

DAFTAR PUSTAKA

- Abdullah, Z. H. dan Dong, Y. 2019. Biodegradable and Water Resistant Poly(vinyl) Alcohol (PVA)/Starch (ST)/Glycerol (GL)/Halloysite Nanotube (HNT) Nanocomposite Films for Sustainable Food Packaging. *Frontiers in Materials*. 6. <https://doi.org/10.3389/fmats.2019.00058>.
- Ahmad, N., dan Zakaria, M. R. 2019. *Oligosaccharide from Hemicellulose*. New York: Academic Press.
- Akbar, M, F., Amri, A., dan Zultiniar. 2019. Pembuatan Bioplastik Berbasis Pati Ubi Jalar dan Polyvinyl Alcohol (PVA) Menggunakan Graphene Sebagai Filler dan Gliserol Sebagai Plasticizer. *Jurnal Online Mahasiswa Fakultas Teknik*, 6(1):1-10.
- Alabi, O. A., Ologbonjaye, K. I., Awosolu, O., dan Alalade, O.E. 2019. Public and Environmental Health Effects of Plastic Wastes Disposal: A Review. *J Toxicol Risk Assess*. 5(1). doi.org/10.23937/2572-4061.1510021.
- Alghooneh, A., Mohammad Amini, A., Behrouzian, F., dan Razavi, S. 2016. Characterisation of cellulose from coffee silverskin. *International Journal of Food Properties*. 20(11). [10.1080/10942912.2016.1253097](https://doi.org/10.1080/10942912.2016.1253097).
- AOAC. 2005. *Official Methods of Analysis of AOAC International*. Gaithersburg: AOAC International.
- Arakawa, C. K. dan DeForest, C. A. 2017. *Biology and Engineering of Stem Cell Niches*. Academic Press. hal. 295-314.
- Aristizábal-Marulanda, V., Chacón-Perez, Y., dan Alzate, C. A. C. 2017. *Handbook of Coffee Processing By-Products*. Manizales: Academic Press.
- Arya, S. S., Venkatram, R., More, P. R., Vijayan, P. 2021. The Wastes of Coffee Bean Processing for Utilization in Food: a review. *Journal of Food Science and Technology*. 59(13):1-16.
- Badan Standardisasi Nasional. 2014. SNI 7818:2014 Kantong plastik mudah terurai. Jakarta: Badan Standardisasi Nasional.
- Badan Standardisasi Nasional. 2016. SNI 7188.7:2016 Kriteria ekolabel – Bagian 7: Kategori produk tas belanja plastik dan bioplastik mudah terurai. Jakarta: Badan Standardisasi Nasional.
- Bagnato, G., Iulianelli, A., Sanna, A., dan Basile, A. 2017. Glycerol Production and Transformation: A Critical Review with Particular Emphasis on Glycerol Reforming Reaction for Producing Hydrogen in Conventional and Membrane Reactors. *Membranes*. 7(2):17.

