

DAFTAR PUSTAKA

- Akdeniz, B, Sumnu, G., dan Sahin, S. 2017. The effects of maltodextrin dan gum arabic on encapsulation of onion skin phenolic compounds. *Chem. Eng. Trans.* 57: 1891-1896.
- Almey, A., Khan, A. J., Zahir, S. Suleiman, M. Aisyah, dan Rahim, K. 2010. Total phenolic content and primary antioxidant activity of methanolic and ethanolic extracts of aromatic plants' leaves. *International Food Research Journal* 17: 1033-1084.
- Ambrose, D. C, Manickavasagan A., dan Naik, R. 2016. "Leafy Medical Herbs: Botany, Chemistry, Postharvest Technology and Uses". Boston, CABI.
- Amin, I., dan Lee, W. Y. 2005. Effect of different blanching times on antioxidant properties in selected cruciferous vegetables. *J. Sci. of Food Agric.* 85(13): 2314-2320.
- Anesini, C., Ferraro, G. E., dan Filip, R. 2008. Total polyphenol content and antioxidant capacity of commercially available tea (*Camellia sinensis*) in Argentina. *J. Agric. Food. Chem.* 56: 9225-9229.
- AOAC. 2005. "*Official Method of Analysis*", 18th Ed. Associated of Official Analitical International, Washington.
- Bhusari, S. N., dan Kumar, P. 2014. Antioxidant activities of spray dried tamarind pulp powder as affected by carrier type and their addition rate. *International Conference on Food, Biological and Medical Sciences.* Bangkok, 1-5.
- Boning, C. R. 2010. "Florida's Best Herbs and Spices: Native and Exotic Plants Grown for Scent and Flavor". Pineapple Press, Sarasota.
- Brind, L., Misra, A., Srivastava, S. 2014. Evaluation of central nervous system stimulating and analgesic activities of *Murraya koenigii* leaves. *Journal of Acute Medicine* 20: 1-5.
- Brittain, H. G. 1996. "Analytical Profiles of Drug and Substances and Excipients". Academic Press, New Jersey.
- Bylaite, E. Nylander T., Venskutonis, R. dan Jonsson, B. 2001. Emulsification of caraway essential oil in water by lecithin and b-lactoglobulin: emulsion stability and properties of the formed oil-aqueous interface. *Colloids Surf. B Biointerfaces* 20: 327-240.
- Cakrawati, D., Handayani, M. N., Noor, E., dan Sunarti, T. C. 2017. Morfology dan stability of microencapsulation of limonin using maltodextrin: Morfology and Stability. *Mater. Sci. Eng.* 180(1): 1-8.
- Chaovanalikit, A., Mingmuang, A., Kitbunluewit, T., Choldumrongkool, N., Sondee, J. dan Chupratum, S. 2012. Anthocyanin and total phenolics

content of mangosteen and effect of processing on the quality of mangosteen products. *International Food Research Journal* 19 (3): 1047-1053

