

## DAFTAR PUSTAKA

- Abi Tarabay, P., Chahine-Tsouvalakis, H., Tawk, S. T., Nemer, N., & Habib, W. (2018). Reduction of food losses in Lebanese apple through good harvesting and postharvest practices. *Annals of Agricultural Sciences*, 63(2), 207-213. <https://doi.org/10.1016/j.aoas.2018.11.006>
- Ajila, C. M., Gassara, F., Brar, S. K., Verma, M., Tyagi, R. D., & Valéro, J. R. (2012). Polyphenolic antioxidant mobilization in apple pomace by different methods of solid-state fermentation and evaluation of its antioxidant activity. *Food and Bioprocess Technology*, 5(7), 2697-2707 <https://doi.org/10.1007/s11947-011-0582-y>
- Anang, M. A., Oteng-Peprah, M., & Opoku-Boadu, K. (2019). Extraction and characterisation of african star apple (*Chrysophyllum albidum*) seed oil and the adsorptive properties of the fruit shell in Ghana. *International journal of food science*, 2019. <https://doi.org/10.1155/2019/4959586>
- Angiolillo, L., Del Nobile, M. A., & Conte, A. (2015). The extraction of bioactive compounds from food residues using microwaves. *Current Opinion in Food Science*, 5, 93–98. <https://doi.org/10.1016/j.cofs.2015.10.001>
- Arain, S., Sherazi, S. T. H., Bhanger, M. I., Memon, N., Mahesar, S. A., & Rajput, M. T. (2012). Prospects of fatty acid profile and bioactive composition from lipid seeds for the discrimination of apple varieties with the application of chemometrics. *grasas y aceites*, 63(2), 175-183. <http://dx.doi.org/10.3989/gya.082811>
- Armenta, S., Esteve-Turrillas, F. A., Garrigues, S., & de la Guardia, M. (2022). Alternative green solvents in sample preparation. *Green Analytical Chemistry*, 1, 100007. <https://doi.org/10.1016/j.greeac.2022.100007>
- Awasthi, M. K., Ferreira, J. A., Sirohi, R., Sarsaiya, S., Khoshnevisan, B., Baladi, S., ... & Taherzadeh, M. J. (2021). A critical review on the development stage of biorefinery systems towards the management of apple processing-derived waste. *Renewable and Sustainable Energy Reviews*, 143, 110972. <https://doi.org/10.1016/j.rser.2021.110972>
- Azwanida, N. N. (2015). A review on the extraction methods use in medicinal plants, principle, strength and limitation. *Med Aromat Plants*, 4(196), 2167-0412. <https://doi.org/10.4172/2167-0412.1000196>
- Baümler, E. R., Carrín, M. E., & Carelli, A. A. (2016). Extraction of sunflower oil using ethanol
- Bhushan, S., Kalia, K., Sharma, M., Singh, B., & Ahuja, P. S. (2008). Processing of apple pomace for bioactive molecules. *Critical reviews in biotechnology*, 28(4), 285-296. <https://sci-hub.mksa.top/10.1080/07388550802368895>
- Blidi, S., Bikaki, M., Grigorakis, S., Loupassaki, S., & Makris, D. P. (2015). A comparative evaluation of bio-solvents for the efficient extraction of polyphenolic phytochemicals: apple waste peels as a case study. *Waste and Biomass Valorization*, 6(6), 1125-1133. <http://dx.doi.org/10.1007/s12649-015-9410-3>
- Bolarinwa, I. F., Orfila, C., & Morgan, M. R. (2015). Determination of amygdalin in apple seeds, fresh apples and processed apple juices. *Food chemistry*, 170, 437-442. <https://doi.org/10.1016/j.foodchem.2014.08.083>
- Brakut, N., PrashnathHirye, K. D., Pawar, V., & Acharya, S. Edible films made from apple peel. *International Journal of Food Science and Nutrition*, 6 (2), 91-94. [https://www.researchgate.net/publication/354270588\\_Edible\\_films\\_made\\_from\\_apple\\_peel#fullTextFileContent](https://www.researchgate.net/publication/354270588_Edible_films_made_from_apple_peel#fullTextFileContent)

- Carpentieri, S., Soltanipour, F., Ferrari, G., Pataro, G., & Donsì, F. (2021). Emerging green techniques for the extraction of antioxidants from agri-food by-products as promising ingredients for the food industry. *Antioxidants*, 10(9), 1417. <https://doi.org/10.3390/antiox10091417>
- Carson, K. J., Collins, J. L., & Penfield, M. P. (1994). Unrefined, dried apple pomace as a potential food ingredient. *Journal of Food Science*, 59(6), 1213-1215. <http://dx.doi.org/10.1111/j.1365-2621.1994.tb14679.x>