- Ballesteros, L.F., Teixeira, J.A., Mussatto, S.I. 2014. Chemical, Functional, and Structural Properties of Spent Coffee Grounds and Coffee Silverskin. *Food Bioprocess Technol.* 7:3493–3503.
- Bastian, F., Hutabarat, O. S., Dirpan, A., Nainu, F., Harapan, H., Emran, T. B., dan Simal-Gandara, J. 2021. From Plantation to Cup: Changes in Bioactive Compounds during Coffee Processing. *Foods* 10(11):2827. <https://doi.org/10.3390/foods10112827>.
- Benaimche, O., Seghir, N. T., Sadowski, L. dan Mellas, Mekki. 2020. Encyclopedia of Renewable and Sustainable Materials. Elsevier. hal. 649-662.
- Blinová, L., Sirotiak, M., Pastierova, A., dan Soldán, M. 2017. Review: Utilization of Waste from Coffee Production. *Research Papers Faculty of Materials Science and Technology Slovak University of Technology.* 25. 10.1515/rput-2017-0011.
- Buxoo, S., dan Jeetah, P. 2020. Feasibility of Producing Biodegradable Disposable Paper Cup from Pineapple Peels, Orange Peels and Mauritian Hemp Leaves with Beeswax Coating. *Springer Nature Applied Sciences Journal.* 2: 1-15.
- Cazon, O., Vazquez, M., dan Velazquez, G. 2018. Cellulose-glycerol-polyvinyl alcohol composite films for food packaging: Evaluation of water adsorption, mechanical properties, light-barrier properties and transparency. *Carbohydrate polymers.* 195:432-443. <https://doi.org/10.1016/j.carbpol.2018.04.120>.
- Chan, M. Y., Husseinsyah, S., dan Sam, S.T. 2015. A comparative study of different crosslinking agent-modified chitosan/corn cob biocomposite films. *Polymer Bulletin.* DOI 10.1007/s00289-015-1305-8.
- Collazo-Bigliardi, S., Ortega-Toro, R., dan Chiralt, A. 2019. Using Lignocellulosic Fractions of Coffee Husk to Improve Properties of Compatibilised Starch-PLA Blend Films. *Food Packaging and Shelf Life.* 22(2):100423. 10.1016/j.fpsl.2019.100423.
- Fauziah, S. N., Mubarak, A. S., dan Pujiastuti, D. Y. 2021. Application of glycerol on bioplastic based carrageenan waste cellulose on biodegradability and mechanical properties bioplastic. *IOP Conf. Series: Earth and Environmental Science.* 679:012005.
- Ferrari, F., Striani, R., Corcione, C., Visconti, P., Greco, A. 2019. BIO-COMPOSITES BASED ON POLY (VINYL) ALCOHOL (PVA) AND FOOD WASTES. Conference: 2019 IIER International Conference on Chemical and Biochemical Engineering 17-18 July 2019.
- Gottstein, V., Bernhardt, M., Dilger, E., Keller, J., Breitling-Utmann, C., Schwarz, S., Kuballa, T., Lachenmeier, D., dan Bunel, M. 2021. Coffee Silver Skin:

Chemical Characterization with Special Consideration of Dietary Fiber and Heat-Induced Contaminants. *Foods*. 10. 1705. 10.3390/foods10081705.

- Gupta, P. K., Raghunath, S., Venkatesh Prasanna, D., Venkat, P., Shree, V., Chithananthan, C., Choudhary, S., Surender, K., dan Geetha, K. 2019. An Update on Overview of Cellulose, Its Structure and Applications. 10.5772/intechopen.84727.
- Hamid, L., dan Samy, I. 2021. Fabricating Natural Biocomposites for Food Packaging. dalam (Ed.), Fiber-Reinforced Plastics. *IntechOpen*. <https://doi.org/10.5772/intechopen.100907>.
- Hazrol, M. D., Sapuan, S. M., Zainudin, E. S., Zuhri, M. Y. M., dan Abdul Wahab, N. I. 2021. Corn Starch (*Zea mays*) Biopolymer Plastic Reaction in Combination with Sorbitol and Glycerol. *Polymers*. 13:242. <https://doi.org/10.3390/polym13020242>.
- Jain, N., Singh, V. K., dan Chauhan, S. 2017. A review on mechanical and water absorption properties of polyvinyl alcohol based composites/films. *J Mech Behav Mater*. 26(5-6):213-222.
- Jayeola, C. O., Adebawale, B. A., Yahaya, L. E., Ogunwolu, S. O., dan Olubamiwa, O. 2018. Therapeutic, Probiotic, and Unconventional Foods. Ibadan: Academic Press.
- Kord, B., Malekian, B., Yousef, H., dan Najafi, A. 2016. Preparation and characterization of nanofibrillated Cellulose/Poly (Vinyl Alcohol) composite films. *Maderas: Ciencia y Tecnologia*. 18:743-752. 10.4067/S0718-221X2016005000065.
- Lakhundi, S., Siddiqui, R., dan Khan, N. A. 2015. Cellulose degradation: a therapeutic strategy in the improved treatment of Acanthamoeba infections. *Parasites & Vectors*. 8(23).
- Leow, Y., Sequerah, V., Tan, Y., Yu, Y., Peterson, E., Jiang, C., Zhang, Z., Yang, L., Loh, X. J., dan Kai, D. 2022. A tough, biodegradable and water-resistant plastic alternative from coconut husk. *Composites Part B: Engineering*. 241:110031. 10.1016/j.compositesb.2022.110031.
- Liu, B., Zhang, J., dan Guo, H. 2022. Research Progress of Polyvinyl Alcohol Water-Resistant Film Materials. *Membranes*. 12(3):347. <https://doi.org/10.3390/membranes12030347>.
- Lu, Y., Lu, Y-C., Hu, H-C., Xie, F-J., Wei, X-Y., dan Fan, X. 2017. Structural Characterization of Lignin and Its Degradation Products with Spectroscopic Methods. *Journal of Spectroscopy*. vol. 2017. Article ID 8951658, 15 pages. <https://doi.org/10.1155/2017/8951658>.