- Chegini, G. dan Taheri, M. 2013. Whey powder: process technology and physical properties: a review. *Middle-East J Sci.* 13(10): 1377-1387.
- Chen, X., Wu, X., Chai, W. M., Feng, H., Shi, Y., Zhou, H., dan Chen, Q. 2013. Optimization of extraction of phenolics from leaves of *Ficus virens*. *J. Zhejiang Univ Sci B.* 14(10): 903-915.
- Cilek, B., Luca, A., Hasirci, V. Sahin, S., dan Sumnu, G. 2012. Microencapsulation of phenolic compounds extracted from sour cherry pomace: effect of formulation, ultrasonication time and core to coating ratio. *Eur. Food Res. Technol.* 235: 587-596.
- Dai, J., dan Mumper R. J. 2010. Plant phenolics: extraction, analysis, and their antioxidant and anticancer properties. *Molecules* 15: 7313-7352.
- El-Hamzy, E. M. A. dan El-kholany, E. A. 2014. Effects of spray drying conditions on the physicochemical and antioxidant properties of the licorice (*Glycyrrhizaglabra*) powder and evaluation of their antimicrobial activity. *Journal of Applied Sciences Research* 10(13): 72-86.
- Ersus, S. dan Yurdagel U. 2007. Microencapsulation of anthocyanin pigments of black carrot (*Daucus carota* L.) by spray drier. *J. Food Eng.* 80(3): 805-812.
- Fang, Z. dan Bhandari, B. 2012. Comparing the efficiency of protein and maltodextrin on spray drying of bayberry juice. *Food. Res. Intl.* 48: 478-483.
- Frascareli, E. C., Silva, V. M., Tonon, R. V., dan Hubinger, M. D. 2011. Physicochemical properties of coffee oil microcapsules produced by spray drying. *Agrobioenvases*
- Gahlawat, D. K., Jakhar, S., dan Dahiya, P. 2014. *Murraya koenigii* (L.) Spreng: an ethnobotanical, phytochemical and pharmacological review. *J Pharmocogn Phytochem.* 3(3): 109-119.
- Gharsallaoui, A. Roundaut, G., Chambin, O., Voilley, A., dan Saurel, R. 2007. Applications of spray-drying in microencapsulation of food ingredients: An overview. *Food Res. Intl.* 40(9): 1107-1121.
- Ghasemzadeh, A., Jaafar H. Z. E., Rahmat, A., Wahab, P. E. M., dan Halim, M. R. A. 2010. Effect of different light intensities on total phenolics and flavonoids synthesis and anti-oxidant activities in young ginger varieties (*Zingiber officinale* Roscoe). *Int. J. Mol. Sci.* 11: 3885-3897.
- Giada, M. L. 2013. "Oxidative Stress and Chronic Degenerative Diseases - A Role for Antioxidants". In *Encapsulation and Controlled Release Technologies in Food Systems*, by Morales-Gonzalez, 90. Intech, Croatia.

- Grafianita. 2011. Kurkuminoid, total fenol dan aktivitas antioksidan simplisia temulawak (*Curcuma xanthorrhiza* Roxb.) pada berbagai teknik pengeringan. Skripsi, Universitas Sebelas Maret, Surakarta.
- Hema R, Kumaravel S, Alagusundaram K. 2011. GC/MS determination of bioactive components of *Murraya koenigii*. J. Am. Sci. 7(1): 80-83.
- Ho, L. P., Pham, A. H. dan Le, V. V. M. 2015. Effects of core/wall ratio and inlet temperature on the retention of antioxidant compounds during the spray drying of sim (*Rhodomyrtus tomentosa*) juice. J. Food Process. Preserv. 39: 2088–2095.
- Igara, C. E., Omoboyowa, D. A., Ahuchaogu, A. A., Orji N. U., dan Ndukwe M. K. 2016. Phytochemical and nutritional profile of *Murraya koenigii* (Linn) Spreng leaf. Journal of Pharma and Phytochemistry 5(5): 7-9.
- Integrated Taxonomic Information System. *ITIS Standard Report Page: Murraya koenigii*. <http://www.itis.gov/servlet/SingleRpt/SingleRpt> (diakses Juni 2017).
- Isailović, B., Kalušević, A., Žuržul, N., Coelho, M. T., dan Đorđević, V. 2012. Microencapsulation of natural antioxidants from *pterospartum tridentatum* in different alginate and inulin systems. Central European Congress On Food 6: 1075- 1081.
- Jain, M., Gilhotra, R., Singh, R. P., dan Mittal, J. 2017. Curry leaf (*Murraya koenigii*): a spice with medicinal property. MOH Biology and Medicine 2(3): 1-21.
- Jambrak, A. R., Mason, T. J., Lelas, V., Paniwnyk, L., dan Herceg, Z. 2014. Effect of ultrasound treatment on particle size and molecular weight of whey proteins. J Food Eng. 121: 15-23.
- Jones, W. P. dan Kinghorn, A. D. 2006. "Extraction of Plant Secondary Metabolites". In Natural Products Isolation, 2nd ed by Satyajit D. Sarker, Zahid Latif, dan Alexandr I. Gray. Humana Press, Totowa.
- Jun M., Fu H. Y., Hong J., Wan X., Yang C. S., dan Ho, C. T. 2003. Comparison of antioxidant activities of isoflavones from kudzu root (*Pueraria lobata* Ohwi). J Food Sci 68: 2117-2122.
- Jyothi, S. S, Seethadevi, A., Prabha, K. S., Muthuprasanna, P. dan Pavitra, P. 2012. Microencapsulation: A review. Int. J. of Pharm. and Biol. Sci. 2(1): 509-531.
- Khan, S. H. dan Chattree, A. 2013. Antioxidant activity of *Murraya koenigii* leaves extracts. Progressive Research 8: 640-644.
- Krishnaiah, Duduku, Sarbatly, R. dan Nithyanadam, R. 2012. Microencapsulation of *Morinda citrifolia* L. extract by spray drying. Chem. Eng. Res. and Des. 90(5): 622-632.

