

DAFTAR PUSTAKA

- Ácsová, A., Martiniaková, S., & Hojerová, J. (2019). Selected in vitro methods to determine antioxidant activity of hydrophilic/lipophilic substances . *Acta Chimica Slovaca*, 12(2), 200–211. <https://doi.org/10.2478/acs-2019-0028>
- Adi, A. C., Rachmawati, H., & dkk. (2019). Formulation and Characterization of Vitamin A Nanoemulsion. *Media Gizi Indonesia*, 14(1), 1.
- Akbari, S., & Nour, A. H. (2018). Emulsion types, stability mechanisms and rheology: A review. *International Journal of Innovative Research and Scientific Studies*, 1(1), 11–17. <https://doi.org/10.53894/ijirss.v1i1.4>
- Ambari, Y., Saputri Oscardini, S., & Nurrosyidah Hanida, I. (2021). Formulasi dan Uji Aktivitas Antioksidan Body Lotion Ekstrak Daun Kemangi (*Ocimum cannum Sims.*) Dengan Metode DPPH (1,1 – diphenyl-2- picrylhydrazyl). 47(8), 170–179.
- Amin, N., & Das, B. (2019). a Review on Formulation and Characterization of Nanoemulsion. *International Journal of Current Pharmaceutical Research*, 11(4), 1–5. <https://doi.org/10.22159/ijcpr.2019v11i4.34925>
- Andasari, S. D., Mustofa, C. H., & Arabela, E. O. (2021). Standarisasi Parameter Spesifik Dan Non Spesifik Ekstrak Etil Asetat Daun Beluntas (*Pluchea indica L.*). *CERATA Jurnal Ilmu Farmasi*, 12(1), 47–53. <https://doi.org/10.61902/cerata.v12i1.252>
- Aprilia, M., Wisaniyasa, N. W., & Suter, I. K. (2020). Pengaruh Suhu dan Lama Pelayuan Terhadap Karakteristik Teh Herbal Daun Kenikir (*Cosmos caudatus Kunth.*). *Jurnal Ilmu Dan Teknologi Pangan (ITEPA)*, 9(2), 136. <https://doi.org/10.24843/itepa.2020.v09.i02.p04>
- Aprillia, Y., Wulandari, T., & Ratina Sutardi. (2023). Karakterisasi Ekstrak Etanol Daun Teh Hijau (*Camellia sinensis (L.) Kuntze*) dan Uji Aktivitas Antioksidan dengan Metode DPPH (2,2-diphenyl-1-picrylhydrazil). *Prosiding Seminar Nasional Diseminasi Penelitian*, 3(September), 2964–6154.
- Aprilya, A., Rahmadevi, R., & Meirista, I. (2021). Formulasi Nanoemulsi dengan Bahan Dasar Minyak Ikan (*Oleum Iecoris Aselli*). *Jurnal Sains Dan Kesehatan*, 3(3), 370–375. <https://doi.org/10.25026/jsk.v3i3.309>
- Arianto, A., & Cindy, C. (2019). Preparation and evaluation of sunflower oil nanoemulsion as a sunscreen. *Open Access Macedonian Journal of Medical Sciences*, 7(22), 3757–3761. <https://doi.org/10.3889/oamjms.2019.497>
- Arief, M. J., Fariani, F., Irsal, M., & Mursyid, A. M. (2023). Formulasi dan Evaluasi Serum Gigi Ekstrak Etanol Siwak (*Salvadora persica L.*). *Jurnal Sains Dan Kesehatan*, 5(2), 198–204. <https://doi.org/10.25026/jsk.v5i2.1724>

- Aritonang, N. S., Sherlyn, Chuman, L., & Rudy. (2022). Uji Identifikasi Senyawa Steroid Fraksi Ekstrak Metanol Andaliman (*Zanthoxylum acthopodium* DC) Secara Kromatografi Lapis Tipis. *Journal Health and Science*, 6(1), 90–98.
- Armstrong, L., Araújo Vieira do Carmo, M., Wu, Y., Antônio Esmerino, L., Azevedo, L., Zhang, L., & Granato, D. (2020). Optimizing the extraction of bioactive compounds from pu-erh tea (*Camellia sinensis* var. *assamica*) and evaluation of antioxidant, cytotoxic, antimicrobial, antihemolytic, and inhibition of α -amylase and α -glucosidase activities. *Food Research International*, 137(January), 109430. <https://doi.org/10.1016/j.foodres.2020.109430>
- Artiga-Artigas, M., Acevedo-Fani, A., & Martín-Belloso, O. (2017). Effect of sodium alginate incorporation procedure on the physicochemical properties of nanoemulsions. *Food Hydrocolloids*, 70(c), 191–200. <https://doi.org/10.1016/j.foodhyd.2017.04.006>
- Aryanti, R., Perdana, F., & Syamsudin, R. A. M. R. (2021). Telaah Metode Pengujian Aktivitas Antioksidan pada Teh Hijau (*Camellia sinensis* (L.) Kuntze). *Jurnal Surya Medika*, 7(1), 15–24. <https://doi.org/10.33084/jsm.v7i1.2024>
- Atmaja, M Iqbal Prawira; Maulana, Hilman; Shabri; Riski, Galih Pancar; Fauziah, Alfiana; Harianto, S. (2021). Evaluasi Kesesuaian Mutu Produk Teh Dengan Persyaratan SNI. *Jurnal Standarisasi*, 23(1), 43–52.
- Aung, W. W., Panich, K., Watthanophas, S., Naridsirikul, S., Ponphaiboon, J., Krongrawa, W., Kulpicheswanich, P., Limmatvapirat, S., & Limmatvapirat, C. (2023). Preparation of Bioactive De-Chlorophyll Rhein-Rich Senna alata Extract. *Antibiotics*, 12(1), 1–25. <https://doi.org/10.3390/antibiotics12010181>
- Bitwell, C., Indra, S. Sen, Luke, C., & Kakoma, M. K. (2023). A review of modern and conventional extraction techniques and their applications for extracting phytochemicals from plants. *Scientific African*, 19(April), e01585. <https://doi.org/10.1016/j.sciaf.2023.e01585>
- Boehm, F., Edge, R., & Truscott, T. G. (2023). Photochemical and Photophysical Properties of Carotenoids and Reactive Oxygen Species: Contradictions Relating to Skin and Vision. *Oxygen*, 3(3), 322–335. <https://doi.org/10.3390/oxygen3030021>
- Boo, Y. C. (2020). Emerging strategies to protect the skin from ultraviolet rays using plant-derived materials. *Antioxidants*, 9(7), 1–23. <https://doi.org/10.3390/antiox9070637>
- Celep, E., Akyuz, S., İnan, Y., & Yesilada, E. (2017). Stability of phenolic content of some herbal infusions and their antioxidant activity following in vitro digestion. *Turkish Journal of Biochemistry*, 42(4), 375–380. <https://doi.org/10.1515/tjb-2017-0178>

