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DAFTAR PUSTAKA

Abidin, Z., Putri, U., & Widiastuti, H. (2020). Potensi antiinflamasi fraksi etil asetat ranting patah tulang (euphorbia tirucalli l.) dengan uji penghambatan denaturasi protein. *Ad-Dawaa' Journal of Pharmaceutical Sciences*, *2*(2), 49–54.

Acharya, V. V., & Chaudhuri, P. (2021). Modalities of protein denaturation and nature of denaturants. *International Journal of Pharmaceutical Sciences Review and Research*, *69*(2).

Adwas, A., Elsayed, A. S., Azab, A., & Quwaydir, F. (2019). Oxidative stress and antioxidant mechanisms in human body. *Journal of Applied Biotechnology & Bioengineering*, *6*(1), 43–47. https://doi.org/10.15406/jabb.2019.06.00173

Agustin, S. (2022). *7 Manfaat Jeruk Purut untuk Kesehatan*. https://www.alodokter.com/ternyata-ada-manfaat-jeruk-purut-untuk-kesehatan. Diakses pada 20 Juni 2022 pukul 21.35 WIB.

Al-Sayyed, H.F., Al-Kurd, R.A., Mwalla, M.M., & Abdel Qader, S.M. (2019). Determination of antioxidant content and capacity of four Jordanian fresh Citrus fruits. *Journal of Agricultural Science*, *11*(3), 605.

Amri, F. S., & Hossain, M. (2018). Comparison of total phenols, flavonoids and antioxidant potential of local and imported ripe bananas. *Egyptian Journal of Basic and Applied Sciences*, *5*, 245–251.

AOAC. (2005). *Official Methods of Analysis of the Association of Official Analytical Chemist*. Association of Analytical Chemist.

Aruoma, O., Landes, B., Ramful-Baboolall, D., Boudorn, E., Neergheen-Bhujun, V., Wagner, K., & Bahorun, T. (2012). Functional benefits of citrus fruits in the management of diabetes. *Preventive Medicine*, *54*, S12–S13.

Baccati, C., Gibernau, M., Paoli, M., Ollitrault, P., Tomi, F., & Luro, F. (2021). Chemical variability of peel and leaf essential oils in the citrus subgenus papeda (Swingle) and few relatives. *Plants*, *10*(6), 1117.

Baliyan, S., Mukherjee, R., Priyadarshini, P., Vibhuti, A., Gupta, A., Pandey, R. P., & Chang, C. (2022). Determination of antioxidants by dpph radical scavenging activity and quantitative phytochemical analysis of ficus religiosa. *Molecules*, *27*(4), 1326–1345.

Baniasadi, H., Vlahakis, C., Hazebroek, J., & Asiago, V. (2014). Effect of environment and genotype on commercial maize hybrids using LC/MS-based metabolomics. *J. Agric. Food Chem.*, *62*(6), 1412–1422.

Banjerdpongchai, R., Wudtiwai, B., Khaw-on, P., Rachakhom, W., Duangnil, N., & Kongtawelert, P. (2016). Hesperidin from Citrus seed induces human hepatocellular carcinoma HepG2 cell apoptosis via both mitochondrial

UNIVERSITAS
GADJAH MADA
POTENSI KULIT JERUK PURUT (Citrus hystrix DC.) SEBAGAI ANTIOKSIDAN DAN ANTIINFLAMASI
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Universitas Gadjah Mada, 2022 | Diunduh dari http://etd.repository.ugm.ac.id/

and death receptor pathways. *Tumor Biology*, *37*(1), 227–237.

Bardono, S. (2021). *Permintaan Tinggi, Jeruk Purut Tembus Pasar Eropa*. https://technology-indonesia.com/pertanian-dan-pangan/inovasi-pertanian/permintaan-tinggi-jeruk-purut-tembus-pasar-eropa/. Diakses pada 22 Juni 2022 pukul 01.34 WIB.

Belinskaia, D. A., Voronina, P. A., Batalova, A. A., & Goncharov, N. V. (2021). Serum Albumin. *Encyclopedia*, *1*, 65–75.

Bender, A. (1982). *Dictionary Of Nutrition And Food Technology* (6th ed.). Butterworths.

Bennett, L. E., Jegasothy, H., Konczak, I., Frank, D., Sudharmarajan, S., & Clingeleffer, P. R. (2011). Total polyphenolics and anti-oxidant properties of selected dried fruits and relationships to drying conditions. *Journal of Functional Foods*, *3*(2), 115–124. https://doi.org/10.1016/j.jff.2011.03.005

Biesemann, N., Ried, J. S., Ding-Pfennigdorff, D., Dietrich, A., Rudolph, C., Hahn, S., Hennerici, W., Asbrand, C., Leeuw, T., & Strübing, C. (2018). High throughput screening of mitochondrial bioenergetics in human differentiated myotubes identifies novel enhancers of muscle performance in aged mice. *Scientific Reports*, *8*(1), 1–12. https://doi.org/10.1038/s41598-018-27614-8

Bindu, S., Mazumder, S., & Bandyopadhyay, U. (2020). Non-steroidal anti-inflammatory drugs (NSAIDs) and organ damage: A current perspective *Biochemical Pharmacology*, *180*, 114147.

Brand-Williams, W., Cuvelier, M., & Berset, C. (1995). Use of free radical method to evaluate antioxidant activity. *Lebensm Wiss Techno*, *28*, 25–30.