- Ma, Y. Z., Sobernheim, D., dan Garzon, J. R. 2016. *Unconventional Oil and Gas Resources Handbook*. Gulf Professional Publishing. hal. 513-526.
- Mahmood, Z., Yameen, M., Jahangeer, M., Riaz, M. Ghaffar, A., dan Javid, I., 2018. Lignin as Natural Antioxidant Capacity. 10.5772/intechopen.73284.
- Monteiro, M. R., Kugelmeier, C. L., Pinheiro, R. S., Batalha, M. O., dan da Silva César A. 2018. Glycerol from Biodiesel Production: Technological Paths for Sustainability. *Renewable and Sustainable Energy Reviews*. 88:109-122.
- Mudgil, D., dan Barak, S. 2019. *Classification, Technological Properties, and Sustainable Sources*. New York: Academic Press.
- Nechita, P., Mirela, R., dan Ciolacu, F. 2021. Xylan Hemicellulose: A Renewable Material with Potential Properties for Food Packaging Applications. *Sustainability*. 13: 13504. <https://doi.org/10.3390/su132413504>.
- Nissa, R. C., Fikriyyah, A. K., Abdullah, A. H. D., dan Pudjirahati, S. 2019. Preliminary study of biodegradability of starch-based bioplastics using ASTM G21-70, dip-hanging, and Soil Burial Test methods. *IOP Conf. Series: Earth and Environmental Science*. 277. doi:10.1088/1755-1315/277/1/012007
- Nova, Suryanto, E., Momuat, L. I. 2020. Karakterisasi Fisikokimia Dan Aktivitas Antioksidan Serat Pangan Dari Ampas Empulur Sagu Baruk (*Arenga microcarpha* B.). *Chemistry Progress*. 13(1):22–30. <https://doi.org/10.35799/cp.13.1.2020.28931>.
- OECD. 2022. *Global Plastics Outlook: Economic Drivers, Environmental Impacts and Policy Options*. Paris: OECD Publishing.
- Oliveira, G., Passos, C. P., Ferreira, P., Coimbra, M. A., dan Goncalves, I. 2021. Coffee By-Products and Their Suitability for Developing Active Food Packaging Materials. *MDPI Journal of Foods*. 10(3):683-699.
- Reid, Ian. 2011. Biodegradation of lignin. *Canadian Journal of Botany*. 73:1011-1018. 10.1139/b95-351.
- Rusdianto, A. S., Wiyono, A. E., Permatasari, D. E. D. 2021. Karakterisasi Gelas Bioplastik Berbasis Pati Singkong (*Manihot esculenta* Crantz) dengan Penambahan Serbuk Sabut Kelapa. *Gontor AGROTECH Science Journal*. 7(1):92-107.
- Sánchez-Safont, E. L., Aldureid, A., Lagarón, J. M., Gámez-Pérez, J., dan Cabedo, L. 2018. Biocomposites of Different Lignocellulosic Wastes for Sustainable Food Packaging Applications. *Composites Part B: Engineering*. 145:215-225.

