



Laporan Hasil Penelitian

Pembuatan Butanoic Acid Dari Campuran Sagu Dan Tetes Tebu Menggunakan Proses Fermentasi Bakteri *Clostridium Acetobutylicum*

DAFTAR PUSTAKA

- (DEN), S. J. D. E. N. (2016). *Content-Indonesia-Energy-Outlook-2015-1Vgcv6T.Pdf* (p. 146).
- Araguirang, G. E., Arizala, A. J. R., Asilo, E. B. B., Batalon, J. L. S., Bello, E. B., Madigal, J. P. T., Monge, J. R., Sanchez, N. A. L., & Elegado, F. B. (2020). PRE-TREATMENT AND ENZYMATIC HYDROLYSIS OF BANANA (*Musa acuminata* x *balbisiana*) PSEUDOSTEM FOR ETHANOL PRODUCTION. *Agro Bali: Agricultural Journal*, 3(2), 98–107. <https://doi.org/10.37637/ab.v3i2.608>
- BioRes_18_4_7915_Fauzi_NFINYS_Glucose_Tolerance_C_acetobutylicum_Ferment_22891.pdf*. (n.d.).
- Brändle, J., Domig, K. J., & Kneifel, W. (2016). Relevance and analysis of butyric acid producing clostridia in milk and cheese. *Food Control*, 67, 96–113. <https://doi.org/10.1016/j.foodcont.2016.02.038>
- Chen, M., Liu, Z., Zhao, X., Li, K., Wang, K., Liu, Z., Xia, L., Yuan, J., & Zhao, R. (2022). Fluorinated co-solvent electrolytes for high-voltage Ni-rich LiNi_{0.8}Co_{0.1}Mn_{0.1}O₂ (NCM811) positive electrodes. *Frontiers in Energy Research*, 10(August), 1–12. <https://doi.org/10.3389/fenrg.2022.973336>
- Chung, T.-W., Hong, G.-X., Shu, S.-H., & Wahyu, D. (2017). *Development of a Novel Adsorption Separation Process of Bio-Based Butanol for the Alternative Energy Sources*. April, 25–30. <https://doi.org/10.20472/iac.2017.029.008>
- Damayanti, A., Putri, R. D. A., & Pratama, A. (2020). *Acredited : SK No .: 60 / E / KPT / 2016 Website : http://ejournal.undip.ac.id/index.php/reaktor/ Kinetics of Enzymatic Hydrolysis of Passion Fruit Peel using Cellulase in Bioethanol Production*. 20(1), 10–17.
- Girbal, L., Croux, C., Vasconcelos, I., & Soucaille, P. (1995). Regulation of metabolic shifts in *Clostridium acetobutylicum* ATCC 824. *FEMS Microbiology Reviews*, 17(3), 287–297. <https://doi.org/10.1111/j.1574-6976.1995.tb00212.x>
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- Kilonzo, P. M., & Margaritis, A. (2004). The effects of non-Newtonian fermentation broth viscosity and small bubble segregation on oxygen mass transfer in gas-lift bioreactors: A critical review. *Biochemical Engineering Journal*, 17(1), 27–40. [https://doi.org/10.1016/S1369-703X\(03\)00121-9](https://doi.org/10.1016/S1369-703X(03)00121-9)
- Laga, A., Syarifuddin, A., & Dirpan, A. (2018). Enzymatic production of maltodextrins derived from sago flour using heat-stable alpha-amylase and pullulanase. *IOP Conference Series: Earth and Environmental Science*, 157(1). <https://doi.org/10.1088/1755-1315/157/1/012028>
- Lin, Z., Cong, W., & Zhang, J. (2023). Biobutanol Production from Acetone–Butanol–Ethanol Fermentation: Developments and Prospects. *Fermentation*, 9(9), 1–17. <https://doi.org/10.3390/fermentation9090847>
- Liu, Y., Yuan, Y., Ramya, G., Mohan Singh, S., Thuy Lan Chi, N., Pugazhendhi, A., Xia, C., & Mathimani, T. (2022). A review on the promising fuel of the future – Biobutanol; the hindrances and future perspectives. *Fuel*, 327(November 2022), 1–6. <https://doi.org/10.1016/j.fuel.2022.125166>
- Madhania, S., Muharam, Y., Winardi, S., & Purwanto, W. W. (2019). Mechanism of molasses–water mixing behavior in bioethanol fermenter. Experiments and CFD modeling. *Energy Reports*, 5, 454–461. <https://doi.org/10.1016/j.egyr.2019.04.008>
- Mangwanda, T. W., Mani, J. S., Johnson, J. B., Jackson, S., McKeown, T., & Naiker, M. (2023). *Physicochemical and Nutritional Analysis of Molasses for Rum Fermentation*. November, 105. <https://doi.org/10.3390/foods2023-15137>
- Millati, T., & Nurhayati. (2020). Mini Review Pembuatan Resistant Starch Pati Beras Dengan. *Jurnal Agrotek*, 7(2), 110–121.
- Nasrah, N. S. M., Zahari, M. A. K. M., Masngut, N., & Ariffin, H. (2017). Statistical Optimization for Biobutanol Production by *Clostridium acetobutylicum* ATCC 824 from Oil Palm Frond (OPF) Juice Using Response Surface Methodology. *MATEC Web of Conferences*, 111, 1–8. <https://doi.org/10.1051/mateconf/201711103001>
- Ni'maturohmah, E., & Yunianta. (2015). Hydrolysis of Sago (Metroxylon Sago