Budiman, A., Kusumaningtyas, R., Pradana, Y., & Lestari, N. (2014). *Biodiesel Bahan Baku Proses dan Teknologi*. UGM Press, Yogyakarta.

Caritá, A. C., Fonseca-Santos, B., Shultz, J. D., Michniak-Kohn, B., Chorilli, M., & Leonardi, G. R. (2020). Vitamin C: One compound, several uses. Advances for delivery, efficiency and stability. *Nanomedicine: Nanotechnology, Biology, and Medicine*, *24*, 102117–102132.

Cassidy, A., & Kay, C. (2013). Phytochemicals: Classification and occurrence. In *Encyclopedia of Human Nutrition* (pp. 39–46). Elsevier.

Chan, S. W., Lee, C. Y., Yap, C. F., Wan Aida, W. M., & Ho, C. W. (2009). Optimisation of extraction conditions for phenolic compounds from limau purut (*Citrus hystrix*) peels. *International Food Research Journal*, *16*(2), 203–213.

Chatterjee, P., Chandra, S., Dey, P., & Bhattacharya, S. (2012). Evaluation of

UNIVERSITAS
GADJAH MADA
POTENSI KULIT JERUK PURUT (Citrus hystrix DC.) SEBAGAI ANTIOKSIDAN DAN ANTIINFLAMASI
ISNI ATIKAWATI, Dr. Ir. Priyanto Triwitono, M.P.; Yunika Mayangsari, S.Si., M.Biotech., Ph.D.
Universitas Gadjah Mada, 2022 | Diunduh dari http://etd.repository.ugm.ac.id/

anti-inflammatory effects of green tea and black tea: A comparative *in vitro* study. *Journal of Advanced Pharmaceutical Technology and Research*, *3*(2), 136–138. https://doi.org/10.4103/2231-4040.97298

Chávez-González, M. L., Sepúlveda, L., Verma, D., Luna-García, H. A., Rodríguez-Durán, L. V., Ilina, A., & Aguilar, C. (2020). Conventional and emerging extraction processes of flavonoids. *Processes*, *8*(4), 434–463. https://doi.org/10.3390/PR8040434

Chen, L., Deng, H., Cui, H., Fang, J., Zuo, Z., Deng, J., Li, Y., Wang, X., & Zhao, L. (2018). Inflammatory responses and inflammation-associated diseases in organs. *Oncotarget*, *9*(6), 7204–7218.

Chen, L., Deng, H., Cui, H., Fang, J., & Zuo, Z. (2018). Inflammatory responses and inflammation-associated diseases in organs. *Oncotarget*, *9*(6), 7204–7218.

Chen, Q., Wang, D., Tan, C., Hu, Y., Sundararajan, B., & Zhou, Z. (2020). Profiling of flavonoid and antioxidant activity of fruit tissues from 27 Chinese local citrus cultivars. *Plants*, *9*(2), 1–18.

Contini, M., Baccelloni, S., Massantini, R., & Anelli, G. (2008). Extraction of natural antioxidants from hazelnut (Corylus avellana L.) shell and skin wastes by long maceration at room temperature. *Food Chemistry*, *110*(3), 659–669. https://doi.org/10.1016/J.FOODCHEM.2008.02.060

Czech, A., Malik, A., Sosnowska, B., & Domaradzki, P. (2021). Bioactive substances, heavy metals, and antioxidant activity in whole fruit, peel, and pulp of citrus fruits. *International Journal of Food Science*, *2021*. https://doi.org/10.1155/2021/6662259

da Silva, D. I., Nogueira, G. D., Duzzioni, A. G., & Barrozo, M. A. (2013). Changes of antioxidant constituents in pineapple (Ananas comosus) residue during drying process. *Industrial Crops and Products*, *50*, 557–562.

Dai, J., & Mumper, R. (2010). Plant phenolics: extraction, analysis and their antioxidant andanticancer properties. *Molecules*, *15*(10), 7313–7352.

Darlina. (2016). Potensi vitamin sebagai radioprotektor. *Buletin Alara*, *18*(1), 7–15.

Dasuki, S. (2011). *202 Khasiat Herba (202 Benefits of Herbs)*. Grup Buku Karangkraf.

De Villiers, A., Venter, P., & Pasch, H. (2016). Recent advances and trends in the liquid-chromatography-mass spectrometry analysis of flavonoids. *Journal of Chromatography A*, *1430*, 16–78.

Desai, S., Desai, A., Kanzaria, S., Mishra, P., & Meshram, D. (2017). *in vitro* evaluation of anti-inflammatory and antiarthritic activity of Citrus limetta

UNIVERSITAS
GADJAH MADA

POTENSI KULIT JERUK PURUT (Citrus hystrix DC.) SEBAGAI ANTIOKSIDAN DAN ANTIINFLAMASI
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Universitas Gadjah Mada, 2022 | Diunduh dari http://etd.repository.ugm.ac.id/

peel. *American Journal of Pharmacy & Health Research*, *55*(99), 2321–3647.

Deska, M. (2020). Activity of antioxidant enzymes under induced oxidative stress. *Journal of Ecological Engineering*, *21*(7), 42–51.