- Casazza, A. A., Pettinato, M., & Perego, P. (2020). Polyphenols from apple skins: A study on microwave-assisted extraction optimization and exhausted solid characterization. *Separation and Purification Technology*, 240, 116640. <https://doi.org/10.1016/j.seppur.2020.116640>
- Che Sulaiman, I. S., Basri, M., Fard Masoumi, H. R., Chee, W. J., Ashari, S. E., & Ismail, M. (2017). 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. *Chemistry Central Journal*, 11(1), 1-11. <https://bmccchem.biomedcentral.com/articles/10.1186/s13065-017-0285-1>
- Chemat, F., Vian, M. A., & Cravotto, G. (2012). Green extraction of natural products: Concept and principles. *International journal of molecular sciences*, 13(7), 8615-8627. <https://doi.org/10.3390/ijms13078615>
- Chen, C., Chaudhary, A., & Mathys, A. (2020). Nutritional and environmental losses embedded in global food waste. *Resources, Conservation and Recycling*, 160, 104912. <https://doi.org/10.1016/j.resconrec.2020.104912>
- Chen, X. Q., Li, Z. H., Liu, L. L., Wang, H., Yang, S. H., Zhang, J. S., & Zhang, Y. (2021). Green extraction using deep eutectic solvents and antioxidant activities of flavonoids from two fruits of Rubia species. *Lwt*, 148, 111708. <https://scihub.mksa.top/10.1016/j.lwt.2021.111708>
- Chinnici, F., Bendini, A., Gaiani, A., & Riponi, C. (2004). Radical scavenging activities of peels and pulps from cv. Golden Delicious apples as related to their phenolic composition. *Journal of Agricultural and food chemistry*, 52(15), 4684-4689. <https://doi.org/10.1016/j.jlwt.2021.111708>
- Chuyen, H. V., Nguyen, M. H., Roach, P. D., Golding, J. B., & Parks, S. E. (2018). Microwave-assisted extraction and ultrasound-assisted extraction for recovering carotenoids from Gac peel and their effects on antioxidant capacity of the extracts. *Food Science & Nutrition*, 6(1), 189-196. <https://doi.org/10.1002/fsn3.546>
- Da Silva, A. C., & Jorge, N. (2017). Bioactive compounds of oils extracted from fruits seeds obtained from agroindustrial waste. *European Journal of Lipid Science and Technology*, 119(4), 1600024. <http://dx.doi.org/10.1002/ejlt.201600024>
- Da Silva, R. P., Rocha-Santos, T. A., & Duarte, A. C. (2016). Supercritical fluid extraction of bioactive compounds. *TrAC Trends in Analytical Chemistry*, 76, 40-51. <https://doi.org/10.1016/j.trac.2015.11.013>
- De Castro, M. L., & Priego-Capote, F. (2010). Soxhlet extraction: Past and present panacea. *Journal of chromatography A*, 1217(16), 2383-2389. <https://doi.org/10.1016/j.chroma.2009.11.027>
- Derdemezis, C.S.; Filippatos, T.D.; Mikhailidis, D.P.; Elisaf, M.S. Effects of plant sterols and stanols beyond low-density lipoprotein cholesterol lowering. *J. Cardiovasc. Pharmacol. Ther.* 2010, 15, 120–134. <https://doi.org/10.1177/1074248409357921>
- Dhillon, G. S., Kaur, S., & Brar, S. K. (2013). Perspective of apple processing wastes as low-cost substrates for bioproduction of high value products: A review. *Renewable and sustainable energy reviews*, 27, 789-805. <https://doi.org/10.1016/j.rser.2013.06.046>

- Duan, Y., Mehariya, S., Kumar, A., Singh, E., Yang, J., Kumar, S., ... & Kumar Awasthi, M. (2021). Apple orchard waste recycling and valorization of valuable product-A review. *Bioengineered*, 12(1), 476-495. <https://doi.org/10.1080/21655979.2021.1872905>
- Egüés, I., Hernandez-Ramos, F., Rivilla, I., & Labidi, J. (2021). Optimization of ultrasound assisted extraction of bioactive compounds from apple pomace. *Molecules*, 26(13), 3783. <https://doi.org/10.3390/molecules26133783>
- Espacenet. (2016). Dandelion Apple Cider Vinegar And Preparation Method Thereof. <https://worldwide.espacenet.com/patent/search/family/058072884/publication/CN106222066A?q=antioxidant%20apple%20waste%20Shanxi%20Zeyuan%20Food> (Diakses pada 8 April 2022)
