

## DAFTAR PUSTAKA

- Agustin, D. A., & Wibowo, A. A. (2021). TEKNOLOGI ENKAPSULASI: TEKNIK DAN APLIKASINYA. *Distilat Jurnal Teknologi Separasi*, 7(2), 202–209.
- Ali, A., Yusof, Y. A., Chin, N., Ibrahim, M., & Basra, S. (2014). Drying Kinetics and Colour Analysis of Moringa Oleifera Leaves. Dalam *Agriculture and Agricultural Science Procedia* (Vol. 2).  
<https://doi.org/10.1016/j.aaspro.2014.11.055>
- Angelina, C., Swasti, Y. R., & Pranata, F. S. (2021). PENINGKATAN NILAI GIZI PRODUK PANGAN DENGAN PENAMBAHAN BUBUK DAUN KELOR (*Moringa oleifera*): REVIEW. *Jurnal Agroteknologi*, 15(1), 79–93.
- Ardyanti, N. K. N. T., Suhendra, L., & Ganda Puta, G. P. (2020). Pengaruh Ukuran Partikel dan Lama Maserasi terhadap Karakteristik Ekstrak Virgin Coconut Oil Wortel (*Daucus carota* L.) sebagai Pewarna Alami. *JURNAL REKAYASA DAN MANAJEMEN AGROINDUSTRI*, 8(3), 423.  
<https://doi.org/10.24843/JRMA.2020.v08.i03.p11>
- Azeez, L., Adebisi, S. A., Oyedeki, A. O., Adetoro, R. O., & Tijani, K. O. (2019). Bioactive compounds' contents, drying kinetics and mathematical modelling of tomato slices influenced by drying temperatures and time. *Journal of the Saudi Society of Agricultural Sciences*, 18(2), 120–126.  
<https://doi.org/10.1016/j.jssas.2017.03.002>
- Azizpour, M., Mohebbi, M., & Khodaparast, M. H. H. (2016). Effects of foam-mat drying temperature on physico-chemical and microstructural properties of shrimp powder. *Innovative Food Science & Emerging Technologies*, 34, 122–126. <https://doi.org/10.1016/j.ifset.2016.01.002>
- Benseddik, A., Azzi, A., Zidoune, M. N., Khanniche, R., & Besombes, C. (2019). Empirical and diffusion models of rehydration process of differently dried pumpkin slices. *Journal of the Saudi Society of Agricultural Sciences*, 18(4), 401–410. <https://doi.org/10.1016/j.jssas.2018.01.003>
- Bhople, S., Singh, M., & Verma, D. K. (2019). Application of Drying Techniques in Food Processing. *International Journal of Current Microbiology and Applied Sciences*, 8(8), 556–558.  
<https://doi.org/10.20546/ijcmas.2019.808.066>
- Brar, A. S., Kaur, P., Kaur, G., Subramanian, J., Kumar, D., & Singh, A. (2020). Optimization of Process Parameters for Foam-Mat Drying of Peaches. *International Journal of Fruit Science*, 20(sup3), S1495–S1518.  
<https://doi.org/10.1080/15538362.2020.1812017>
- Buchailot, A., Caffin, N., & Bhandari, B. (2009). Drying of Lemon Myrtle (*Backhousia citriodora*) Leaves: Retention of Volatiles and Color. *Drying Technology*, 27(3), 445–450.  
<https://doi.org/10.1080/07373930802683740>
- Daud, A., Suriati, & Nuzulyanti. (2024). Kajian Penerapan Faktor yang Mempengaruhi Akurasi Penentuan Kadar Air Metode Thermogravimetri. *LUTJANUS*, 29(2), 11–16.