- Celep, E., Charehsaz, M., Akyüz, S., Acar, E. T., & Yesilada, E. (2015). Effect of in vitro gastrointestinal digestion on the bioavailability of phenolic components and the antioxidant potentials of some Turkish fruit wines. *Food Research International*, 78, 209–215. <https://doi.org/10.1016/j.foodres.2015.10.009>
- Chan, E. W. C., Lim, Y. Y., & Chew, Y. L. (2007). Antioxidant activity of *Camellia sinensis* leaves and tea from a lowland plantation in Malaysia. *Food Chemistry*, 102(4), 1214–1222. <https://doi.org/10.1016/j.foodchem.2006.07.009>
- Chaves, N., Santiago, A., & Alías, J. C. (2020). Quantification of the antioxidant activity of plant extracts: Analysis of sensitivity and hierarchization based on the method used. *Antioxidants*, 9(1). <https://doi.org/10.3390/antiox9010076>
- Demmig-Adams, B., López-Pozo, M., Stewart, J. J., & Adams, W. W. (2020). Zeaxanthin and lutein: Photoprotectors, anti-inflammatories, and brain food. *Molecules*, 25(16). <https://doi.org/10.3390/molecules25163607>
- Destiyana, O. Y., Hajrah, & Rijai, L. (2018). Formulasi Nanoemulsi Kombinasi Ekstrak Bunga Mawar (*Rosa damascena* Mill.) dan Ekstrak Umbi Bengkuang (*Pachyrhizus erosus* L.) Menggunakan Minyak Pembawa Virgin Coconut Oil (VCO). *Proceeding of Mulawarman Pharmaceuticals Conferences*, 8(December 2018), 254–259. <https://doi.org/10.25026/mpc.v8i1.331>
- Dimawarnita, F., Syarif, A. M., Faramitha, Y., Prakoso, H. T., Dimawarnita, F., Syarif, A. M., Faramitha, Y., & Widiastuti, H. (2022). Dekolorisasi pewarna tekstil menggunakan teknik batch dan rotary biological contactor dengan tiga jenis agen hayati decolorization of textile dyes using batch and rotary biological contactor techniques with three types of biological agents. *Jurnal Teknologi Industri Pertanian*, 32(3), 295–304.
- Fadhlillah, M., Safari, A., Rachman, S. D., Isnansafitri, F. F., & Ishmayana, S. (2020). Optimisasi Viskositas Cream Cheese dengan Penambahan Kulit Ari Psyllium (*Plantago ovata*) dan Susu Full Cream. *Chimica et Natura Acta*, 8(3), 98. <https://doi.org/10.24198/cna.v8.n3.32203>
- Farah, V., Nurhasanah, D., & Putra, N. (2023). Peredaman Radikal Bebas Ekstrak Etanol Daun Rosella (*Hibiscus sabdariffa* L) Dengan Metode Frap. *Journal of Pharmaceutical*, 1(1), 21–29.
- Fauzia, W., Yuningsih, L. M., & Mulyani, R. (2023). Formulasi Sediaan Hand and body Lotion Dari Sari Bonggol Nanas (*Ananas comosus* (L .) Merr) Terhadap Kelembapan Kulit. 6573, 24–30. <https://doi.org/10.17977/um0260v7i22023p024>
- Fawwaz, M., Baits, M., Pratama, M., & Abidin, Z. (2024). Antioxidant Activity and Total Carotenoids Level of *Litopenaeus vannamei* Aktivitas Antioksidan dan Kadar Karotenoid Total pada *Litopenaeus vannamei*. 11(3).