Devy, N., & Andrini. (2010). Kandungan flavonoid dan limonoid pada berbagai fase pertumbuhan tanaman jeruk kalamondin (Citrus mitis Blanco) dan purut (Citrus hystrix D.C.). *Jurnal Balai Penelitian Tanaman Jeruk Dan Buah Subtropika*, *2*(2), 109–114.

Djilas, S., Čanadanović-Brunet, J., & Ćetković, G. (2009). By-products of fruits processing as a source of phytochemicals. *Chemical Industry and Chemical Engineering Quarterly*, *15*(4), 191–202.

Djuichou Nguemnang, S. F., Tsafack, E. G., Mbiantcha, M., Gilbert, A., Atsamo, A. D., Yousseu Nana, W., Matah Marthe Mba, V., & Adjouzem, C. F. (2019). *in vitro* anti-inflammatory and in vivo antiarthritic activities of aqueous and ethanolic extracts of dissotis thollonii cogn. (Melastomataceae) in rats. *Evidence-Based Complementary and Alternative Medicine*, *2019*. https://doi.org/10.1155/2019/3612481

Estruel-Amades, S., Massot-Cladera, M., Pérez-Cano, F. J., Franch, À., Castell, M., & Camps-Bossacoma, M. (2019). Hesperidin effects on gut microbiota and gut-associated lymphoid tissue in healthy rats. *Nutrients*, *11*(2), 324–340. https://doi.org/10.3390/nu11020324

Fattouch, S., Caboni, P., & Coroneo, V. (2007). Antimicrobial activity of Tunisianquince (Cydonia oblonga Miller) pulp and peel polyphenolic extracts. *Journal of Agriculture and Food Chemistry*, *55*, 963–969.

Ferrero-Miliani, L., Nielsen, O. H., Andersen, P. S., & Girardin, S. E. (2007). Chronic inflammation: importance of NOD2 and NALP3 in interleukin-1β generation. *Clinical and Experimental Immunology*, *147*(2), 227–235. https://doi.org/10.1111/j.1365-2249.2006.03261.x

Fortin, H., Vigora, C., Lohezic-Le, F., Robina, V., le Bosse, B., Boustiea, J. (2002). *in vitro*antiviral activityof thirty-six plants from La Reunion Island. *Fitoterapia*, *73*, 346–350.

Foti, M. (2015). Use and abuse of the DPPH• Radical. *J. Agric. Food Chem.*, *63*(40), 8765–8776.

García-Sánchez, A., Miranda-Díaz, A., & Cardona-Muñoz, E. (2020). The role of oxidative stress in physiopathology and pharmacological treatment with pro-and antioxidant properties in chronic diseases. *Oxidative Medicine and Celluler Longevity*, *2082145*, 1–16. https://doi.org/10.1155/2020/2082145

UNIVERSITAS
GADJAH MADA

POTENSI KULIT JERUK PURUT (Citrus hystrix DC.) SEBAGAI ANTIOKSIDAN DAN ANTIINFLAMASI
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Universitas Gadjah Mada, 2022 | Diunduh dari http://etd.repository.ugm.ac.id/

Garg, A., Garg, S., Zaneveld, L.J.D., & Singla, A.K. (2001). Chemistry and pharmacology of the citrus bioflavonoid hesperidin. *Phytotherapy Research*, *15*(8), 655–669.

Ghazzawi, H. A., Al-Sayyed, H. F., Al-Kurd, R. A., Mwalla, M. M., Arafat, T. A., & AbdelQader, S. M. (2021). Effect of different extraction solvents on the antioxidant content and capacity of nine seasonal fruits. *Clinical Nutrition Open Science*, *38*, 33–42. https://doi.org/10.1016/j.nutos.2021.06.003

Gillespie, R. J., & Paul. (2001). *Chemical Bonding and Molecular Geometry*. Oxford University Press.

Giriwijoyo, S. (2004). *Ilmu Faal Olahraga Fungsi Tubuh Manusia pada Olahraga*. Universitas Pendidikan Indonesia.

Glasauer, A., & Chandel, N. (2013). ROS. *Current Biology*, *23*(3), 100–102. https://doi.org/10.1016/j.cub.2012.12.011

Guo, K., Ren, J., Gu, G., Wang, G., Gong, W., Wu, X., Ren, H., Hong, Z., & Li, J. (2019). Hesperidin protects against intestinal inflammation by restoring intestinal barrier function and up-regulating treg cells. *Molecular Nutrition and Food Research*, *63*(11), e1800975.

Gwee, K. A., Goh, V., Lima, G., & Setia, S. (2018). Coprescribing proton-pump inhibitors with nonsteroidal anti-inflammatory drugs: risks versus benefits. *Journal of Pain Research*, *11*, 361–374.

Halliwell, B. (2007). Biochemistry of oxidative stress. *Biochem Soc Trans*, *35*(5), 1147–1150.

Hannoodee, S., & Dian, N, N. (2021). *Acute Inflammatory Response - PubMed*. StatPearls [Internet]. https://pubmed.ncbi.nlm.nih.gov/32310543/

Hardiyanti, R. (2019). Uji Aktivitas Antiinflamasi ekstrak etanol daun jeruk purut (Citrus hystrix D.C) pada tikus jantan yang diinduksi karagenan. *Skripsi*. Universitas Sumatera Utara, Medan.