- Lakkis, J. M. 2016. "Encapsulation and Controlled Release Technologies in Food Systems", 2nd ed. Blackwell, Oxford.
- Leon-Martinez, F. M., Mendez-Lagunas, L. L. dan Rodrigez-Raminrez, J. 2010. Spray drying of nopal mucilage (*Opuntia ficus-indica*): Effects on powder properties and characterization. *Carbohydrate Polymers* 81: 864-870.
- Leon, N. 2015. Effect of different ratio of maltodextrin and whey protein isolate as carrier agent and core-to-coating ratio towards several characteristics of encapsulated red ginger extract. Skripsi, Universitas Pelita Harapan, Tangerang.
- Liu, W. J. H. 2011. "Traditional Herbal Medicine Research Methods: Identification, Analysis, Bioassay, and Pharmaceutical and Clinical Studies". John Wiley and Sons, Hoboken.
- Liu, Z. Q., Zhou, J. H., Zeng, Y. L., dan Ouyang X. L. 2004. The enhancement and encapsulation of agaricus bisporus flavor. *J. Food Eng.* 65: 391-396.
- Kwak, H. S., Kwon, S. H., Lee, J. B., and Ahn, J. 2002. In Vitro Stability of β -galactosidase Microcapsules. *Asian-Australian J of Anim Sci* 15(12): 1808-1812.
- Madene, A., Jacquot, M, Scher, J, dan Desobry, S. 2006. Flavour encapsulation and controlled release: A review. *International Journal of Food Science and Technology* 41: 1-21.
- Mandal, S. 2017. Curry plant, *Murraya koenigii* L.: An indigenous spice plant with versatile medicinal property: A minireview. *Intl. J. Clin. Exp. Physiol.* 3(2): 59-65.
- Mishra, P., Mushra, S., Mahanta, C. L. 2014. Effect of maltodextrin concentration and inlet temperature during spray drying on physicochemical and antioxidant properties of amla (*Emblica officinalis*) juice powder. *Food and Bioproducts Processing* 92(3): 252-258.
- Mishra, P., Rai, G. K. dan Mahanta, C. L. 2015. Process standardization for development of spray-dried lemon juice powder and optimization of amla-lemon based rts (ready-to-serve) drink using response surface methodology. *J. Food Process. Preserv.* 39: 1216–1228.
- Mishra, P., Brahma, A., dan Seth D. 2017. Physicochemical, functionality and storage stability of hog plum (*Spondia pinnata*) juice powder produced by spray drying. *J Food Sci Technol*: 1-10.
- Munin, A. dan Edwads-Levy, F. 2011. Encapsulation of natural polyphenolic compounds; a review. *Pharmaceutics* 3: 793-829.
- Mustafa, R.A., Hamid, A. A., Mohamed, S. and Bakar, F. A. 2010. Total phenolic compounds, flavonoids, and radical scavenging activity of 21 selected tropical plants. *J. of Food Sci.* 75(1): C28–C35.
- Ni, Q., Xu, G., Lu, G., Gao Q., Zhou, C., dan Zhang, Y. 2012. Investigation of the stability and the antioxidant properties of anthocyanins-bades purple

