

DAFTAR PUSTAKA

- [1] Badan Pusat Statistik, *Statistik kopi Indonesia 2020*. Jakarta: Badan Pusat Statistik, 2021.
- [2] ICO, “Historical data on the global coffee trade,” International Coffee Organization. Accessed: Mar. 11, 2023. [Online]. Available: https://www.ico.org/new_historical.asp?section=Statistics
- [3] D. Khusna and J. Susanto, “Pemanfaatan limbah padat kopi sebagai bahan bakar alternatif dalam bentuk briket berbasis biomass (studi kasus di PT. Santos Jaya Abadi Instan Coffee),” *Seminar Nasional Sains dan Teknologi Terapan III 2015, Institut Teknologi Adhi Tama Surabaya*, pp. 247–260, 2015.
- [4] N. L. U. Sumadewi, D. H. D. Puspaningrum, and N. N. Adisanjaya, “Pkm pemanfaatan limbah kopi di Desa Catur Kabupaten Bangli,” *Gastronomia ecuatoriana y turismo local.*, vol. 1, no. 69, pp. 5–24, 2020.
- [5] M. Y. Tan, H. T. N. Kuan, and A. A. Khan, “Tensile properties of ground coffee waste reinforced polyethylene composite,” *Materials Science Forum*, vol. 880, pp. 73–76, 2017, doi: 10.4028/www.scientific.net/MSF.880.73.
- [6] N. Zarrinbakhsh, T. Wang, A. Rodriguez-Uribe, M. Misra, and A. K. Mohanty, “Characterization of wastes and coproducts from the coffee industry for composite material production,” *BioResources*, vol. 11, no. 3, pp. 7637–7653, 2016, doi: 10.15376/biores.11.3.7637-7653.
- [7] L. Edahwati, D. S. Perwitasari, and D. Siswanti, “Reduction of lignin from coffee husk using organosolve method,” *Eksergi*, vol. 11, no. 2, p. 7, 2014, doi: 10.31315/e.v11i2.364.
- [8] A. R. Hakim and R. Saputri, “Narrative Review: Optimasi Etanol sebagai Pelarut Senyawa Flavonoid dan Fenolik,” *Jurnal Surya Medika*, vol. 6, no. 1, pp. 177–180, 2020, doi: 10.33084/jsm.v6i1.1641.
- [9] E. F. Hartono and N. Rachmat, “Klasifikasi jenis plastik HDPE, LDPE, dan PS berdasarkan tekstur menggunakan metode support vector machine,” *JATISI (Jurnal Teknik Informatika dan Sistem Informasi)*, vol. 9, no. 2, pp. 1403–1412, 2022, doi: 10.35957/jatisi.v9i2.2470.
- [10] C. DeArmitt and R. Rotheron, *Dispersants and coupling agents*, Second Edi. Elsevier Inc., 2011. doi: 10.1016/B978-1-4377-3514-7.10025-X.
- [11] Y. Adityawardhana, “Studi Penambahan Coupling Agent Anhidrat Maleat Terhadap Sifat Mekanik Dan Morfologi Komposit Serat Karbon / Epoksi Untuk Lambung Kapal,” *Institut Teknologi Sepuluh Nopember*, 2018.
- [12] E. Roumeli *et al.*, “Effect of maleic anhydride on the mechanical and thermal properties of hemp/high-density polyethylene green composites,” *Journal of Thermal Analysis and Calorimetry*, vol. 121, no. 1, pp. 93–105, 2015, doi: 10.1007/s10973-015-4596-y.