- Dehghannya, J., Pourahmad, M., Ghanbarzadeh, B., & Ghaffari, H. (2018). Influence of foam thickness on production of lime juice powder during foam-mat drying: Experimental and numerical investigation. *Powder Technology*, 328, 470–484. Scopus. <https://doi.org/10.1016/j.powtec.2018.01.034>
- Dehghannya, J., Pourahmad, M., Ghanbarzadeh, B., & Ghaffari, H. (2019). Heat and mass transfer enhancement during foam-mat drying process of lime juice: Impact of convective hot air temperature. *International Journal of Thermal Sciences*, 135, 30–43. <https://doi.org/10.1016/j.ijthermalsci.2018.07.023>
- Diskes Bandung. (2023). *MANFAAT DAUN KELOR UNTUK KESEHATAN*. <https://diskes.badungkab.go.id/artikel/47615-manfaat-daun-kelor-untuk-kesehatan>
- Ekechukwu, V. (1999). Review of Solar Energy Drying Systems I: An Overview of Drying Principles and Theory. *Energy Conversion and Management*, 40, 593–613. [https://doi.org/10.1016/S0196-8904\(98\)00092-2](https://doi.org/10.1016/S0196-8904(98)00092-2)
- Faezian, A., Yeganehzad, S., & Tighchi, H. (2018). A Simplified Model to Describe Drainage of Egg White Powder Foam Containing Additives. *Chemical Engineering Science*, 195. <https://doi.org/10.1016/j.ces.2018.10.008>
- Firebaugh, J. D., & Daubert, C. R. (2005). Emulsifying and Foaming Properties of a Derivatized Whey Protein Ingredient. *International Journal of Food Properties*, 8(2), 243–253. <https://doi.org/10.1081/JFP-200060245>
- Franco, T. S., Ellendersen, L. N., Fattori, D., Granato, D., & Masson, M. L. (2015). Influence of the Addition of Ovalbumin and Emulsifier on the Physical Properties and Stability of Yacon (*Smallanthus sonchifolius*) Juice Foams Prepared for Foam Mat Drying Process. *Food and Bioprocess Technology*, 8(10), 2012–2026. <https://doi.org/10.1007/s11947-015-1553-5>
- Gupta, K., & Alam, M. (2014). Mass and color kinetics of foamed and non foamed grape concentrate during convective drying process: A comparative study. *Journal of Engineering and Technology Research*, 6, 48–67. <https://doi.org/10.5897/JETR2014.0350>
- Hardy, Z., & Jideani, V. A. (2017). Foam-mat Drying Technology: A Review. *Critical Reviews In Food Science and Nutrition*, 57(12), 2560–2572. <http://www.tandfonline.com/action/showCitFormats?doi=10.1080/10408398.2015.1020359>
- Hossain, M. A., Ahmed, T., Ferdous, J., & Zzaman, W. (2024). Optimization of the foam-mat drying process to develop high-quality tomato powder: A response surface methodology approach. *Heliyon*, 10(21), e39811. <https://doi.org/10.1016/j.heliyon.2024.e39811>
- Huang, C., Li, X., & Wen, Y. (2021). AN OTSU image segmentation based on fruitfly optimization algorithm. *Alexandria Engineering Journal*, 60(1), 183–188. <https://doi.org/10.1016/j.aej.2020.06.054>
- Indiarto, R., Asyifaa, A., Citra, F., Aulia, G., & Achmad, S. (2021). Conventional And Advanced Food-Drying Technology: A Current Review. *International Journal of Scientific & Technology Research*, 10, 99–107.

- Ismandari, T. (2023). Optimasi suhu dan waktu pengeringan pada kegiatan pascapanen jagung (*Zea Mays L*). *TEKNOLOGI PANGAN: Media Informasi dan Komunikasi Ilmiah Teknologi Pertanian*, 14(1), 132–145.
- Jamali, A., Kouhila, M., Mohamed, L. A., Idlimam, A., & Lamharrar, A. (2006). Moisture adsorption-desorption isotherms of *Citrus reticulata* leaves at three temperatures. *Journal of Food Engineering*, 77(1), 71–78. Scopus. <https://doi.org/10.1016/j.jfoodeng.2005.06.045>
- Kamali, R., Dadashi, S., Dehghannya, J., & Ghaffari, H. (2022). Numerical simulation and experimental investigation of foam-mat drying for producing banana powder as influenced by foam thickness. *Applied Food Research*, 2(1), 100075. <https://doi.org/10.1016/j.afres.2022.100075>
- Kaveh, M., Rasooli Sharabiani, V., Amiri Chayjan, R., Taghinezhad, E., Abbaspour-Gilandeh, Y., & Golpour, I. (2018). ANFIS and ANNs model for prediction of moisture diffusivity and specific energy consumption potato, garlic and cantaloupe drying under convective hot air dryer. *Information Processing in Agriculture*, 5(3), 372–387. <https://doi.org/10.1016/j.inpa.2018.05.003>
- Khamjae, T., & Rojanakorn, T. (t.t.). Foam-mat drying of passion fruit aril. *International Food Research Journal*, 25(1), 204–212.