- Espacenet. (2017). Brewer's Gain Fermented Feed And Preparation Method Theorof. <https://worldwide.espacenet.com/patent/search/family/058334157/publication/CN106490339A?q=antioxidant%20apple%20waste> (Diakses pada 8 April 2022)
- Espacenet. (2016). Manufacture Method For Apple Seed Essential Oil. <https://worldwide.espacenet.com/patent/search/family/055325315/publication/CN105349247A?q=Apple%20Seed%20Oil> (Diakses pada 12 Juni 2022)
- Espacenet. (2018). Edible film food packaging film with maintenance and refreshing effects. <https://worldwide.espacenet.com/patent/search/family/054714908/publication/CN105129226A?q=edible%20film%20apple> (Diakses pada 27 Februari 2022)
- Espitia, P. C. R., Du, W. X., Avena-bustillos, R. D. J. S., Fátima, N. D., Soares, F., & McHugh, T. H. (2014). Edible films from pectin: Physical-mechanical and antimicrobial properties—A review. *Food Hydrocoll*, 35, 287-296. <https://doi.org/10.1016/j.foodhyd.2013.06.005>
- Esua, J. O., Chin, N. L., Yusof, Y. A., & Sukor, R. (2017). Antioxidant bioactive compounds and spoilage microorganisms of wax apple (*Syzygium samarangense*) during room temperature storage. *International Journal of Fruit Science*, 17(2), 188-201. <http://dx.doi.org/10.1080/15538362.2017.1285263>
- FAO. (2015). Global Initiative on Food Loss and Waste Reduction. <https://www.fao.org/3/i4068e/i4068e.pdf> (Diakses pada 13 Mei 2022)
- Ferrentino, G., Morozova, K., Mosibo, O. K., Ramezani, M., & Scampicchio, M. (2018). Biorecovery of antioxidants from apple pomace by supercritical fluid extraction. *Journal of Cleaner Production*, 186, 253-261. <https://doi.org/10.1016/j.jclepro.2018.03.165>
- Fotirić Akšić, M., Dabić Zagorac, D., Gašić, U., Tosti, T., Natić, M., & Meland, M. (2022). Analysis of Apple Fruit (*Malus× domestica* Borkh.) Quality Attributes Obtained from Organic and Integrated Production Systems. *Sustainability*, 14(9), 5300. <http://dx.doi.org/10.3390/su14095300>
- Fotirić Akšić, M., Dabić Zagorac, D., Gašić, U., Tosti, T., Natić, M., & Meland, M. (2022). Analysis of Apple Fruit (*Malus× domestica* Borkh.) Quality Attributes Obtained from Organic and Integrated Production Systems. *Sustainability*, 14(9), 5300. <http://dx.doi.org/10.3390/su14095300>
- Fromm, M., Bayha, S., Carle, R., & Kammerer, D. R. (2012). Comparison of fatty acid profiles and contents of seed oils recovered from dessert and cider apples and further Rosaceous plants. *European Food Research and Technology*, 234(6), 1033-1041. <http://dx.doi.org/10.1007/s00217-012-1709-8>
- Fu, X., Wang, D., Belwal, T., Xu, Y., Li, L., & Luo, Z. (2021). Sonication-synergistic natural deep eutectic solvent as a green and efficient approach for extraction of phenolic

- compounds from peels of *Carya cathayensis* Sarg. *Food Chemistry*, 355, 129577. <https://doi.org/10.1016/j.foodchem.2021.129577>
- Ghinea, C., & Leahu, A. (2022). Valorisation of apple (*Malus domestica*) wastes. In *Mediterranean Fruits Bio-wastes* (pp. 325-348). Springer, Cham. [http://dx.doi.org/10.1007/978-3-030-84436-3\\_13](http://dx.doi.org/10.1007/978-3-030-84436-3_13)
- Google Patent. (2007). Astringency-Compensated Polyphenolic Antioxidant-Containing Comestible Composition. <https://patents.google.com/patent/WO2007131106A2/en?oq=antioxidant+apple+pomace+silver+palate> (Diakses pada 8 April 2022)
- Google Patent. (2005). Edible Film. <https://patents.google.com/patent/US20050089548?oq=edible+film+apple+peel+givudan> (Diakses pada 27 Februari 2022)
- Google Patent. (2012). Fruit And Vegetable Films And Uses Thereof. <https://patents.google.com/patent/US8715763?oq=edible+film+apple+peel+Newgem+Foods> (Diakses pada 27 Februari 2022)
- Google Patent. (2015). High Shear Application In Processing Oils. <https://patents.google.com/patent/US8940347?oq=seed+oil+apple+salad> (Diakses pada 12 Juni 2022)
