

DAFTAR PUSTAKA

- Abbaszadegan, A., Ghahramani, Y., Gholami, A., Hemmateenejad, B., Dorostkar, S., Nabavizadeh, M., & Sharghi, H. (2015). The Effect of Charge at the Surface of Silver Nanoparticles on Antimicrobial Activity against Gram-Positive and Gram-Negative Bacteria: A Preliminary Study. *Journal of Nanomaterials*, 2015(1). <https://doi.org/10.1155/2015/720654>
- Altammar, K. A. (2023). A review on nanoparticles: characteristics, synthesis, applications, and challenges. *Frontiers in Microbiology*, 14, 1155622. <https://doi.org/10.3389/fmicb.2023.1155622>
- Arnaud, M., Cm, P., Junior, Lima, M. G., Silva, A. V. E., Araujo, J. T., Gallembeck, A., De França Caldas Júnior, A., & Rosenblatt, A. (2021). Nano-silver fluoride at higher concentration for caries Arrest in primary molars: a randomized controlled trial. *International Journal of Clinical Pediatric Dentistry*, 14(2), 207–211. <https://doi.org/10.5005/jp-journals-10005-1920>
- Aryatikta, R., Winarni, N. S., & Pramono, N. S. N. W. (2022). Kajian Pustaka Potensi Sargassum Sp. sebagai Nutrasetikal. *Food Scientia Journal of Food Science and Technology*, 2(2), 139–159. <https://doi.org/10.33830/fsj.v2i2.3083.2022>
- Asri, A. F., Aritonang, H. F., & Koleangan, H. S. J. (2024). Sintesis nanopartikel perak termodifikasi PEG-4000 menggunakan ekstrak daun Afrika sebagai pendeteksi HG2+. *CHEMISTRY PROGRESS*, 17(1), 9–19.
- Badan Kebijakan Pembangunan Kesehatan BKKP 2023. Survei Kesehatan Indonesia (SKI) 2023 dalam angka. <https://www.badankebijakan.kemkes.go.id/ski-2023-dalam-angka/>
- Balouiri, M., Sadiki, M., & Ibsouda, S. K. (2015). Methods for in vitro evaluating antimicrobial activity: A review. *Journal of Pharmaceutical Analysis*, 6(2), 71–79. <https://doi.org/10.1016/j.jpha.2015.11.005>
- Barbasz, A., Oćwieja, M., & Roman, M. (2017). Toxicity of silver nanoparticles towards tumoral human cell lines U-937 and HL-60. *Colloids and Surfaces B Biointerfaces*, 156, 397–404. <https://doi.org/10.1016/j.colsurfb.2017.05.027>
- Chugh, D., Viswamalya, V., & Das, B. (2021). Green synthesis of silver nanoparticles with algae and the importance of capping agents in the process. *Journal of Genetic Engineering and Biotechnology*, 19(1), 126. <https://doi.org/10.1186/s43141-021-00228-w>
- Duman, H., Eker, F., Akdaşçi, E., Witkowska, A. M., Bechelany, M., & Karav, S. (2024). Silver Nanoparticles: A comprehensive review of synthesis methods and chemical and physical properties. *Nanomaterials*, 14(18), 1527. <https://doi.org/10.3390/nano14181527>
- El-Desouky, D. I., Hanno, A., Elhamouly, Y., Hamza, S. A., El-Desouky, L. M., & Dowidar, K. M. L. (2022). Preventive potential of nano silver fluoride versus sodium fluoride varnish on enamel caries like lesions in primary teeth: in vitro study. *BMC Oral Health*, 22(1), 244. <https://doi.org/10.1186/s12903-022-02271-6>

- Erniati, E., Syahrial, S., Erlangga, E., Imanullah, I., & Andika, Y. (2024). Aktivitas antioksidan dan total fenol rumput laut *Sargassum* sp. dari Perairan Simeulue Aceh. *Jurnal Pengolahan Hasil Perikanan Indonesia*, 27(3), 186–196. <https://doi.org/10.17844/jphpi.v27i3.46981>
- Fahim, M., Shahzaib, A., Nishat, N., Jahan, A., Bhat, T. A., & Inam, A. (2024). Green synthesis of silver nanoparticles: A comprehensive review of methods, influencing factors, and applications. *JCIS Open*, 16, 100125. <https://doi.org/10.1016/j.jciso.2024.100125>
- Gajic, I., Kabic, J., Kekic, D., Jovicevic, M., Milenkovic, M., Culafic, D. M., Trudic, A., Ranin, L., & Opavski, N. (2022). Antimicrobial susceptibility testing: A comprehensive review of currently used methods. *Antibiotics*, 11(4), 427. <https://doi.org/10.3390/antibiotics11040427>.