- Khattab, T. A., Dacrory, S., Abou-Yousef, H., & Kamel, S. (2019). Development of microporous cellulose-based smart xerogel reversible sensor via freeze drying for naked-eye detection of ammonia gas. *Carbohydrate Polymers*, 210, 196–203. <https://doi.org/10.1016/j.carbpol.2019.01.067>
- Khwaja, O., Siddiqui, M. H., & Younis, K. (2020). Underutilized kadam (*Neolamarckia cadamba*) fruit: Determination of some engineering properties and drying kinetics. *Journal of the Saudi Society of Agricultural Sciences*, 19(6), 401–408. <https://doi.org/10.1016/j.jssas.2020.06.001>
- Kumar, A., Kandasamy, P., Chakraborty, I., & Hangshing, L. (2022). Analysis of energy consumption, heat and mass transfer, drying kinetics and effective moisture diffusivity during foam-mat drying of mango in a convective hot-air dryer. *Biosystems Engineering*, 219, 85–102. <https://doi.org/10.1016/j.biosystemseng.2022.04.026>
- Kumar, K., Srivastav, S., & Sharanagat, V. S. (2021). Ultrasound assisted extraction (UAE) of bioactive compounds from fruit and vegetable processing by-products: A review. *Ultrasonics Sonochemistry*, 70, 105325. <https://doi.org/10.1016/j.ultsonch.2020.105325>
- Lestari, M. F., & Aras, N. R. M. (2024). Relationship Analysis of Shrinkage Level, Moisture Content, and Drying Rate of *Eucheuma Cottonii* Seaweed in Various Drying Time and Methods. *INDONESIAN JOURNAL OF FUNDAMENTAL SCIENCES*, 10(1), 8–19.
- Li, T. S., Sulaiman, R., Rukayadi, Y., & Ramli, S. (2021). Effect of gum Arabic concentrations on foam properties, drying kinetics and physicochemical properties of foam mat drying of cantaloupe. *Food Hydrocolloids*, 116, 106492. <https://doi.org/10.1016/j.foodhyd.2020.106492>

- Ly, B. C. K., Dyer, E. B., Feig, J. L., Chien, A. L., & Del Bino, S. (2020). Research Techniques Made Simple: Cutaneous Colorimetry: A Reliable Technique for Objective Skin Color Measurement. *Journal of Investigative Dermatology*, 140(1), 3-12.e1. <https://doi.org/10.1016/j.jid.2019.11.003>
- Mallenakuppe, R., Homabalegowda, H., Gouri, M., Basavaraju, P., & Chandrashekharaiyah, U. (2019). History, Taxonomy and Propagation of Moringa oleifera-A Review. *SSR Institute of International Journal of Life Sciences*, 5, 2322–2327. <https://doi.org/10.21276/SSR-IIJLS.2019.5.3.7>
- Marhaeni, L. S. (2021). *DAUN KELOR (Moringa oleifera) SEBAGAI SUMBER PANGAN FUNGSIONAL DAN ANTIOKSIDAN*. 13(2), 40–53.