- Górnaś, P., Rudzińska, M., & Segliña, D. (2014). Lipophilic composition of eleven apple seed oils: A promising source of unconventional oil from industry by-products. *Industrial Crops and Products*, 60, 86-91. <https://doi.org/10.1016/j.indcrop.2014.06.003>
- Gulsunoglu, Z., Purves, R., Karbancioglu-Guler, F., & Kilic-Akyilmaz, M. (2020). Enhancement of phenolic antioxidants in industrial apple waste by fermentation with *Aspergillus* spp. *Biocatalysis and Agricultural Biotechnology*, 25, 101562. <https://doi.org/10.1016/j.bcab.2020.101562>
- Gustavsson, J., Cederberg, C., Sonesson, U., Otterdijk, R.V., Meybeck, A., (2011). Global Food Losses And Food Waste. Extent, Causes And Prevention. Food And Agriculture Organization Of The United Nations, Rome. [https://www.fao.org/fileadmin/user\\_upload/sustainability/pdf/Global\\_Food\\_Losses\\_and\\_Food\\_Waste.pdf](https://www.fao.org/fileadmin/user_upload/sustainability/pdf/Global_Food_Losses_and_Food_Waste.pdf)
- Güzel, M., & Akpinar, Ö. (2019). Valorisation of fruit by-products: Production characterization of pectins from fruit peels. *Food and Bioproducts Processing*, 115, 126-133. <https://doi.org/10.1016/j.fbp.2019.03.009>
- Hancock, J. F., Luby, J. J., Brown, S. K., & Lobos, G. A. (2008). Apples. In *Temperate fruit crop breeding* (pp. 1-38). Springer, Dordrecht. <https://link.springer.com/book/10.1007/978-1-4020-6907-9>
- Heidarisafar, Z., Sadeghi, G., Karimi, A., & Azizi, O. (2016). Apple peel waste as a natural antioxidant for heat-stressed broiler chickens. *Tropical animal health and production*, 48(4), 831-835. <https://doi.org/10.1007/s11250-016-1001-1>
- Heleno, S. A., Diz, P., Prieto, M. A., Barros, L., Rodrigues, A., Barreiro, M. F., & Ferreira, I. C. (2016). Optimization of ultrasound-assisted extraction to obtain mycosterols from *Agaricus bisporus* L. by response surface methodology and comparison with conventional Soxhlet extraction. *Food Chemistry*, 197, 1054–1063. <https://doi.org/10.1016/j.foodchem.2015.11.108>
- Herrero, M., Castro-Puyana, M., Mendiola, J. A., & Ibañez, E. (2013). Compressed fluids for the extraction of bioactive compounds. *TrAC Trends in Analytical Chemistry*, 43, 67-83. <https://doi.org/10.1016/j.trac.2012.12.008>

- Hewett, E. W. (1976). Irrigation of apple trees in Nelson. *New Zealand Journal of Agricultural Research*, 19(4), 505-511. <https://doi.org/10.1080/00288233.1976.10420982>
- Ilie, G., & Ciocoiu, C. N. (2010). Application of fishbone diagram to determine the risk of an event with multiple causes. *Management research and practice*, 2(1), 1-20. [https://www.researchgate.net/publication/46567642\\_Application Of Fishbone Diagram To Determine The Risk Of An Event With Multiple Causes#fullTextFileContent](https://www.researchgate.net/publication/46567642_Application Of Fishbone Diagram To Determine The Risk Of An Event With Multiple Causes#fullTextFileContent)
- Immanuel, M., Hartopo, R., Anantadjaya, S. P., & Saroso, T. (2013). Food waste management: 3R approach in selected family-owned restaurants. *JAMS-Journal of Management Studies*, 2(01), 18-37. <https://old.iuli.ac.id/wp-content/uploads/2017/11/Food-waste-Management.pdf>
- Jacotet-Navarro, M., Rombaut, N., Deslis, S., Fabiano-Tixier, A. S., Pierre, F. X., Bily, A., & Chemat, F. (2016). Towards a “dry” bio-refinery without solvents or added water using microwaves and ultrasound for total valorization of fruit and vegetable by-products. *Green Chemistry*, 18(10), 3106-3115. <http://dx.doi.org/10.1039/C5GC02542G>
- Jacotet-Navarro, M., Rombaut, N., Deslis, S., Fabiano-Tixier, A. S., Pierre, F. X., Bily, A., & Chemat, F. (2016). Towards a “dry” bio-refinery without solvents or added water using microwaves and ultrasound for total valorization of fruit and vegetable by-products. *Green Chemistry*, 18(10), 3106-3115. <http://dx.doi.org/10.1039/C5GC02542G>
- Kek, S. P., Chin, N. L., & Yusof, Y. A. (2013). Direct and indirect power ultrasound assisted pre-osmotic treatments in convective drying of guava slices. *Food and Bioproducts Processing*, 91(4), 495–506. <https://doi.org/10.1016/j.fbp.2013.05.003>
