

## DAFTAR PUSTAKA

- Agustina, S., Aidha, N. N., & Oktarina, E. (2018). *Ektstraksi Antioksidan Spirulina sp. dengan Menggunakan Metode Ultrasonikasi dan Aplikasinya untuk Krim Kosmetik.* 40(2), 105–116.
- Agustini, N. W. S., & Setyaningrum, M. (2018). Screening Fitokimia Uji Aktivitas Antimikroba dan Antioksidan serta Identifikasi. *Warta IHP/Journal of Agro-Based Industry*, 35(1), 29–37. [https://scholar.archive.org/work/37n5imnosnappchtqp47223fqe/access/wayback/http://ejournal.kemenperin.go.id/ihp/article/download/3898/pdf\\_21](https://scholar.archive.org/work/37n5imnosnappchtqp47223fqe/access/wayback/http://ejournal.kemenperin.go.id/ihp/article/download/3898/pdf_21)
- Andrade, L. M. (2018). Chlorella and Spirulina Microalgae as Sources of Functional Foods, Nutraceuticals, and Food Supplements; an Overview. *MOJ Food Processing & Technology*, 6(1), 45–58. <https://doi.org/10.15406/mojfpt.2018.06.00144>
- Baker, H. J., Lindsey, J. R., & Wesibroth, S. H. (2013). *The Laboratory Rat: Biology and Diseases* (Issue v. 1). Elsevier Science. <https://books.google.co.id/books?id=ei7LBAAAQBAJ>
- Braune, S., Krüger-Genge, A., Kammerer, S., Jung, F., & Küpper, J. H. (2021). Phycocyanin from Arthrospira platensis as Potential Anti-Cancer Drug: Review of In Vitro and In Vivo Studies. *Life*, 11(2), 1–14. <https://doi.org/10.3390/life11020091>
- Buetow, B. S., & Laflamme, M. A. (2018). Cardiovascular. In P. M. Treuting, S. M. Dintzis, & K. S. Montine (Eds.), *Comparative Anatomy and Histology: A Mouse, Rat, and Human Atlas* (2nd ed.). Academic Press. <https://doi.org/10.1016/b978-0-12-802900-8.00019-1>
- Christwardana, M., & Nur, M. M. A. (2013). *Spirulina platensis : Potensinya sebagai Bahan Pangan Fungsional.* 2(1), 1–4.
- D’Oria, R., Schipani, R., Leonardini, A., Natalicchio, A., Perrini, S., Cignarelli, A., Laviola, L., & Giorgino, F. (2020). The Role of Oxidative Stress in Cardiac Disease: From Physiological Response to Injury Factor. *Oxidative Medicine and Cellular Longevity*, 2020. <https://doi.org/10.1155/2020/5732956>
- Dichi, I., Bregano, J. W., Simao, A. N. C., & Cecchini, R. (2014). *Role of Oxidative Stress in Chronic Disease*. CRC Press.
- El Bialy, B. E., El-Boraey, N. G., Hamouda, R. A., & Abdel-Daim, M. M. (2019). Comparative Protective Effects of Spirulina and Spirulina Supplemented with Thiamine against Sub-acute Carbon Tetrachloride Toxicity in Rats. *Biomedical and Pharmacology Journal*, 12(2), 511–525. <https://doi.org/10.13005/bpj/1670>

- Fahleny, R., Trilaksani, W., & Setyaningsih, I. (2015). Aktivitas Antioksidan pada Formula Terpilih Tablet Hisap Spirulina Platensis Berdasarkan Karakter Fisik. *Jurnal Ilmu Dan Teknologi Kelautan Tropis*, 6(2), 427–444. <https://doi.org/10.29244/jitkt.v6i2.9019>
- Feral, E. W., Mandey, F. W., & Wildayani. (2021). *Jurnal Ilmu Alam dan Lingkungan Peningkatan Fertilitas melalui Fortifikasi Senyawa Aktif Spirulina platensis pada Kerang Darah Anadara granosa L.* 12(2), 1–6.