- potato colorants after processing. *African J of Biotechnol* 11(14): 3379-3387.
- Othman, A., Mukhtar, N. J., Ismail, N., S., dan Chang, S. K. 2014. Phenolics, flavonoids content and antioxidant activities of 4 Malaysian herbal plants. *Int. Food. Res. J.* 21(2): 759-766.
- Ozdemir, Murat, and Cevik, T. 2007. "Innovative Applications of Microencapsulation in Food Packaging." In *Encapsulation and Controlled Release Technologies in Food Systems*, by Jamileh M. Lakkis, 201-211. Blackwell, Iowa.
- Patil, V., Chauhan, A.K. dan singh, R.P. 2014. Optimization of the spray-drying process for developing guava powder using response surface methodology. *Powder Technol.* 253: 230–236.
- Perez, M. B., Calderon, N. L. and Croci, C. A. 2007. Radiation-induced enhancement of antioxidant activity in extracts of rosemary (*Rosmarinus of cinalis* L.). *Food Chem.* 104(2): 585-592.
- Quek, Y. S., Chok, N. K. dan Swedlund, P. 2007. The physicochemical properties of spray dried watermelon powders. *Chemical Engineering and Processing* 46: 386-392.
- Raaman, N. 2006. "Pythochemical Techniques". New India Publishing Agency, Pitam Pura.
- Rastina. 2014. Efektivitas ekstrak daun kari (*Murraya koenigii*) terhadap daya awet ikan keumamah. Thesis, Insitut Pertanian Bogor, Bogor.
- Reblova, Z. 2012. Effect of Temperature on the antioxidant activity of phenolic acids. *Czech J. of Food Sci.* 30(2): 171-177.
- Rufino, M., Alves, R. E., Brito, E. S., Perez-Jimenez, J., Saura-Calixto, F., dan Mancini-Filho, J. 2010. Bioactive compounds and antioxidant capacities of 18 non-traditional tropical fruits from Brazil. *Food Chem.* 121: 996-1002.
- Safriani, N., Arpi, N., Erfiza, N. M., dan Basyamfar, R. A. 2011. Antioxidant activities of curry leaves (*Murraya koenigii*) and salam leaves (*Eugenia polyantha*). *Proceedings of the Annual International Conference Syaiah Kuala Univesity* 1(1): 28-32.
- Salomi dan Manimekalai. 2016. Phytochemical Analysis and Antimicrobial Activity of Four Different Extracts from the Leaves of *Murraya koenigii*. *Intl. J. Microbiol. App. Sci* 5(7):875-882.
- Sanchez-Mundo, M. L., Escobedo-Crisantes, V. M., Mendoza-Arvizu, S., dan Jaramillo-Flores, M. E. 2016. Polymerization of phenolic compounds by polyphenol oxidase from bell pepper with increase in their antioxidant capacity. *Journal of Food* 14(4): 594-603.

- Sasidharan, I. dan Menon, A. N. 2011. Effect of temperature and solvent on antioxidant properties of curry leaf (*Murraya koenigii* L.). *J Food Sci Technol* 48(3): 366-370.
- Sayuti, K. dan Yenrina, R. 2015. "Antioksidan Alami dan Sintetik". Andalas University Press, Padang.
- Setiawan, M. 2015. Effect of different carrier agents and core to coating ratio towards the encapsulation of soursop leaves (*Annona muricata* L.) Tea Extract. Skripsi, Universitas Pelita Harapan, Tangerang.
- Singh, A. P., Wilson, T., Luthria, D., Freeman, M. R., Scott, R. M., Bilenker, D., Shah, S., Somasundaram, S., dan Vorsa, N. 2011. LC-MS-MS characterisation of curry leaf flavonols and antioxidant activity. *Food Chem.* 127: 80-85.
- Solval, K. M., Sundararajan, S., Alfaro, L., Sathivel, S. 2012. Development of cantaloupe (*Cucumis melo*) juice powders using spray drying technology. *LWT - Food Sci Technol.* 46: 287-293.
- Suhag, Y., Nayik, G.A. dan Nanda, V. 2016. Effect of gum arabic concentration and inlet temperature during spray drying on physical and antioxidant properties of honey powder. *Food Measure* 10: 350-356.
- Sutiono, E. 2015. The utilization of *aloe vera* mucilage as carrier agent for the encapsulation of soursop leaves tea extract by spray drying. Skripsi, Universitas Pelita Harapan, Tangerang.
- The University of Oklahoma Department of Microbiology and Plant Biology. *Cal's Plant of the Week: Murraya koenigii.* <http://www.plantoftheweek.org/week129.shtml> (diakses Juni 2017).
- Tonon, R. V., Brabet, C., Hubinger, M. D. 2008. Influence of process conditions on the physicochemical properties of acbái (Euterpe oleraceae Mart.) powder produced by spray drying. *J Food Eng* 88: 411-418.
- Wilson, T., Singh, A. P., Freeman, M. M., dan Singh, V., Olson, R. M., Vorsa, N., Somasundaram, S., dan Luthria, D. 2009. Characterization of curry leaf polyphenolics and their antioxidant activity. *FASEB J* 23 (1): 718-724.