- KolanoWsKi-Małgorzata zaKrzeWsKa, W. (2019). Apple processing wastes as potential source of new edible oil. *Journal of Food and Nutrition Research (ISSN 1336-8672)*, 58(1), 92-98. [https://www.researchgate.net/publication/331994650\\_Apple\\_processing\\_wastes\\_a\\_s\\_potential\\_source\\_of\\_new\\_edible\\_oil#fullTextFileContent](https://www.researchgate.net/publication/331994650_Apple_processing_wastes_a_s_potential_source_of_new_edible_oil#fullTextFileContent)
- Kumar, S.P.J.; Prasad, S.R.; Banerjee, R.; Agarwal, D.K.; Kulkarni, K.S.; Ramesh, K.V. Green solvents and technologies for oil extraction from oilseeds. *Chem. Cent. J.* **2017**, 11, 1–7. <https://bmccchem.biomedcentral.com/articles/10.1186/s13065-017-0238-8>
- Łata, B. (2007). Relationship between apple peel and the whole fruit antioxidant content: year and cultivar variation. *Journal of agricultural and food chemistry*, 55(3), 663-671. <https://doi.org/10.1021/jf062664j>
- Leadbeater, N. E., Torenius, H. M., & Tye, H. (2004). Microwave-promoted organic synthesis using ionic liquids: A mini review. *Combinatorial Chemistry & High Throughput Screening*, 7(5), 511-528. <https://doi.org/10.2174/1386207043328562>
- Lee, Y., Kim, S., Kwon, E. E., & Lee, J. (2020). Effect of carbon dioxide on thermal treatment of food waste as a sustainable disposal method. *Journal of CO2 Utilization*, 36, 76-81. <http://dx.doi.org/10.1016/j.jcou.2019.11.004>
- Li, Y., Fabiano-Tixier, A. S., Vian, M. A., & Chemat, F. (2013). Solvent-free microwave extraction of bioactive compounds provides a tool for green analytical chemistry. *TrAC Trends in Analytical Chemistry*, 47, 1-11. <https://doi.org/10.1016/j.trac.2013.02.007>
- Li, Y.; Fine, F.; Fabiano-Tixier, A.S.; Abert-Vian, M.; Carre, P.; Pages, X.; Chemat, F. (2014). Evaluation of alternative solvents for improvement of oil extraction from rapeseeds. *Comptes Rendus Chim.* 17, 242–251. <https://doi.org/10.1016/j.crci.2013.09.002>
- Lu, Y & L. Y. Foo (1998). Constitution Of Some Chemical Components Of Apple Seed. *Food Chemistry*, 61(1-2), 29–33. [doi:10.1016/s0308-8146\(97\)00123-4](https://doi.org/10.1016/s0308-8146(97)00123-4)

- Malinowska, M., Śliwa, K., Sikora, E., Ogonowski, J., Oszmiański, J., & Kolniak-Ostek, J. (2018). Ultrasound-assisted and micelle-mediated extraction as a method to isolate valuable active compounds from apple pomace. *Journal of Food Processing and Preservation*, 42(10), e13720. <https://doi.org/10.1111/jfpp.13720>
- Manzoor, S., Masoodi, F. A., Rashid, R., & Dar, M. M. (2022). Effect of apple pomace-based antioxidants on the stability of mustard oil during deep frying of French fries. *LWT*, 163, 113576. <https://doi.org/10.1016/j.lwt.2022.113576>
- Massias, A., Boisard, S., Baccaunaud, M., Calderon, F. L., & Subra-Paternault, P. (2015). Recovery of phenolics from apple peels using CO<sub>2</sub>+ ethanol extraction: kinetics and antioxidant activity of extracts. *The Journal of Supercritical Fluids*, 98, 172-182. <https://doi.org/10.1016/j.supflu.2014.12.007>
- Matta, E., Tavera-Quiroz, M. J., & Bertola, N. (2019). Active edible films of methylcellulose with extracts of green apple (Granny Smith) skin. *International Journal of Biological Macromolecules*, 124, 1292-1298. <https://doi.org/10.1016/j.ijbiomac.2018.12.114>
- McCann, M. J., Gill, C. I. R., O'brien, G., Rao, J. R., McRoberts, W. C., Hughes, P., ... & Rowland, I. R. (2007). Anti-cancer properties of phenolics from apple waste on colon carcinogenesis in vitro. *Food and Chemical Toxicology*, 45(7), 1224-1230. <https://doi.org/10.1016/j.fct.2007.01.003>
- Messina, C. M., Bono, G., Renda, G., La Barbera, L., & Santulli, A. (2015). Effect of natural antioxidants and modified atmosphere packaging in preventing lipid oxidation and increasing the shelf-life of common dolphinfish (*Coryphaena hippurus*) fillets. *LWT-Food Science and Technology*, 62(1), 271-277. <https://doi.org/10.1016/j.lwt.2015.01.029>