- Fayakun, F. L., & Prihantini, M. (2023). Optimasi Konsentrasi Surfaktan Cremophor RH 40 dalam Nanoemulsi Kompleks Molekular Asam Glikolat-Kitosan Menggunakan Metode Multilevel Categoric-One Factor. *Jurnal Ilmu Farmasi Dan Farmasi Klinik*, 20(2), 167. <https://doi.org/10.31942/jiffk.v20i2.9858>
- Forestryana, D., Hayati, A., & Putri, A. N. (2022). Formulation and Evaluation of Natural Gel Containing Ethanolic Extract of Pandanus amaryllifolius R. Using Various Gelling Agents. *Borneo Journal of Pharmacy*, 5(4), 345–356. <https://doi.org/10.33084/bjop.v5i4.1411>
- Gaidhani, K. A., Harwalkar, M., Bhambere, D., & Nirgude, P. S. (2015). Lyophilizaton/Freeze Drying a Review. *Kunal et Al. World Journal of Pharmaceutical Research World Journal of Pharmaceutical Research SJIF Impact Factor 5*, 4(8), 517. www.wjpr.net
- Ghosh, V., Ranjha, R., & Gupta, A. K. (2021). *Formulation of anti-larval nanoemulsion : Impact of droplet size on larvical activity against malaria vectors in Chhattisgarh, India*. 58(April), 178–186.
- Gulcin, İ. (2020). Antioxidants and antioxidant methods: an updated overview. In *Archives of Toxicology* (Vol. 94, Issue 3). <https://doi.org/10.1007/s00204-020-02689-3>
- Gupta, A., Eral, H. B., Hatton, T. A., & Doyle, P. S. (2016). Nanoemulsions: Formation, properties and applications. *Soft Matter*, 12(11), 2826–2841. <https://doi.org/10.1039/c5sm02958a>
- Habibi, N. A., Fathia, S., & Utami, C. T. (2019). Perubahan Karakteristik Bahan Pangan pada Keripik Buah dengan Metode Freeze Drying (Review). *JST (Jurnal Sains Terapan)*, 5(2). <https://doi.org/10.32487/jst.v5i2.634>
- Hafiz Ramadhan, Baidah, D., Lestari, N. P., & Yuliana, K. A. (2020). Aktivitas Antioksidan Ekstrak Etanol 96% Daun, Buah dan Kulit Terap (*Artocarpus odoratissimus*) Menggunakan Metode Cuprac. *Farmasains : Jurnal Ilmiah Ilmu Kefarmasian*, 7(1), 7–12. <https://doi.org/10.22236/farmasains.v7i1.4331>
- Hakim, A. R., & Saputri, R. (2020). Narrative Review: Optimasi Etanol sebagai Pelarut Senyawa Flavonoid dan Fenolik. *Jurnal Surya Medika*, 6(1), 177–180. <https://doi.org/10.33084/jsm.v6i1.1641>
- Hasan, M. R., Haque, M., Hoque, M. A., Sultana, S., Rahman, M., Shaikh, M. A., & Sarker, M. K. (2024). Heliyon Antioxidant activity study and GC-MS profiling of *Camellia sinensis* Linn. *Heliyon*, 10(1), e23514. <https://doi.org/10.1016/j.heliyon.2023.e23514>
- Herdiana, I., & Aji, N. (2020). Fraksinasi Ekstrak Daun Sirih dan Ekstrak Gambir serta Uji Antibakteri *Streptococcus mutans*. *Jurnal Ilmiah Kesehatan*, 19(03), 100–106. <https://doi.org/10.33221/jikes.v19i03.580>

- Indalifiany, A., Malaka, M. H., Sahidin, S., Fristiohady, A., & Andriani, R. (2021). Formulation And Physical Stability Test Of Nanoemulgel Containing Petrosia Sp. Ethanolic Extract. *Jurnal Farmasi Sains Dan Praktis*, 7(3), 321–331. <https://doi.org/10.31603/pharmacy.v7i3.6080>
- Irawati, W., Timotius, V. A. C., Adhiwijaya, R. P., & Marvella, E. B. (2022). Karakterisasi Resistensi dan Dekolorisasi Berbagai Pewarna Oleh Bakteri Indigen Indonesia Escherichia coli Strain CN5. *Jurnal Biologi Papua*, 14(2), 109–117. <https://doi.org/10.31957/jbp.2202>
- Irfan, M., Mukhlisah Nurul, A., Agustina, & Syah Putra, S. (2024). *Kualitas Fisik dan Organoleptik Es Krim dengan Penambahan Kayu Secang (Caesalpinia sappani L.) sebagai Pewarna Alami*. 5(1), 13–28. <https://doi.org/10.24198/jthp.v5i1.49593>
- Iskandar, D. (2020). Aplikasi Uji Skrining Fitokimia Terhadap Daun Uncaria Tomentosa Sebagai Bahan Utama Dalam Pembuatan Teh. *Jurnal Teknologi Technoscientia*, 12(2), 153–158.
- Izza, A. R. F., Tambunan, F. M. A., & Maulina, D. (2023). Karakterisasi Dan Skrining Fitokimia Buah Lada Putih (Piperis albi fructus). *Indonesian Journal of Health Science*, 3(1), 1–6. <https://doi.org/10.54957/ijhs.v3i1.356>
- Jakubczyk, K., Kochman, J., Kwiatkowska, A., Kałdunska, J., Dec, K., Kawczuga, D., & Janda, K. (2020). Antioxidant properties and nutritional composition of matcha green tea. *Foods*, 9(4). <https://doi.org/10.3390/foods9040483>
- Karlina, V. R., & Nasution, H. M. (2022). Skrining Fitokimia Dan Uji Aktivitas Antibakteri Ekstrak Etanol Daun Jeruk Purut (Citrus hystrix DC) Terhadap Bakteri Staphylococcus Aureus Dan Escherichia Coli. *Journal of Health and Medical Science*, 1(2), 132–139. <https://pusdikrapublishing.com/index.php/jkes/home>
- Kaur, A., Kaur, M., Kaur, P., Kaur, H., Kaur, S., & Kaur, K. (2015). Estimation and Comparison of Total Phenolic and Total Antioxidants in Green Tea and Black Tea. *Global Journal of Bio-Science and Biotechnology*, 4(1), 116–120.
- Khairun Nisa, N., Marliana, E., & Erwin. (2024). Potensi Aktivitas Antioksidan Ekstrak Metanol Daun Sungkai (Peronema canescens Jack.) *Jurnal Atomik*, 9(1), 19–24. <https://jurnal.kimia.fmipa.unmul.ac.id/index.php/JAE-ISSN2549-005219> <https://doi.org/10.30872/ja.v9i1.1277>
- Kong, S., Choi, H. R., Kim, Y. J., Lee, Y. S., Park, K. C., & Kwak, S. Y. (2020). Milk protein-derived antioxidant tetrapeptides as potential hypopigmenting agents. *Antioxidants*, 9(11), 1–12. <https://doi.org/10.3390/antiox9111106>
- Kumari, S., Goyal, A., Khan, A. A., Garg, M., Sindhu, R. K., Fatima, S., & Mallick, S. (2025). Lipidic cubic phase zeaxanthin loaded cubosomes: formulation, characterization and evaluation for antioxidant potential through DPPH assay.

