

DAFTAR PUSTAKA

- A'yun, V.Q., Evi, L., Pratama, R.I., Junianto., 2023. Aluminium Foil as a Packaging Material for Fishery Products; A Review. *AJFAR*, 23(3), 35-41. Doi; 10.9734/AJFAR/2023/V23I3604.
- Aji, N.M., Noviyanty, Y., dan Fahlevi, R., 2023. Skrining Fitokimia Dan Profil Klt Metabolit Sekunder Dari Ekstrak Etanol Daun Miana (*Coleus Scutellarioides benth*). *Jurnal Farmasi* 10.33024/jfm.v6i2.10689.
- Altammar, K.A., 2023. A Review on Nanoparticles: characteristics, synthesis, applications, and challenges. *Frontiers in microbiology*, 14, 1155622.
- Babiker, M.E.M., 2024. Eco-Environmentally Friendly Green Synthesis and Characterization of Aluminum Oxide Nanoparticles Using Leaf Extract of *Mentha Pulegium*. *International Journal of Chemical and Biochemical Sciences (IJCBS)*, 25(19), 958-965. <https://doi.org/10.62877/114-IJCBS-24-25-19-114>.
- Bachtiar, S.Y., Tjahjaningsing, W., dan Sianita, N., 2012. Pengaruh Ekstrak Alga Cokelat (*Sargassum Sp.*) Terhadap Pertumbuhan Bakteri *Escherichia Coli*. *Journal of Marine and Coastal Science*, 1(1), 53-60.
- Bargah, R. K., 2015. Preliminary Test of Phytochemical Screening of Crude Ethanolic and Aqueous Extract of *Moringa pterygosperma Gaertn*. *Journal of Pharmacognosy and Phytochemistry*, 4(1), 7-9.
- Bdewi, S.F., Rashid, S.N., Alshammary, E.T., dan Hammad, R.T., 2023. Characterization of Alumina Nanoparticles Prepared Via Green Synthesis Method. *Journal of University of Anbar for Pure Science (JUAPS)*, 17(2), 84-189.
- Bibi, E., 2023. Synthesis and characterization of Al_2O_3 nanoparticles from *Trachyspermum ammi*. *Journal of Agronomy & Agricultural Science Category: Agriculture Type: Research Article*, 6(2), 1-5. <http://dx.doi.org/10.24966/AAS-8292/100050>.
- Devi, H.S., Boda, M.A., Rubab, S., Parveen, S., Wani, A.H., dan Shah, M.A., 2021. Biosynthesis and antifungal activities of CuO and Al_2O_3 nanoparticles. *Comprehensive Analytical Chemistry*, 94, 533-546.
- Dobrzanski, L.A., Szindler, M., Drygała, A., dan Szinder, M.M., 2014. Silicon solar cells with Al_2O_3 antireflection coating. *centr.eur.j.phys.* 12, 666–670. <https://doi.org/10.2478/s11534-014-0500-9>.
- Fernando, SSN., Gunasekara, TDCP., dan Holton, J., 2018. Antimicrobial Nanoparticles: applications and mechanisms of action. *Sri Lankan Journal of Infectious Diseases*, 8(1), 2-11. doi: <http://dx.doi.org/10.4038/sljid.v8i1.8167>.