- Fithriani, D., Amini, S., Melanie, S., & Susilowati, R. (2015). Uji Fitokimia, Kandungan Total Fenol dan Aktivitas Antioksidan Mikroalga Spirulina sp., Chlorella sp., dan Nannochloropsis sp. *Jurnal Pascapanen Dan Bioteknologi Kelautan Dan Perikanan*, 10(2), 101. <https://doi.org/10.15578/jpbkp.v10i2.270>
- Gunawan, S., Aulia, A., & Soetikno, V. (2021). Development of Rat Metabolic Syndrome Models: A Review. *Veterinary World*, 14(7), 1774–1783. <https://doi.org/10.14202/vetworld.2021.1774-1783>
- Gurudeeban, S., Satyavani, K., Shanmugapriya, R., Ramanathan, T., Umamaheswari, G., & Muthazagan, K. (2010). Antioxidant and radical scavenging effect of Clerodendrum inerme (L.). *Global Journal of Pharmacology*, 4(2), 91–94.
- Hadiyanto, & Azim, M. (2012). *Mikroalga: Sumber Pangan dan Energi Masa Depan* (1st ed.). UPT UNDIP Press Semarang.
- Irawati, D., Abdillah, A. A., Pramono, H., & Sulmartiwi, L. (2020). The Effect of Using Different Polar Solvents on The Stability of Thermal Extraction Phycocyanin from Spirulina platensis. *IOP Conference Series: Earth and Environmental Science*, 441(1). <https://doi.org/10.1088/1755-1315/441/1/012050>
- Ishikawa, K. (2018). *Experimental Models of Cardiovascular Diseases* (1st ed.). Springer. <http://www.springer.com/series/7651>
- Junaidi, L. (2019). *Teknologi Ekstraksi Bahan Aktif Alami*. IPB Press.
- Kabinawa, I. N. K. (2006). *Spirulina; Ganggang Penggempur Aneka Penyakit*. AgroMedia Pustaka. [https://books.google.co.id/books?id=coVOgGePwoC&printsec=frontcover&hl=id&source=gbs\\_ge\\_summary\\_r&cad=0#v=onepage&q&f=false](https://books.google.co.id/books?id=coVOgGePwoC&printsec=frontcover&hl=id&source=gbs_ge_summary_r&cad=0#v=onepage&q&f=false)
- Karadeniz, A., Yildirim, A., Karakoc, A., Kalkan, Y., & Celebi, F. (2009). Protective Effect of Panax ginseng on Carbon Tetrachloride Induced Liver, Heart and Kidney Injury in Rats. *Revue de Medecine Veterinaire*, 160(5), 237–243.
- Kim, D. H., Park, M. H., Choi, Y. J., Chung, K. W., Park, C. H., Jang, E. J., An,

- H. J., Yu, B. P., & Chung, H. Y. (2013). Molecular Study of Dietary Heptadecane for the Anti-Inflammatory Modulation of NF- $\kappa$ B in the Aged Kidney. *PLoS ONE*, 8(3). <https://doi.org/10.1371/journal.pone.0059316>
- Krinke, G. J. (2000). *The Laboratory Rat (Handbook of Experimental Animals)*. Academic Press.
- Kurniawan, S. N., & Raisa, N. (2018). *Penggunaan Hewan Coba pada Penelitian di Bidang Neurologi*. Universitas Brawijaya Press. <https://books.google.co.id/books?id=vf-FDwAAQBAJ>
- Kuttinath, S., KH, H., & Rammohan, R. (2019). Phytochemical Screening, Antioxidant, Antimicrobial, and Antibiofilm Activity of Sauropus Androgynus Leaf Extracts. *Asian Journal of Pharmaceutical and Clinical Research*, 12(4), 244–250. <https://doi.org/10.22159/ajpcr.2019.v12i4.31756>
- Lesmana, P. A., Diniarti, N., & Setyono, B. D. H. (2019). *Pengaruh Penggunaan Limbah Budidaya Ikan Lele Sebagai Media Pertumbuhan Spirulina sp. 1*.