- Biomass Conversion and Biorefinery.* <https://doi.org/10.1007/s13399-025-06711-5>
- Kurnia, D., Rohmah, D., & Anggraeni, V. J. (2022). Aktivitas antioksidan dengan metode cuprac dan penetapan kadar fenolat total pada ekstrak dan fraksi makroalga Eucheuma cottonii. *Jurnal Agrotek Ummat*, 9(4), 298–309.
- Kurniasari, F. (2016). Evaluasi Uji Hedonik dan Uji Iritasi Sediaan Lotion Minyak Atsiri Daun Cengkeh (Eugenia Aromatic L .) Evaluation of Hedonic Test and Irritation Test of Lotion of Clove Leaf Essential Oil (Eugenia Aromatic L .). *Jurnal Farmasi Indonesia*, 13(2), 163–170. <https://www.academia.edu/download/87737279/230911375.pdf>
- Kurniawati, I. F., & Sutoyo, S. (2021). Review Artikel: Potensi Bunga Tanaman Sukun (Artocarpus Altilis [Park. I] Fosberg) Sebagai Bahan Antioksidan Alami. *Unesa Journal of Chemistry*, 10(1), 1–11. <https://doi.org/10.26740/ujc.v10n1.p1-11>
- Lady Yunita Handoyo, D., & Pranoto, M. E. (2020). Pengaruh Variasi Suhu Pengeringan Terhadap Pembuatan Simplisia Daun Mimba (Azadirachta Indica). *Jurnal Farmasi Tinctura*, 1(2), 45–54. <https://doi.org/10.35316/tinctura.v1i2.988>
- Lee, C., & Demirci, M. (2022). Handbook of Food Bioactive Ingredients. In *Handbook of Food Bioactive Ingredients* (Issue April 2023). <https://doi.org/10.1007/978-3-030-81404-5>
- Leslie, P. J., & Gunawan, S. (2019). Uji Fitokimia dan Perbandingan Efek Antioksidan Pada Daun Teh Hijau , Teh hitam , dan Teh putih (Camellia sinensis) dengan Metode DPPH (2 , 2-difenil-1- pikrilhidrazil). *Tarumanagara Medical Journal*, 1(2), 383–388.
- Lestari Febriani, R., Suhaimi, & Wildaniah, W. (2018). Penetapan Parameter Standar Simplisia Dan Ekstrak Etanol Daun Kratom (*Mitragyna speciosa Korth*) Yang Tumbuh Di Kabupaten Kapuas Hulu Dan Kabupaten Melawi. *Jurnal Insan Farmasi Indonesia*, 1(1), 72–84. <https://e-jurnal.stikes-isfi.ac.id/index.php/JIFI/article/view/154/pdf>
- Lestari, T., Djamaluddin, A., & Handayani, R. P. (2020). 340490-Pembuatan-Dan-Uji-Organoleptik-Sediaan-L-1E5Ead6F. 106–113.
- Li, D., Wang, R., Huang, J., Cai, Q., Yang, C. S., Wan, X., & Xie, Z. (2019). Effects and mechanisms of tea regulating blood pressure: Evidences and promises. *Nutrients*, 11(5), 1–20. <https://doi.org/10.3390/nu11051115>
- Liaudanskas, M., Viškelis, P., Raudonis, R., Kviklys, D., Uselis, N., & Janulis, V. (2014). Phenolic composition and antioxidant activity of *Malus domestica* leaves. *Scientific World Journal*, 2014. <https://doi.org/10.1155/2014/306217>
- Lukić, M., Pantelić, I., & Savić, S. D. (2021). Towards optimal ph of the skin and