- Gour, A., dan Jain, N.K., 2019. Advances in green synthesis of nanoparticles. *Artificial cel ls, nanomedicine, and biotechnology*, 47(1), 844-851.
- Gracelin, D. H. S., Britto, A. J. D., dan Kumar, B., 2013. Qualitative and Quantitative Analysis of Phytochemicals in Five Pteris Species. *International Journal of Pharmacy and Pharmaceutical Sciences*, 5(1), 105-107.
- Gudkov, S. V., Burmistrov, D. E., Smirnova, V. V., Semenova, A. A., dan Lisitsyn, A. B., 2022. A mini review of antibacterial properties of Al₂O₃ nanoparticles. *Nanomaterials*, 12(15), 2635. <https://doi.org/10.3390/nano12152635>.
- Hakim, L dan Marsalin, I., 2016. Pemanfaatan Limbah Aluminium Foil Untuk Produksi Gas Hidrogen Menggunakan Katalis Natrium Hidroksida (NaOH). *Jurnal Teknologi Kimia Unimal*, 6(1), 68-81.
- Handayani, Tri, Sutarno, dan Setyawan, A.D., 2004. Analisis Nutrisi Rumput Laut *Sargassum crassifolium*. *J. Agardh, Biofarmasi*, 2(2), 45-52.
- Hassanpour, P., Panahi, Y., Kalan, A.E., Akbarzade, A., Davaran, S., Nasibova, A.N., Khalilov, R., dan Kavetsky, T., 2018. Biomedical applications of aluminium oxide nanoparticles. *Micro & Nano Letters*, 13(9), 1227-1231.
- Herawati, D., dan Pudjiastuti, P., 2021. Effect of different solvents on the phytochemical compounds of *Sargassum* sp. from Yogyakarta and East Nusa Tenggara. In *Journal of Physics: Conference Series*, 1783(1), 012001. doi 10.1088/1742-6596/1783/1/012001.
- Ikhioya, I.L., dan Nkele, A.C., 2024. Green Synthesis and Characterization of Aluminium Oxide Nanoparticle using Neem Leaf Extract (*Azadirachta indica*). *Hybrid Advances*, 5:1-6. <https://doi.org/10.1016/j.hybadv.2024.100141>
- Iravani, S., 2011. Green synthesis of metal nanoparticles using plants. *Green Chemistry*, 3(10), 2638–2650. <https://doi.org/10.1039/C1GC15386B>.
- Ismail, R. A., Zaidan, S. A., dan Kadhim, R. M., 2017. Preparation and characterization of aluminum oxide nanoparticles by laser ablation in liquid as passivating and anti-reflection coating for silicon photodiodes. *Applied Nanoscience*, 7, 477-487.
- J. D. Baleta, F.N., Bolaños, J.M., Ruma, O.C., Baleta, A.N., dan Cairel, 2017. Phytochemicals screening and antimicrobial properties of *Sargassum oligocystum* and *Sargassum crassifolium* Extracts. *Journal Med. Plants Stud*, 5, 382–387.
- Kasim, S., Paramitha, N.Y., dan Taba, P., 2019. Sintesis Nanopartikel Perak Menggunakan Ekstak Daun Salam (*Syzygium polyanthum*) Sebagai Bioreduktor dan Uji Aktivitas Antioksidan. *Indo J Chem*, 7(1), 51-60.

- Khan, S.Z., Liu, Z., dan Li, L., 2010. Characteristics of $\gamma\text{-Al}_2\text{O}_3$ nanoparticles generated by continuous-wave laser ablation in liquid. *Appl. Phys*, 101, 781–787. <https://doi.org/10.1007/s00339-010-5936-1>.
- Kolo, M.M., 2016. Synthesis Of Aluminium Oxide Nanoparticle With Electrochemistry Method. Tesis. Institut Teknologi Sepuluh November. Surabaya.
- Koopi, H., dan Buazar, F., 2018. A novel one-pot biosynthesis of pure alpha aluminum oxide nanoparticles using the macroalgae *Sargassum ilicifolium*: a green marine approach. *Ceramics International*, 44(8), 8940-8945.
- Kopi, Hadith, Bouadhar dan Fouad., 2018. Synthesis and characterization of aluminum oxide nanoparticles using the macroalgae *Sargassum ilicifolium*. *Journal of Marine Science and Technology*, 3(17), 64-58. <https://doi.org/10.22113/jmst.2016.40996>.
- Manogar, P., Morvinyabesh, J. E., Ramesh, P., Jeyaleela, G. D., Amalan, V., Ajarem, J. S., Allam, A.A., Khim, J.S., dan Vijayakumar, N., 2022. Biosynthesis and antimicrobial activity of aluminium oxide nanoparticles using *Lyngbya majuscula* extract. *Materials Letters*, 311, 131569.
- Manyasree, D., Kiranmayi, P., dan Kumar, R., 2018. Synthesis, characterization and antibacterial activity of aluminium oxide nanoparticles. *Int. J. Pharm. Pharm. Sci*, 10(1), 32-35. <http://dx.doi.org/10.22159/ijpps.2018v10i1.20636>.
- Megawati, S., Safitri, M., Rangkuti, S.N., Makiyyah, L., dan Mawarni, N.I.A., 2025. Uji aktivitas antibakteri GC-MS Fraksi Etil Astat dan N-Heksan Daun Kenitu (*Chrysophyllum cainoto* L). *Jurnal farmasimed (JFM)*, 7(2), 151-161. Doi: 10.35451/jfm.v7i2.2421.
- Mammari, N., Lamouroux, E., Boudier, A., dan Duval, R.E., 2022. Current Knowledge on the Oxidative-Stress-Mediated Antimicrobial Properties of Metal-Based Nanoparticles. *Journals Microorganisms*, 10(2), 437. Doi: <https://doi.org/10.3390/microorganisms10020437>.
- Nadaroglu, H., Gungor, A.A., dan Ince, S., 2017. Synthesis of Nanoparticles by Green Synthesis Method. *International Journal of Innovative Research and Reviews*, 1(1), 6-9.
- Nduni, M. N., Osano, A. M., dan Chaka, B., 2021. Synthesis and characterization of aluminium oxide nanoparticles from waste aluminium foil and potential application in aluminium-ion cell. *Cleaner Engineering and Technology*, 3, 100-108. <https://doi.org/10.1016/j.clet.2021.100108>.
- Ningrum, Y.P., 2018. Sintesis dan Karakteristik Nanopartikel Silika (SiO_2) dari Limbah Geothermal sebagai Fluorescent Fingerprint Powder. Skripsi. Universitas Islam Negeri Syarif Hidayatullah. Jakarta.
- Ningsih, N., Yasni, S., dan Yuliani, S., 2017. Sintesis Nanopartikel Ekstrak Kulit Manggis Merah Dan Kajian Sifat Fungsional Produk Enkapsulasinya. *Jurnal Teknologi dan Industri Pangan*, 28(1), 27-35.

