DAFTAR PUSTAKA

Ahmad, I., Narsa, A. C., Ramadhani, M. R., Zamruddin, N. M., Iswahyudi, I., Hajrah, H., Indriyanti, N., Arifuddin, M., Siska, S., Supandi, S., & Ambarwati, N. S. S. (2023). Optimization of *Microwave-Assisted Extraction* on polyphenol metabolite from Eleutherine bulbosa (Mill.) urb. bulbs using response surface methodology. *Journal of Advanced Pharmaceutical Technology & Research*, *14*(2), 113–118. https://doi.org/10.4103/japtr.japtr_613_22

Aisyah, Y., Hastuti, P., & Sastrohamidjojo, H. (2010). Peningkatan Kadar Patchouli Alkohol Minyak Nilam Membran Selulosa Asetat. *AGRITECH*, *30*(3), 184–191.

Akhmad, C., & Haasler, B. (2016). *Panduan Budidaya Nilam (Pogostemon cablin Benth.) dan Produksi Minyak Atsiri* (N. Wardah, Ed.). Balai Penelitian Lingkungan Hidup dan Kehutanan (BP2LHK). http://gizbioclime.org

Amelia, D., Rahayuningtyas, N., Ramadhanti, N., & Maharani, F. (2024). Destilasi Minyak Atsiri Dari Daun dan Biji Adas (Foeniculum Vulgare Miller.) Berbantu Gelombang Mikro Sebagai Antimicrobial Edible Coating pada Bakso. *Jurnal Kimia*, *18*(1), 68. https://doi.org/10.24843/JCHEM.2024.v18.i01.p10

Ardianto, A., Humaida, S., & Wardati, I. (2019). Pengaruh Cara Pengeringan Nilam (Pogostemon cablin Benth.) Pada Penyulingan Terhadap Hasil Minyak Nilam. *Implementasi IPTEKS Sub Sektor Perkebunan Pendukung Devisa Negara Dan Ketahanan Energi Indonesia*, 8–19. https://doi.org/10.25047/agropross.2019.139

Asconom, A. G., A, S. A., & Abdullahi, H. (2025). Kinetic and Thermodynamic Studies of Turmeric Oil Extraction Process Using Soxhlet Extraction. *International Journal of*

Convergent and Informatics Science Research, *7*(9), 17–37. https://doi.org/10.70382/hijcisr.v07i9.023

Asmil, A., Situmorang, H., & Amir, S. (2023). Usahatani Nilam di Kecamatan Gunung Tuleh Kabupaten Pasaman Barat, Sumatera Barat. *JOSETA Journal of Socio-Economics on Tropical Agriculture*, *4*(1). https://doi.org/10.25077/joseta.v4i1.437

BPS. (2026). *Data Ekspor Impor Nasional Minyak Nilam*.

BPS Sumatera Barat. (2022). *Luas Area Tanaman Perkebunan Rakyat (Hektar)*.

Chan, C.-H., Yusoff, R., & Ngoh, G.-C. (2014). Optimization of *Microwave-Assisted Extraction* based on absorbed *microwave* power and energy. *Chemical Engineering Science*, *111*, 41–47. https://doi.org/10.1016/j.ces.2014.02.011

Dao, T. P., Do, H. T., Le, Q. K., van Gia Phap, N., Bach, L. G., van Muoi, N., & Cang, M. H. (2020). Kinetic Studies on Extraction of Essential Oil from Lemongrass Leaves (Cymbopogon citratus) by Steam Distillation Industrial Scale. *Asian Journal of Chemistry*, *32*(6), 1399–1403. https://doi.org/10.14233/ajchem.2020.22227

Díaz-de-Cerio, E., & Trigueros, E. (2025). Evaluating the Sustainability of Emerging Extraction Technologies for Valorization of Food Waste: *Microwave*, Ultrasound, Enzyme-Assisted, and Supercritical Fluid Extraction. In *Agriculture (Switzerland)* (Vol. 15, Number 19). Multidisciplinary Digital Publishing Institute (MDPI). https://doi.org/10.3390/agriculture15192100