- Haghgoo, R., Saderi, H., Eskandari, M., Haghshenas, H., & Rezvani, M. (2014). Evaluation of the antimicrobial effect of conventional and nanosilver-containing varnishes on oral streptococci. *PubMed*, 15(2), 57–62. <https://pubmed.ncbi.nlm.nih.gov/24883341>
- Hamouda, R. A., & Aljohani, E. S. (2024). Assessment of Silver Nanoparticles Derived from Brown Algae *Sargassum vulgare*: Insight into Antioxidants, Anticancer, Antibacterial and Hepatoprotective Effect. *Marine Drugs*, 22(4), 154. <https://doi.org/10.3390/md22040154>
- Junior, V. E. S., Targino, A. G. R., Flores, M. a. P., Rodríguez-Díaz, J. M., Teixeira, J. A., Heimer, M. V., De Luna Freire Pessoa, H., Galembeck, A., & Rosenblatt, A. (2017). Antimicrobial activity of silver nanoparticle colloids of different sizes and shapes against *Streptococcus mutans*. *Research on Chemical Intermediates*, 43(10), 5889–5899. <https://doi.org/10.1007/s11164-017-2969-5>
- Kavishri S., Geetha A., Ilango var I. G. K., Vasugi S., Sivaperumal P., Balachandran S. (2024). Facile Synthesis of Silver Nanoparticles From Sustainable *Sargassum* sp. Seaweed Material and Its Anti-inflammatory Application. *Cureus*, 16(4), e57754. <https://doi.org/10.7759/cureus.57754>.
- Kumar, L. R. G., Paul, P. T., Anas, K. K., Tejpal, C. S., Chatterjee, N. S., Anupama, T. K., Mathew, S., & Ravishankar, C. N. (2022). Phlorotannins–bioactivity and extraction perspectives. *Journal of Applied Phycology*, 34(4), 2173–2185. <https://doi.org/10.1007/s10811-022-02749-4>
- Kumar, P., Selvi, S. S., Prabha, A. L., Kumar, K. P., Ganeshkumar, R. S., & Govindaraju, M. (2012). Synthesis of Silver Nanoparticles from *Sargassum Tenerrimum* and Screening Phytochemicals for Its Antibacterial Activity. *Nano Biomedicine and Engineering*, 4(1). <https://doi.org/10.5101/nbe.v4i1.p12-16>
- Lemos, J., Palmer, S., Zeng, L., Wen, Z., Kajfasz, J., Freires, I., Abranches, J., & Brady, L. (2019). The Biology of *Streptococcus mutans*. *Microbiology Spectrum*, 7(1). <https://doi.org/10.1128/microbiolspec.gpp3-0051-2018>
- Liao, Y., Brandt, B. W., Li, J., Crielaard, W., Van Loveren, C., & Deng, D. M. (2017). Fluoride resistance in *Streptococcus mutans*: a mini review. *Journal of Oral Microbiology*, 9(1), 1344509. <https://doi.org/10.1080/20002297.2017.1344509>

- Lubojanski, A., Piesiak-Panczyszyn, D., Zakrzewski, W., Dobrzynski, W., Szymonowicz, M., Rybak, Z., Mielan, B., Wiglusz, R. J., Watras, A., & Dobrzynski, M. (2023). The Safety of Fluoride Compounds and Their Effect on the Human Body—A Narrative Review. *Materials*, *16*(3), 1242. <https://doi.org/10.3390/ma16031242>.
- Mankar, N., Kumbhare, S., Nikhade, P., Mahapatra, J., & Agrawal, P. (2023). Role of fluoride in Dentistry: A Narrative review. *Cureus*, *15*(12), e50884. <https://doi.org/10.7759/cureus.50884>
- Medeiros G. A., Tsai C., Singh N., dan Boynton J. R. (2024). Silver Diamine Fluoride as a Caries Management Option for the Young Child. *J Mich Dent Assoc*, *106*(1), Article 3.
- Mei, M. L., Ito, L., Cao, Y., Li, Q., Chu, C., & Lo, E. C. (2013). The inhibitory effects of silver diamine fluorides on cysteine cathepsins. *Journal of Dentistry*, *42*(3), 329–335.