- Maynard, R. L., & Downes, N. (2019). *Anatomy and Histology of the Laboratory Rat in Toxicology and Biomedical Research*. Academic Press. <https://doi.org/10.1016/b978-0-12-811837-5.00027-7>
- Mohammed Golam Rasul. (2018). Conventional Extraction Methods Use in Medicinal Plants, their Advantages and Disadvantages. *International Journal of Basic Sciences and Applied Computing*, 6, 10–14.
- Mulianto, N. (2020). Malondialdehid sebagai Penanda Stres Oksidatif pada Berbagai Penyakit Kulit. *Cermin Dunia Kedokteran*, 47(1), 39–44. <http://www.cdkjournal.com/index.php/CDK/article/view/341>
- Najib, A. (2018). *Ekstraksi Senyawa Bahan Alam*. Deepublish. <https://books.google.co.id/books?id=ad2CDwAAQBAJ>
- Nege, A. S., Masithah, E. D., & Khotib, J. (2018). Trends in the Uses of Spirulina Mircoalga: A mini-review. *Jurnal Ilmiah Perikanan Dan Kelautan*, 12, 149–166.
- Neha, K., Haider, M. R., Pathak, A., & Yar, M. S. (2019). Medicinal Prospects of Antioxidants: A Review. *European Journal of Medicinal Chemistry*, 178, 687–704. <https://doi.org/10.1016/j.ejmech.2019.06.010>
- Neti, L., Larasati, V., & Permahani, A. (2018). a Natural Combination Extract of Mangosteen Pericarp and Phycocianin of Spirullina Platensis Decreases Plasma Malonaldialdehyde Level in Acute Exercise-Induced Oxidative Stress. *Majalah Ilmiah Sriwijaya*, XXX(17).
- Pizzino, G., Irrera, N., Cucinotta, M., Pallio, G., Mannino, F., Arcoraci, V., Squadrito, F., Altavilla, D., & Bitto, A. (2017). Oxidative Stress: Harms and

- Benefits for Human Health. *Oxidative Medicine and Cellular Longevity*, 2017. <https://doi.org/10.1155/2017/8416763>
- Preedy, V. R. (2020). *Pathology: Oxidative Stress and Dietary Antioxidants*. Academic Press.
- Ragaza, J. A., Hossain, M. S., Meiler, K. A., Velasquez, S. F., & Kumar, V. (2020). A review on Spirulina: alternative media for cultivation and nutritive value as an aquafeed. *Reviews in Aquaculture*, 12(4), 2371–2395. <https://doi.org/10.1111/raq.12439>
- Ramadhani, M. R., Bachri, M. S., & Widyaningsih, W. (2017). Effects of Ethanolic Extract of Arrowroot Tubers (*Maranta Arundinacea L.*) on the Level of Mda, Sgpt and Sgot in Ethanol Induced Rats. *Jurnal Kedokteran Dan Kesehatan Indonesia*, 8(1), 10–18. <https://doi.org/10.20885/jkki.vol8.iss1.art3>
- Rosidah, I., Ningsih, S., Renggani, T. N., Efendi, J., & Agustini, K. (2020). Profil Hematologi Tikus (*Rattus norvegicus*) Galur Sprague-Dawley Jantan Umur 7 Dan 10 Minggu. *Jurnal Bioteknologi & Biosains Indonesia (JBBI)*, 7(1), 136–145. <https://doi.org/10.29122/jbbi.v7i1.3568>
- Saifudin, A. (2014). *Senyawa Metabolit Sekunder: Teori, Konsep dan Teknik Pemurnian*. Deepublish.