Elnour, A. A. M., Abdurahmani, N. H., Musa, K. H., & Abdulla, F. M. (2024). Bioactive compounds extracted from patchouli via *microwave*-assisted hydrodistillation: A 36-year bibliometric and systematic review analysis. In *Phytomedicine Plus* (Vol. 4, Number 3). Elsevier B.V. https://doi.org/10.1016/j.phyplu.2024.100616

Feng, C., Zhao, R., Yang, X., Ruan, M., Yang, L., & Liu, T. (2024). A novel stepwise *microwave* hydrodistillation and extraction process for separating seed oil and essential oil simultaneously from perilla seeds. *LWT*, *198*. https://doi.org/10.1016/j.lwt.2024.116048

Firmansyah, M., Irwansyah, F., Budipramana, K., Hadiyat, M. A., Artadana, I. B. M., & Hardjo, P. H. (2023). *Patchouli alcohol* Optimization from Pogostemon cablin Benth. cv. Sidikalang Leaves Using Response Surface Methodology. In J. Sukweenadhi & F. Setiawan (Eds.), *Natural Resources And Life Sciences 2022* (pp. 111–115). Advances in Biological Sciences Research 38. https://doi.org/10.2991/978-94-6463-322-1_15

Gil-Martín, E., Forbes-Hernández, T., Romero, A., Cianciosi, D., Giampieri, F., & Battino, M. (2022). Influence of The Extraction Method on The Recovery of Bioactive Phenolic Compounds from Food Industry by-Products. *Food Chemistry*, *378*, 1–39. https://doi.org/10.1016/j.foodchem.2021.131918

Gonzaga, L. J., Pérez Roa, M. E., Lavecchia, R., & Zuorro, A. (2025). Unlocking marine potential: *Microwave-Assisted Extraction* of bioactive compounds from marine macroalgae. In *Journal of Environmental Chemical Engineering* (Vol. 13, Number 3). Elsevier Ltd. https://doi.org/10.1016/j.jece.2025.116858

Guo, J., Yuan, Y., Liu, Z., & Zhu, J. (2013). Development and structure of internal glands and external glandular trichomes in Pogostemon cablin. *PloS One*, *8*(10). https://doi.org/10.1371/journal.pone.0077862

Hamzah Fansuri, & Adhiksana, A. (2024). Effect of Mass Variation of Pepper Leaves on Essential Oil Extraction Via *Microwave* Assisted Extraction (MAE). *Rekayasa Bahan Alam Dan*

Energi Berkelanjutan, *8*(2), 89–96. https://doi.org/10.21776/ub.rbaet.2024.008.02.06

Herdhiansyah, D., Subhan, Rianda, L., & Asriani. (2023). Kajian Pengolahan Nilam (Patchouli) Menggunakan Metode Penyulingan Uap di Kecamatan Poleang Utara Kabupaten Bombana. *Jurnal Agroindustri Halal*, *9*(3), 355–364. https://doi.org/10.30997/jah.v9i3.6404

Iskandar, B., Lukman, A., Tartilla, R., Dwi Condro Surboyo, M., & Leny, L. (2021). Formulasi, Karakterisasi dan Uji Stabilitas Mikroemulsi Minyak Nilam (Pogostemon cablin Benth.). *Jurnal Ilmiah Ibnu Sina (JIIS): Ilmu Farmasi Dan Kesehatan*, *6*(2), 282–291. https://doi.org/10.36387/jiis.v6i2.724

Jeon, S., Kim, J., & Yang, D. (2022). Design of Large-Scale *Microwave* Cavity for Uniform and Efficient Plastic Heating. *Polymers*, *14*(3). https://doi.org/10.3390/polym14030541

Jurinjak Tušek, A., Benković, M., Belščak Cvitanović, A., Valinger, D., Jurina, T., & Gajdoš Kljusurić, J. (2016). Kinetics and thermodynamics of the solid-liquid extraction process of total polyphenols, antioxidants and extraction yield from Asteraceae plants. *Industrial Crops and Products*, *91*, 205–214. https://doi.org/10.1016/j.indcrop.2016.07.015

