

DAFTAR PUSTAKA

1. Sikder MM, Li X, Akumwami S, Labony SA. Reactive oxygen species: role in pathophysiology, and mechanism of endogenous and dietary antioxidants during oxidative stress. *Chonnam Med J*. 2025;61(1):32.
2. Muharram FR, Multazam CECZ, Mustofa A, et al. The 30 years of shifting in the Indonesian cardiovascular burden-analysis of the global burden of disease study. *J Epidemiol Glob Health*. 2024;14(1):193-212.
3. Ansari WA, Srivastava K, Nasibullah M, Khan MF. Reactive oxygen species (ROS): sources, generation, disease pathophysiology, and antioxidants. Published online 2025.
4. Chibuye B, Singh I Sen, Ramasamy S, Maseka KK. Natural antioxidants: A comprehensive elucidation of their sources, mechanisms, and applications in health. *Next Res*. 2024;1(2):100086.
5. Rudrapal M, Rakshit G, Singh RP, Garse S, Khan J. Dietary Polyphenols: Review on Chemistry/Sources, Bioavailability/Metabolism, Antioxidant Effects, and Their Role in Disease Management. Published online 2024.
6. Zhang Z, Li X, Sang S, et al. Polyphenols as plant-based nutraceuticals: health effects, encapsulation, nano-delivery, and application. *Foods*. 2022;11(15):2189.
7. Zubaidi SN, Nani HM, Saleh M, et al. *Annona muricata*: Comprehensive Review on the Ethnomedicinal, Phytochemistry, and Pharmacological Aspects Focusing on Antidiabetic Properties. Published online 2023.
8. Ilango S, Sahoo DK, Paital B, et al. A Review on *Annona muricata* and Its Anticancer Activity. Published online 2022:1-31.
9. Aguilar-Hernández G, García-Magaña M de L, Vivar-Vera M de los Á, et al. Optimization of ultrasound-assisted extraction of phenolic compounds from *Annona muricata* by-products and pulp. *Molecules*. 2019;24(5):904.
10. Ibrahim A, Syazlie M, Ibrahim C, et al. Effects of *Annona muricata* extraction on inhibition of polyphenoloxidase and microbiology quality of *Macrobrachium rosenbergii*. *J Food Sci Technol*. 2022;59(3):859-868. doi:10.1007/s13197-021-05081-w
11. Hartati R, Rompis FM, Pramastya H, Fidrianny I. Optimization of antioxidant activity of soursop (*Annona muricata* L.) leaf extract using response surface methodology. Published online 2024:1-13. doi:10.3892/br.2024.1854
12. Mahesh JS, Selvakumarsamy S. Optimization of drying and extraction techniques for antioxidants and acetogenins In *Annona muricata* leaves using response surface methodology. *Food Humanit*. 2024;3:100447.
13. Karabegović I, Stojanović SS, Mančić S, Đorđević N, Malićanin M, Danilović B. Optimization of food-grade bioactive compound extraction from plant sources by response surface methodology approach: A comprehensive review. *MASO Int FOOD Sci Technol*. 2024;13(1):31-47.
14. Fatmawati S, Anggraini Putri D, Malina Annur R, Hidayat F. *Bioaktivitas Dan Konstituen Kimia Tanaman Obat Indonesia*. CV BUDI UTAM; 2019.
15. Nurkhasanah MA, Si A, Mochammad S, et al. *Antioksidan Dan Stres Oksidatif*.; 2023.
16. Shahabi Mohammadabadi S, Goli M, Naji Tabasi S. Optimization of Bioactive Compound Extraction from Eggplant Peel by Response Surface Methodology: Ultrasound-Assisted Solvent Qualitative and Quantitative Effect. *Foods*. 2022;11(20). doi:10.3390/foods11203263
17. Nolasco-González Y, Chacón-López MA, Ortiz-Basurto RI, et al. *Annona muricata* Leaves as a Source of Bioactive Compounds: Extraction and Quantification Using Ultrasound. *Horticulturae*. 2022;8(7):1-17. doi:10.3390/horticulturae8070560
18. Jomova K, Raptova R, Alomar SY, Alwasel SH, Nepovimova E, Kuca K. *Reactive Oxygen Species , Toxicity , Oxidative Stress , and Antioxidants : Chronic Diseases and Aging*. Vol 97. Springer Berlin Heidelberg; 2023. doi:10.1007/s00204-023-03562-9