- [13] Y. A. Kusumaningrum and Rr. A. N. Aisha, "Prarancangan pabrik hdpe dari ethylene," Universitas Islam Indonesia, 2022.
- [14] A. Nurhidayat and D. D. Susilo, "Pengaruh fraksi volume pada pembuatan komposit hdpe limbah-cantula dan berbasis jenis perekat dalam pembuatan laminate," 2013.
- [15] S. G. S. Giat, S. Sudirman, D. I. Anwar, F. Lukitowati, and B. Abbas, "Sifat fisis dan mekanis komposit high density polyethylene (HDPE) – hydroxyapatite (HAp) dengan teknik iradiasi gamma," *Jurnal Kimia dan Kemasan*, vol. 37, no. 1, p. 53, 2015, doi: 10.24817/jkk.v37i1.1812.
- [16] R. A. F. Siburian *et al.*, *Polimer: ilmu material umum*. 2017.
- [17] C. A. Harper, *Modern plastic handbook*. New York: McGraw-Hill Companies, Inc., 2000.
- [18] A. Maghfirah, H. Meilanda, E. Marlianto, and M. Iskandar, "Pemanfaatan serat cangkang kulit kopi dalam pembuatan beton polimer dengan resin polyester sebagai perekat," *Jurnal Ilmu Fisika dan Teknologi*, vol. 3, no. 2, pp. 51–61, 2019.
- [19] N. Farhaty and Muchtaridi, "Tinjauan kimia dan aspek farmakologi senyawa asam klorogenat pada biji kopi : review," *Far*, vol. 14, no. 1, pp. 214–227, 2016.
- [20] R. Campos-Vega, G. Loarca-Piña, H. A. Vergara-Castañeda, and B. Dave Oomah, "Spent coffee grounds: a review on current research and future prospects," *Trends in Food Science and Technology*, vol. 45, no. 1, pp. 24–36, 2015, doi: 10.1016/j.tifs.2015.04.012.
- [21] A. Hadiasyah, "Pembuatan biobriket dari serasah dan ampas kopi serta penambahan limbah bubuk kakao sebagai pengaroma," Universitas Hasanuddin, 2022.
- [22] H. F. Rochmah, A. S. Kresnanda, and M. L. Asyidiq, "Pemanfaatan limbah ampas kopi sebagai upaya pemberdayaan petani kopi di Cv Frinsa Agrolestari, Bandung, Jawa Barat," *Jurnal Sains Terapan*, vol. 11, no. 2, pp. 60–69, 2021, doi: 10.29244/jstsv.11.2.60-69.
- [23] G. Dattatraya Saratale *et al.*, "A review on valorization of spent coffee grounds (SCG) towards biopolymers and biocatalysts production," *Bioresource Technology*, vol. 314, no. April, p. 123800, 2020, doi: 10.1016/j.biortech.2020.123800.
- [24] M. Gefri, "Studi laboratoriom pengaruh temperatur dan konsentrasi H₂SO₄ terhadap kualitas lignin sebagai bahan dasar pembuatan surfaktan liginosulfonat dari tandan kosong kelapa sawit," 2022.
- [25] F. A. Souhoka and J. Latupeirissa, "Sintesis dan karakterisasi selulosa asetat (CA)," *Indo. J. Chem. Res.*, vol. 5, no. 2, pp. 58–62, 2018, doi: 10.30598//ijcr.2018.5-fen.
- [26] W. Fatriasari, N. Masruchin, and E. Hermiati, *Selulosa: karakteristik dan pemanfaatannya*. Jakarta: LIPI Press, 2019.
- [27] I. Mulyadi, "Isolasi dan karakteristik selulosa," *Jurnal Sainika Unpam*, vol. 1, no. 2, pp. 177–180, 2019.
- [28] P. Kusumo, S Biyono, and Tegar S, "Isolasi lignin dari serbuk grajen kayu jati (*tectona grandis*) dengan metode klasson," *Jurnal Teknik: Media Pengembangan Ilmu dan Aplikasi*

