

DAFTAR PUSTAKA

- Abdallah, E. M. (2018). Black pepper fruit (*Piper nigrum* L.) as antibacterial agent: A mini-review. *Journal of Bacteriology & Mycology: Open Access*, 6(2), 141–145. <https://doi.org/10.15406/jbmoa.2018.06.00192>
- Al-Jasass, F. M., & Al-Jasser, M. S. (2012). Chemical composition and fatty acid content of some spices and herbs under Saudi Arabia conditions. *The Scientific World Journal*, 2012, 18–23. <https://doi.org/10.1100/2012/859892>
- Aliya, N., Riyanta, A. B., & Muldiyana, T. (2024). Uji Aktivitas Antioksidan Ekstrak Kulit Dan Daging Buah Naga Merah (*Hylocereus Polyrhizus*) dan penentuan Parameter Non Spesifik. *Jurnal Riset Kefarmasian Indonesia*, 6(1), 1–15. <https://doi.org/10.33759/jrki.v6i1.485>
- Arifin, H., Anggraini, N., Handayani, D., & Rasyid, R. (2014). Standarisasi Ekstrak Etanol Daun *Eugenia cumini* Merr. The Standardisation Of Ethanolic Extract Of *Eugenia cumini* Merr. Leaf. *Jurnal Sains Dan Teknologi Farmasi Indonesia, September*.
- Ashokkumar, K., Murugan, M., Dhanya, M. K., Pandian, A., & Warkentin, T. D. (2021). Phytochemistry and therapeutic potential of black pepper [*Piper nigrum* (L.)] essential oil and piperine: a review. *Clinical Phytoscience*, 7(1). <https://doi.org/10.1186/s40816-021-00292-2>
- Da Silva, J. K., Da Trindade, R., Alves, N. S., Figueiredo, P. L., Maia, J. G. S., & Setzer, W. N. (2017). Essential Oils from Neotropical Piper Species and Their Biological Activities. In *International Journal of Molecular Sciences* (Vol. 18, Issue 12). <https://doi.org/10.3390/IJMS18122571>
- Dachriyanus. (2004). *Analisis Struktur Senyawa Organik Secara Spektroskopi*.
- Emeka Nwofia, G., Kelechukwu, C., & Nwofia, B. K. (2013). Nutritional composition of some *Piper nigrum* (L.) accessions from Nigeria. *Int. J. Med. Arom. Plants*, 3(2), 2249–4340. <http://www.openaccessscience.com>
- Ettannil, Zachariah, J., & John Gobinath, P. (2009). Physico-chemical properties of black pepper from selected varieties in relation to market grades. *Journal of Food Science and Technology*, 46, 263-265.
- Fachriyah, E., Kusriani, D., Haryanto, I. B., Wulandari, S. M. B., Lestari, W. I., & Sumariyah, S. (2020). Phytochemical Test, Determination of Total Phenol, Total Flavonoids and Antioxidant Activity of Ethanol Extract of Moringa Leaves (*Moringa oleifera* Lam). *Jurnal Kimia Sains Dan Aplikasi*, 23(8), 290–294. <https://doi.org/10.14710/jksa.23.8.290-294>
- Feng, X., Jiang, Z. T., Wang, Y., & Li, R. (2010). Composition comparison of

essential oils extracted by hydrodistillation and microwave-assisted hydrodistillation from amomum tsao-ko in China. *Journal of Essential Oil-Bearing Plants*, 13(3), 286–291. <https://doi.org/10.1080/0972060X.2010.10643823>

