

DAFTAR PUSTAKA

- Anggraito, Y. U., Susanti, R., Iswari, R. S., Yuniastuti, A., Lisdiana, WH, N., Habibah, N. A., & Bintari, S. H. (2018). Metabolit Sekunder Dari Tanaman. In *Fakultas Matematika dan Ilmu Pengetahuan Alam Universitas Negeri Semarang*.
- Anto, S. T. P. M. S. (2020). *Rempah-rempah Dan Minyak Atsiri*. Penerbit Lakeisha. <https://books.google.co.id/books?id=IKj5DwAAQBAJ>
- Anwar, H. M., Georgy, G. S., Hamad, S. R., Badr, W. K., El Raey, M. A., Abdelfattah, M. A. O., Wink, M., & Sobeh, M. (2021). A leaf extract of *harrisonia abyssinica* ameliorates neurobehavioral, histological and biochemical changes in the hippocampus of rats with aluminum chloride-induced alzheimer's disease. *Antioxidants*, 10(6). <https://doi.org/10.3390/antiox10060947>
- apt. Supomo, S. S. M. S., apt. Hj. Hayatus Sa'adah S. F, M. S., apt. Eka Siswanto Syamsul, S. F. M. S., apt. Kintoko, S. F. M. S. P. D., apt. Hardi Astuti Witasari, S. F. M. S., Noorcahyati, S. H. M. P., & Sari, D. P. (2021). *Khasiat Tumbuhan Akar Kuning Berbasis Bukti*. Nas Media Pustaka. <https://books.google.co.id/books?id=pKtaEAAAQBAJ>
- Asri, S. F. M., Soelaiman, I. N., Moklas, M. A. M., Nor, N. H. M., Zainal, N. H. M., & Ramli, E. S. M. (2020). The role of piper sarmentosum aqueous extract as a bone protective agent, a histomorphometric study. *International Journal of Molecular Sciences*, 21(20), 1–16. <https://doi.org/10.3390/ijms21207715>
- Azelan, A., Taher, Z. M., Sasano, S., Ariga, T., & Aziz, A. A. (2020). Chemical constituents and bioactivity of piper sarmentosum: A mini review. *Food Research*, 4, 14–18. [https://doi.org/10.26656/fr.2017.4\(S2\).S10](https://doi.org/10.26656/fr.2017.4(S2).S10)
- Berata, I., IBO, W., AAAM, A., & Adnyana, I. (2011). *Patologi Veteriner Umum*. Swasta Nulus.
- BPOM. (2020). Peraturan Badan Pengawas Obat Dan Makanan Tentang Pedoman Uji Toksisitas Praklinik Secara In Vivo. *Journal of Chemical Information and Modeling*, 53(9), 21–25. <http://www.elsevier.com/locate/scp>
- Bribi, N. (2018). Pharmacological activity of Alkaloids: A. *Asian Journal of Botany*, 1(April), 1–5. <https://doi.org/10.63019/ajb.v1i2.467>
- Chairunnisa, S., Wartini, N. M., & Suhendra, L. (2019). Pengaruh Suhu dan Waktu Maserasi terhadap Karakteristik Ekstrak Daun Bidara (*Ziziphus mauritiana* L.) sebagai Sumber Saponin. *Jurnal Rekayasa Dan Manajemen Agroindustri*, 7(4), 551. <https://doi.org/10.24843/jrma.2019.v07.i04.p07>
- Constanty, I. C., & Tukiran, T. (2021). Aktivitas Antioksidan Dari Fraksi n-Heksana Kulit Batang Tumbuhan Jambu Semarang (*Syzygium samarangense*). *Jurnal Kimia Riset*, 6(1), 1. <https://doi.org/10.20473/jkr.v6i1.24467>
- Depkes RI. (1995). *Materia Medika Indonesia. Jilid VI*. Departemen Kesehatan Republik Indonesia.