- Mei, M., Lo, E., & Chu, C. (2018). Arresting Dentine Caries with Silver Diamine Fluoride: What’s Behind It *Journal of Dental Research*, *97*(7), 751–758. <https://doi.org/10.1177/0022034518774783>
- Menichetti, A., Mavridi-Printezi, A., Mordini, D., & Montalti, M. (2023). Effect of size, shape and surface functionalization on the antibacterial activity of silver nanoparticles. *Journal of Functional Biomaterials*, *14*(5), 244. <https://doi.org/10.3390/jfb14050244>
- Nadhira, Z., Dewi, N., Dewi, R., K. (2020). Pengaruh Aplikasi Sodium Fluoride 2% terhadap Jumlah Koloni *Streptococcus* Sp. dalam Saliva Anak Usia 7-9 Tahun. *Dentin Jurnal Kedokteran Gigi*, *4*(3), 95–99.
- Nguyen, N. P. U., Dang, N. T., Doan, L., & Nguyen, T. T. H. (2023). Synthesis of Silver Nanoparticles: From Conventional to ‘Modern’ Methods—A Review. *Processes*, *11*(9), 2617. <https://doi.org/10.3390/pr11092617>
- O’Hair, R. a. J. (2019). Silver: the cultured and versatile element. *Australian Journal of Chemistry*, *72*(12), 923. <https://doi.org/10.1071/ch19395>.
- Ouay, B. L., & Stellacci, F. (2015). Antibacterial activity of silver nanoparticles: A surface science insight. *Nano Today*, *10*(3), 339–354. <https://doi.org/10.1016/j.nantod.2015.04.002>
- Pérez-Díaz, M. A., Boegli, L., James, G., Velasquillo, C., Sánchez-Sánchez, R., Martínez-Martínez, R., Martínez-Castañón, G. A., & Martínez-Gutierrez, F. (2015). Silver nanoparticles with antimicrobial activities against *Streptococcus mutans* and their cytotoxic effect. *Materials Science and Engineering C*, *55*, 360–366. <https://doi.org/10.1016/j.msec.2015.05.036>
- Pitts, N. B., Zero, D. T., Marsh, P. D., Ekstrand, K., Weintraub, J. A., Ramos-Gomez, F., Tagami, J., Twetman, S., Tsakos, G., & Ismail, A. (2017). Dental caries. *Nature Reviews Disease Primers*, *3*(1), 17030. <https://doi.org/10.1038/nrdp.2017.30>
- Pushpalatha, C., Bharkhavy, K. V., Shakir, A., Augustine, D., Sowmya, S. V., Bahammam, H. A., Bahammam, S. A., Albar, N. H. M., Zidane, B., & Patil, S. (2022). The anticariogenic efficacy of nano silver fluoride. *Frontiers in Bioengineering and Biotechnology*, *10*, 931327. <https://doi.org/10.3389/fbioe.2022.931327>

- Rai, M., Yadav, A., & Gade, A. (2008). Silver nanoparticles as a new generation of antimicrobials. *Biotechnology Advances*, 27(1), 76–83. <https://doi.org/10.1016/j.biotechadv.2008.09.002>
- Ratiani, S. I., Rohman, A. a. R. L., Selay, R. E. P., Gibran, S. S., Dewi, S. A., & Rizkita, A. D. (2023). Green Synthesis Nanoparticles Review: Sun Protection Based on Silver Nanoparticles Made From Extract Rhizome Galangal and Ketapang Leaf. *Proceeding International Conference on Religion, Science and Education*, 2, 643–650.
- Sanders, E. R. (2012). Aseptic Laboratory Techniques: plating methods. *Journal of Visualized Experiments*, 63. <https://doi.org/10.3791/3064>.
- Septiani E., Pranata N., Sugiaman V. K. (2022). Minimum Inhibitory Concentration and Minimum Bactericidal Concentration of Beluntas Leaf Ethanol Extract Against *Streptococcus mutans*. *J Dentomaxillofac Sci*, 7(2), 83-87.
- Sharma, P., Dhawan, P., Rajpal, S. K., & Sharma, R. (2023). A Comparison of Antimicrobial Efficacy of Silver-based Preventive Restorations (Silver Nitrate, Silver Diamine Fluoride, and Silver Nanoparticles) against *Streptococcus mutans* Monospecies Biofilm Model. *International Journal of Clinical Pediatric Dentistry*, 16(S1), S13–S19. <https://doi.org/10.5005/jp-journals-10005-2575>.