- Santosa, W. N., & Baharuddin, B. (2020). Penyakit Jantung Koroner dan Antioksidan. *KELUWIH: Jurnal Kesehatan Dan Kedokteran*, 1(2), 98–103. <https://doi.org/10.24123/kesdok.v1i2.2566>
- Santoso, U., Setyaningsih, W., Ningrum, A., Ardhi, A., & Sudarmanto. (2020). *Analisis Pangan*. Gadjah Mada University Press. [https://books.google.co.id/books?id=tSoSEAAAQBAJ&pg=PR11&dq=spektrofotometri&hl=en&sa=X&ved=2ahUKEwiw7Mz\\_sfj2AhWMILcAHY\\_5AzEQ6AF6BAgJEAM#v=onepage&q=spektrofotometri&f=false](https://books.google.co.id/books?id=tSoSEAAAQBAJ&pg=PR11&dq=spektrofotometri&hl=en&sa=X&ved=2ahUKEwiw7Mz_sfj2AhWMILcAHY_5AzEQ6AF6BAgJEAM#v=onepage&q=spektrofotometri&f=false)
- Sari Afriani, Uju, & Setyaningsih, I. (2018). Komposisi kimia spirulina plantesis yang dikultivasi dalam fotobioreaktor dengan fotoperiode berbeda. *Jurnal Pengolahan Hasil Perikanan Indonesia*, 21(3), 471–479.
- Sembiring, T., Dayana, I., & Rianna, M. (2019). *Alat Penguji Material*. Guepedia. [https://books.google.co.id/books?id=BpCUDwAAQBAJ&pg=PA50&dq=spektrofotometri%2Buv-vis%2Bmerupakan&hl=id&sa=X&ved=2ahUKEwi\\_luy\\_neH1AhXISGwGHdHPAs4ChDoAXoECAEQAw#v=onepage&q=spektrofotometri%2Buv-vis%2Bmerupakan&f=false](https://books.google.co.id/books?id=BpCUDwAAQBAJ&pg=PA50&dq=spektrofotometri%2Buv-vis%2Bmerupakan&hl=id&sa=X&ved=2ahUKEwi_luy_neH1AhXISGwGHdHPAs4ChDoAXoECAEQAw#v=onepage&q=spektrofotometri%2Buv-vis%2Bmerupakan&f=false)
- Shalaby, E., & Catala, A. (2019). *Antioxidants*. IntechOpen. <https://books.google.co.id/books?id=vHH8DwAAQBAJ>

- Sirait, P. S., Setyaningsih, I., & Tarman, K. (2019). Anticancer Activity of Spirulina Cultivated in Walne and Organic Media. *Jurnal Pengolahan Hasil Perikanan Indonesia*, 22(1), 50. <https://doi.org/10.17844/jphpi.v22i1.25876>
- Snezhkina, A. V., Kudryavtseva, A. V., Kardymon, O. L., Savvateeva, M. V., Melnikova, N. V., Krasnov, G. S., & Dmitriev, A. A. (2020). ROS Generation and Antioxidant Defense Systems in Normal and Malignant Cells. *Oxidative Medicine and Cellular Longevity*, 2019. <https://doi.org/10.1155/2019/6175804>
- Sousa, T., Reina-Couto, M., & Gomes, P. (2019). Role of Oxidative Stress in the Patophysiology of Arterial Hypertension and Heart Failure. In *Oxidative Stress in Heart Diseases*. [https://doi.org/10.1007/978-981-13-8273-4\\_18](https://doi.org/10.1007/978-981-13-8273-4_18)
- Suhartati, T. (2017). *Dasar-Dasar Spektrofotometri UV-Vis dan Spektrometri Massa untuk Penentuan Struktur Senyawa Organik*. Aura.