Health Integrative UW. (2018). *The Anti-Inflammatory Lifestyle* (pp. 1–12). School of Medicine and Public Health, University of Wisconsin. www.fammed.wisc.edu/integrative%0Ahttps://www.fammed.wisc.edu/files/webfm-uploads/documents/outreach/im/handout_ai_diet_patient.pdf

Hilma, Putri, N. A., & Nilda, L. (2021). Determination of total phenol and total flavonoid content of longan (Dimoncarpus longan lour) leaf extract. *Jurnal Ilmiah Farmako Bahari*, *12*(1), 80–87. www.journal.uniga.ac.id

Hirata, A., Murakami, Y., Shoji, M., Kadoma, Y., & Fujisawa, S. (2005). Kinetics of radical-scavenging activity of hesperetin and hesperidin and their inhibitory activity on COX-2 expression. *Anticancer Research*, *25*(5), 3367–3374.

UNIVERSITAS
GADJAH MADA

POTENSI KULIT JERUK PURUT (Citrus hystrix DC.) SEBAGAI ANTIOKSIDAN DAN ANTIINFLAMASI
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Universitas Gadjah Mada, 2022 | Diunduh dari http://etd.repository.ugm.ac.id/

Huang, Y. S., & Ho, S. C. (2010). Polymethoxy flavones are responsible for the anti-inflammatory activity of citrus fruit peel. *Food Chemistry*, *119*(3), 868–873. https://doi.org/10.1016/J.FOODCHEM.2009.09.092

Irawaty, W., & Ayucitra, A. (2018). Assessment on antioxidant and *in vitro* antidiabetes activities of different fractions of Citrus hystrix peel. *International Food Research Journal*, *25*(6), 2467–2477.

Irawaty, W., & Ayucitra, A. (2019). Potensi Limbah Pertanian Indonesia sebagai Agen Antidiabetes: Studi Kasus Rambut Jagung dan Kulit Jeruk. *SAINTEK: Jurnal Ilmiah Sains Dan Teknologi Industri*, *3*(2), 91.

Irawaty, W., Soetaredjo, F. E., Ayucitra, A., Sianto, M. E., Jonathan, K., Setyabudi, C., Tanda, S., & Soetaredjo, E. (2014). Antioxidant and antidiabetic activities of ethanolic Citrus hystrix peel extract: optimization of extraction conditions. *Australian Journal of Basic and Applied Sciences*, *8*(14), 85–89. www.ajbasweb.com

Irawaty, W., Wijaya, Y., Widyadinata, D., & Ayucitra, A. (2017). Fractionation of phenolic compounds from kaffir lime (Citrus hystrix) peel extract and evaluation of antioxidant activity. *Reaktor*, *17*(3), 111–117.

Irianti, T., Sugiyanto, Nuranto, S., & Kuswandi. (2018). *Antioksidan*. Universitas Gadjah Mada, Yogyakarta.

Isoda, H., Motojima, H., Onaga, S., Samet, I., Villareal, M. O., & Han, J. (2014). Analysis of the erythroid differentiation effect of flavonoid apigenin on K562 human chronic leukemia cells. *Chemico-Biological Interactions*, *220*, 269–277. https://doi.org/10.1016/j.cbi.2014.07.006

Jain, M., & Parmar, H. S. (2011). Evaluation of antioxidative and anti-inflammatory potential of hesperidin and naringin on the rat air pouch model of inflammation. *Inflammation Research*, *60*(5), 483–491.

Jain, P., Pandey, R., & Shukla, S. (2015). *Inflammation : Natural Resource and Its Applications*. Springer.

Johnston, C., Steinberg, F, M., & Rucker, R. (2005). Ascorbic acid. In *Handbook of Vitamins* (pp. 490–510). CRC Press.

Jumardi, Hamzah, F., & Ayu, D. (2018). Kombinasi kulit buah jeruk purut dan seledri pada pembuatan teh herbal. *JOM FAPERTA*, *5*(1), 1–11.

Katerji, M., Filippova, M., & Duerksen-Hughes, P. (2019). Approaches and methods to measure oxidative stress in clinical samples: research applications in the cancer field meghri. *Oxidative Medicine and Cellular Longevity*, *1279250*, 1–29. https://doi.org/10.1155/2019/1279250

Kawiji, Lia, U. K., Rohula, U., & Novita, T. A. (2015). Ekstraksi maserasi oleoresin daun jeruk purut (Citrus hystrix DC.): optimasi rendemen dan pengujian karakteristik mutu hystrix DC) oleoresin: yield optimization

UNIVERSITAS
GADJAH MADA
POTENSI KULIT JERUK PURUT (Citrus hystrix DC.) SEBAGAI ANTIOKSIDAN DAN ANTIINFLAMASI
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Universitas Gadjah Mada, 2022 | Diunduh dari http://etd.repository.ugm.ac.id/

and quality characteristics examination. *AGRITECH*, *35*(2), 178–184.

Kidarn, S., Saenjum, C., Hongwiset, D., & Phrutivorapongkul, A. (2018). Furanocoumarins from kaffir lime and their inhibitory effects on inflammatory mediator production. *Cogent Chemistry*, *4*(1), 1529259. https://doi.org/10.1080/23312009.2018.1529259

Kołodziejska, J., & Kołodziejczyk, M. (2018). Diclofenac in the treatment of pain in patients with rheumatic diseases. *Reumatologia*, *56*(3), 174–183. https://doi.org/10.5114/reum.2018.76816

Kulig, M., Galanty, A., Grabowska, K., & Podolak, I. (2022). Assessment of safety and health-benefits of Citrus hystrix DC. peel essential oil, with regard to its bioactive constituents in an *in vitro* model of physiological and pathological skin conditions. *Biomedicine & Pharmacotherapy*, *151*, 113151. https://doi.org/10.1016/J.BIOPHA.2022.113151

Kunwar, A., & Priyadarsini, K. I. (2011). Free radicals, oxidative stress and importance of antioxidants in human health Corresponding author. *Journal of Medical & Allied Science*, *1*(2), 53–60.