- Mokrani, A., & Madani, K. (2016). Effect of solvent, time and temperature on the extraction of phenolic compounds and antioxidant capacity of peach (*Prunus persica* L.) fruit. *Separation and Purification Technology*, 162, 68-76. <https://doi.org/10.1016/j.seppur.2016.01.043>
- Molinuevo-Salces, B., Riaño, B., Hijosa-Valsero, M., González-García, I., Paniagua-García, A. I., Hernández, D., ... & García-González, M. C. (2020). Valorization of apple pomaces for biofuel production: A biorefinery approach. *Biomass and Bioenergy*, 142, 105785. <https://doi.org/10.1016/j.biombioe.2020.105785>
- Montañés, F., Catchpole, O. J., Tallon, S., Mitchell, K. A., Scott, D., & Webby, R. F. (2018). Extraction of apple seed oil by supercritical carbon dioxide at pressures up to 1300 bar. *The Journal of Supercritical Fluids*, 141, 128-136. <https://doi.org/10.1016/j.supflu.2018.02.002>
- O'shea, N., Ktenioudaki, A., Smyth, T. P., McLoughlin, P., Doran, L., Auty, M. A. E., ... & Gallagher, E. (2015). Physicochemical assessment of two fruit by-products as functional ingredients: Apple and orange pomace. *Journal of Food Engineering*, 153, 89-95. <https://doi.org/10.1016/j.jfoodeng.2014.12.014>
- Oh, W. Y., Ambigaipalan, P., & Shahidi, F. (2021). Quercetin and its ester derivatives inhibit oxidation of food, LDL and DNA. *Food Chemistry*, 364, 130394. <https://doi.org/10.1016/j.foodchem.2021.130394>
- Oliveira, É. R., Silva, R. F., Santos, P. R., & Queiroz, F. (2019). Potential of alternative solvents to extract biologically active compounds from green coffee beans and its residue from the oil industry. *Food and bioproducts processing*, 115, 47-58. <https://doi.org/10.1016/j.fbp.2019.02.005>
- Palmatier, R. W., M. B. Houston. & J. Hulland. (2018). Review Articles: Purpose, Process and Structure. *Journal of the Academy Mark. Science*, 46: 1-5. <http://dx.doi.org/10.1007/s11747-017-0563-4>

- Panzella, L., Moccia, F., Nasti, R., Marzorati, S., Verotta, L., & Napolitano, A. (2020). Bioactive phenolic compounds from agri-food wastes: An update on green and sustainable extraction methodologies. *Frontiers in nutrition*, 7, 60. <https://doi.org/10.3389/fnut.2020.00060>
- Prasad, W., Wani, A. D., Khamrui, K., Hussain, S. A., & Khetra, Y. (2022). Green solvents, potential alternatives for petroleum based products in food processing industries. *Cleaner Chemical Engineering*, 100052. <https://doi.org/10.1016/j.ccle.2022.100052>
- Preti, R., & Tarola, A. M. (2021). Study of polyphenols, antioxidant capacity and minerals for the valorisation of ancient apple cultivars from Northeast Italy. *European Food Research and Technology*, 247(1), 273-283. <https://link.springer.com/article/10.1007/s00217-020-03624-7>
- Radenkovs, V., Kviesis, J., Juhnevica-Radenkova, K., Valdovska, A., Püssa, T., Klavins, M., & Drudze, I. (2018). Valorization of wild apple (*Malus* spp.) by-products as a source of essential fatty acids, tocopherols and phytosterols with antimicrobial activity. *Plants*, 7(4), 90. <https://doi.org/10.3390%2Fplants7040090>
- Rana, S., Gupta, S., Rana, A., & Bhushan, S. (2015). Functional properties, phenolic constituents and antioxidant potential of industrial apple pomace for utilization as active food ingredient. *Food Science and Human Wellness*, 4(4), 180-187. <https://doi.org/10.1016/j.fshw.2015.10.001>
- Randolph, J. (2009). A guide to writing the dissertation literature review. *Practical assessment, research, and evaluation*, 14(1), 13. <https://scholarworks.umass.edu/cgi/viewcontent.cgi?article=1219&context=pare>
- Riaz, A., Aadil, R. M., Amoussa, A. M. O., Bashari, M., Abid, M., & Hashim, M. M. (2021). Application of chitosan-based apple peel polyphenols edible coating on the preservation of strawberry (*Fragaria ananassa* cv Hongyan) fruit. *Journal of Food Processing and Preservation*, 45(1), e15018. <https://doi.org/10.1111/jfpp.15018>