- Ganjar, I. G., & Rohman, A. (2007). *Kimia Farmasi Analisis*. Pustaka Belajar.
- Global Biodiversity Information Facility. (2019). *Data Species: piper nigrum L.* <https://www.gbif.org/occurrence/4525003385>
- Gorgani, L., Mohammadi, M., Najafpour, G. D., & Nikzad, M. (2017). Piperine—The Bioactive Compound of Black Pepper: From Isolation to Medicinal Formulations. *Comprehensive Reviews in Food Science and Food Safety*, 16(1), 124–140. <https://doi.org/10.1111/1541-4337.12246>
- Grinevicius, V. M. A. S., Andrade, K. S., Ourique, F., Micke, G. A., Ferreira, S. R. S., & Pedrosa, R. C. (2017). Antitumor activity of conventional and supercritical extracts from *Piper nigrum* L. cultivar Bragantina through cell cycle arrest and apoptosis induction. *The Journal of Supercritical Fluids*, 128, 94–101. <https://doi.org/10.1016/J.SUPFLU.2017.05.009>
- Gülçin, I. (2005). The antioxidant and radical scavenging activities of black pepper (*Piper nigrum*) seeds. *International Journal of Food Sciences and Nutrition*, 56(7), 491–499. <https://doi.org/10.1080/09637480500450248>
- Harborne, J. B. (1987). *Metode Fitokimia : Penuntun Cara Modern Menganalisis Tumbuhan* (Kosasih Padmawinata dan Iwang Soediro (ed.); 2nd ed.). Institut Teknologi Bandung.
- Hikmawanti, N. P. E., Hanani, E., Maharani, S., & Putri, A. I. W. (2021). Piperine Levels in Java Chili and Black Fruits Extracts from Regions with Different Altitude. *Jurnal Jamu Indonesia*, 6(1), 16–22. <https://doi.org/10.29244/jji.v6i1.176>
- Hujjatusnaini, N., Ardiansyah, Indah, B., Afitri, E., & Widyastuti, R. (2021). Buku Referensi Ekstraksi. In *Jurnal Sains dan Seni ITS* (Vol. 6, Issue 1).
- Ismail, A. A., van de Voort, F. R., & Sedman, J. (1997). Chapter 4 Fourier transform infrared spectroscopy: Principles and applications. *Techniques and Instrumentation in Analytical Chemistry*, 18(C), 93–139. [https://doi.org/10.1016/S0167-9244\(97\)80013-3](https://doi.org/10.1016/S0167-9244(97)80013-3)
- Kanaki, N., Dave, M., Padh, H., & Rajani, M. (2008). A rapid method for isolation of piperine from the fruits of *Piper nigrum* Linn. *Journal of Natural Medicines*, 62(3), 281–283. <https://doi.org/10.1007/s11418-008-0234-3>
- Khan, M., Hanif, M. A., Rehman, R., & Bhatti, I. A. (2019). Chapter 6. In *Medicinal Plants of South Asia: Novel Sources for Drug Discovery* (pp. 75–86). <https://doi.org/10.1016/B978-0-08-102659-5.00006-9>

- Khotimah, K. (2016). Skrining Fitokimia dan Identifikasi Metabolit Sekunder Senyawa Karpain Pada Ekstrak Metanol Daun *Carica pubescens* Lenne dan K. Koch Dengan LC/MS. *Uin Maulana Malik Ibrahim Malang*, 1–69.
- Kusumo, W. D., Susanti, NIngrum, E. K., & Makayasa, C. H. A. (2022). Skrining Fitokimia Senyawa Metabolit Sekunder Pada Ekstrak Etanol Bunga Pepaya(*Carica papaya* L.). *Journal Of Current Pharmaceutical Sciences*, 5(2), 2598–2095.
- Kusumorini, N., Nugroho, A. K., Pramono, S., & Martien, R. (2021). Development of new isolation and quantification method of piperine from white pepper seeds (*Piper nigrum* L) using a validated HPLC. *Indonesian Journal of Pharmacy*, 32(2), 158–165. <https://doi.org/10.22146/ijp.866>
- Lobo, V., Patil, A., Phatak, A., & Chandra, N. (2010). Free radicals, antioxidants and functional foods: Impact on human health. *Pharmacognosy Reviews*, 4(8), 118–126. <https://doi.org/10.4103/0973-7847.70902>
- Marliana, S. D., Suryanti, V., & Suyono. (2005). Skrining Fitokimia dan Analisis Kromatografi Lapis Tipis Komponen Kimia Buah Labu Siam (*Sechium edule* Jacq . Swartz .) dalam Ekstrak Etanol The phytochemical screenings and thin layer chromatography analysis of. *Biofarmasi*, 3(1), 26–31.
- Mollik, M., Rahman, M. H., Al-Shaeri, M., Ashraf, G. M., Alexiou, A., & Gafur, M. A. (2022). Isolation, characterization and in vitro antioxidant activity screening of pure compound from black pepper (*Piper nigrum*). *Environmental Science and Pollution Research*, 29(34), 52220–52232. <https://doi.org/10.1007/s11356-022-19403-8>
- Molyneux P. (2004). The Use of the Stable Free Radical Diphenylpicryl-hydrazyl (DPPH) for Estimating Antioxidant Activity. *Songklanakarinn Journal of Science and Technology*, 26(2), 211–219.
- Nurul Ula, Q. (2014). Identifikasi Golongan Senyawa dan Pengaruh Ekstrak Etanol 70% Daun Widuri (*Calotropis gigantea*) terhadap Berat Tumor Secara In Vivo Pada Mencit (*Mus musculus*). *Universitas Islam Negeri Maulana Malik Ibrahim Malang*, 52–55.
- Octavia, M. D., Zaini, E., Hasmiwati, H., & Revila, G. (2024). Isolasi Piperin Dari Lada Hitam (*Piper Nigrum* L.) Dan Uji Kemurniannya. *Jurnal Farmasi Higea*, 16(1), 52. <https://doi.org/10.52689/higea.v16i1.621>
- Paarakh, P. M., Sreeram, D. C., D, S. S., & Ganapathy, S. P. S. (2015). In vitro cytotoxic and in silico activity of piperine isolated from *Piper nigrum* fruits Linn. *In Silico Pharmacology*, 3(1), 3–9. <https://doi.org/10.1186/s40203-015-0013-2>
- Riches, E., Bajic, S., Elia, E., Langley, G. Jo., & Herniman, J. M. (2017). Atmospheric Pressure Ionization Sources: Their Use and Applicability.