- topical formulations: From the current state of the art to tailored products. *Cosmetics*, 8(3). <https://doi.org/10.3390/cosmetics8030069>
- Mangalu, M. A., Simbala, H. E. I., & Suoth, E. J. (2022). Standarisasi Parameter Spesifik Ekstrak Buah Pinang Yaki (Areca vestiaria). *Jurnal Farmasi Medica/Pharmacy Medical Journal (PMJ)*, 5(1), 20. <https://doi.org/10.35799/pmj.v5i1.41611>
- Manno, M. R., & Setianto, A. B. (2022). Optimasi Campuran Avicel 101 Dan Laktosa Sebagai Bahan Pengisi Pada Tablet Dispersi Padat Tadalafil Dengan Metode Granulasi Basah. *Jurnal Ilmu Farmasi Dan Farmasi Klinik*, 19(2), 95. <https://doi.org/10.31942/jiffk.v19i2.6667>
- Mardikasari, S. A., Mallarangeng, A. N. T. A. M., Zubaydah, W. O. S., & Juswita, E. J. (2017). Uji Stabilitas Lotion dari Ekstrak Etanol Daun Jambu Biji (*Psidium guajava* L.). *Jurnal Farmasi, Sains, Dan Kesehatan*, 3(2), 28–32.
- Maryam, S., Pratama, R., Effendi, N., & Naid, T. (2016). Analisis Aktivitas Antioksidan Ekstrak Etanolik Daun Yodium (*Jatropha multifida* L.) Dengan Metode Cupric Ion Reducing Antioxidant Capacity (CUPRAC). *Jurnal Fitofarmaka Indonesia*, 2(1), 90–93. <https://doi.org/10.33096/jffi.v2i1.185>
- Md, S., Alhakamy, N. A., Aldawsari, H. M., Husain, M., Kotta, S., Abdullah, S. T., Fahmy, U. A., Alfaleh, M. A., & Asfour, H. Z. (2020). Formulation design, statistical optimization, and in vitro evaluation of a naringenin nanoemulsion to enhance apoptotic activity in a549 lung cancer cells. *Pharmaceuticals*, 13(7), 1–21. <https://doi.org/10.3390/ph13070152>
- Murillo, A. G., Hu, S., & Fernandez, M. L. (2019). Zeaxanthin: Metabolism, properties, and antioxidant protection of eyes, heart, liver, and skin. *Antioxidants*, 8(9), 1–18. <https://doi.org/10.3390/antiox8090390>
- Narsa, A. C., Fridayanti, A., Gama, S. I., Ali, M. M., & Wathoni, N. (2023). Formulation And Evaluation Of Hand And Body Lotion From Purple Sweet Potato (Ipomoea Batatas L.) Peel Extract And Its Antioxidant Activity. 15(2), 118–122.
- Ningsih, A. W., Klau, I. C. S., & Wardani, E. P. (2021). Studi Formulasi Hand Body Lotion Ekstrak Etanol Kunyit (Curcuma domestica val.). *FARMASIS: Jurnal Sains Farmasi*, 2(1), 32–37. <https://doi.org/10.36456/farmasis.v2i1.3621>
- Nishino, A., Yasui, H., & Maoka, T. (2017). Reaction and scavenging mechanism of β-carotene and zeaxanthin with reactive oxygen species. *Journal of Oleo Science*, 66(1), 77–84. <https://doi.org/10.5650/jos.ess16107>
- Nugraha, N. S., Listyani, T. A., & Septiarini, A. D. (2022). The Antioxidant Test and Determination of Phenolic Content in Packaged Green Tea Using FRAP Method. *Science and Community Pharmacy Journal*, 1(2), 64–67.
- Nugrahaeni, A. R. D., Roniawan, H. F., & Januarti, I. B. (2023). *Formulasi dan*

Evaluasi Fisik Sediaan Handbody Lotion Niacinamide dengan Kombinasi Alpha Arbutin sebagai Brightening Atma Rulin Dewi Nugrahaeni, Habib Fatah Roniawan, Ika Buana Januarti.* 7269, 153–164.

- Nugraheni, T. S., Setiawan, I., Putri, A. A., Sukmawati, A. W., Khasanah, L. N., Nisa, L. K., Putri, L. N. H., Wulandari, S. K., & Riswana, S. A. (2024). Various methods for testing antioxidant activity. *Jurnal of Pharmacy*, 13(1), 39–50.
- Nugroho, B., & Sari, N. P. (2018). Fomulasi Self Nano Emulsifying Drug Delivery System (SNEDDS) Ekstrak Daun Karamunting (*Rhodomyrtus tomentosa* (Ait.) Hassk.). *Jurnal Ilmiah Farmasi*, 14(1), 1–8. <https://doi.org/10.20885/jif.vol14.iss1.art1>
- Nugroho, W., Ayuchecaria, N., & Aryzki, S. (2022). Penentuan Nilai Sun Protecting Factor (SPF) Dan Uji Karakteristik Sifat Fisik-Kimia Sediaan Nanoherbal Bedak Dayak. *Journal Pharmaceutical Care and Sciences*, 3(1), 140–146. <https://doi.org/10.33859/jpcs.v3i1.255>
- Nurdianti, L., Setiawan, F., Maya, I., Rusdiana, T., Kusumawulan, C. K., Gozali, D., & Virgianti, D. P. (2024). Formulation and Evaluation of Radiance Serum Containing Astaxanthin-Zeaxanthin Nanoemulsions as an Anti-Wrinkle Agent: Stability, Ex Vivo, and In Vivo Assessments. *Cosmetics*, 11(5). <https://doi.org/10.3390/cosmetics11050182>
- Nurley, N., Rahmah, A., Ratnapuri, P. H., Srikartika, V. M., & Anwar, K. (2021). Uji Karakteristik Fisik Sediaan Gel Ekstrak Daun Kirinyuh (*Chromolaena odorata* L.) dengan Variasi Karbopol dan HPMC. *Jurnal Pharmascience*, 8(2), 79. <https://doi.org/10.20527/jps.v8i2.9346>
- Nursal, F. K., Sumirtapura, Y. C., Suciati, T., & Kartasasmita, R. E. (2019). Optimasi Nanoemulsi Natrium Askorbil Fosfat melalui Pendekatan Design of Experiment (Metode Box Behnken). *Jurnal Sains Farmasi & Klinis*, 6(3), 228. <https://doi.org/10.25077/jsfk.6.3.228-236.2019>
- Octavian, D., & Maulana, H. (2025). Pengaruh Lama Waktu Steaming dan Tiris terhadap Warna Seduhan Teh Hijau dengan Variasi Media Penyeduhan. 3(02), 89–100. <https://doi.org/10.55180/biofoodtech.v3i2.1456>
- Olatunde, O. O., Benjakul, S., & Vongkamjan, K. (2018). Antioxidant and antibacterial properties of guava leaf extracts as affected by solvents used for prior dechlorophyllization. *Journal of Food Biochemistry*, 42(5), 1–11. <https://doi.org/10.1111/jfbc.12600>
- Özyürek, M., Bektaşoğlu, B., Güçlü, K., Güngör, N., & Apak, R. (2008). Simultaneous total antioxidant capacity assay of lipophilic and hydrophilic antioxidants in the same acetone-water solution containing 2% methyl- β -cyclodextrin using the cupric reducing antioxidant capacity (CUPRAC) method. *Analytica Chimica Acta*, 630(1), 28–39. <https://doi.org/10.1016/j.aca.2008.09.057>

