

DAFTAR PUSTAKA

- Azwanida, N.N., 2015, A Review on the Extraction Methods Use in Medicinal Plants, Principle, Strength and Limitation, *Medicinal & Aromatic Plants*, **04** (03) : 3–8.
- Balitbangkes, 2000, *Inventaris Tanaman Obat Indonesia (I) Jilid 1*, Badan Penelitian dan Pengembangan Kesehatan, Jakarta, 249-250.
- Balitbangkes, 2001, *Inventaris Tanaman Obat Indonesia (I) Jiid 2*, Badan Penelitian dan Pengembangan Kesehatan, Jakarta, 345-346.
- Berker, K.I., Güçlü, K., Tor, İ., Demirata, B., dan Apak, R., 2010, Total Antioxidant Capacity Assay Using Optimized Ferricyanide / Prussian Blue Method, *Food Anal. Methods*, **3** : 154–168.
- Bhaves, V.D., Nayak, Y., dan Jayashree, B. S., 2013, In vitro antioxidant and antiglycation activity of *Zingiber zerumbet* (wild zin-ger) rhizome extract, *International Journal of Research in Pharmaceutical Sciences*, **4** (4) : 482–489.
- Blois, M., 1958, Antioxidant determination by the use of stable free radicals. *Nature*, **181** (4617) : 1199–2000.
- Chang, C.C., Yang, M.H., Wen, H.M., dan Chern, J.C., 2002, Estimation of total flavonoid content in propolis by two complementary colometric methods, *Journal of Food and Drug Analysis*, **10** (3) : 178–182.
- Chang, C.J., Liou, S.-S., Tzeng, T.-F., dan Liu, I.-M., 2014, The ethanol extract of *Zingiber zerumbet* Smith attenuates non-alcoholic fatty liver disease in hamsters fed on high-fat diet, *Food and Chemical Toxicology*, **65** (2014) : 33–42.
- Chew, A.J., Abidin, N.Z., dan Wahab, N.B.A., 2012, Anti-proliferation and anti-migration activities of ten selected *Zingiberaceae* species against MDA-MB-231 cells, *Journal of Medicinal Plants Research*, **6** (21) : 3711–3723.
- Danciu, C., Vlaia, L., Fetea, F., Hancianu, M., Coricovac, D.E., Ciurlea, S.A., dan Trandafirescu, C., 2015, Evaluation of phenolic profile, antioxidant and anticancer potential of two main representants of *Zingiberaceae* family against B164A5 murine melanoma cells. *Biological Research*, **48** (1) : 1-9.
- Departemen Kesehatan Republik Indonesia, 1985, *Cara Pembuatan Simplisia*, Departemen Kesehatan Indonesia, Jakarta, 55-56.
- Departemen Kesehatan Republik Indonesia, 2000, *Parameter Standar Umum Ekstrak Tumbuhan Obat Indonesia*. Departemen Kesehatan Indonesia, Jakarta, 7-8.
- Dwyana, Z., Rusli, dan Pakaya, M.S., 2017, Aktivitas Antimikroba Ekstrak Dietil Eter Rimpang Lempuyang Wangi (*Zingiber aromaticum* Vahl .) Terhadap Bakteri Patogen Secara Klt-Bioautografi, *Jurnal Ilmu Alam dan Lingkungan*, **8** (15) : 62–66.

- Fitri, N., 2014, Butylated hydroxyanisole sebagai Bahan Aditif Antioksidan pada Makanan dilihat dari Perspektif Kesehatan, *Jurnal Kefarmasian Indonesia*, **4** (1) : 41–50.
- Ganapathy, G., dan Nair, A.R., 2017, Curcuminoids in *Zingiber zerumbet* Rhizomes: Bioguided Fractionation and Chromatographic Identification of Antimicrobial and Antioxidant Metabolites, *Journal of Herbs, Spices and Medicinal Plants*, **23** (2) : 169–181.
- Gandhi, K., dan Saravanan, S., 2018, Phytochemical Estimation and In vitro Antioxidant Activity of Rhizome of *Zingiber zerumbet* (L.) Sm., *International Journal of Life Sciences Research*, **6** (2) : 255–262.
- Gandjar, I.G., dan Rohman, A., 2007, *Kimia Farmasi Analisis*, Pustaka Pelajar, Yogyakarta.
- Garde-Cerdán, T., Gonzalo-Diago, A., dan Pérez-Álvarez, E.P., 2017, *Analytical Chemistry And Microchemistry: Phenolic Compounds Types, Effects And Research*, Nova Science Publisher, New York, 70-71.
- Ghasemzadeh, A., Jaafar, H.Z.E., Ashkani, S., Rahmat, A., Juraimi, A.S., Puteh, A., dan Muda Mohamed, M.T., 2016, Variation in secondary metabolite production as well as antioxidant and antibacterial activities of *Zingiber zerumbet* (L.) at different stages of growth, *BMC Complementary and Alternative Medicine*, **16** (1) : 1–10.
- Gogtay, N.J., dan Thatte, U.M., 2017, Principles of correlation analysis, *Journal of Association of Physicians of India*, **65** (3) : 78–81.
- Gutteridge, J.M.C., dan Halliwell, B., 2018, Mini-Review: Oxidative stress, redox stress or redox success?, *Biochemical and Biophysical Research Communications*, **502** (2) : 183–186.
- Handayani, N., 2007, Optimasi Komposisi Pelarut Pada Pembuatan Ekstrak Lempuyang Wangi (*Zingiber aromaticum* Val.) Secara Simplex Lattice Design Dengan Parameter Kadar Flavonoid Total, *Doctoral dissertation*, Fakultas Farmasi, Universitas Gadjah Mada, Yogyakarta.
- Jang, D. S., Han, A. R., Park, G., Jhon, G. J., dan Seo, E. K., 2004, Flavonoids and aromatic compounds from the rhizomes of *Zingiber zerumbet*, *Archives of pharmacal research*, **27** (4) : 386-389.
- Kader, G., Nikkon, F., Rashid, M.A., dan Yeasmin, T., 2011, Antimicrobial activities of the rhizome extract of *Zingiber zerumbet* Linn, *Asian Pacific Journal of Tropical Biomedicine*, **1** (5) : 409–412.
- Kapitan, O.B., Ambarsari, L., dan Falah, S., 2017, In Vitro Antibakteri Ekstrak Etanol Puni (*Zingiber zerumbet*) Asal Pulau Timor, *Savana Cendana*, **2** (2) : 29–32.
- Kementerian Kesehatan Republik Indonesia, 2010, *Suplemen I Farmakope Herbal Indonesia*, Kementerian Kesehatan Republik Indonesia, Jakarta.
- Kementerian Kesehatan Republik Indonesia, 2018. *Hasil Utama Riskesdas 2018*.