Kusuma, I.G.N.S., Putra, I.N.K., & Darmayanti, L.P.T. (2019). Pengaruh suhu pengeringan terhadap aktivitas antioksidan teh herbal kulit kakao (Theobroma cacao L.). *Jurnal Ilmu dan Teknologi Pangan (ITEPA)*, *8*(1), 85.

Li, Y., Liu, X., Cai, X., Shan, X., Gao, R., Yang, S., Han, T., Wang, S., Wang, L., & Gao, X. (2017). Dihydroflavonol 4-Reductase genes from freesia hybrida play important and partially overlapping roles in the biosynthesis of flavonoids. *Frontiers in Plant Science*, *8*, 428–443.

Liu, N., Yang, W., Li, X., Zhao, P., Liu, Y., Guo, L., Huang, L., & Gao, W. (2022). Comparison of characterization and antioxidant activity of different citrus peel pectins. *Food Chemistry*, *386*, 132683.

Liu, Y., Lv, X., Zhao, S., Ning, Z., Zeng, H., Shu, Y., Tao, O., Xiao, C., & Lu, C. (2015). Citrus fruits as a treasure trove of active natural metabolites that potentially provide benefits for human health. *Chemistry Central Journal*, *9*(1), 68–82. https://doi.org/10.1186/s13065-015-0145-9

Lung, J. K., & Destiani, D. (2017). Uji aktivitas antioksidan vitamin A, C, E dengan Metode DPPH. *Farmaka*, *15*(1), 53–62.

Luo, J., Mills, K., le Cessie, S., Noordam, R., & van Heemst, D. (2020). Ageing, age-related diseases and oxidative stress: What to do next? *Ageing Research Reviews*, *57*, 100982–100997. https://doi.org/10.1016/J.ARR.2019.100982

Malleshappa, P., Kumaran, R. C., Venkatarangaiah, K., & Parveen, S. (2018). Peels of Citrus fruits: A potential source of anti-inflammatory and anti-nociceptive agents. *Pharmacognosy Journal*, *10*(6), S172–S178.

UNIVERSITAS
GADJAH MADA
POTENSI KULIT JERUK PURUT (Citrus hystrix DC.) SEBAGAI ANTIOKSIDAN DAN ANTIINFLAMASI
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Universitas Gadjah Mada, 2022 | Diunduh dari http://etd.repository.ugm.ac.id/

Mamta, Misra, K., Dhillon, G, Brar, S., & Verma, M. (2014). Biotransformation of waste biomass into high value biochemicals. In *Biotransformation of Waste Biomass into High Value Biochemicals, Chapter 6 Antioxidant*. Springer Science + Business Media. https://doi.org/10.1007/978-1-4614-8005-1

Man, M. Q., Yang, B., & Elias, P. M. (2019). Benefits of hesperidin for cutaneous functions. *Evidence-Based Complementary and Alternative Medicine, 2676307*. https://doi.org/10.1155/2019/2676307

Martens, S., & Mithöfer, A. (2005). Flavones and flavone synthases. *Phytochemistry*, *66*(20), 2399–2407.

Medzhitov, R. (2008). Origin and physiological roles of inflammation. *Nature*, *454*, 428–435.

Morris, A., & Rossiter, M. (2011). *Anti-Inflammation Diet for Dummies*. John Wiley & Sons, Inc.

Muhtadin, A., Wijaya, R., Prihatini, P., & Mahfud. (2013). Pengambilan minyak atsiri dari kulit jeruk segar dan kering dengan menggunakan metode steam distillation. *Jurnal Teknik Pomits*, *2*(1), 98–101.

Munteanu, I.G., & Apetrei, C. (2021). Analytical methods used in determining antioxidant activity: A review. *International Journal of Molecular Sciences*, *22*(7), 3380–3410. https://doi.org/10.3390/ijms22073380

Norkaew, O., Pitija, K., Pripdeevech, P., Sookwong, P., & Wongpornchai. (2013). Supercritical fluid extraction andgas chromatographic-mass spectrometric analysis of terpenoids in fresh Kaffir lime leaf oil. *Chiang Mai J. Sci*, *40*, 240–247.

Novika, D., Ahsanunnisa, R., & Yani, D. (2021). Uji Aktivitas antiinflamasi ekstrak etanol daun belimbing wuluh (Averrhoa bilimbi L .) terhadap penghambatan denaturasi protein. *Stannum : Jurnal Sains Dan Terapan Kimia*, *3*(1), 16–22. https://doi.org/10.33019/jstk.v3i1.2117

Nurhayati, N., Marseno, D. W., Setyabudi, F. S., & Supriyanto, S. (2018). Pengaruh steam blanching terhadap aktivitas polifenol oksidase, total polifenol dan aktivitas antioksidan biji kakao. *Jurnal Aplikasi Teknologi Pangan*, *7*(3), 95–103. https://doi.org/10.17728/jatp.2314

Palupi, D., & Wardani, P. (2017). Tingkat penggunaan obat antiinflamasi non steroid (AINS) di apotek di GS Kabupaten Kudus. *Jurnal Keperawatan Dan Kesehatan*, *2*(5), 37–41.