19. Rahaman M, Hossain R, Torequl M, et al. Natural antioxidants from some fruits, seeds, foods, natural products, and associated health benefits: An update. 2023;(December 2022):1657-1670. doi:10.1002/fsn3.3217
20. Zhang Y, Cai P, Cheng G. A Brief Review of Phenolic Compounds Identified from Plants: Their Extraction, Analysis, and Biological Activity. Published online 2022. doi:10.1177/1934578X211069721
21. Pérez M, Dominguez-López I, Lamuela-Raventós RM. The chemistry behind the folin-ciocalteu method for the estimation of (poly) phenol content in food: Total phenolic intake in a mediterranean dietary pattern. *J Agric Food Chem*. 2023;71(46):17543-17553.
22. Wianowska D, Olszowy-Tomczyk M. A concise profile of gallic acid-From its natural sources through biological properties and chemical methods of determination. *Molecules*. 2023;28(3):1186.
23. Yefrida, Suyani H, Aziz H, Efdi M. Comparison of iron reduction methods on the determination of antioxidants content in vegetables sample. *Orient J Chem*. 2018;34(5):2418-2424. doi:10.13005/ojc/340525
24. Gulcin İ, Alwasel SH. DPPH radical scavenging assay. *Processes*. 2023;11(8):2248.
25. Irianti T, Mada UG, Ugm S, et al. Antioksidan. 2017;(October).
26. Njus D, Kelley PM, Tu YJ, Schlegel HB. Ascorbic acid: The chemistry underlying its antioxidant properties. *Free Radic Biol Med*. 2020;159:37-43.
27. Muliasari H, Hanifa NI, Hajrin W, Andanalusia M, Hidayati AR. Determination of Antioxidants by DPPH Scavenging Activity of Ashitaba Herb (*Angelica keiskei*) Methanol Extract. *J Biol Trop*. 2023;23(4):482-490.
28. Castillo-Correa M, Montalbán-Hernández C, Navarro-Hortal MD, et al. Exploring the Influence of Extraction Methods, Solvents, and Temperature on Total Phenolic Recovery and Antioxidant Capacity in Olive Leaf Extracts: A Systematic Review with Quantitative Synthesis. *Separations*. 2025;12(9). doi:10.3390/separations12090236
29. Travis CR, McMaster J, Rivas F. Advances in Natural Product Extraction: Established and Emerging Technologies. *Molecules*. 2026;31(7):1136.
30. Nurcholis W, Alfadzrin R, Izzati N, et al. Effects of Methods and Durations of Extraction on Total Flavonoid and Phenolic Contents and Antioxidant Activity of Java Cardamom (*Amomum compactum* Soland Ex Maton) Fruit. *Plants*. 2022;11(17):1-13. doi:10.3390/plants11172221
31. Siddiqui SA, Ali Redha A, Salauddin M, Harahap IA, Rupasinghe HPV. Factors Affecting the Extraction of (Poly)Phenols from Natural Resources Using Deep Eutectic Solvents Combined with Ultrasound-Assisted Extraction. *Crit Rev Anal Chem*. 2025;55(1):139-160. doi:10.1080/10408347.2023.2266846
32. Beg S, Swain S, Rahman M, Hasnain MS, Imam SS. *Application of Design of Experiments (DoE) in Pharmaceutical Product and Process Optimization*. Elsevier Inc.; 2019. doi:10.1016/B978-0-12-815799-2.00003-4
33. Daffa'Aththobarani M, Priyanto AD, Putra AYT, et al. Optimization Approach of Microwave Assisted Extraction Anthocyanins Pigments Butterfly Pea Flowoers (*Clitoria Ternatea* L.) Using OFAT (One-Factor-At-a-Time) Method. *AGRITEPA J Ilmu dan Teknol Pertan*. 2025;12(1):31-44.
34. Yefrida Y, Hayana H. Optimization of Antioxidant Extraction from *Moringa oleifera* Leaves Using an Integrated OFAT and RSM-CCD Approach. 2026;9(7):1283-1296.
35. Bezerra MA, Santelli RE, Oliveira EP, Villar LS, Escaleira LA. Response surface methodology (RSM) as a tool for optimization in analytical chemistry. *Talanta*. 2008;76(5):965-977. doi:10.1016/j.talanta.2008.05.019
36. Myers RH, Montgomery DC, Anderson-Cook CM. *Response Surface Methodology: Process and Product Optimization Using Designed Experiments*. John Wiley & Sons; 2016.