- Pangisian, J., Sangi, M. S., & Kumaunang, M. (2022). Analisis Senyawa Metabolit Sekunder dan Uji Aktivitas Antioksidan serta Antibakteri Biji Buah Pangi (*Pangium edule* Reinw). *Jurnal LPPM Bidang Sains Dan Teknologi*, 7(1), 11–19.
- Paramita, N. L. P. V., Andari, N. P. T. W., Andani, N. M. D., & Susanti, N. M. P. (2020). Penetapan Kadar Fenol Total Dan Katekin Daun Teh Hitam Dan Ekstrak Aseton Teh Hitam Dari Tanaman *Camellia Sinensis* Var. *Assamica*. *Jurnal Kimia*, 14(1), 43. <https://doi.org/10.24843/jchem.2020.v14.i01.p08>
- Passeron, T., Zouboulis, C. C., Tan, J., & Andersen, M. L. (2021). *Adult skin acute stress responses to short-term environmental and internal aggression from exposome factors*. 1963–1975. <https://doi.org/10.1111/jdv.17432>
- Phaniendra, A., Jestadi, D. B., & Periyasamy, L. (2015). Free Radicals: Properties, Sources, Targets, and Their Implication in Various Diseases. *Indian Journal of Clinical Biochemistry*, 30(1), 11–26. <https://doi.org/10.1007/s12291-014-0446-0>
- Powo (2024). "Plants of the World Online. Diselenggarakan oleh Royal Botanic Gardens, Kew. Diterbitkan di Internet; <https://powo.science.kew.org/>. Diakses pada November 2024
- Pradhan, S., & Dubey, R. C. (2021). Beneficial properties of green tea. *Antioxidant Properties and Health Benefits of Green Tea*, 27–56.
- Prasanth, M. I., Sivamaruthi, B. S., Chaiyasut, C., & Tencomnao, T. (2019). A review of the role of green tea (*camellia sinensis*) in antiphotoaging, stress resistance, neuroprotection, and autophagy. *Nutrients*, 11(2). <https://doi.org/10.3390/nu11020474>
- Prawira-Atmaja, M. I., Azhary, B., Harianto, S., Maulana, H., Shabri, & Rohdiana, D. (2019). Grade Teh Hijau Berpengaruh Terhadap Total Polifenol , Rasio Rehidrasi dan Warna Seduhan Teh. *Jurnal Ilmu Pangan Dan Hasil Pertanian*, 3(2), 159–169. <https://doi.org/10.26877/jiph.v3i2.5116>
- Pujiastuti, A., & Kristiani, M. (2019). Formulasi dan Uji Stabilitas Mekanik Hand and Body Lotion Sari Buah Tomat (*Licopersicon esculentum* Mill.) sebagai Antioksidan. *Jurnal Farmasi Indonesia*, 16(1), 42–55. <https://doi.org/10.31001/jfi.v16i1.468>
- Purwanti, L., Dasuki, U., & Imawan, A. (2019). PERBANDINGAN AKTIVITAS ANTIOKSIDAN DARI SEDUHAN 3 MERK TEH HITAM (*Camellia sinensis* (L.) Kuntze) DENGAN METODE SEDUHAN BERDASARKAN SNI 01-1902-1995. *Jurnal Ilmiah Farmasi Farmasyifa*, 2(1), 19–25. <https://doi.org/10.29313/jiff.v2i1.4207>
- Quiles, J. (2023). *Zeaxanthin as a Powerful Carotenoid for Eye Health About the Study*. 12(6), 1–2.