Pandey, K., & Rizvi, S. (2009). Plant polyphenols as dietary antioxidants in human health and disease. *Oxidative Medicine and Cellular Longevity*, *2*(5), 270–278. https://doi.org/10.4161/oxim.2.5.9498

Papoutsis, K., Pristijono, P., Golding, J.B., Stathopoulos, C.E., Scarlett, C.J.,

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Bowyer, M.C., & Vuong, Q. Van. (2016). Impact of different solvents on the recovery of bioactive compounds and antioxidant properties from lemon (Citrus limon L.) pomace waste. *Food Science and Biotechnology*, *25*(4), 971–977. https://doi.org/10.1007/s10068-016-0158-8

Parwata, I.M.O. (2016). *Bahan Ajar : Antioksidan*. Pascasarjana Universitas Udayana, Bali.

Patrón-Vázquez, J., Baas-Dzul, L., Medina-Torres, N., Ayora-Talavera, T., Sánchez-Contreras, Á., García-Cruz, U., & Pacheco, N. (2019). The effect of drying temperature on the phenolic content and functional behavior of flours obtained from lemon wastes. *Agronomy*, *9*(9), 1–16.

Permata, D. A., & Novelina. (2015). Aktivitas inhibisi A -amilase dan total polifenol teh daun sisik naga pada suhu pengeringan yang berbeda. *Prosiding Seminar Agroindustri Dan Lokakarya Nasional FKPT-TPI*.

Peters, T. (1996). *All about albumin. In Biochemistry, Genetics, and Medical Applications*. Academic Press Ltd.

Punchard, N., Whelan, C., & Adcock, I. (2004). The Journal of Inflammation. *Journal of Inflammation*, *1*(1), 1–4. https://doi.org/10.1186/1476-9255-1-1

Putri, H., Standie, N., Yonika, A., Nindi, W., & Adam, H. (2013). Cardioprotective and hepatoprotective effects of Citrus hystrix peels extract on rats model. *Asian Pacific Journal of Tropical Biomedicine*, *3*(5), 371–375.

Raffa, D., Maggio, B., Raimondi, M. V., Plescia, F., & Daidone, G. (2017). Recent discoveries of anticancer flavonoids. *European Journal of Medicinal Chemistry*, *142*, 213–228.

Rahim, M. S., Salihon, J., Yusoff, M., Bakar, I., & Damanik, M. R. (2010). Effect of temperature and time to the antioxidant activity in plecranthus effect of temperature and time to the antioxidant activity. *American Journal of Applied Science*, *7*(9), 1195–1199.

Ramli, R., Zaghlul, N. S., & Nasir, N. A. H. . (2020). The potential of antioxidants and phytochemicals components in fruit waste (peel) of Citrus hystrix and Ananas comosus. *Charting the Sustainable Future of ASEAN in Science and Technology*, 123–135.

Sadasivam, M., Kumarasamy, C., Thangaraj, A., Govindan, M., Kasirajan, G., Vijayan, V., Deavadasan, V., Chia-Her, L., Madhusudhanan, G. ., Ramaraj, T., & Subramaniam, M. . (2018). Phytochemical constituents from dietary plant Citrus hystrix. *Nat. Prod. Res*, *32*(14), 1721–1726.

Safdar, M. N., Kausar, T., Jabbar, S., Mumtaz, A., Ahad, K., & Saddozai, A. A. (2017). Extraction and quantification of polyphenols from kinnow (Citrus reticulate L.) peel using ultrasound and maceration techniques. *Journal of*

UNIVERSITAS
GADJAH MADA
POTENSI KULIT JERUK PURUT (Citrus hystrix DC.) SEBAGAI ANTIOKSIDAN DAN ANTIINFLAMASI
ISNI ATIKAWATI, Dr. Ir. Priyanto Triwitono, M.P.; Yunika Mayangsari, S.Si., M.Biotech., Ph.D.
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Food and Drug Analysis, *25*(3), 488–500.

Saraswaty, V., Risdian, C., Primadona, I., Andriyani, R., Andayani, D. G. S., & Mozef, T. (2017). Pineapple peel wastes as a potential source of antioxidant compounds. *IOP Conference Series: Earth and Environmental Science*, *60*(1). https://doi.org/10.1088/1755-1315/60/1/012013

Schroeder, E. (1977). *Water and wastewater treatment*. Mc Graw-Hill.

Seeka, C., Sutthivaiyakit, P., Youkwan, J., Hertkorn, N., Harir, M., Schmitt-Kopplin, P., & Sutthivaiyakit, S. (2016). PrenylfuranocoumarinHMGA-flavonol glucoside conjugates and other constituents of the fruit peels of Citrus hystrix and their anticholinesterase activity. *Phytochemistry*, *127*, 38

Setyabudi, C., Tanda, S., Santosa, W., & Soetardjo, F. (2015). Studi *in vitro* ekstrak kulit jeruk purut untuk aplikasi terapi diabetes mellitus. *Jurnal Ilmiah Widya Teknik*, *14*(1), 26–31.