- Riaz, A., Lei, S., Akhtar, H. M. S., Wan, P., Chen, D., Jabbar, S., ... & Zeng, X. (2018). Preparation and characterization of chitosan-based antimicrobial active food packaging film incorporated with apple peel polyphenols. *International Journal of Biological Macromolecules*, 114, 547-555. <https://doi.org/10.1016/j.ijbiomac.2018.03.126>
- Rodríguez-Pérez, C., Quirantes-Piné, R., Fernández-Gutiérrez, A., & Segura-Carretero, A. (2015). Optimization of extraction method to obtain a phenolic compounds-rich extract from *Moringa oleifera* Lam leaves. *Industrial Crops and Products*, 66, 246-254. <https://doi.org/10.1016/j.indcrop.2015.01.002>
- Sablani, S. S., Dasse, F., Bastarrachea, L., Dhawan, S., Hendrix, K. M., & Min, S. C. (2009). Apple peel-based edible film development using a high-pressure homogenization. *Journal of food science*, 74(7), E372-E381. <http://dx.doi.org/10.1111/j.1750-3841.2009.01273.x>
- Senica, M., F. Stampar., R> Veberic., & M. M. Petkovsek. (2019). Cyanogenic Glycosides And Phenolics In Apple Seeds And Their Changes During Long Term Storage. *Scientia Horticulturae*, 255(), 30–36. <https://doi.org/10.1016/j.scienta.2019.05.022>
- Sganzerla, W. G., Rosa, G. B., Ferreira, A. L. A., da Rosa, C. G., Beling, P. C., Xavier, L. O., ... & de Lima Veeck, A. P. (2020). Bioactive food packaging based on starch, citric pectin and functionalized with *Acca sellowiana* waste by-product: Characterization and application in the postharvest conservation of apple. *International journal of biological macromolecules*, 147, 295-303. <https://doi.org/10.1016/j.ijbiomac.2020.01.074>

- Shalini, R., & Gupta, D. K. (2010). Utilization of pomace from apple processing industries: a review. *Journal of food science and technology*, 47(4), 365-371. <http://dx.doi.org/10.1007/s13197-010-0061-x>
- Sharma, M., Hussain, S., Shalima, T., Aav, R., & Bhat, R. (2022). Valorization of seabuckthorn pomace to obtain bioactive carotenoids: An innovative approach of using green extraction techniques (ultrasonic and microwave-assisted extractions) synergized with green solvents (edible oils). *Industrial Crops and Products*, 175, 114257. <https://doi.org/10.1016/j.indcrop.2021.114257>
- Shaw, P. J., Smith, M. M., & Williams, I. D. (2018). On the prevention of avoidable food waste from domestic households. *Recycling*, 3(2), 24. <http://dx.doi.org/10.3390/recycling3020024>
- Shiekh, R. A., Malik, M. A., Al-Thabaiti, S. A., & Shiekh, M. A. (2013). Chitosan as a novel edible coating for fresh fruits. *Food Science and Technology Research*, 19(2), 139-155. <http://dx.doi.org/10.3136/fstr.19.139>
- Shin, S. H., Chang, Y., Lacroix, M., & Han, J. (2017). Control of microbial growth and lipid oxidation on beef product using an apple peel-based edible coating treatment. *LWT*, 84, 183-188. <https://doi.org/10.1016/j.lwt.2017.05.054>
- Singh, A., Sabally, K., Kubow, S., Donnelly, D. J., Gariepy, Y., Orsat, V., & Raghavan, G. S. V. (2011). Microwave-assisted extraction of phenolic antioxidants from potato peels. *Molecules*, 16(3), 2218-2232. <http://dx.doi.org/10.3390/molecules16032218>
- Soquetta, M. B., Terra, L. D. M., & Bastos, C. P. (2018). Green technologies for the extraction of bioactive compounds in fruits and vegetables. *CyTA-Journal of Food*, 16(1), 400-412. <https://doi.org/10.1080/19476337.2017.1411978>
- Tiwari, B. K. (2015). Ultrasound: A clean, green extraction technology. *TrAC Trends in Analytical Chemistry*, 71, 100-109. <https://doi.org/10.1016/j.trac.2015.04.013>
- Tow, W. W., Premier, R., Jing, H., & Ajlouni, S. (2011). Antioxidant and antiproliferation effects of extractable and nonextractable polyphenols isolated from apple waste using different extraction methods. *Journal of food science*, 76(7), T163-T172. <http://dx.doi.org/10.1111/j.1750-3841.2011.02314.x>