- Santoso, E. B., Basito, dan Rahadian, D. 2013. Pengaruh Penambahan Berbagai Jenis dan Konsentrasi Susu terhadap Sifat Sensoris dan Sifat Fisikokimia *Puree Labu Kuning (Cucurbita moschata)*. *Jurnal Teknosains Pangan*. 2(3).
- Sanyang, M. L., Sapuan, S., Jawaid, M., Ishak, M., dan Sahari, J. 2015. Effect of Plasticizer Type and Concentration on Tensile, Thermal and Barrier Properties of Biodegradable Films Based on Sugar Palm (*Arenga pinnata*) Starch. *Polymers*. 7:1106-1124. doi:10.3390/polym7061106.
- Saputra, M. R. B. dan Supriyo, E. 2020. Pembuatan Plastik *Biodegradable* Menggunakan Pati dengan Penambahan Katalis ZnO dan *Stabilizer* Gliserol. *PENTANA*. 1(1):41-51.
- Senania, A. Sulisty, H., dan Prasetya, A. 2017. The Synthesis of Glycerol Carbonate from Biodiesel Byproduct Glycerol and Urea over Amberlyst 36. *Jurnal Bahan Alam Terbarukan*. 6(1):1-5.
- Simarmata, E., Hartiati, A., Harsojuwono, B. 2020. Karakteristik Komposit Bioplastik dalam Variasi Rasio Pati Umbi Talas (*Xanthosoma sagittifolium*) – Kitosan. *Agrotechno*. 5(2):75-80.
- Statista Research Department. 2022. Production of Coffee in Indonesia 2012-2021.
- Tajalla, G. U. N., Humaira, S., Parmita, A. W. Y. P., Zulfikar, A. 2019. Pembuatan Dan Karakterisasi Selulosa Dari Limbah Serbuk Meranti Kuning (*Shorea Macrobalanos*). *Jurnal Sains Terapan*. 5(1):142-147.
- Tan, H. W., Abdul Aziz, A. R., dan Aroua, M. K. 2013. Glycerol production and its applications as a raw material: A review. *Renewable and Sustainable Energy Reviews*. 27:118-127.
- Tan, R., Li, F., Zhang, Y., Yuan, Z., Feng, X., Zhang, W., Liang, T., Cao, J., De Hoop, C., Peng, X., dan Huang, X. 2021. High-Performance Biocomposite Polyvinyl Alcohol (PVA) Films Modified with Cellulose Nanocrystals (CNCs), Tannic Acid (TA), and Chitosan (CS) for Food Packaging. *Journal of Nanomaterials*. vol. 2021. <https://doi.org/10.1155/2021/4821717>.
- Tapangnoi, P., Oui, P. S., Naebpetch, W., dan Siriwong, C. 2022. Preparation of Purified Spent Coffee Ground and Its Reinforcement in Natural Rubber Composite. *Arabian Journal of Chemistry*. 15:1-13.
- Teodorescu, M., Bercea, M., dan Morariu S. 2018. Biomaterials of Poly(vinyl alcohol) and Natural Polymers. *Polymer Reviews*. 58(2).
- Tezara, C., Siregar, J., Lim, H. Y., Fauzi, F. A., Yazdi, Mh, Moey, L. K. Jin Wei, L. 2016. Factors that Affect the Mechanical Properties of Kenaf Fiber Reinforced Polymer: A Review. *JMES*. 10(2):2159-2175.

- Tuapattinaya, P. M. J., Simal, R., dan Warella, J. C. 2021. Analisis Kadar Air dan Kadar Abu Teh Berbahan Dasar Daun Lamun (*Enhalus acoroides*). *Biopendix Jurnal Biologi, Pendidikan, dan Terapan*, 8(1): 16-21.
- Utami, M. R., & Widiarti, N. 2014. Sintesis Plastik Biodegradable Dari Kulit Pisang dengan Penambahan Kitosan Dan Plasticizer Gliserol. *IJCS - Indonesia Journal of Chemical Science*. 3(2).
- Valdes, A., Fenollar, O., Sanahuja, A., Balart, R., Fortunati, E., Kenny, J., dan Garrigós, Maria. 2016. Characterization and enzymatic degradation study of poly(ϵ -caprolactone)-based biocomposites from almond agricultural by-products. *Polymer Degradation and Stability*. 132:181-190. 10.1016/j.polydegradstab.2016.02.023.
- Xie, Q., Zheng, X., Li, L., Ma, L., Zhao, Q., Chang, S., dan You, L. 2021. Effect of Curcumin Addition on the Properties of Biodegradable Pectin/Chitosan Films. *Molecules*. 26(8), 2152. doi:10.3390/molecules26082152.
- Zahroh, F., Sugihartono, I., dan Safitri, E. 2019. Young's Modulus Calculation of Some Metals Using Molecular Dynamics Method Based on the Morse Potential. *CERiMRE*. 2(1):19-34.
- Zanela, J., Blick, A. P., Casagrande, M., Grossmann, M. Yamashita, F. 2018. Polyvinyl alcohol (PVA) molecular weight and extrusion temperature in starch/PVA biodegradable sheets. *Polímeros*. 28(3).
- Zhou, L., He, H., Jiang, C., Ma, L., dan Yu, P. (2017). Cellulose Nanocrystals from Cotton Stalk for Reinforcement of Poly (Vinyl Alcohol) Composites. *Cellulose Chemistry and Technology*. 51:109-119.