Kautsarah, H., Martunis, & Juanda. (2023). Peningkatan Kualitas Minyak Nilam Aceh Selatan Dengan Menggunakan Rotary Vacum Evaporator. *Jurnal Ilmiah Mahasiswa Pertanian*, *8*(1), 236–247. www.jim.unsyiah.ac.id/JFP

Kendra, A., Djali, M., Hanidah, I. I., Lembong, E., & Jaluwardhana, R. S. (2026). Karakteristik Fisikokimia dan Organoleptik Edible Cup Cookies Berbasis Tepung Kulit Biji Kakao (Theobroma cacao L.) Sebagai Alternatif Cangkir Plastik Pangan. *Jurnal Teknotan*, *20*(1), 147–158. https://doi.org/10.24198/jt.vol20n1.16

Kok, T., Florenika, N., Tua Gultom, M., Hartatie Hardjo, P., & Illayan Massadeh, M. (2023). Mini-Review: Extraction of

Patchouli Oil from Pogostemon cablin Benth. Leaves. *E3S Web of Conferences*, *374*. https://doi.org/10.1051/e3sconf/202337400036

Kusuma, H. S., Altway, A., & Mahfud, M. (2017). A Preliminary Study of Patchouli Oil Extraction by *Microwave* Air-Hydrodistillation Method. *Korean Chemical Engineering Research*, *55*(4), 510–513. https://doi.org/10.9713/kcer.2017.55.4.510

Kusuma, H. S., Altway, A., & Mahfud, M. (2018). Solvent-free *microwave* extraction of essential oil from dried patchouli (Pogostemon cablin Benth) leaves. *Journal of Industrial and Engineering Chemistry*, *58*, 343–348. https://doi.org/10.1016/j.jiec.2017.09.047

Kusuma, H. S., & Mahfud. (2015a). Preliminary Study: Kinetics of Oil Extraction from Sandalwood by *Microwave*-assisted Hydrodistillation. *AJChE*, *15*(2), 62–69.

Kusuma, H. S., & Mahfud, M. (2015b). *Microwave*-assisted hydrodistillation for extraction of essential oil from patchouli (Pogostemon cablin) leaves. *Periodica Polytechnica Chemical Engineering*, *61*(2), 82–92. https://doi.org/10.3311/PPch.8676

Kusuma, H. S., & Mahfud, M. (2017). The extraction of essential oils from patchouli leaves (Pogostemon cablin benth) using a *microwave* air-hydrodistillation method as a new green technique. *RSC Advances*, *7*(3), 1336–1347. https://doi.org/10.1039/c6ra25894h

Lee, J. E., Jayakody, J. T. M., Kim, J. Il, Jeong, J. W., Choi, K. M., Kim, T. S., Seo, C., Azimi, I., Hyun, J. M., & Ryu, B. M. (2024). The Influence of Solvent Choice on the Extraction of Bioactive Compounds from Asteraceae: A Comparative Review. *Foods*, *13*(1), 1–21. https://doi.org/10.3390/foods13193151

Le-Tan, H., & Jaeger, H. (2022). Impact of Cell Disintegration Techniques on Curcumin Recovery. In *Food Engineering Reviews* (Vol. 14, Number 4, pp. 655–672). Springer. https://doi.org/10.1007/s12393-022-09319-x

Lias, S. G., Bartmess, J., Liebman, J. F., Holmes, J. L., Levin. R.D., & Mallard, G. (2010, January). *Water - the NIST WebBook (Standard Reference Database Number 69)*. National Institute of Standards and Technology (NIST). https://webbook.nist.gov/cgi/cbook.cgi?ID=C7732185

Lin, W. M., & Abidin, Z. Z. (2018). Kinetic Modelling of Solid-Liquid Extraction of Anthocyanins of Gynura Crepioides Leaves. In *International Journal of Engineering & Technology*. www.sciencepubco.com/index.php/IJET

López-Salazar, H., Camacho-Díaz, B. H., Ocampo, M. L. A., & Jiménez-Aparicio, A. R. (2023). *Microwave-Assisted Extraction* of functional compounds from plants: A Review. *BioResources*, *18*(3), 6614–6638. https://doi.org/10.15376/biores.18.3.Lopez-Salazar