- Matias, G. S., Lermen, F. H., Matos, C., Nicolin, D. J., Fischer, C., Rossoni, D. F., & Jorge, L. M. M. (2023). A model of distributed parameters for non-Fickian diffusion in grain drying based on the fractional calculus approach. *Biosystems Engineering*, 226, 16–26. <https://doi.org/10.1016/j.biosystemseng.2022.12.004>
- Mogashoa, Z., & Jideani, V. (2015). Foam-mat Drying Technology: A Review. *Critical reviews in food science and nutrition*, 57. <https://doi.org/10.1080/10408398.2015.1020359>
- Mohammadian, M., & Alavi, F. (2016). The Effects of Iranian Gum Tragacanth on the Foaming Properties of Egg White Proteins in Comparison with Guar and Xanthan Gums. *Journal of Food Biosciences and Technology*, 6, 59–68.
- Mounir, S. (2018). Foam Mat Drying FMD. Dalam *Drying Technologies For Foods: Fundamentals And Applications: Part III*. New Delhi, NIPA.
- Mukhriani. (2014). EKSTRAKSI, PEMISAHAN SENYAWA, DAN IDENTIFIKASI SENYAWA AKTIF. *Jurnal Kesehatan*, 7(2), 361–367. <https://media.neliti.com/media/publications/137566-ID-ekstraksi-pemisahan-senyawa-dan-identifi.pdf>
- Nurhabibah, & Harahap, E. J. (2022). PENGARUH PANJANG STEK TERHADAP PERTUMBUHAN BIBIT KELOR (Moringea oleifera L.) DI DESA KUTA BLANG, KECAMATAN SAMA DUA, KABUPATEN ACEH SELATAN. *Agrinula : Jurnal Agroteknologi dan Perkebunan*, 5(1), 30–36. <https://doi.org/10.36490/agri.v5i1.225>
- Oduunlami, O. A., Amoo, T. E., Adisa, H. A., Elehinafe, F. B., and, & Oladimeji, T. E. (2023). Application of mass transfer in the pulp and paper Industry—overview, processing, challenges, and prospects. *Results in Engineering*, 20, 101498. <https://doi.org/10.1016/j.rineng.2023.101498>
- Ozbayoglu, E. M., Akin, S., & Eren, T. (2005). Foam Characterization Using Image Processing Techniques. *SPE Western Regional Meeting*, SPE-93860-MS. <https://doi.org/10.2118/93860-MS>
- Pinto, M. R. M. R., Paula, D. de A., Alves, A. I., Rodrigues, M. Z., Vieira, É. N. R., Fontes, E. A. F., & Ramos, A. M. (2018). Encapsulation of carotenoid extracts from pequi (Caryocar brasiliense Camb) by emulsification (O/W) and foam-mat drying. *Powder Technology*, 339, 939–946. <https://doi.org/10.1016/j.powtec.2018.08.076>

- Porciuncula, B. D. A., Zotarelli, M. F., Carciofi, B. A. M., & Laurindo, J. B. (2013). Determining the effective diffusion coefficient of water in banana (Prata variety) during osmotic dehydration and its use in predictive models. *Journal of Food Engineering*, 119(3), 490–496. <https://doi.org/10.1016/j.jfoodeng.2013.06.011>
- Prakotmak, P., Soponronnarit, S., & Prachayawarakorn, S. (2010). Modelling of moisture diffusion in pores of banana foam mat using a 2-D stochastic pore network: Determination of moisture diffusion coefficient during adsorption process. *Journal of Food Engineering*, 96(1), 119–126. <https://doi.org/10.1016/j.jfoodeng.2009.07.004>
- Prokomsetda. (2018). *18 Manfaat Daun Kelor Untuk Kesehatan (Efek Sampingnya) | Bagian Protokol dan Komunikasi Pimpinan*. <https://prokomsetda.bulelengkab.go.id/informasi/detail/artikel/18-manfaat-daun-kelor-untuk-kesehatan-efek-sampingnya-57>
- Puspitojati, E. (2021). BAURAN PROMOSI OLAHAN DAUN KELOR (STUDI KASUS KWT NGUDI REJEKI DESA TRIRENGGO KECAMATAN BANTUL KABUPATEN BANTUL DAERAH ISTIMEWA YOGYAKARTA). *Jurnal Ilmu-Ilmu Pertanian*, 28(2), Article 2. <https://doi.org/10.55259/jiip.v28i2.67>
- Rahayu, P. P., Purwadi, Radiati, L. E., & Manab, A. (2015). Physico chemical properties of whey protein and gelatine biopolymer using tea leaf extract as crosslink materials. *Current Research in Nutrition and Food Science*, 3(3), 224–236. Scopus. <https://doi.org/10.12944/CRNFSJ.3.3.06>
- Ramadan, A. H., Ghanem, T. H., & Eissa, A. S. (2022). Some engineering factors affecting refractance window drying of guava. *Al-Azhar Journal of Agricultural Engineering*, 4(1), 10–20. [https://azeng.journals.ekb.eg/article\\_278935\\_992ad5521f19b7dae14eae3b9081f75.pdf](https://azeng.journals.ekb.eg/article_278935_992ad5521f19b7dae14eae3b9081f75.pdf)
- Ridhatullah, M. A., & Hasibuan, R. (2019). Pengaruh Ketebalan Bahan dan Jumlah Desikan terhadap Laju Pengeringan Jahe (Zingiber officinale Roscoe) pada Pengering Kombinasi Surya dan Desikan. *Jurnal Teknik Kimia USU*, 08(2), 61–66.