- Sunarti. (2021). *Antioksidan dalam Penanganan Sindrom Metabolik*. UGM Press. <https://books.google.co.id/books?id=gHxJEAAAQBAJ>
- Suratno, S. (2016). Skrining Fitokimia Ekstrak Etanol Mikroalga Spirulina platensis yang Berpotensi sebagai Antibakteri. *Jurnal Surya Medika*, 1(2), 26–33. <https://doi.org/10.33084/jsm.v1i2.396>
- Tsutsui, H., Kinugawa, S., & Matsushima, S. (2011). Oxidative stress and Heart Failure. *American Journal of Physiology - Heart and Circulatory Physiology*, 301(6), 2181–2190. <https://doi.org/10.1152/ajpheart.00554.2011>
- U.S. Departement of Health and Human Services. (2002). Toxicological Profile for Carbon Tetrachloride. *ATSDR's Toxicological Profiles*, August. [https://doi.org/10.1201/9781420061888\\_ch50](https://doi.org/10.1201/9781420061888_ch50)
- Unsal, V., Cicek, M., & Sabancilar, İ. (2021). Toxicity of Carbon Tetrachloride, Free Radicals and Role of Antioxidants. *Reviews on Environmental Health*, 36(2), 279–295. <https://doi.org/10.1515/reveh-2020-0048>
- Van der Pol, A., Van Gilst, W. H., Voors, A. A., & Van der Meer, P. (2019). Treating Oxidative Stress in Heart Failure: Past, Present and Future. *European Journal of Heart Failure*, 21(4), 425–435. <https://doi.org/10.1002/ejhf.1320>
- Wahjuni Sri. (2015). *Dislipidemia: Menyebabkan Stress Oksidatif ditandai oleh Meningkatnya Malondialdehid*. Udayana University Press.
- Wardhani, R. R. A. A. K., Akhyar, O., & Prasiska, E. (2018). *Screening of Phytochemical, Antioxidant Activity and Total Phenolic-Flavonoid of Leaves and Fruit Extract of Galam Rawa Gambut (Melaleuca cajuputi ROXB)*. 9(2), 2550–0716.

- Wehr, J. D., Sheath, R. G., & Kociolek, J. P. (2015). *Freshwater Algae of North America: Ecology and Classification*. Elsevier Science. <https://books.google.co.id/books?id=yjnLAWAAQBAJ>
- Wijaya, A., Andriani, Hadi, D. P., & Nawangsari. (2018). Pengaruh Penghentian Pajanan Monosodium Glutamat terhadap Kadar Malondialdehid Jantung Tikus Putih ( *Rattus norvegicus* ) Jantan Dewasa. *Jurnal Cerebellum*, 4(4), 1153–1162. <https://jurnal.untan.ac.id/index.php/jfk/article/view/32867>
- Yahya, M. A., & Nurrosyidah, I. H. (2020). Antioxidant activity ethanol extract of gotu kola (*Centella asiatica* (L.) Urban) with DPPH method (2,2-Diphenyl-1-Pikrilhidrazil). *Journal of Halal Product and Research*, 3(2), 106. <https://doi.org/10.20473/jhpr.vol.3-issue.2.106-112>
- Yanuhar, U. (2016). *Mikroalga Laut: Nannchloropsis oculata*. UB Press.
- Yasir, A. S., Wiranti, M. W., & Wulantika, N. W. (2019). Ulasan Pustaka: Potensi *Spirulina platensis* terhadap Aktivitas Antioksidan, Antidiabetes dan Antihipertensi. *Jurnal Farmasi Malahayati*, 2(2), 164–174.
- Yuslianti, E. R. (2017). *Pengantar Radikal Bebas dan Antioksidan*. Deepublish.
- Yusufoglu, H. S., Soliman, G. A., Foudah, A. I., Abdulkader, M. S., Ansari, M. N., Alam, A., & Salkini, M. A. (2018). Protective Role of Aerial Parts of *Silene villosa* Alcoholic Extract Against CCl<sub>4</sub>-Induced Cardiac and Renal toxicity in Rats. *International Journal of Pharmacology*, 14(7), 1001–1009. <https://doi.org/10.3923/ijp.2018.1001.1009>
- Zhang, Q. W., Lin, L. G., & Ye, W. C. (2018). Techniques for Extraction and Isolation of Natural Products : a Comprehensive Review. *Chinese Medicine*, 1–26. <https://doi.org/10.1186/s13020-018-0177-x>