Machdar, I., Luthfiah, D. A., Husni, & Rinaldi, W. (2025). Study on Yield and Chemical Constituent of Pogostemon Cablin (Blanco) Benth Collected from Different Regions in Aceh Province, Indonesia. *Journal of Ecological Engineering*, *26*(4), 228–237. https://doi.org/10.12911/22998993/200069

Mairiza, L., Tirta Yani, F., Nasution, F., Maulinda, L., & Sy, Y. (2025). Investigasi Pengaruh Variasi Massa dan Daya *Microwave* Terhadap Rendemen Ekstraksi Minyak Daun Kelor (Moringa oleifera L.). *Chemical Engineering Journal Storage*, *5*(5), 805–821. https://doi.org/10.29103/cejs.v5i5.24295

Melikoglu, M. (2025). *Microwave-Assisted Extraction*: Recent advances in optimization, synergistic approaches, and applications for green chemistry. In *Sustainable Chemistry for*

Climate Action (Vol. 7). Elsevier B.V. https://doi.org/10.1016/j.scca.2025.100122

Mishra, R. R., & Sharma, A. K. (2016). *Microwave*-material interaction phenomena: Heating mechanisms, challenges and opportunities in material processing. In *Composites Part A: Applied Science and Manufacturing* (Vol. 81, pp. 78–97). Elsevier Ltd. https://doi.org/10.1016/j.compositesa.2015.10.035

Muhsanati, Yulnafatmawita, Bujang Rusman, Aprisal, Azwar Rasyidin, Teguh Budi Prasetyo, Amrizal Saidi, Auzar Syarif, P.K. Dewi Hayati, Indra Dwipa, Zulfadly Syarif, Nugraha Ramadhan, Yulmira Yanti, Eti Farda Husin, Yaherwandi, Reni Mayerni, Warnita, Rahmat Syahni, Rusda Khairati, … Devi Analia. (2019). *Perspektif Pertanian Tropika Basah: Potensi dan Tantangannya dalam Rangka Pertanian Berkelanjutan* (T. Habazar, B. Rusman, Yonariza, & A. Anwar, Eds.; Vol. 1). CV. Rumahkayu Pustaka Utama.

Mulyono, E., Sjarief, A. M., & Supriyono. (1994). Studi Penentuan Sifat-Sifat Fisik dan Termofisik Daun Nilam Aceh. *Bul. Litro*, *9*, 26–33.

Muqorrobin, M., & Mustikaningrum, M. (2023). Pengaruh Perbedaan Suhu dan Waktu Terhadap Kinetika Ekstraksi Minyak dengan Metode Ultrasonik pada Ampas Kopi The Effect of Differences in Temperature and Time on The Kinetics of Oil Extraction Using The Ultrasonic Method in Coffee Grounds. In *Jurnal Integrasi Proses dan Lingkungan* (Vol. 1, Number 1). http://journal.umg.ac.id/index.php/jipl/home

Ni'Mah, L., Juliastuti, S. R., & Mahfud, M. (2023). One-Stage *Microwave*-Assisted Activated Carbon Preparation from Langsat Peel Raw Material for Adsorption of Iron, Manganese and Copper from Acid Mining Waste. *Communications in*

Science and Technology, *8*(2), 143–153. https://doi.org/10.21924/cst.8.2.2023.1299

Nirwana, C. H., & Zamrudy, W. (2021). Studi Literatur Karakteristik Minyak Cengkeh (Clove Oil) dari Beberapa Metode Distilasi. *Distilat Jurnal Teknologi Separasi*, *7*(2), 561–569. http://distilat.polinema.ac.id

Nour, A. H., Modather, R. H., Yunus, R. M., Elnour, A. A. M., & Ismail, N. A. (2024). Characterization of bioactive compounds in patchouli oil using *microwave*-assisted and traditional hydrodistillation methods. In *Industrial Crops and Products* (Vol. 208). Elsevier B.V. https://doi.org/10.1016/j.indcrop.2023.117901

Nurfaizin, S., Hartati, I., & Auviatita, F. (2025). Pemanfaatan Limbah Kulit Nanas Terdelignifikasi dengan Metode MAE (*Microwave* assisted extraction) Untuk peningkatan Produksi Bioethanol. *Chemical Engineering Journal Storage (CEJS)*, *5*(2), 235–245. https://doi.org/10.29103/cejs.v5i2.21945