- Dorta, E., González, M., Lobo, M. G., Sánchez-Moreno, C., & de Ancos, B. (2014). Screening of phenolic compounds in by-product extracts from mangoes (*Mangifera indica* L.) by HPLC-ESI-QTOF-MS and multivariate analysis for use as a food ingredient. *Food Research International*, 57(March), 51–60.

- <https://doi.org/10.1016/j.foodres.2014.01.012>
- Farnsworth, N. R. (1966). Biological and Phytochemical Screening of Plants. *Science*, 151(3712), 874–875. <https://doi.org/10.1126/science.151.3712.874>
- Farooq, S., Mir, S. A., Shah, M. A., & Manickavasagan, A. (2022). Chapter 2 - Extraction techniques. In S. A. Mir, A. Manickavasagan, & M. A. Shah (Eds.), *Plant Extracts: Applications in the Food Industry* (pp. 23–37). Academic Press. <https://doi.org/https://doi.org/10.1016/B978-0-12-822475-5.00005-3>
- Fatimah, R., & Santoso, Bi. S. . (2020). Toksisitas Akut Dekok Daun Kersen (*Muntingia calabura*) Menggunakan Metode BSLT (Brine Shrimp Lethality Test). *Pharmacy Medical Journal*, 3(2), 47–52. <https://doi.org/10.11392/jsao.49.40>
- Fauzy, F. H., Zainudin, M. M., Ismawi, H. R., & Elshami, T. F. T. (2019). Piper sarmentosum Leaves Aqueous Extract Attenuates Vascular Endothelial Dysfunction in Spontaneously Hypertensive Rats. *Evidence-Based Complementary and Alternative Medicine*, 2019. <https://doi.org/10.1155/2019/7198592>
- Fitriani, E., & Sanuddin, M. (2020). Penetapan Kadar Polifenol Ekstrak Dan Fraksi Kulit Pinang (*Areca catechu* L.) Dengan Metode Spektrofotometri UV-VIS. *Journal of Healthcare Technology and Medicine*, 6(1), 170–178.
- Geller, F., Murillo, R., Steinhauser, L., Heinzmann, B., Albert, K., Merfort, I., & Laufer, S. (2014). Four new flavonol glycosides from the leaves of *Brugmansia suaveolens*. *Molecules*, 19(5), 6727–6736. <https://doi.org/10.3390/molecules19056727>
- Gholib, D. (2015). *Tanaman Herbal Anti Cendawan*. Balai Penelitian dan Pengembangan Pertanian Kementerian Pertanian.
- Harborne. (1987). *Metode Fitokimia Penuntun Cara Modern Menganalisa Tumbuhan*. Penerbit ITB.
- Harmita, K., Harahap, Y., & Supandi. (2019). *Liquid Chromatography-Tandem Mass Spectrometry (LC-MS/MS)*. PT. ISFI Penerbitan.
- Hasanah, N., & Novia, D. R. (2020). Analisis Ekstrak Etanol Buah Labu Kuning (*Cucurbita Moschata* D). *Jurnal Ilmiah Farmasi*, 9(1), 54–59.