37. Li W, Zhao L chun, Wang Z, Zheng Y nan, Liang J, Wang H. Response Surface Methodology to Optimize Enzymatic Preparation of Deapio-Platycodin D and Platycodin D from Radix Platycodi. Published online 2012:4089-4100. doi:10.3390/ijms13044089
38. Bhattacharya S. Central Composite Design for Response Surface Methodology and Its Application in Pharmacy. *Response Surf Methodol Eng Sci*. Published online 2021. doi:10.5772/intechopen.95835
39. Araujo P. Key aspects of analytical method validation and linearity evaluation. 2009;877:2224-2234. doi:10.1016/j.jchromb.2008.09.030
40. Zenkevich IG, Nikitina DA, Kushakova AS. Processing and Interpretation of Analytical Data with a High Degree of Uncertainty. 2022;77(11):1399-1412. doi:10.1134/S1061934822090143
41. Markhali FS, Teixeira JA. clean technologies Effect of Ohmic Heating on the Extraction Yield, Polyphenol Content and Antioxidant Activity of Olive Mill Leaves. Published online 2022:512-528.
42. Megawati, Fardhyanti DS, Widjanarko D, Hanifah, Bungsu GM, Rizky MHF. Kinetics of soursop leaves antioxidant extraction using microwave-assisted extraction. In: *IOP Conference Series: Earth and Environmental Science*. Vol 572. IOP Publishing; 2020:12041.
43. Wang Z, Tian Y, Yang M, et al. Extraction of phenolic compounds from Moringa oleifera Lam. leaves with ultrasonic-assisted deep eutectic solvents. *Front Nutr*. 2024;11(August):1-16. doi:10.3389/fnut.2024.1405128
44. Sivaji S, Gunasekaran S, Saengrayap R, et al. Response surface methodology in postharvest and food technology research: A bibliometric assessment. *Appl Food Res*. 2025;5(2). doi:10.1016/j.afres.2025.101461
45. Nurcholis W, Safithri M, Marliani N, Iqbal M. Response surface modeling to optimize sonication extraction with the maceration method for the phenolic content and antioxidant activity of Justicia gendarussa Burm f. *J Appl Pharm Sci*. 2023;13(10):181-187. doi:10.7324/JAPS.2023.143746
46. Younis M, Mohamed Ahmed IA, Ahmed KA, et al. Response surface methodology (RSM) optimization of the physicochemical quality attributes of ultraviolet (UV-C)-treated barhi dates. *Plants*. 2022;11(17):2322.
47. Che Sulaiman IS, Basri M, Fard Masoumi HR, Chee WJ, Ashari SE, Ismail M. Effects of temperature, time, and solvent ratio on the extraction of phenolic compounds and the anti-radical activity of Clinacanthus nutans Lindau leaves by response surface methodology. *Chem Cent J*. 2017;11(1):54.
48. Cano-Lamadrid M, Martínez-Zamora L, Mozafari L, Bueso MC, Kessler M, Artés-Hernández F. Response Surface Methodology to Optimize the Extraction of Carotenoids from Horticultural By-Products-A Systematic Review. *Foods*. 2023;12(24):1-17. doi:10.3390/foods12244456
49. Ponphaiboon J, Krongrawa W, Aung WW, Chinatangkul N, Limmatvapirat S, Limmatvapirat C. Advances in natural product extraction techniques, electrospun fiber fabrication, and the integration of experimental design: a comprehensive review. *Molecules*. 2023;28(13):5163.
50. Yuliantari NWA, Widarta IWR, Permana I. The Influence of Time and Temperature on Flavonoid Content and Antioxidant Activity of Sirsak Leaf (Annona muricata L.) Using Ultrasonic. *Media Ilm Teknol Pangan (Scientific J Food)*. Published online 2017.
51. Handayani H, Sriherfyna FH, Yuniarta Y. Antioxidant extraction of soursop leaf with ultrasonic bath (Study of material: Solvent ratio and extraction time). *J Pangan Dan Agroindustri*. 2016;4(1):262-272.
52. Setyani W, Murwanti R, Sulaiman TNS, Hertiani T. Application of Response Surface Methodology (RSM) for the optimization of ultrasound-assisted extraction (UAE) of Moringa oleifera: Extraction yield, content of bioactive compounds, and biological effects

in vitro. *Plants*. 2023;12(13):2455.

