolasi Dan Analisis Lipid Mikroalga Air Tawar Sebagai Bahan Baku Biodiesel* (Doctoral dissertation, UPT. Perpustakaan Unand).

Sujadi, S., Hasibuan, H. A., Rahmadi, H. Y., and Purba, A. R. 2016. Komposisi asam lemak dan bilangan iod minyak dari sembilan varietas kelapa sawit DxP komersial di PPKS. *Jurnal Penelitian Kelapa Sawit*, *24*(1), 1-11.

Sun, X., Wang, C., Tong, Y., Wang, W., and Wei, J. 2014. Microalgae filtration by UF membranes: influence of three membrane materials. *Desalination and Water Treatment*, *52*(28-30), 5229-5236.

Sundari, E. R. 2022. Alternatif Penggunaan Kertas Saring Sebagai Pengganti Kertas Cakram Pada Uji Resistensi Bakteri Aeromonas Sp. Terhadap Ampisilin Dan Kloramfenikol. *Jurnal Pengelolaan Laboratorium Sains dan Teknologi*, *2*(1), 23-27.

Sunoj, S., Hammed, A., Igathinathane, C., Eshkabilov, S., and Simsek, H. 2021. Identification, quantification, and growth profiling of eight different microalgae species using image analysis. *Algal Research*, *60*, 102487.

Suparmaniam, U., Lam, M. K., Lim, J. W., Yusup, S., Tan, I. S., Lau, S. Y., ... and Kachhwaha, S. S. 2022. Influence of environmental stress on microalgae growth and lipid profile: a systematic review. *Phytochemistry Reviews*, 1-23.

Sze, Ying, Leong., David, J., Burritt., Indrawati, Oey. 2016. Effect of Combining Pulsed Electric Fields with Maceration Time on Merlot Grapes in Protecting Caco-2 Cells from Oxidative Stress. Food and Bioprocess Technology, 9(1):147-160. doi: 10.1007/S11947-015-1604-Y

Tekin, K., and Karagöz, S.. 2013. *Non-catalytic and catalytic hydrothermal liquefaction of biomass*. *39*(2). https://doi.org/10.1007/S11164-012-0572-3

Tenyang, N., Tiencheu, B., and Womeni, H. M. 2018. Effect of smoking and refrigeration on lipid oxidation of Clupea harengus: A fish commonly consumed in Cameroon. *Food science and nutrition*, *6*(2), 464-473.

Tewal, F., Kemer, K., Rimper, J. R., Mantiri, D. M., Pelle, W. E., and Mudeng, J. D. 2021. Laju Pertumbuhan dan Kepadatan Mikroalga Dunaliella sp. Pada Pemberian Timbal Asetat dengan Konsentrasi yang Berbeda. *Jurnal Pesisir dan Laut Tropis*, *9*(1), 30-37.

Timotius, V., Suyono, E. A., Suwanti, L. T., Koerniawan, M. D., Budiman, A., and Siregar, U. J. 2022. The content of lipid, chlorophyll, and carotenoid of *Euglena* sp. under various salinities. *Asia-Pac. J. Mol. Biol. Biotechnol*, *30*, 114-122.

Untari, B., and Ainna, A. 2020. Penentuan Kadar Asam Lemak Bebas dan Kandungan Jenis Asam Lemak dalam Minyak yang Dipanaskan dengan MetodeTitrasi Asam Basa dan Kromatografi Gas. *Jurnal Ilmiah Bakti Farmasi*, *5*(1), 1-10.

Utama, P., Suhendar, D., and Romalia, L. H. 2016. Penggunaan berbagai macam media tumbuh dalam pembuatan bibit induk jamur tiram putih (*Pleurotus ostreatus*). *Jurnal Agroekoteknologi*, *5*(1).

Utomo, S. 2016. Pengaruh Konsentrasi Pelarut (N-heksana) Terhadap Rendemen Hasil Ekstraksi Minyak Biji Alpukat Untuk Pembuatan Krim Pelembab Kulit. Jurnal Konversi, 5(1), 39-47.

Vandamme, D., Muylaert, K., Fraeye, I., and Foubert, I. 2014. Floc characteristics of Chlorella vulgaris: influence of flocculation mode and presence of organic matter. *Bioresource technology*, *151*, 383-387.

Viena, V. 2014. Kultivasi Mikroalga Hijau pada Sumber Nitrogen Berbeda Untuk Ekstraksi Lipida. *Jurnal Purifikasi*, *14*(2), 99-105.

Wahidim, S. 2015. Oil Palm Industry, Economic Environment, and Sustainable Development Environment. *JL Pol'y and Globalization*, *41*, 84.

Wahyuni, N., Masithah, E. D., Soemarjati, W., Suciyono, S., and Ulkhaq, M. F. 2018. Pola Pertumbuhan mikroalga Spirulina sp. skala laboratorium yang dikultur menggunakan wadah yang Berbeda. *Majalah Ilmiah Bahari Jogja*, *16*(2), 89-97.