- Hasnaeni, Wisdawati, & Usman, S. (2019). Pengaruh Metode Ekstraksi Terhadap Rendemen Dan Kadar Fenolik Ekstrak Tanaman Kayu Beta-Beta (*Lunasia amara* Blanco). *Jurnal Farmasi Galenika (Galenika Journal of Pharmacy) (e-Journal)*, 5(2), 175–182. <https://doi.org/10.22487/j24428744.2019.v5.i2.13149>
- He, Y., Li, Z., Wang, W., Sooranna, S. R., Shi, Y., Chen, Y., Wu, C., Zeng, J., Tang, Q., & Xie, H. (2018). Chemical profiles and simultaneous quantification of aurantii fructus by use of hplc-q-tof-ms combined with gc-ms and hplc methods. *Molecules*, 23(9), 1–18. <https://doi.org/10.3390/molecules23092189>
- Hematpoor, A., Liew, S. Y., Azirun, M. S., & Awang, K. (2017). Insecticidal activity and the mechanism of action of three phenylpropanoids isolated from the roots of *Piper sarmentosum* Roxb. *Scientific Reports*, 7(1), 1–13. <https://doi.org/10.1038/s41598-017-12898-z>
- Hidayat, S., & Napitupulu, R. (2015). *Kitab Tumbuhan Obat*. AgriFlo. <https://books.google.co.id/books?id=vQLLCgAAQBAJ>
- Hieu, L. D., Thang, T. D., Hoi, T. M., & Ogunwande, I. A. (2014). Chemical composition of essential oils from four Vietnamese species of *Piper*

- (Piperaceae). *Journal of Oleo Science*, 63(3), 211–217. <https://doi.org/10.5650/jos.ess13175>
- HMDB, (Human Metabolome Database). (2022a). *Kaempferol 3-O-(2''-rhamnosyl-galactoside) 7-O-rhamnoside*. <https://hmdb.ca/metabolites/HMDB0301698>
- HMDB, (Human Metabolome Database). (2022b). *Quercetin-3-Sulfate*. <https://hmdb.ca/metabolites/HMDB0041770>
- Hussein, R. A., & E-Anssary, A. A. (2018). Plants Secondary Metabolites: The Key Drivers of the Pharmacological Actions of Medicinal Plants. In *Herbal Medicine* (pp. 10–30). <https://www.intechopen.com/books/advanced-biometric-technologies/liveness-detection-in-biometrics>
- Ibrahim, M. A., & Mohamad Asri, N. A. A. (2020). the Study of Antioxidant Activities of Piper Sarmentosum and Piper Nigrum. *Tropical Agrobiodiversity*, 1(1), 01–03. <https://doi.org/10.26480/trab.01.2020.01.03>
- Ifeanyichukwu, O., & Tuma, F. (2021). *Physiology, Renal*. StatPearls Publishing, Treasure Island.
- Kalra, A., Yetiskul, E., Wehrle, C. J., & Tuma4., F. (2022). *Physiology, Liver*. StatPearls. Treasure Island.
- Kasahara, S., & Seizaburo. (1995). *Medical Herb Index in Indonesia Edisi-2*. PT. Esai Indonesia.
- Khusnul, K., Kusmayanti, A., Rahman, L. A., & Ratnaningtyas, N. I. (2020). Effect of ethanol extract from Karuk leaf (Piper sarmentosum Roxb.) on the growth of *Malassezia furfur* in vitro. *Journal of Microbial Systematics and Biotechnology*, 2(2), 22–27. <https://doi.org/10.37604/jmsb.v2i2.59>
- Kleinenkuhnen, N., Büchel, F., Gerlich, S. C., Kopriva, S., & Metzger, S. (2019). A novel method for identification and quantification of sulfated flavonoids in plants by neutral loss scan mass spectrometry. *Frontiers in Plant Science*, 10(July). <https://doi.org/10.3389/fpls.2019.00885>
- Koh, H. L., Chua, T. K., & Tan, C. H. (2009). *A Guide to Medicinal Plants: An Illustrated, Scientific and Medicinal Approach*. World Scientific Pub. <https://books.google.co.id/books?id=HFJWD9bwm9oC>
- Kristanti, A. dkk. (2019). *Fitokimia*. Airlangga University Press. <https://books.google.co.id/books?id=3BnIDwAAQBAJ>
- Leba, M. A. U. (2017). *Buku Ajar: Ekstraksi dan Real Kromatografi*. Deepublish. <https://books.google.co.id/books?id=x1pHDwAAQBAJ>
- Li, H., Subbiah, V., Barrow, C. J., Dunshea, F. R., & Suleria, H. A. R. (2021). Phenolic profiling of five different australian grown apples. *Applied Sciences (Switzerland)*, 11(5), 1–22. <https://doi.org/10.3390/app11052421>
- Mahasuari, N. P. S., Paramita, N. L. P. V., & Yadnya Putra, A. . G. R. (2020). Effect Of Methanol Concentration As a Solvent on Total Phenolic And Flavonoid Content of Beluntas Leaf Extract (*Pulchea indica* L.). *Journal of Pharmaceutical Science and Application*, 2(2), 77. <https://doi.org/10.24843/jpsa.2020.v02.i02.p05>
- Meles, D. K. (2010). Peran Uji Praklinik Dalam Bidang Farmakologi. *Pusat Penerbitan Dan Percetakan Unair (AUP)*, 1–33. https://simdos.unud.ac.id/uploads/file_penelitian_1_dir/767616f64cd58798f36164d0c9396ffb.pdf
- Mescher, A. L. (2016). *Junqueira ' s Basic Histology Text & Atlas (14th ed .)*.