Kementerian Kesehatan Republik Indonesia. Jakarta.

- Kim, G.H., Kim, J.E., Rhie, S.J., dan Yoon, S., 2015, The Role of Oxidative Stress in Neurodegenerative Diseases, *Experimental Neurobiology*, **24** (4) : 325–340.
- Kirana, C., Mcintosh, G.H., Record, I.R., Jones, G.P., Kirana, C., Mcintosh, G. H., dan Jones, G.P., 2003, Antitumor Activity of Extract of *Zingiber aromaticum* and Its Bioactive Sesquiterpenoid Zerumbone, *Nutrition And Cancer*, **45** (2) : 218–225.
- Koncki, R., 2002, Chemical Sensors and Biosensors Based on Prussian Blues, *Critical Reviews in Analytical Chemistry*, **32** (1) : 79–96.
- Kumar, S., dan Pandey, A.K., 2013, Chemistry and Biological Activities of Flavonoids: An Overview Shashank, *The Scientific World Journal*, **2013**.
- Lestari, I.K., 2012, Penentuan Profil Metabolit Sekunder Ekstrak Etanol Rimpang Lempuyang Gajah (*Zingiber zerumbet*) dengan TLC dan GC-MS, *Skripsi*, Fakultas Farmasi, Universitas Muhammadiyah Surakarta, Surakarta.
- Liguori, I., Russo, G., Curcio, F., Bulli, G., Aran, L., Della-Morte, D., dan Abete, P., 2018, Clinical Interventions in Aging Dovepress Oxidative stress, aging, and diseases, *Clinical Interventions in Aging*, **13** : 757–772.
- Mabry, T.J., Markham, K.R., dan Thomas, M.B., 1970, *The Systematic Identification of Flavonoids*. Springer-Verlag, New York.
- Marsusi, Setyawan, A.D., dan Shanti L., 2001, A Chemotaxonomic Study in the Genus *Zingiber*, *Biodiversitas, Journal of Biological Diversity*, **2** (1) : 92–97.
- Muktapa, 2000, Uji Aktivitas Penangkap Radikal Bebas Diiphenyl Pikryl Hidrazyl (DPPH) Minyak Atsiri dan Ekstrak Metanol Rimpang *Zingiber aromaticum* Val Secara Spektrofotometri, *Skripsi*, Fakultas Farmasi, Universitas Airlangga, Surabaya.
- Nakatani, N., Jitoe, A., Masuda, T., dan Yonemori, S., 1991, Flavonoid constituents of *Zingiber zerumbet* Smith, *Agricultural and biological chemistry*, **55** (2) : 445-460.
- Nordin, M.F.M., Mokhtar, N., dan Morad, N.A., 2018, Total Phenolic Content, Total Flavonoid Content and Radical Scavenging Activity from *Zingiber zerumbet* Rhizome using Subcritical Water Extraction, *International Journal of Engineering*, **31** (8) : 1421–1429.
- Norfazlina, M.N., Farida Zuraina, M.Y., N.F.R., Nazip, S.M., Rumiza, A.R., Suziana Zaila, C.F., dan Florinsiah, L., 2014, Cytotoxicity Study of *Nigella Sativa* and *Zingiber zerumbet* Extracts, Thymoquinone and Zerumbone Isolated on Human Myeloid Leukemia (HL60) Cell, *The Open Conference Proceedings Journal*, **4** (1) : 99–107.
- Nugroho, A.E., Kusumaramdani, G., Widyaninggar, A., Anggoro, D.P., dan Pramono, S., 2014, Antidiabetic effect of combinations of n-hexane insoluble fraction of ethanolic extract of *Andrographis paniculata* with other traditional