Parganiha, D., Naik, R. K., Patel, S., Khokhar, D., & Mishra, N. K. (2016). Study on the Effect of Moisture Content of Patchouli (Pogostemon cablin) Plants on Recovery Percentage of Essential Oil. *International Journal of Engineering Research & Technology (IJERT)*, (3), 294. http://www.ijert.org

Patel, R. B., & Thakker, M. R. (2025). Essential Oil Extraction from Various Natural Sources: A Comprehensive Review of Methods, Phytochemistry, and Biological Activities. *International Journal of Environmental Sciences*, *11*(7), 2141–2156. https://theaspd.com/index.php

Pavlić, B., Kaplan, M., Zeković, Z., Canli, O., Jovičić, N., Bursać Kovačević, D., Bebek Markovinović, A., Putnik, P., & Bera, O. (2023). Kinetics of *Microwave-Assisted Extraction* Process Applied on Recovery of Peppermint Polyphenols: Experiments and Modeling. *Plants*, *12*(6). https://doi.org/10.3390/plants12061391

Périno-Issartier, S., Ginies, C., Cravotto, G., & Chemat, F. (2013). A comparison of essential oils obtained from lavandin via different extraction processes: Ultrasound, *microwave*, turbohydrodistillation, steam and hydrodistillation. *Journal of Chromatography A*, *1305*, 41–47. https://doi.org/10.1016/j.chroma.2013.07.024

Puspitasari, A. D., & Proyogo, L. S. (2017). Perbandingan Metode Ekstraksi Maserasi dan Sokletasi Terhadap Kadar Fenolik Total Ekstrak Etanol Daun Kersen (Muntingia calabura). *Jurnal Ilmiah Cendekia EkSakta*, *2*, 1–8. https://doi.org/http://dx.doi.org/10.3194/ce.v2i1.1791

Qiu, Y., Wang, Y., & Li, Y. (2022). Solvent-Free *Microwave* Extraction of Essential Oils from Litsea cubeba (Lour.) Pers. at Different Harvesting Times and Their Skin-Whitening Cosmetic Potential. *Antioxidants*, *11*(12). https://doi.org/10.3390/antiox11122389

Rahath Kubra, I., Kumar, D., & Rao, L. J. M. (2013). Effect of *Microwave-Assisted Extraction* on the release of polyphenols from ginger (Zingiber officinale). *International Journal of Food Science and Technology*, *48*(9), 1828–1833. https://doi.org/10.1111/ijfs.12157

Rassem, H. H. A., Nour, A. H., Ali, G. A. M., Masood, N., Al-Bagawi, A. H., Alanazi, T. Y. A., Magam, S., & Assiri, M. A. (2022). Essential Oil from Hibiscus Flowers through Advanced *Microwave*-Assisted Hydrodistillation and Conventional Hydrodistillation. *Journal of Chemistry*, *2022*. https://doi.org/10.1155/2022/2000237

Rifai, A., Firdaus, & Soekamto, N. H. (2019). Purification and analysis of *patchouli alcohol* from patchouli oil by vacuum fractionation distillation. *Journal of Physics: Conference Series*, *1341*(5), 1–6. https://doi.org/10.1088/1742-6596/1341/5/052016

Rinawati, R., Gustami Pangesti, G., & Gede Ratna Juliasih, N. L. (2020). Review: Green Analytical Chemistry: Pemanfaatan Supercritical Fluid Extraction (SFE) Dan *Microwave-Assisted Extraction* (MAE) Sebagai Metode Ekstraksi Senyawa Diterpena pada Minyak Biji Kopi Shangrai. *Analit:Analytical and Environmental Chemistry*, *5*(1), 24–33. https://doi.org/10.23960/aec.v5.i1.2020.p24-33

Rusydi, A., Talip, N., Latip, J., Rahman, R. A., & Sharif, I. (2013). Morphology of trichomes in Pogostemon cablin Benth. (Lamiaceae). *AJCS*, *7*(6), 744–749.