- Urbina, L., Eceiza, A., Gabilondo, N., Corcueria, M. Á., & Retegi, A. (2019). Valorization of apple waste for active packaging: Multicomponent polyhydroxyalkanoate coated nanopapers with improved hydrophobicity and antioxidant capacity. *Food Packaging and Shelf Life*, 21, 100356. <https://doi.org/10.1016/j.fpsl.2019.100356>
- USDA Nutrient Database. Raw Apple. <https://fdc.nal.usda.gov/fdc-app.html#/food-details/1750339/nutrients> (Diakses Pada 3 April 2022)
- Vidović, S., Horecki, A. T., Vladić, J., Šumić, Z., Gavarić, A., & Vakula, A. (2020). Apple. In *Valorization of Fruit Processing By-Products* (pp. 17-42). Academic Press. <https://sci-hub.mksa.top/10.1016/B978-0-12-817106-6.00002-2>
- Walia, M., Rawat, K., Bhushan, S., Padwad, Y. S., & Singh, B. (2014). Fatty acid composition, physicochemical properties, antioxidant and cytotoxic activity of apple seed oil obtained from apple pomace. *Journal of the Science of Food and Agriculture*, 94(5), 929-934. <https://doi.org/10.1002/jsfa.6337>
- Wijngaard, H. H., & Brunton, N. (2010). The optimisation of solid–liquid extraction of antioxidants from apple pomace by response surface methodology. *Journal of Food Engineering*, 96(1), 134-140. <https://doi.org/10.1016/j.jfoodeng.2009.07.010>
- Withouck, H., Boeykens, A., Vanden Broucke, M., Moreira, M. M., Delerue-Matos, C., & De Cooman, L. (2019). Evaluation of the impact of pre-treatment and extraction conditions on the polyphenolic profile and antioxidant activity of Belgium apple wood. *European*

- Food Research and Technology*, 245(11), 2565-2578.  
<https://link.springer.com/article/10.1007/s00217-019-03373-2>
- Wohlin, C. (2014). Guidelines for snowballing in systematic literature studies and a replication in software engineering. In *Proceedings of the 18th international conference on evaluation and assessment in software engineering* (pp. 1-10). <http://dx.doi.org/10.1145/2601248.2601268>
- Wolfe, K. L. (2003). Apple Peels as a Value-Added Food Ingredient. *J. Agri. Food Chem.* 51, 1676-1683. <http://dx.doi.org/10.1021/jf025916z>
- Yalcin, H., Karaman, S., & Ozturk, I. (2011). Evaluation of antioxidant efficiency of potato and orange peel and apple pomace extract in sunflower oil. *Italian Journal of Food Science*, 23(1), 55-61. [https://www.researchgate.net/publication/236169576\\_Evaluation\\_of\\_antioxidant\\_efficiency\\_of\\_potato\\_and\\_orange\\_peel\\_and\\_apple\\_pomace\\_extract\\_in\\_sunflower\\_oil](https://www.researchgate.net/publication/236169576_Evaluation_of_antioxidant_efficiency_of_potato_and_orange_peel_and_apple_pomace_extract_in_sunflower_oil)
- Yu, X., Van De Voort, F. R., Li, Z., & Yue, T. (2007). Proximate composition of the apple seed and characterization of its oil. *International Journal of Food Engineering*, 3(5). <http://dx.doi.org/10.2202/1556-3758.1283>
- Yukui, R., Wenya, W., Rashid, F., & Qing, L. (2009). Fatty acids composition of apple and pear seed oils. *International Journal of Food Properties*, 12(4), 774-779. <http://dx.doi.org/10.1080/10942910802054320>
- Zarrinmehr, M. J., Daneshvar, E., Nigam, S., Gopinath, K. P., Biswas, J. K., Kwon, E. E., ... & Bhatnagar, A. (2022). The effect of solvents polarity and extraction conditions on the microalgal lipids yield, fatty acids profile, and biodiesel properties. *Bioresource Technology*, 344, 126303. <https://doi.org/10.1016/j.biortech.2021.126303>
- Zhao, M., Peng, Y., & Li, L. (2021). A robot system for the autodetection and classification of apple internal quality attributes. *Postharvest Biology and Technology*, 180, 111615. <https://doi.org/10.1016/j.postharvbio.2021.111615>
- Zhu, Y., Yang, H., Si, Z., & Zhang, X. (2020). Solubility and thermodynamics of 1-hydroxyproline in water and (methanol, ethanol, n-propanol) binary solvent mixtures. *Journal of Molecular Liquids*, 298, 112043. <http://dx.doi.org/10.1016/j.molliq.2019.112043>