- Nurhayati, L.S., Yahdiyani, N., dan Hidayatulloh, A., 2020. Perbandingan Pengujian Aktivitas Antibakteri Starter Yogurt Dengan Metode Difusi Sumuran Dan Metode Difusi Cakram. *Jurnal Teknologi Hasil Peternakan*, 1(2), 41-46. Doi: 10.24198/jthp.v1i2.27537.
- Oladeji, O. S., dan Xaba, T., 2024. Green syththesis of aluminium oxide nanoparticles using *Chrysophyllum albidum*, *Terminalia catappa* and *Mimusops Coriacea* leaf extracts for antibacterial and antifungal activities. *Nano-Structures & Nano-Objects*, 37, 101-1094. <https://doi.org/10.1016/j.nanoso.2024.101094>.
- Paga, A., Agus, A., Kustantinah, K., dan Budisatria, I. G. S., 2022. Secondary metabolites content of seaweed (*Sargassum* sp.) based on the different drying methods. *Advances in Biological Sciences Research*, 21. 219-223. <https://doi.org/10.2991/absr.k.220401.044>.
- Pakidi, C.S. dan Suwoyo, H.S., 2017. Potensi Dan Pemanfaatan Bahan Aktif Alga Cokelat *Sargassum* Sp. *Jurnal Ilmu Perikanan*, 6(1),551-562.
- Pangestuti, I. E., Sumardianto, S., dan Amalia, U., 2017. Phytochemical Compound Screening of *Sargassum* sp. and It's Activity as Antibacterial Against *Staphylococcus aureus* and *Escherichia coli*. *Saintek Perikanan: Indonesian Journal of Fisheries Science and Technology*, 12(2), 98-102.
- Paramita, S. A. dan Priyono, P., 2024. Perkembangan nanosains dan nanoteknologi: fenomena dari sifat fisika dan kimia. *Berkala fisika*, 27(2), 49-57.
- Pringgenies, D., Ekasari, N. L., dan Gunawan, 2011. Potensi Beberapa Ekstrak Rumput Laut sebagai Antibakteri Upaya Sebagai Bahan Antibakteri Makanan. *Prosiding*, 133-142.
- Purnomo, S. R., Rupiasih, N. N., dan Sumadiyasa, M., 2017. Sintesis Nanopartikel Perak Dengan Metode Biologi Menggunakan Ekstrak Tanaman *Sambiloto* (*Andrographis paniculata* Ness). *Buletin Fisika*, 18(1), 6.
- Safitri, E. A., dan Fatmawati, A., 2021. Aktivitas Inhibisi Ekstrak Etanolik *Ulva Lactuca* Terhadap Bakteri *Staphylococcus Aureus* An Activity of Ethanolic Extract of *Ulva Lactuca* in Inhibiting *Staphylococcus Aureus*. *Pharmaceutical Journal of Indonesia*, 7(1), 43-47.
- Saleh, A. K., Shaban, A. S., Diab, M. A., Debarnot, D., dan Elzaref, A. S., 2023. Green synthesis and characterization of aluminum oxide nanoparticles using *Phoenix dactylifera* seed extract along with antimicrobial activity, phytotoxicity, and cytological effects on *Vicia faba* seeds. *Biomass Conversion and Biorefinery*, 14,1-17.