November 2015.

- Mgbeahuruike, E. E., Yrjönen, T., Vuorela, H., & Holm, Y. (2017). Bioactive compounds from medicinal plants: Focus on Piper species. *South African Journal of Botany*, 112, 54–69. <https://doi.org/10.1016/j.sajb.2017.05.007>
- Mutiara, R., Djangi, M. J., & Herawati, N. (2016). Isolasi dan Uji Aktivitas Antioksidan Senyawa Metabolit Sekunder Ekstrak Metanol Kulit Buah Mangrove Pidada (*Sonneratia caseolaris*) Isolation and Antioxidant Activity Test of Secondary Metabolites Compound Methanol Extract of Mangrove Pidada Rind ' s (*Jurnal Chemical*, 17(2), 52–62.
- Niessen, W. M. A. (1998). *Liquid Chromatography: Mass Spectrometry, Second Edition*. Taylor & Francis. <https://books.google.co.id/books?id=oSnKlgDBzJEC>
- Nurika, I. (2019). *Bioenergi dan Biorefinery*. Universitas Brawijaya Press. <https://books.google.co.id/books?id=D4SQDwAAQBAJ>
- OECD. (2008). Test No. 425: Acute Oral Toxicity - Up-and-Down-Procedure (UDP). *OECD Guidelines For The Testing Of Chemicals, October*. <https://doi.org/10.1787/9789264070622-en>
- Patel, K. (2019). *Tinjauan Teknik Ekstraksi*. 6, 6–21.
- Permadi, A. (2008). *Membuat Kebun Tanaman Obat*. Niaga Swadaya. <https://books.google.co.id/books?id=YVRjJfRD3f8C>
- Pertiwi, D., Sitorus, P., & Hafiz, I. (2022). Antimicrobial Activity of *Clerodendrum paniculatum* L. n-Hexane and Water Fraction Against *Pseudomonas aeruginosa* and MRSA. *Indonesian Journal of Pharmaceutical Science and Technology*, 9(1), 25. <https://doi.org/10.24198/ijpst.v1i1.30659>
- Plantamor. (n.d.). *Klasifikasi Cabean (Piper sarmentosum)*. <http://plantamor.com/species/info/piper/sarmentosum>
- PubChem. (2022). *Quercetin 7-(6''-galloylglucoside)*. https://pubchem.ncbi.nlm.nih.gov/compound/Quercetin-7-_6_-galloylglucoside
- Putri, H. L., Retnowati, R., & Suratmo. (2015). Fraksi n-heksana Dari Ekstrak Metanol Daun Mangga Kasturi (*Mangifera casturi* Koesterm) Dan Uji Fitokimia. *Kimia Student Journal*, 1(1), 772–777.
- Qin, W., Huang, S., Li, C., Chen, S., & Peng, Z. (2010). Biological activity of the essential oil from the leaves of *Piper sarmentosum* Roxb. (Piperaceae) and its chemical constituents on *Brontispa longissima* (Gestro) (Coleoptera: Hispididae). *Pesticide Biochemistry and Physiology*, 96(3), 132–139. <https://doi.org/10.1016/j.pestbp.2009.10.006>
- Riwanti, P., & Izazih, F. (2019). Skrining Fitokimia Ekstrak Etanol 96% *Sargassum polycystum* dan Profile dengan Spektrofotometri Infrared. *Acta Holistica Pharmacia*, 2(1), 34–41.