Wahyuni, W. T., Herdiyanto, H., and Rafi, M. 2017. Metode Ekstraksi dan Pemisahan Optimum Untuk Isolasi Xantorizol dari Temulawak (Curcuma xanthorrhiza). *Jurnal Jamu Indonesia*, *2*(2), 43-50.

Wati, D. K., and Yuliani, L. S. B. 2012. Pengaruh Pemberian Filtrat Daun Alang-Alang (Imperata cylindrica L.) terhadap Pertumbuhan Miselium Jamur Trichoderma sp yang Hidup pada Media Tanam Jamur Tiram Putih (*Pleurotus ostreatus*). *LenteraBio*, *1*(2), 93-98.

Weidinger, M., and Kusel-Fetzmann, E. 2008. Ultrastructure of selected *Euglena* species in relation to their taxonomy. In *EMC 2008 14th European Microscopy Congress 1–5 September 2008, Aachen, Germany: Volume 3: Life Science* (pp. 151-152). Springer Berlin Heidelberg. doi: 10.1007/978-3-540-85228-5_76

Wicaksono, A., Widayat, W., and Saptadi, S. 2019. *Kajian Teknoekonomi Produksi Biodiesel Dengan Bahan Baku Palm Sludge Oil (Pso) Dan Minyak Goreng Bekas (Jelantah) Skala Industri Kecil* (Doctoral dissertation, School of Postgraduate).

Widiyanto, A., Susilo, B., and Yulianingsih, R. 2014. Studi Kultur Semi-Massal Mikroalga Chlorella sp Pada Area Tambak Dengan Media Air Payau (Di Desa Rayunggumuk, Kec. Glagah, Kab. Lamongan). *Jurnal Bioproses Komoditas Tropis*, *2*(1), 1-7.

Widyartini, D. S. 2023. Pertumbuhan Dan Biomassa Sel Dari Spesies Mikroalga Dengan Salinitas Berbeda Pada Kultur Skala Laboratorium. In *Prosiding Seminar Nasional LPPM Unsoed* (Vol. 12, pp. 108-116).

Widyastuti, C. R., and Dewi, A. C. 2014. Sintesis biodiesel dari minyak mikroalga Chlorella vulgaris dengan reaksi transesterifikasi menggunakan katalis KOH. Jurnal Bahan Alam Terbarukan, 3(1), 29-33.

Wu, M., Wu, G., Lu, F., Wang, H., Lei, A., and Wang, J. 2022. Microalgal photoautotrophic growth induces pH decrease in the aquatic environment by acidic metabolites secretion. *Biotechnology for Biofuels and Bioproducts*, *15*(1), 1-13.

Xue, Z., Wan, F., Gao, X., Yu, W., Zhang, Z., Liu, J., and Kou, X. 2021. Extraction And Evaluation Of Edible Oil From Schizochytrium Sp. Using An Aqueous Enzymatic Method. *Frontiers of Agricultural Science and Engineering* 8(4):623-634.

Xue, Z., Wan, F., Yu, W., Liu, J., Zhang, Z., and Kou, X. 2018. Edible oil production from microalgae: A review. *European journal of lipid science and technology*, *120*(6), 1700428.

Xue, Z., Yu, Y., Yu, W., Gao, X., Zhang, Y., and Kou, X. 2020. Development prospect and preparation technology of edible oil from microalgae. *Frontiers in Marine Science*, *7*, 402.

Yastanto, A. J. 2020. Karakteristik Pertumbuhan Jamur pada Media PDA dengan Metode Pour Plate. *Indonesian Journal of Laboratory*, *2*(1), 33-39.

Yin, Z., Zhu, L., Li, S., Hu, T., Chu, R., Mo, F., ... and Li, B. 2020. A comprehensive review on cultivation and harvesting of microalgae for biodiesel production: Environmental pollution control and future directions. *Bioresource Technology*, *301*, 122804.

Yulianti, W., Ayuningtyas, G., Martini, R., and Resmeiliana, I. 2020. Pengaruh Metode Ekstraksi dan Polaritas Pelarut Terhadap Kadar Fenolik Total Daun Kersen (Muntingia calabura L). *Jurnal Sains Terapan: Wahana Informasi dan Alih Teknologi Pertanian*, *10*(2), 41-49.

Zakryś, B., Milanowski, R., and Karnkowska, A. 2017. Evolutionary origin of *Euglena*. *Euglena: biochemistry, cell and molecular biology*, 3-17.

Zhu, J., and Wakisaka, M. 2018. Growth promotion of *Euglena* gracilis by ferulic acid from rice bran. *AMB Express*, *8*(1), 1-7.

Zhu, Z., Jiang, J., and Fa, Y. 2020. Overcoming the biological contamination in microalgae and cyanobacteria mass cultivations for photosynthetic biofuel production. *Molecules*, *25*(22), 5220.

Zulkarnain, K., and Siswanti, E. 2022. Variasi Pecahan Biji Jagung (Zea mays) sebagai Nutrisi terhadap Pertumbuhan Misellium Jamur Tiram (*Pleurotus ostreatus*). *Panthera: Jurnal Ilmiah Pendidikan Sains dan Terapan*, *2*(2), 67-74.