- Teknik*, vol. 19, no. 2, pp. 130–139, 2020, doi: 10.26874/jt.vol19no02.158.
- [29] V. Ambrogi, C. Carfagna, P. Cerruti, and V. Marturano, *Additives in Polymers*. Elsevier Inc., 2017. doi: 10.1016/B978-0-323-44353-1.00004-X.
- [30] K. Weissemel and H.-J. Arpe, *Industrial organic chemistry*, 3rd ed. New York: VCH Verlagsgesellschaft mbH, 1997.
- [31] U. Fathanah, “Kualitas papan komposit dari sekam padi dan plastik HDPE daur ulang menggunakan maleic anhydride (MAH) sebagai compatibilizer,” *Jurnal Rekayasa Kimia dan Lingkungan*, vol. 8, no. 2, pp. 53–59, 2011.
- [32] O. M. Musa, *Handbook of maleic anhydride based materials*. 2016. doi: 10.1007/978-3-319-29454-4_10.
- [33] L. Huang, B. Mu, X. Yi, S. Li, and Q. Wang, “Sustainable use of coffee husks for reinforcing polyethylene composites,” *Journal of Polymers and the Environment*, vol. 26, no. 1, pp. 48–58, 2018, doi: 10.1007/s10924-016-0917-x.
- [34] M. Li, X. Wen, J. Liu, and T. Tang, “Synergetic effect of epoxy resin and maleic anhydride grafted polypropylene on improving mechanical properties of polypropylene/short carbon fiber composites,” *Composites Part A: Applied Science and Manufacturing*, vol. 67, pp. 212–220, 2014, doi: 10.1016/j.compositesa.2014.09.001.
- [35] C. D. Jayanti, “Pembuatan pulp dari limbah sabut kelapa muda dengan metode organosolv menggunakan pemanas microwave,” Universitas Muhammadiyah Surakarta, 2018.
- [36] A. Gunawan, D. E. Sihotang, and M. Y. Thoha, “Pengaruh waktu pemasakan dan volume larutan pemasak terhadap viskositas pulp dari ampas tebu,” *Jurnal Teknik Kimia*, vol. 18, no. 2, pp. 1–8, 2012.
- [37] Roosmariharso, “Petunjuk praktik pemrosesan polimer,” Politeknik STMI Jakarta, 2021.
- [38] C. Irawan, B. Arifvianto, and M. Mahardika, “Pengaruh temperatur ekstrusi terhadap sifat fisis, kimiawi dan kekuatan tarik filamen ultra high molecular weight polyethylene (UHMWPE),” *Jurnal Teknologi Terapan (JTT)*, vol. 7, no. September, pp. 76–85, 2021.
- [39] Z. Raheem, *Handbook of polymer testing*. Shwaburly: Rapra Technology Limited, 2002. doi: 10.1201/9781482270020.
- [40] American Society for Testing and Material, “ASTM D638-14: standard test method for tensile properties of plastics,” *ASTM International*, vol. 82, no. C, pp. 1–15, 2014, doi: 10.1520/D0638-14.1.
- [41] E. Melyna and A. P. Afridana, “The Effect of Coffee Husk Waste Addition with Alkalisiation Treatment on the Mechanical Properties of Polypropylene Composites,” *Equilibrium Journal of Chemical Engineering*, vol. 7, no. 1, p. 14, 2023, doi: 10.20961/equilibrium.v7i1.68556.
- [42] A. R. J. H. Roby, “Pengaruh penambahan limbah ampas kopi dengan perlakuan alkalisasi terhadap kekakuan, kuat impak, dan sifat alir pada komposit polipropilena,” 2022.
- [43] H. Wu *et al.*, “Effect of oil extraction on properties of spent coffee ground–plastic

- composites,” *Journal of Materials Science*, vol. 51, no. 22, pp. 10205–10214, 2016, doi: 10.1007/s10853-016-0248-2.
- [44] A. Setiabudi, R. Hardian, and A. Muzakir, *Karakterisasi Material: Prinsip dan Aplikasinya dalam Penelitian Kimia*, Cetakan Pe., vol. 1. Bandung: UPI PRESS, 2012.
- [45] American Society for Testing and Material, “ASTM D 3418-03,” pp. 1–7, 2003.
- [46] E. Melyna, K. S. Nisa, A. Aurel, and L. Fitri, “Pengaruh penambahan serbuk alumina (Al_2O_3) pada komposit serat kayu jati bermatriks polipropilena The effect of alumina (Al_2O_3) addition on teak powder and polypropylene composite Received February 2023 , Revised May 2023 , Accepted for publicat,” vol. 29, no. 2, pp. 62–70, 2023.
- [47] S. Mohan Bhasney, K. Mondal, A. Kumar, and V. Katiyar, “Effect of microcrystalline cellulose [MCC] fibres on the morphological and crystalline behaviour of high density polyethylene [HDPE]/polylactic acid [PLA] blends,” *Composites Science and Technology*, vol. 187, p. 107941, 2020, doi: 10.1016/j.compscitech.2019.107941.
- [48] A. H. Awad, A. Aly Abd El-Wahab, R. El-Gamsy, and M. H. Abdel-latif, “A study of some thermal and mechanical properties of HDPE blend with marble and granite dust,” *Ain Shams Engineering Journal*, vol. 10, no. 2, pp. 353–358, 2019, doi: 10.1016/j.asej.2018.08.005.