- Rockwood, J., Anderson, B., & Casamatta, D. (2013). *POTENTIAL USES OF Moringa oleifera AND AN EXAMINATION OF ANTIBIOTIC EFFICACY CONFERRED BY M. oleifera SEED AND LEAF EXTRACTS USING CRUDE EXTRACTION TECHNIQUES AVAILABLE TO UNDERSERVED INDIGENOUS POPULATIONS*. 3. <https://www.semanticscholar.org/paper/POTENTIAL-USES-OF-Moringa-oleifera-AND-AN-OF-BY-M.-Rockwood-Anderson/d5e658f9d9afb7fb3253709999c564ae63567aaa>
- Rosyidi, M., & Fahrudin, A. (2022). Design And Construction Of Cabinet Dryer With Variation Of Blower Speed Using Charcoal Combustion On Chilli Plants: *Procedia of Engineering and Life Science*, 3. <https://doi.org/10.21070/pels.v3i0.1357>
- Sadiyah, I., Indiarto, R., & Cahyana, Y. (2022). KARAKTERISTIK DAN SENYAWA FENOLIK MIKROKAPSUL EKSTRAK DAUN KELOR

- (*Moringa oleifera*) DENGAN KOMBINASI MALTODEKSTRIN DAN WHEY PROTEIN ISOLAT. *Jurnal Teknologi Industri Pertanian*, 32(3), 273–282. <https://doi.org/10.24961/j.tek.ind.pert.2022.32.3.273>
- Salahi, M. R., Mohebbi, M., & Taghizadeh, M. (2015). Foam-Mat Drying of Cantaloupe (ucumis melo): Optimization of Foaming Parameters and Investigating Drying Characteristics. *Journal of Food Processing and Preservation*, 39(6), 1798–1808. <https://doi.org/10.1111/jfpp.12414>
- Shen, L., Pang, S., Zhong, M., Sun, Y., Qayum, A., Liu, Y., Rashid, A., Xu, B., Liang, Q., Ma, H., & Ren, X. (2023). A comprehensive review of ultrasonic assisted extraction (UAE) for bioactive components: Principles, advantages, equipment, and combined technologies. *Ultrasonics Sonochemistry*, 101, 106646. <https://doi.org/10.1016/j.ultsonch.2023.106646>
- Simha, P., Mathew, M., & Ganesapillai, M. (2016). Empirical modeling of drying kinetics and microwave assisted extraction of bioactive compounds from *Adathoda vasica* and *Cymbopogon citratus*. *Alexandria Engineering Journal*, 55(1), 141–150. <https://doi.org/10.1016/j.aej.2015.12.020>
- Singh, T. P., Singh, P., & Kumar, P. (2015). Drumstick (*Moringa Oleifera*) as a food additive in livestock products. *Nutrition & Food Science*, 45(3), 423–432. <https://doi.org/10.1108/NFS-02-2015-0018>
- Susanti, D. Y., Sediawan, W. B., Fahrurrozi, M., & Hidayat, M. (2021a). Foam-mat drying in the encapsulation of red sorghum extract: Effects of xanthan gum addition on foam properties and drying kinetics. *Journal of the Saudi Society of Agricultural Sciences*, 20(4), 270–279. <https://doi.org/10.1016/j.jssas.2021.02.007>
- Susanti, D. Y., Sediawan, W. B., Fahrurrozi, M., Hidayat, M., & Putri, A. Y. (2021b). Encapsulation of red sorghum extract rich in proanthocyanidins: Process formulation and mechanistic model of foam-mat drying at various temperature. *Chemical Engineering and Processing - Process Intensification*, 164, 108375. <https://doi.org/10.1016/j.cep.2021.108375>
- Susanty, Yudistirani, S. A., & Islam, M. B. (2019). METODE EKSTRAKSI UNTUK PEROLEHAN KANDUNGAN FLAVONOID TERTINGGI DARI EKSTRAK DAUN KELOR (*Moringa oleifera* Lam). *KONVERSI*, 8(2), 31–36.