Sa'adah, H., & Nurhasnawati, H. (2015). Perbandingan Pelarut Etanol dan Air pada Pembuatan Ekstrak Umbi Bawang Tiwai (Eleutherine americana Merr) Menggunakan Metode Maserasi. *Jurnal Ilmiah Manuntung*, *1*(2), 149–153.

Sabel, W. (1967). *Basic Techniques of Preparative Organic Chemistry*. Pergamon Press (Imprint of Elsevier). https://doi.org/10.1016/C2013-0-06983-6

Samang, T. K., & Aktawan, A. (2025). Analisis Komparatif Metode Ekstraksi Minyak Atsiri Sereh (Cymbopogon sp.): Review. *Jurnal Integrasi Proses Dan Lingkungan*, *2*(2), 117–125. https://journal.umg.ac.id/index.php/jipl

Samanta, R., Chatterjee, N., Kumar, A., Mishra, R., Sahoo, S., & Kumari, P. (2025). Comparative Analysis of *Microwave-Assisted Extraction* (MAE) and Traditional Extraction Techniques for Phytochemicals from Plants. *International Journal of Environmental Sciences*, *11*(18), 2025. https://www.theaspd.com/ijes.php

Sanbari, E. P. (2018). *Ekstraksi Minyak Atsiri Bawang Putih (Alliumsativum L.) dengan Menggunakan Metode Microwave Hydrodistillation dan Solvent-Free Microwave Extraction* [Sarjana]. Institut Teknologi Sepuluh Nopember.

Sanjaya, A., Mustafa, M., Sweatenia, E. G., Aulia, S. A. R., Rahmawati, D., Valiendra, D. A., Damayanti, D., Fahni, Y.,

Auriyani, W. A., & Saputri, D. R. (2024). Influence of Solvent Type on Patchouli Oil Extraction Efficiency Using *Microwave*-Assisted Method. *Jurnal Integrasi Proses*, *13*(2), 133–140. http://jurnal.untirta.ac.id/index.php/jip

SNI 06-2385-2006. (2006). *Standar Nasional Indonesia Minyak nilam ICS 71.100.60 Badan Standardisasi Nasional*.

SNI-8028-1-2014 Minyak Atsiri, Pub. L. SNI 8028-1-2014, Badan Standarisasi Nasional 1 (2014).

Sookjitsumran, W., Devahastin, S., Mujumdar, A. S., & Chiewchan, N. (2016). Comparative evaluation of *microwave*-assisted extraction and preheated solvent extraction of bioactive compounds from a plant material: a case study with cabbages. *International Journal of Food Science & Technology*, *51*(11), 2440–2449. https://doi.org/10.1111/ijfs.13225

Sugiyono. (2019). *Metode Penelitian Kuantitatif, Kualitatif, dan R&D*. Alfabeta.

Sukardi, Soeparman, S., Argo, B. D., & Irawan, Y. S. (2019). Use of pulsed electric fields to induce breakage of glandular trichome cells in leaves of fresh patchouli (Pogostemon cablin benth.): Specific energy *input* consumption. *International Journal of Plant Biology*, *10*(1), 21–25. https://doi.org/10.4081/pb.2019.7443

Sun, J., Wang, W., & Yue, Q. (2016). Review on *microwave*-matter interaction fundamentals and efficient *microwave*-associated heating strategies. *Materials*, *9*(4), 1–25. https://doi.org/10.3390/ma9040231

Syaviq, N. M. (2025). *Optimasi Ekstraksi Nilam (Pogostemon cablin Benth.) dengan Microwave Assisted Extraction (MAE) Berdasarkan Perbedaan Ukuran Partikel dan Pengaturan Daya Ekstraksi* [Sarjana]. Universitas Andalas.