- Rowe, R. C., Sheskey, P. J., & Quinn, M. E. (2007). Handbook of Pharmaceutical Excipients. In *xPharm: The Comprehensive Pharmacology Reference* (sixth edit). <https://doi.org/10.1016/B978-008055232-3.62446-8>
- Rudiana, T., Suryani, N., & Anwar, H. (2021). Aktivitas Antioksidan dan Identifikasi Senyawa Metabolit Sekunder dari Ekstrak Batang Dahu (*Dracontomelon dao*). *JC-T (Journal Cis-Trans): Jurnal Kimia Dan Terapannya*, 5(1), 8–12. <https://doi.org/10.17977/um0260v5i12021p008>
- Sadek, P. (2002). *The HPLC Solvent Guide* (J. W. ad Sons (ed.); Second Edi).

- Saifudin, A. (2014). *Senyawa Alam Metabolit Sekunder Teori, Konsep, dan Teknik Pemurnian*. Deepublish. <https://books.google.co.id/books?id=H8-HDwAAQBAJ>
- Septiani, V., Choirunnisa, A., & Syam, A. K. (2017). Uji Aktivitas Antimikroba Ekstrak Etanol Daun Karuk (*Piper sarmentosum* Roxb.) Terhadap *Streptococcus mutans* Dan *Candida albicans*. *Kartika Jurnal Ilmiah Farmasi*, 5(1), 7–14. <https://doi.org/10.26874/kjif.v5i1.87>
- Shkondrov, A., & Krasteva, I. (2021). Liquid chromatography – high resolution mass spectrometry screening of *Astragalus hamosus* and *Astragalus corniculatus*. *Pharmacia*, 68(1), 135–139. <https://doi.org/10.3897/pharmacia.68.e60621>
- Siswadi dan Grace S.Saragih. (2018). Uji Toksisitas Akut Ekstrak Etanol Kulit Batang Faloak (*Sterculia quadrifida* R.Br) Pada Tikus Sprague-Dawley Acute Toxicity of *Sterculia quadrifida* R.Br Bark Ethanol Extract on Sprague-Dawley Rats Siswadi dan Grace S. Saragih. *Traditional Medicine Journal*, 23(2), 127–134.
- Soemarie, Y. B., Sa'adah, H., Fatimah, N., & Ningsih, T. M. (2017). Uji Mutu Fisik Granul Ekstrak Etanol Daun Kemangi (*Ocimum americanum* L.) Dengan Variasi Konsentrasi Explotab®. *Jurnal Ilmiah Manuntung*, 3(1), 64. <https://doi.org/10.51352/jim.v3i1.92>
- Soenardjo, N., & Supriyantini, E. (2017). Analisis Kadar Tanin Dalam Buah Mangrove *Avicennia marina* Dengan Perebusan Dan Lama Perendaman Air Yang Berbeda. *Jurnal Kelautan Tropis*, 20(2), 90. <https://doi.org/10.14710/jkt.v20i2.1701>
- Sukardiman, dkk. (2020). *Buku Ajar Farmakognosi - Jilid 1*. Airlangga University Press. <https://books.google.co.id/books?id=0JnIDwAAQBAJ>
- Sulistiyarini, I., Sari, D. A., & Wicaksono, T. A. (2019). Skrining Fitokimia Senyawa Metabolit Sekunder Batang Buah Naga (*Hylocereus polyrhizus*). *Jurnal Ilmiah Cendekia Eksakta*, 56–62.