- Telaumbanua, A. S., Karyadi, J. N. W., Pravitajaty, Kusumastuti, A. N. I., Ma'Rufah, K., & Ayuni, D. (2021). Physical quality analysis of drying beluntas leaves (*Pluchea indica* L.) using variations of drying methods. *IOP Conference Series: Earth and Environmental Science*, 922(1), 012053. <https://doi.org/10.1088/1755-1315/922/1/012053>
- Wadu, J., Linda, A. M., Retang, E. U. K., & Saragih, E. C. (2021). PEMANFAATAN DAUN KELOR SEBAGAI BAHAN DASAR PRODUK OLAHAN MAKANAN DI KELURAHAN KAMBANIRU. *SELAPARANG: Jurnal Pengabdian Masyarakat Berkemajuan*, 4(2), 87–90. <https://doi.org/10.31764/jpmb.v4i2.4270>
- Wahyuni, R., Wignyanto, W., Wijana, S., & Sucipto, S. (2021). Optimization of foam mat drying process of moringa leaf powder (*Moringa oleifera*) as

- protein and amino acids sources. *Food Research*, 5(2), 418–426.  
[https://doi.org/10.26656/fr.2017.5\(2\).539](https://doi.org/10.26656/fr.2017.5(2).539)
- Welsh, Z. G., Khan, M. I. H., & Karim, M. A. (2021). Multiscale modeling for food drying: A homogenized diffusion approach. *Journal of Food Engineering*, 292, 110252.  
<https://doi.org/10.1016/j.jfoodeng.2020.110252>
- Widyastuti, T. E. W., & Srianta, I. (2011). *Development of functional drink based on Foam-Mat Dried Papaya (Carica papaya L.): Optimisation of foam-mat drying process and its formulation*. 4, 167–176.  
<https://www.semanticscholar.org/paper/Development-of-functional-drink-based-on-Foam-Mat-Widyastuti-Srianta/d1bc7fc6f826a26229e14097e03c4f97409992b7>
- Yadav, S., & Mathur, J. (2023). An updated review on Phytochemical constituent and pharmacological properties of Moringa oleifera Lam. *The Journal of Phytopharmacology*, 12, 399–410.  
<https://doi.org/10.31254/phyto.2023.12606>
- Yudistira, B., Fatmawati, A., & Prabawa, S. (2023). Effect of temperature and foam mat drying method on the physical and chemical properties of white sweet potato (*Ipomoea batatas* L.) inulin. *Food Research*, 7(5), 332–338.  
[https://doi.org/10.26656/fr.2017.7\(5\).1010](https://doi.org/10.26656/fr.2017.7(5).1010)
- Zeng, Z., Han, C., Wang, Q., Yuan, H., Zhang, X., & Li, B. (2024). Analysis of drying characteristic, effective moisture diffusivity and energy, exergy and environment performance indicators during thin layer drying of tea in a convective-hot air dryer. *Frontiers in Sustainable Food Systems*, 8.  
<https://doi.org/10.3389/fsufs.2024.1371696>