Waters White Paper, 1–14.

- Saptarini, N. M., & Herawati, I. E. (2019). Metode kolorimetri untuk penentuan kandungan total Alkaloid dan Flavonoid pada tanaman nightshade hitam Indonesia (*Solanum nigrum* L .). *Jurnal Pendidikan & Penelitian Farmasi Tingkat Lanjut*, 80–84.
- Shingate, P. N., Dongre, P. P., & Kannur, D. M. (2013). New Method Development for Extraction and Isolation of Piperine From Black Pepper. *International Journal of Pharmaceutical Sciences and Research*, 4(8), 3165. <http://dx.doi.org/10.13040/IJPSR.0975-8232.4>
- Sreevidya, N., & Mehrotra, S. (2003). Spectrophotometric method for estimation of Alkaloids precipitable with dragendorff's reagent in plant materials. *Journal of AOAC International*, 86(6), 1124–1127. <https://doi.org/10.1093/jaoac/86.6.1124>
- Sruthi, D., & John Zachariah, T. (2017). In vitro antioxidant activity and cytotoxicity of sequential extracts from selected black pepper (*Piper nigrum* L.) varieties and Piper species. *International Food Research Journal*, 24(February), 75–85.
- Sruthi, D., Leela, N., John, Z., & Jayarajan, K. (2013). Correlation between chemical profiles of black pepper (*Piper nigrum* L.) var. Panniyur-1 collected from different locations. *Journal of Medicinal Plants Research*, 7(31), 2349–2357. <https://doi.org/10.5897/jmpr2013.4493>
- Suhartati, T. (2017). Dasar-Dasar Spektrofotometri Uv-Vis Dan Spektrometri Massa Untuk Penentuan Struktur Senyawa Organik. In T. A. Creative (Ed.), *Perpustakaan Nasional RI: Katalog Dalam Terbitan (KDT)* (Vol. 11, Issue 1). AURA CV. Anugrah Utama Raharja Anggota IKAPI.
- Sulman, L. (2021). Isolation of piperine from black pepper (*Piper nigrum*) in the provision of standard compounds for natural chemical practice and research activities. *Jurnal Pijar Mipa*, 16(5), 683–687. <https://doi.org/10.29303/jpm.v16i5.2981>
- Utpala, P., Asish, G. ., Zachariah, T. ., Saji, K. ., K, J. G., Jayarajan, K., Mathew, P. ., & Parthasarathy, V. . (2008). Spatial influence on the important volatile oils of *Piper nigrum* leaves. *Current Science*, 94(1632), 5.
- Wulansari, A. N. (2018). Alternatif Cantigi Ungu (*Vaccinium Varingiaefolium*) Sebagai Antioksidan Alami : Review. *Farmaka*, 16(2), 419–429.
- Zarai, Z., Boujelbene, E., Ben Salem, N., Gargouri, Y., & Sayari, A. (2013). Antioxidant and antimicrobial activities of various solvent extracts, piperine and piperic acid from *Piper nigrum*. *Lwt*, 50(2), 634–641. <https://doi.org/10.1016/j.lwt.2012.07.036>