Shen, W., Ying, X., & Yan-Hua, L. (2012). Inhibitory effects of Citrus flavonoids on starch digestion and antihyperglycemic effects in HepG2 cells. *J Agric Food Chem*, *60*(38), 9609–9619.

Sies, H. (2018). On the history of oxidative stress: Concept and some aspects of current development. *Current Opinion in Toxicology*, *7*, 122–126. https://doi.org/10.1016/j.cotox.2018.01.002

Sirivibulkovit, K., Nouanthavong, S., & Sameenoi, Y. (2018). Paper-based DPPH assay for antioxidant activity analysis. *Analytical Sciences*, *34*(7), 795–800. https://doi.org/10.2116/ANALSCI.18P014

Sitinjak, R. (2017). Uji Aktivitas Antioksidan dari Ekstrak Etanol Kulit Buah Jeruk Purut (Citrus hystrix D . C) dengan Metode Pemerangkapan DPPH (1 , 1-diphenyl-2-picrylhydra. *Skripsi*. Universitas Sumatera Utara, Medan. http://repositori.usu.ac.id/handle/123456789/1447

Sostres, C., Gargallo, C. J., Arroyo, M. T., & Lanas, A. (2010). Adverse effects of non-steroidal anti-inflammatory drugs (NSAIDs, aspirin and coxibs) on upper gastrointestinal tract. *Best Practice and Research: Clinical Gastroenterology*, *24*(2), 121–132. https://doi.org/10.1016/j.bpg.2009.11.005

Spencer, N. (1988). Direct oxidation of methane. *Journal of Catalysis*, *109*(187).

Staško, A., Brezová, V., Biskupiˇc, S., & Mišík, V. (2007). The potential pitfalls of using 1,1-diphenyl-2-picrylhydrazyl to characterize antioxidants in mixed water solvents. *Free Radic. Res.*, *41*(4), 379–390.

Stone, W., & Burns, B. (2018). *Pathology, Inflammation* (pp. 25–28). StatPearls Publishing.

UNIVERSITAS
GADJAH MADA

POTENSI KULIT JERUK PURUT (Citrus hystrix DC.) SEBAGAI ANTIOKSIDAN DAN ANTIINFLAMASI
ISNI ATIKAWATI, Dr. Ir. Priyanto Triwitono, M.P.; Yunika Mayangsari, S.Si., M.Biotech., Ph.D.
Universitas Gadjah Mada, 2022 | Diunduh dari http://etd.repository.ugm.ac.id/

Sudarmadji, S., Haryono, & Suhardi. (1997). *Analisa Bahan Makanan dan Pertanian*. Liberty.

Suhartono, E. (2016). *Toksisitas Oksigen Reaktif & Antioksidan di Bidang Kedokteran dan Kesehatan*. Gosyen Publishing.

Supriadi, A., Riansyah, A., & Nopianti, R. (2013). Pengaruh perbedaan suhu dan waktu pengeringan terhadap karakteristik ikan asin sepat siam (Trichogaster pectoralis) dengan menggunakan oven. *Fishtech*, *2*(1), 53–68.

Sureda, A., Tejada, S., Pinya, S., Martorell, M., Capo, X., Tur, J., & Pons, A. (2018). Potential anti-inflammatory effects of hesperidin from the genus Citrus. *Current Medicinal Chemistry*, *25*(37), 4929–4945.

Suriyaprom, K., Kaewprasert, S., Putpadungwipon, P., Namjuntra, P., & Klongthalay, S. (2019). Association of antioxidant status and inflammatory markers with metabolic syndrome in Thais. *Journal of Health, Population, and Nutrition*, *38*(1), 1–7. https://doi.org/10.1186/s41043-018-0158-9

Suryadinata, R. V. (2018). Pengaruh radikal bebas terhadap proses inflamasi pada penyakit paru obstruktif kronis (PPOK). *Amerta Nutrition*, *2*(4), 317.

Susilo, B., Sumarlan, S., Wibisono, Y., & Puspitasari, N. (2016). Pengaruh pretreatment dan lama waktu ekstraksi terhadap karakteristik ekstrak kulit jeruk purut (*Citrus hystrix* D.C) menggunakan ultrasonic assisted extraction (UAE) effect of pretreatment and extraction duration to the characteristics of Kaffir Lim. *Jurnal Keteknikan Pertanian Tropis Dan Biosistem*, *4*(3), 230–241.

Susilo, J. (2013). *Bertani Jeruk Purut Prospeknya Tidak Pernah Surut* (Edisi 1). Pustaka Baru Press.

Suttisansanee, U., Thiyajai, P., Chalermchaiwat, P., Wongwathanarat, K., Pruesapan, K., Charoenkiatkul, S., & Temviriyanukul, P. (2021). Phytochemicals and *in vitro* Bioactivities of Aqueous Ethanolic Extracts from Common Vegetables in Thai Food. *Plants*, *10*(8), 1563–1581. https://doi.org/10.3390/plants10081563

Syarifah, T. (2017). Ekstraksi Minyak Atsiri dari Batang, Daun dan Kulit Jeruk Purut (Citrus hystrix DC) dengan Metode Solvent-Free Microwave Extraction. *Tesis.* Institut Teknologi Sepuluh November, Surabaya.

Triyandi, R., Rokiban, A., & Pratiwi, C. (2020). Fraksi air ekstrak daun wungu (Graptopphyllumpictum L.) Sebagai antiinflamasi terhadap tikus putih jantan. *Jurnal Farmasi Lampung*, *9*(1), 1–9.