- Rahmadani, D., Side, S., & Putri, S. E. (2020). Pengaruh Penambahan PVA terhadap Ukuran Nanopartikel Perak Hasil Sintesis Menggunakan Bioreduktor Ekstrak Daun Sirsak (*Annona muricata L.*). *Sainsmat : Jurnal Ilmiah Ilmu Pengetahuan Alam*, 9(1), 1. <https://doi.org/10.35580/sainsmat91141862020>
- Rahmawati, D. . S. G. . F. A. S. . (2022). Skrining Fitokimia Senyawa Metabolit Sekunder Ekstrak Etanol Daun Teh Hijau (*Camellia sinensis (L.) Kuntze*). In *Seminar Nasional Penelitian Dan Pengabdian Kepada Masyarakat*, 385–389.
- Ramadhan, H., Andina, L., Vebruati, V., Nafila, N., Yuliana, K. A., Baidah, D., & Lestari, N. P. (2020). Perbandingan Rendemen Dan Skrining Fitokimia Dari Ekstrak Etnaoi 96% Daun, Buah Dan Kulit Buah Terap (*Artocarpus odoratissimus Blanco*). *Jurnal Ilmiah Farmako Bahari*, 11(2), 103. <https://doi.org/10.52434/jfb.v11i2.876>
- Rante, T. R. K., Simbala, H. E. I., & Mansauda, K. L. R. (2020). Phytochemical Screening and Antioxidant Potential of (*Stachytarpheta jamaicensis L.*) Leaf Extract Using 1.1 Diphenyl-2-Picrylhydrazyl (DPPH) Method. *Jurnal MIPA*, 9(2), 91–96.
- Rapisarda, P., Amenta, M., Ballistreri, G., Fabroni, S., & Timpanaro, N. (2022). Distribution, Antiokxidant Capacity, Bioavailability and Biological Properties of Anthocyanin Pigment in Blood Oranges and Other Citrus Species. 1–27.
- Reşat Apak, Kubilay Güçlü, Birsen Demirata, Mustafa Özyürek, S. E. Ç., & Burcu Bektaşoğlu, K. I. B. and D. Ö. (2004). <*Journal of Agricultural and Food Chemistry Volume 52 issue 26 2004 [doi 10.1021%2Fjf048741x] Apak, Reat; Güçlü, Kubilay; Özyürek, -- Novel Total Antioxidant Capacity Index for Dietary Polyphenols and Vitamins .pdf*>. 7970–7981.
- Reubun, Y., Kumala, S., Setyahadi, S., & Simanjutak, P. (2020). Pengeringan Beku Ekstrak Herba Pegagan (*Centella asiatica*). *StatPearls*, 13(2), 113–117. <http://www.ncbi.nlm.nih.gov/pubmed/33085411>
- Rinda, R. E., Mursyid, A. M., & Hasrawati, A. (2019). Sediaan Krim Ekstrak Air Buah Aren (*Arenga pinnata*) Sebagai Antioksidan. *Jurnal Ilmiah As-Syifaa*, 11(1), 01–08. <https://doi.org/10.33096/jifa.v11i1.449>
- Rodriguez-Amaya, D. B. (2015). Status of carotenoid analytical methods and in vitro assays for the assessment of food quality and health effects. *Current Opinion in Food Science*, 1(1), 56–63. <https://doi.org/10.1016/j.cofs.2014.11.005>
- Rohmani, S., & Anggraini, N. (2019). Formulasi Body Lotion Ekstrak Kulit Pisang dengan Variasi Konsentrasi Emulsifier. *Prosiding APC (Annual Pharmacy Conference)*, 4, 44–52. <https://jurnal.uns.ac.id/apc/article/view/35460>
- Rosidah, I., Zainuddin, Z., Agustini, K., Bunga, O., & Pudjiastuti, L. (2020). Standardisasi Ekstrak Etanol 70% Buah Labu Siam (*Sechium edule* (Jacq.))

- Sw.). *Farmasains : Jurnal Ilmiah Ilmu Kefarmasian*, 7(1), 13–20. <https://doi.org/10.22236/farmasains.v7i1.4175>
- Safitri, D. K., & Safitri, C. I. N. H. (2020). Uji Aktivitas Formulasi Lotion Tabir Surya Ekstrak Bekatul Padi (*Oryza sativa L.*). *Artikel Pemakalah Paralel*, 236.
- Sahumena, M. H., & Suryani, S. (2023). Formulasi Self Nano-Emulsifying Drug Delivery System (SNEDDS) Ibuprofen dengan VCO dan Kombinasi Surfaktan. *Indonesian Journal of Pharmaceutical Education*, 2(3), 239–246. <https://doi.org/10.37311/ijpe.v2i3.20405>
- Salvia-Trujillo, L., & McClements, D. J. (2016). Influence of Nanoemulsion Addition on the Stability of Conventional Emulsions. *Food Biophysics*, 11(1), 1–9. <https://doi.org/10.1007/s11483-015-9401-8>
- Sari, M., Ulfa, R. N., Marpaung, M. P., & Purnama. (2021). Penentuan Aktivitas Antioksidan dan Kandungan Flavonoid Total Ekstrak Daun Papasan (*Coccinia grandis L.*) Berdasarkan Perbedaan Pelarut Polar. *KOVALEN: Jurnal Riset Kimia*, 7(1), 30–41. <https://doi.org/10.22487/kovalen.2021.v7.i1.15437>
- Souto, E. B., Cano, A., Martins-gomes, C., & Coutinho, T. E. (2022). *Microemulsions and Nanoemulsions in Skin Drug Delivery*. 1–22.
- Statistik, B. P. (2019). Statistik Teh Indonesia. *Sustainability (Switzerland)*, 11(1), 1–14. http://scioteca.caf.com/bitstream/handle/123456789/1091/RED2017-Eng8ene.pdf?sequence=12&isAllowed=y%0Ahttp://dx.doi.org/10.1016/j.regsciurbeco.2008.06.005%0Ahttps://www.researchgate.net/publication/305320484_SISTEM_PEMBETUNGAN_TERPUSAT_STRATEGI_MELESTARI
- Stuetz, W., Schlörmann, W., & Glei, M. (2017). B-vitamins, carotenoids and α - γ -tocopherol in raw and roasted nuts. *Food Chemistry*, 221(October), 222–227. <https://doi.org/10.1016/j.foodchem.2016.10.065>
- Suryani, A., & Wahyuni, T. (2025). *Formulasi Hand & Body Lotion dengan Minyak Biji Tomat (Solanum lycopersicum L .): Studi Inovatif Pelembab dan Antioksidan untuk Perawatan Kulit*.
- Susanti, Hajrin, W., & Hanifa, N. I. (2022). Formulasi Dan Evaluasi Sediaan Salep Ekstrak Etanolik Daun Tekelan (*Chromolaena odorata L.*) Dengan Berbagai Basis. *Jurnal Ilmu Farmasi Dan Farmasi Klinik (JIFFK)*, 19(2), 88–94. www.unwahas.ac.id/publikasiilmiah/index.php/ilmufarmasidanfarmasiklinik
- Suwardi, F., & Noer, S. (2020). Uji Aktivitas Antioksidan Ekstrak Etanol Kulit Bawang Merah (*Allium ascalonicum L .*). *Sinasis*, 1(1), 117.
- Syaputri, F. N., Mulya, R. A., Daru, T., Tugon, A., & Wulandari, F. (2023). Formulasi dan Uji Karakteristik Handbody Lotion yang Mengandung Ekstrak. 4(1), 13–22.
- Tungadi, R., Sy. Pakaya, M., & D.as’ali, P. W. (2023). Formulasi dan Evaluasi