- Sumartini, & Ikrawan, Y. (2020). ANALISIS BUNGA TELANG (*Clitoria ternatea*) DENGAN VARIASI Ph METODE LIQUID CHROMATOGRAPH-TANDEM MASS SPECTROMETRY (LC-MS/MS) Sumartini Sumartini. *Pasundan Food Technology Journal*, 7(2), 70–77. <https://doi.org/10.23969/pftj.v7i2.2983>
- Sun, X., Chen, W., Dai, W., Xin, H., Rahmand, K., Wang, Y., Zhang, J., Zhang, S., Xu, L., & Han, T. (2020). *Piper sarmentosum* Roxb.: A review on its botany, traditional uses, phytochemistry, and pharmacological activities. *Journal of Ethnopharmacology*, 263(November 2019), 112897. <https://doi.org/10.1016/j.jep.2020.112897>
- Tagrida, M., & Benjakul, S. (2020). Ethanolic extract of Betel (*Piper betle* L.) and Chaphlu (*Piper sarmentosum* Roxb.) dechlorophyllized using sedimentation process: Production, characteristics, and antioxidant activities. *Journal of Food Biochemistry*, 44(12), 1–14. <https://doi.org/10.1111/jfbc.13508>
- Talukder, S. (2007). Histopathology Techniques: Tissue Processing and Staining. *Chemistry & ...*, 1–11. <http://onlinelibrary.wiley.com/doi/10.1002/cbdv.200490137/abstract>
- Teles, Y. C. F., Souza, M. S. R., & De Souza, M. de F. V. (2018). Sulphated flavonoids: Biosynthesis, structures, and biological activities. *Molecules*,

- 23(2), 1–11. <https://doi.org/10.3390/molecules23020480>
- Trikas, E. D., Papi, R. M., Kyriakidis, D. A., & Zachariadis, G. A. (2016). A sensitive LC-MS method for anthocyanins and comparison of byproducts and equivalent wine content. *Separations*, 3(2). <https://doi.org/10.3390/separations3020018>
- Ugusman, A., Zakaria, Z., Hui, C. K., Nordin, N. A. M. M., & Mahdy, Z. A. (2012). Flavonoids of Piper sarmentosum and its cytoprotective effects against oxidative stress. *EXCLI Journal*, 11(January 2017), 705–714. <https://doi.org/10.17877/DE290R-10356>
- Wahdaningsih, S., Untari, E. K., & Robiyanto, -. (2019). Acute Toxicity Test of Ethanolic Extract of Dayak Onion Leaves (*Eleutherine americana* Merr.) Toward Wistar Female Rats Using OECD 425 Method. *Dhaka University Journal of Pharmaceutical Sciences*, 18(2), 171–177. <https://doi.org/10.3329/dujps.v18i2.43259>
- Wendersteyt, N. V., Wewengkang, D. S., & Abdullah, S. S. (2021). Uji Aktivitas Antimikroba Dari Ekstrak Dan Fraksi Ascidian (*Herdmania momus*) Dari Perairan Pulau Bangka Likupang Terhadap Pertumbuhan Mikroba *Staphylococcus aureus*, *Salmonella typhimurium* DAN *Candida albicans*. *Pharmacon*, 10(1), 706. <https://doi.org/10.35799/pha.10.2021.32758>
- Wiart, C. (2006). *Medicinal Plants of Asia and the Pacific*. CRC Press. <https://books.google.co.id/books?id=SofMBQAAQBAJ>
- Widyaningrum, H., & Alternatif, T. S. (2011). *Kitab Tanaman Obat Nusantara*. MediaPressindo. <https://books.google.co.id/books?id=DcVAEAAAQBAJ>
- Yang, W., Chen, X., Li, Y., Guo, S., Wang, Z., & Yu, X. (2020). Advances in Pharmacological Activities of Terpenoids. *Natural Product Communications*, 15(3). <https://doi.org/10.1177/1934578X20903555>
- Zainudin, M., Zakaria, Z., Megat Mohd Nordin, N. A., & Othman, F. (2013). Does oral ingestion of Piper sarmentosum cause toxicity in experimental animals? *Evidence-Based Complementary and Alternative Medicine*, 2013. <https://doi.org/10.1155/2013/705950>
- Zhang, Y., Cai, P., Cheng, G., & Zhang, Y. (2022). A Brief Review of Phenolic Compounds Identified from Plants: Their Extraction, Analysis, and Biological Activity. *Natural Product Communications*, 17(1). <https://doi.org/10.1177/1934578X211069721>