- Sangor, F. I., dan Al-Ghouti, M. A., 2023. Waste-to-value: Synthesis of nano-aluminum oxide (nano- γ - Al_2O_3) from waste aluminum foils for efficient adsorption of methylene blue dye. *Case Studies in Chemical and Environmental Engineering*, 8, 100394. <https://doi.org/10.1016/j.cscee.2023.100394>.
- Sari, R.N., Nurhasni, dan Yaqin, M.A., 2017. Sintesis Nanopartikel ZnO Ekstrak Sargassum Sp. Dan Karakteristik Produknya. *Jurnal Pengolahan Hasil Perikanan Indonesia*, 20(2), 238-254.
- Shaikh, J. R., dan Patil, M., 2020. Qualitative Tests for Preliminary Phytochemical Screening: An Overview. *International Journal of Chemical Studies*, 8(2), 603-608. <https://doi.org/10.22271/chemi.2020.v8.i2i.8834>.
- Sing, K. S. W, 1985. Reporting physisorption data for gas/solid systems with special reference to the determination of surface area and porosity. *Pure and Applied Chemistry*. 57(4), 603-619. <https://doi.org/10.1351/pac198557040603>.
- Thakur, S., Gupta, S., Sharma, A., dan Gupta, S., 2013. Qualitative and Quantitative Analysis of Phytochemicals and Pharmacological Value of Some Dye Yielding Medicinal Plants. *Orient Journal of Chemistry*, 29(2), 475-481. <https://doi.org/10.13005/OJC/290211>.
- Thanaraj, S., Mitthun, A.N.K., Sravanthy, P.G., Carmelin, D.S., Surya, M., dan Saravanan, M., 2024. Green Synthesis of Aluminum Oxide Nanoparticles Using Clerodendrum phlomidis and Their Antibacterial, Anti-inflammatory, and Antioxidant Activities. *Cureus*, 16(1): 2-12.
- Thommes, M., Kaneko, K., Neimark, A.V., Olivier, J.P., Reinoso, F.R., Rouquerol, J., dan Sing, K.S.W., 2015. Physisorption of gases, with special reference to the evaluation of surface area and pore size distribution (IUPAC Technical Report). *Pure and Applied Chemistry*. 87(9-10), 1051-1069. <https://doi.org/10.1515/pac-2014-1117>.
- Tran, G. T., Nguyen, N. T. H., Nguyen, N. T. T., Nguyen, T. T. T., Nguyen, D. T. C., & Tran, T. V. 2023. Plant extract-mediated synthesis of aluminum oxide nanoparticles for water treatment and biomedical applications: a review. *Environmental Chemistry Letters*, 21(4), 2417-2439.
- Wulandari, S., Nisa, Y.S., Taryono, Indarti., dan Sayekti, R.RS., 2019. Sterilisasi Peralatan dan Media Kultur Jaringan. *Journal of Agrotechnology Innovation*, 4(2), 16-19. <https://jurnal.ugm.ac.id/Agrinova/>.
- Xie, H., Li, W., Han, X., Li, M., Zhao, Q., Xu, Y., Su, H., dan Meng, W., 2025. Identification of RIPK3 as a target of flavonoids for anti-necroptosis in vitro. *Bioorganic Chemistry*, 108503. <https://doi.org/10.1016/j.bioorg.2025.108503>.
- Zaki, T., Nermen H.M., Maher I.N., H. A., dan El Salam., 2012. Characterization And Application Of Nano-Alumina Sorbents For Desulfurization And

Dearomatization Of Suez Crude Petrolatum. Fuel Processing Technology, 106(2013), 625–630.

Zulaicha, A. S., Saputra, I. S., Sari, I. P., Ghifari, M. A., Yulizar, Y., Permana, Y. N., dan Sudirman, S., 2021, Green synthesis nanopartikel perak (AgNPs) menggunakan bioreduktor alami ekstrak daun ilalang (*Imperata cylindrica* L), *Rafflesia Journal of Natural and Applied Sciences*, 1(1), 11-19