- Sidauruk, S. W., Sari, N. I., Diharmi, A., & Arif, I. (2021). Aktivitas Antibakteri Ekstrak *Sargassum plagyophyllum* terhadap Bakteri *Listeria monocytogenes* dan *Pseudomonas aeruginosa*. *Jurnal Pengolahan Hasil Perikanan Indonesia*, 24(1), 27–37. <https://doi.org/10.17844/jphpi.v24i1.33417>
- Slayton, R. L., Urquhart, O., Araujo, M. W., Fontana, M., Guzmán-Armstrong, S., Nascimento, M. M., Nový, B. B., Tinanoff, N., Weyant, R. J., Wolff, M. S., Young, D. A., Zero, D. T., Tampi, M. P., Pilcher, L., Banfield, L., & Carrasco-Labra, A. (2018). Evidence-based clinical practice guideline on nonrestorative treatments for carious lesions. *The Journal of the American Dental Association*, 149(10), 837-849.e19. <https://doi.org/10.1016/j.adaj.2018.07.002>
- Suganya S., Dhanalakshmi B. dan Kumar S. D. (2020). Biosynthesis and characterization of silver nanoparticles from *Sargassum wightii* and its antibacterial activity against multi-resistant human pathogens. *Indian J Geo-Mar Sci*, 49(05), 839-844.
- Targino, A. G. R., Flores, M. a. P., Santos, V. E. D., Junior, De Godoy Bené Bezerra, F., De Luna Freire, H., Galembeck, A., & Rosenblatt, A. (2014). An innovative approach to treating dental decay in children. A new anti-caries agent. *Journal of Materials Science Materials in Medicine*, 25(8), 2041–2047. <https://doi.org/10.1007/s10856-014-5221-5>
- Thiurunavukkarau, R., Shanmugam, S., Subramanian, K., Pandi, P., Muralitharan, G., Arokiarajan, M., Kasinathan, K., Sivaraj, A., Kalyanasundaram, R., AlOmar, S. Y., & Shanmugam, V. (2022). Silver nanoparticles synthesized from the seaweed *Sargassum polycystum* and screening for their biological potential. *Scientific Reports*, 12(1), 14757. <https://doi.org/10.1038/s41598-022-18379-2>

- Utamaningtyas, A., Pramesti, H. T., & BalafiF, F. F. (2023). The *Streptococcus mutans* ability to survive in biofilms and during dental caries formation: scoping review. *Journal of Syiah Kuala Dentistry Society*, 7(2), 150–158. <https://doi.org/10.24815/jds.v7i2.30295>
- Valdez R. A. N., Martinez R. E. M., Contreras E. A. Z., Herrera J. L. A., Perez R. A. D. (2022). Anti-Adherence and Antimicrobial Activities of Silver Nanoparticles against Serotypes C and K of *Streptococcus mutans* on Orthodontic Appliances. *Medicina*, 58(7), 877. <https://doi.org/10.3390/medicina58070877>
- Vijayaraghavan, K., & Yun, Y. (2008). Bacterial biosorbents and biosorption. *Biotechnology Advances*, 26(3), 266–291. <https://doi.org/10.1016/j.biotechadv.2008.02.002>
- Wiraningtyas A., Ruslan, Mutmainnah P. A., Rohaeti E., dan Budiasih K. (2020). Synthesis and Characterization of Silver Nanoparticles (AgNPs) Using *Sargassum* sp. Extract as an Antibacterial in Woven Fabrics. *ASSEHR*, 576, 44-47.
- Wong, H. M. (2022). Childhood caries management. *International Journal of Environmental Research and Public Health*, 19(14), 8527. <https://doi.org/10.3390/ijerph19148527>
- Xu, G. Y., Zhao, I. S., Lung, C. Y., Yin, I. X., Lo, E. C., & Chu, C. H. (2023). Silver compounds for caries management. *International Dental Journal*, 74(2), 179–186. <https://doi.org/10.1016/j.identj.2023.10.013>
- Yadav K. dan Prakash S. (2016). Dental Caries: A Review. *AJBPS*, 6(53), 1-7.
- Yin, I. X., Zhao, I. S., Mei, M. L., Lo, E. C. M., Tang, J., Li, Q., So, L. Y., & Chu, C. H. (2020). Synthesis and Characterization of Fluoridated Silver Nanoparticles and Their Potential as a Non-Staining Anti-Caries Agent *International Journal of Nanomedicine*, Volume 15, 3207–3215. <https://doi.org/10.2147/ijn.s243202>
- Zameer, M., Birajdar, S. B., Basheer, S. N., Peeran, S. W., Peeran, S. A., & Reddy, A. (2021). Nanosilver fluoride as a caries arresting agent: A narrative review. *Contemporary Pediatric Dentistry*, 1–13. <https://doi.org/10.51463/cpd.2021.47>
- Zhai, L., Kong, J., Zhao, C., Xu, Y., Sang, X., Zhu, W., & Yao, N. (2025). Global trends and challenges in childhood caries: a 20-year bibliometric review. *Translational Pediatrics*, 14(1), 139–152. <https://doi.org/10.21037/tp-24-415>