Truong, D. H., Nguyen, D. H., Ta, N. T. A., Bui, A. V., Do, T. H., & Nguyen, H. C. (2019). Evaluation of the use of different solvents for phytochemical constituents, antioxidants, and *in vitro* anti-inflammatory activities of

UNIVERSITAS
GADJAH MADA
POTENSI KULIT JERUK PURUT (Citrus hystrix DC.) SEBAGAI ANTIOKSIDAN DAN ANTIINFLAMASI
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Universitas Gadjah Mada, 2022 | Diunduh dari http://etd.repository.ugm.ac.id/

severinia buxifolia. *Journal of Food Quality*, *8178294*.

Tuasamu, Y. (2018). Karakterisasi morfologi daun dan anatomi stomata pada beberapa species tanaman jeruk (Citrus sp). *Agrikan: Jurnal Agribisnis Perikanan*, *11*(2), 85–90. https://doi.org/10.29239/J.AGRIKAN.11.2.85-90

Ulhaq, Z. S., Hendyatama, T. H., Hameed, F., & Santosaningsih, D. (2021). Antibacterial activity of Citrus hystrix toward Salmonella spp. infection. *Enfermedades Infecciosas y Microbiologia Clinica (English Ed.)*, *39*(6), 283–286. https://doi.org/10.1016/J.EIMCE.2020.05.016

USDA. (2014). *Citrus hystrix DC*. Diakses dari https://plants.usda.gov/home/plantProfile?symbol=CIHY2 pada 10 Juni 2022 pukul 14.07 WIB

Wahyudiati, D. (2016). *Biokimia*. LEPPIM Mataram, Mataram.

Wali, A. F., Rashid, S., Rashid, S. M., Ansari, M. A., Khan, M. R., Haq, N., Alhareth, D. Y., Ahmad, A., & Rehman, M. U. (2020). Naringenin regulates doxorubicin-induced liver dysfunction: Impact on oxidative stress and inflammation. *Plants*, *9*(4), 1–17. https://doi.org/10.3390/plants9040550

Wang, T., Li, Q., & Bi, K. (2018). Bioactive flavonoids in medicinal plants: Structure, activity and biological fate. *Asian Journal of Pharmaceutical Sciences*, *13*(1), 12–23. https://doi.org/10.1016/j.ajps.2017.08.004

Warsito, Noorhamdani, Sukardi, & Suratmo. (2017). Aktivitas antioksidan dan antimikroba minyak jeruk purut. *Journal of Environmental Engineering & Sustainable Technology*, *04*(01), 13–18.

Xu, M., Chen, S., Wang, W., & Liu, S. (2013). Employing bifunctional enzymes for enhanced extraction of bioactives from plants: flavonoids as an example. *J. Agric. Food Chem.*, *61*(33), 7941–7948.

Yapi, J. C., Gnangui, S. N., Ahi, A. P., Didier, J., & Kouamé, L. P. (2014). Thermal inactivation kinetics and thermodynamic analysis of the first isoform of polyphenoloxidase Purified from edible yam Dioscorea cayenensis- rotundata cv Kponan. *Sky Journal of Biochemistry Research*, *3*(8), 72–79.

Yen, F.L., Wu, T.H., Lin, L.T., Cham, T. M., & Lin, C. C. (2009). Naringenin loaded nanoparticles improve the physicochemical properties and the hepatoprotective effects of naringenin in orally-administered rats with CCl4-induced acute liver failure. *Pharmaceutical Research*, *26*, 893–902.

Youkwan, J., Sutthivaiyakit, S., & Sutthivaiyakit, P. (2010). Citrusosides A–D and furanocoumarins with cholinesterase inhibitory activity from the fruit peels of Citrus hystrix. *J. Nat. Prod*, *73*, 1879–1883.

UNIVERSITAS
GADJAH MADA

POTENSI KULIT JERUK PURUT (Citrus hystrix DC.) SEBAGAI ANTIOKSIDAN DAN ANTIINFLAMASI
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Universitas Gadjah Mada, 2022 | Diunduh dari http://etd.repository.ugm.ac.id/

Yulianthi, N. N., Suhendra, L., & Wrasiati, L. (2017). Pengaruh perbandingan jenis pelarut terhadap kandungan senyawa total fenol , α -Tokoferol , dan total karotenoid ekstrak Sargassum polycystum. *Jurnal Rekayasa Dan Manajemen Agroindustri*, *5*(4), 1–10.

Zahoor, S., Anwar, F., Mehmood, T., Sultana, B., & Qadir, R. (2016). Variation in antioxidant attributes and individual phenolics of citrus fruit peels in relation to different species and extraction solvents. *Journal of the Chilean Chemical Society*, *61*(2), 2884–2889.

Zhang, J., Stanley, R., Melton, L., & Skinner, M. (2007). Inhibition of lipid oxidation by phenolic antioxidants in relation to their physicochemical properties. *Pharmacologyonline*, *1*, 180–189.

Zhou, W., Dong, M., Wu, H., Li, H. L., Xie, J. L., Ma, R.-Y., & Dai, J.-Y. (2021). Common mechanism of Citrus Grandis Exocarpium in treatment of chronic obstructive pulmonary disease and lung cancer. *Chinese Herbal Medicines*, *13*(4), 525–533.