Tanruean, K., Luangkamin, S., Srisurat, T., Bunmusik, W., & Suttiarporn, P. (2025). Optimization of *Microwave-Assisted*

Extraction Process for Production of Polyphenol-Rich Crude Extract from Cinnamomum iners Leaves. *Applied Sciences (Switzerland)*, *15*(3). https://doi.org/10.3390/app15031265

Taratima, W., Chuanchumkan, C., Maneerattanarungroj, P., Trunjaruen, A., Theerakulpisut, P., & Dongsansuk, A. (2022). Effect of Heat Stress on Some Physiological and Anatomical Characteristics of Rice (Oryza sativa L.) cv. KDML105 Callus and Seedling. *Biology*, *11*(11). https://doi.org/10.3390/biology11111587

Tchabo, W., Yadang, G., Edikou, S., Kaba, I., Kouyaté, S., Dah-Nouvlessounon, D., & Dossou, J. (2026). Process Optimization of *Microwave*-Assisted Aqueous Extraction for Phytochemicals and Antioxidant Activity of Syzygium Cumini. *Journal of Food and Nutrition Sciences*, *14*(1), 53–67. https://doi.org/10.11648/j.jfns.20261401.15

Ultra International BV. (2025). *Essential Oils Market Report*.

Variana, Y., & Mahfud, M. (2023). *Trend Baru alam Dunia Minyak Atsiri: Ekstraksi Bawang Putih dan Bawang Merah Menggunakan Microwave Hydrodistillation dan Solvent-Free Microwave Extraction* (Z. Rosidah, Ed.; 1st ed.). Deepublish.

Variyana, Y., & Mahfud, M. (2020). Kinetics study using solvent-free *microwave* extraction of essential oil from Allium sativum L. *Key Engineering Materials*, *840 KEM*, 186–192. https://doi.org/10.4028/www.scientific.net/kem.840.186

Variyana, Y., Mega Arum Ariyani, & Iyappateya Gelegar. (2025). Kinetics of Solvent Free *Microwave* Extraction from Amomum cardamomum: Comparison First and Second Order Models. *International Journal of Natural Science and Engineering*, *9*(1), 43–53. https://doi.org/10.23887/ijnse.v9i1.68623

Variyana, Y., Rezki, A. S., Ermaya, D., & Mahfud, M. (2023). Ekstraksi Minyak Nabati dari Biji Kemiri (Aleurites Moluccana L. Willd.) dengan Metode *Microwave*

Hydrodiffusion and Gravity (MHG). *Journal of Chemical Process Engineering*, *8*(1), 7–16.

Wahyuni, Y. A. T., Puspawati, G. A. K. D., & Putra, I. N. K. (2021). Pengaruh Jenis Pelarut pada Metode *Microwave* Assisted Extraction (MAE) terhadap Karakteristik Ekstrak Daun Singkong (Manihot utilissima Pohl.). *Itepa: Jurnal Ilmu Dan Teknologi Pangan*, (4), 566–578.

Widaryanto, & Ninuk Herlina. (2015). Pengaruh Umur Panen Terhadap Rendemen dan Kualitas Minyak Atsiri Tanaman Nilam (Pogostemon cablin Benth.). *Jurnal Produksi Tanaman*, *3*(3), 205–211.

Xiao, P., Yu, Z., Chen, T., Yu, L., He, Y., & Jin, W. (2025). Systematic Evaluation and Platform Construction of Kinetics Modeling for Herbal Extraction in Phytomedicine. *Ultrasonics Sonochemistry*, *123*. https://doi.org/10.1016/j.ultsonch.2025.107646

Yazıcı, Ö., & Sevgili, L. M. (2024). Obtaining cumin (Cuminum Cymminum) essential oils by steam distillation. Part I: investigation of operation parameters on essential oil yield and distribution of oil composition. *Journal of Chemical Technology and Biotechnology*, *99*(2), 481–498. https://doi.org/10.1002/jctb.7550

Yurleni, Y. (2018). Penggunaan Beberapa Metode Ekstraksi Pada Rimpang Curcuma Untuk Memperoleh Komponen Aktif Secara Kualitatif. *Biospecies*, *11*(1), 48–56. https://doi.org/10.22437/biospecies.v11i1.4997

Zghaibi, N., Omar, R., Kamal, S. M. M., Biak, D. R. A., & Harun, R. (2020). Kinetics study of *microwave*-assisted brine extraction of lipid from the microalgae Nannochloropsis sp. *Molecules*, *25*(4). https://doi.org/10.3390/molecules25040784