- medicines, *International Food Research Journal*, 21 (2) : 785-789.
- Pełal, A., dan Pyrzyńska, K., 2014, Evaluation of Aluminium Complexation Reaction for Flavonoid Content Assay, *Food Analytical Methods*, 7 (9) : 1776–1782.
- Phongpaichit, S., Subhadhirasakul, S., dan Wattanapiromsakul, C., 2005, Antifungal activities of extracts from Thai medicinal plants against opportunistic fungal pathogens associated with AIDS patients, *Mycoses*, 48 (5) : 333–338.
- Pietta, P.G., 2000, Flavonoids as Antioxidants, *American Chemical Society and American Society of Pharmacognosy*, 63 : 1035–1042.
- Predescu, N.C., Papuc, C., Nicorescu, V., Gajaila, I., Goran, G.V., Petcu, C.D., dan Stefan, G., 2016, The influence of solid-to-solvent ratio and extraction method on total phenolic content, flavonoid content and antioxidant properties of some ethanolic plant extracts, *Revista de Chimie*, 67 (10) : 1922–1927.
- Rashid, R., Hawariah, A., dan Pihie, L., 2005, The antiproliferative effect of *Zingiber zerumbet* extract and fractions on the growth of human breast carcinoma cell lines, *Malaysian Journal of Pharmaceutical Sciences*, 3 (1) : 45–52.
- Ridwina, G., 2008, Perbandingan pengukuran aktivitas antioksidan dari ekstrak etanol dan minyak atsiri lempuyang gajah, *Skripsi*, Fakultas Matematika dan Ilmu Pengetahuan Alam, Institut Pertanian Bogor, Bogor.
- Rukmana, R., 2008, *Temu-temuan Apotik Hidup di Pekarangan*, Penerbit Kanisius, Yogyakarta.
- Shahidi, F., 2015, *Handbook of Antioxidants for Food Preservation*. Woodhead Publishing Series in Food Science (Technology), Elsevier Inc.
- Sugiyono, 2018, *Metode Penelitian Kombinasi (Mixed Methods)*, Alfabeta, Bandung.
- Suhendi, A., Hanwar, D., Santoso, B., Wicaksono, A.N., dan Widiana, L., 2018, Antioxidant activity of non polar and semipolar fractions of ethanol extract of *Zingiber zerumbet* smith leaves by spectrophotometer and ELISA reader, *Journal of Pharmaceutical Sciences and Research*, 10 (3) : 439–441.
- Suresh, R., Thampiraj, S., dan Stephen, A., 2018, Antibacterial activities of wild rhizomatous plants *Zingiber officinalis*, *Zingiber zerumbet*(*Zingiberaceae*) and synergistic effects of both collected from southern Western Ghats, India, 7 (2) : 26–33.
- Thaipong, K., Boonprakob, U., Crosby, K., Cisneros-Zevallos, L., dan Hawkins Byrne, D., 2006, Comparison of ABTS, DPPH, FRAP, and ORAC assays for estimating antioxidant activity from guava fruit extracts, *Journal of Food Composition and Analysis*, 19 (6–7) : 669–675.
- Tzeng, T.F., Hong, T.Y., Tzeng, Y.C., Liou, S.S., dan Liu, I.M., 2015, Consumption of polyphenol-rich *Zingiber zerumbet* rhizome extracts protects against the

breakdown of the blood-retinal barrier and retinal inflammation induced by diabetes, *Nutrients*, **7** (9) : 7821–7841.

Wagner, H., dan Bladt, S., 1996, *Plant Drug Analysis* (second Edition), Springer.

Widiasari, N., 2015, Uji daya analgetik dan identifikasi kandungan kimia ekstrak etanol rimpang lempuyang wangi (*Zingiber aromaticum* Val.) secara Kromatografi Lapis Tipis. *Skripsi*, Fakultas Matematika dan Ilmu Pengetahuan Alam, Universitas Sebelas Maret, Surakarta.

Widyastuti, S.M., Hadi, E.E.W., dan Wahyuono, S., 2018, Dominant understory plants producing herbal medicine materials on homegarden agroforestry system in Menoreh Hills, Kulon Progo District, *AGRIVITA Journal of Agricultural Science*, **40** (2) : 212-221.

Wijesekera, R.O., 2017, *The Medicinal Plant Industry* (Vol. 176), CRC Press, United States of America.

Wulandari, E.T., 1999, Identifikasi perbedaan rimpang lempuyang pahit, lempuyang wangi dan lempuyang gajah, *Warta Tumbuhan Obat Indonesia*, **5** (1) : 11–13.

Zhang, Q.W., Lin, L.G., dan Ye, W.C., 2018, Techniques for extraction and isolation of natural products: A comprehensive review, *Chinese Medicine*, **13** (1) : 1–26