- Stabilitas Fisik Sediaan Krim Senyawa Astaxanthin. *Indonesian Journal of Pharmaceutical Education*, 3(1), 117–124. <https://doi.org/10.37311/ijpe.v3i1.14612>
- Tzima, K., Brunton, N. P., & Rai, D. K. (2020). Evaluation of the impact of chlorophyll removal techniques on polyphenols in rosemary and thyme by-products. *Journal of Food Biochemistry*, 44(3). <https://doi.org/10.1111/jfbc.13148>
- Wang, C., Han, J., Pu, Y., & Wang, X. (2022). Tea (*Camellia sinensis*): A Review of Nutritional Composition, Potential Applications, and Omics Research. *Applied Sciences (Switzerland)*, 12(12), 1–20. <https://doi.org/10.3390/app12125874>
- Wardani, G., Adrianta, K., Udayani, N. N., Mendra, N. N., Fridayana, N. L., & Suena, N. M. (2025). Aktivitas Antioksidan Ekstrak Etanol Kulit Biji dan Buah Bakau (*Xylocarpus granatum* J.Koenig) dengan Metode DPPH dan FRAP. 11(1), 86–98. <https://doi.org/10.36733/medicamento.v11i1.9426>
- 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). *QUANTUM: Jurnal Inovasi Pendidikan Sains*, 9(2), 133–143.
- Wati, S., Bukit, M., & Sutaji, H. I. (2023). Kajian Awal Spektrum Serapan Senyawa Hasil Ekstraksi Daun Sirih (*Piper betle* L.) Asal Kota Kupang. *Magnetic: Research Journal of Physics and It's Application*, 3(1), 203–209. <http://dx.doi.org/10.59632/magnetic.v3i1.248%0Ahttps://ejurnal.unisap.ac.id/index.php/magnetic/article/download/248/152>
- Wulanawati, A., Epriyani, C., & Sutanto, E. (2019). Analisis Stabilitas Lotion Menggunakan Emulsifier Hasil Penyabunan Minyak Dan Alkali. *Jurnal Farmamedika (Pharmamedica Journal)*, 4(1), 23–28. <https://doi.org/10.47219/ath.v4i1.51>
- Yao, Y., Peng, G., Tian, J., Qu, X., & Li, C. (2023). Zeaxanthin Combined with Tocopherol to Improve the Oxidative Stability of Chicken Oil. *Journal of Oleo Science*, 72(12), 1063–1072. <https://doi.org/10.5650/jos.ess23079>
- Yuliani, D., & Mayangsari, R. (2022). Daun Tebu (*Saccharum spontaneum* L.) Sebagai Penyerap Zat Warna Tekstil Reactive Blue. *Biospecies*, 15(2), 19–23. <https://doi.org/10.22437/biospecies.v15i2.12646>
- Yulianto, M. E., Senen, & Ariwibowo D. (2012). Studi awal rekayasa proses produksi teh hijau berkatekin tinggi melalui teknologi steaming. *Fakultas Teknobiologi*, 4(1), 23–24. <https://ejournal.undip.ac.id/index.php/metana/article/view/1719>
- Yuliawati, K. M. (2022). Pengujian Aktivitas Antioksidan Menggunakan Metode

FRAP dan Penentuan Kadar Fenol Total pada Ekstrak Air Kulit Buah Naga Merah (*Hylocereus polyrhizus*). *Journal of Pharmacopodium*, 5(2), 205–210. <https://doi.org/10.36465/jop.v5i2.917>

Zafar, J., Aqeel, A., Shah, F. I., Ehsan, N., Gohar, U. F., Moga, M. A., Festila, D., Ciurea, C., Irimie, M., & Chicea, R. (2021). Biochemical and immunological implications of lutein and zeaxanthin. *International Journal of Molecular Sciences*, 22(20). <https://doi.org/10.3390/ijms222010910>

Zhang, L., Santos, J. S., Cruz, T. M., Marques, M. B., do Carmo, M. A. V., Azevedo, L., Wang, Y., & Granato, D. (2019). Multivariate effects of Chinese keemun black tea grades (*Camellia sinensis* var. *sinensis*) on the phenolic composition, antioxidant, antihemolytic and cytotoxic/cytoprotection activities. *Food Research International*, 125(April), 108516. <https://doi.org/10.1016/j.foodres.2019.108516>

Zia-Ul-Haq, M., Dewanjee, S., & Riaz, M. (2021). Carotenoids: Structure and Function in the Human Body. In *Carotenoids: Structure and Function in the Human Body*. <https://doi.org/10.1007/978-3-030-46459-2>

Zubaydah, W. O., Indalifiany, A., Yamin, Suryani, Munasari, D., Sahumena, M., & Jannah, S. (2023). Formulasi dan Karakterisasi Nanoemulsi Ekstrak Etanol Buah Wualae (*Etlingera Elatior* (Jack) R.M. Smith). *Lansau: Jurnal Ilmu Kefarmasian*, 1(1), 22–37. <https://doi.org/10.33772/lansau.v1i1.4>

Zulfa, E., Novianto, D., & Setiawan, D. (2019). Formulasi Nanoemulsi Natrium Diklofenak Dengan Variasi Kombinasi Tween 80 dan Sapn 80: Kajian Fisik Sediaan. *Media Farmasi Indonesia*, 14(1), 1471–1477.