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- Rottb.) Starch by β -Amylase for Making Dextrin. *Jurnal Pangan Dan Agroindustri*, 3(1), 292–301.
- Nurul adela, B., Soh, K. L., Nasrin, A. B., & Maizan, I. (2017). Hydrolysis of residual starch from sago pith residue and its fermentation to bioethanol. *Sains Malaysiana*, 46(8), 1269–1278.
- Omorotionmwan, B. B., Wang, H., Baker, J. P., Gizynski, K., Yoo, M., Akaluka, C., Zhang, Y., & Minton, N. P. (2023). Chromosomal engineering of inducible isopropanol- butanol-ethanol production in *Clostridium acetobutylicum*. *Frontiers in Bioengineering and Biotechnology*, 11(June), 1–14. <https://doi.org/10.3389/fbioe.2023.1218099>
- Patakova, P., Maxa, D., Rychtera, M., Linhova, M., Fribert, P., Muzikova, Z., Lipovsky, J., Paulova, L., Pospisil, M., Sebor, G., & Melzoch, K. (2011). Perspectives of Biobutanol Production and Use. *Biofuel's Engineering Process Technology, December 2015*. <https://doi.org/10.5772/16464>
- Rahmawati, A. Y., & Sutrisno, A. (2015). Hidrolisis Tepung Ubi Jalar Ungu (*Ipomea batatas* L.) Secara Enzimatis Menjadi Sirup Glukosa Fungsional: Kajian Pustaka. *Jurnal Pangan Dan Agroindustri*, 3(3), 1152–1159.
- Sánchez-Ramírez, E., Quiroz-Ramírez, J. J., Segovia-Hernández, J. G., Hernández, S., & Bonilla-Petriciolet, A. (2015). Process alternatives for biobutanol purification: Design and optimization. *Industrial and Engineering Chemistry Research*, 54(1), 351–358. <https://doi.org/10.1021/ie503975g>
- Selvia Aprilyanti. (2018). Pengaruh konsentrasi NaOH dan waktu hidrolisis terhadap kadar selulosa pada daun nanas. *Jurnal Teknik Kimia*, 24(1), 28–31. <https://doi.org/10.36706/jtk.v24i1.424>
- Sun, Y., Xu, Z., Zheng, Y., Zhou, J., & Xiu, Z. (2019). Efficient production of lactic acid from sugarcane molasses by a newly microbial consortium CEE-DL15. *Process Biochemistry*, 81(2), 132–138. <https://doi.org/10.1016/j.procbio.2019.03.022>
- Veptiyan, E. D., Apriani, M., & Mayangsari, N. E. (2019). Pengaruh Waktu Delignifikasi terhadap Karakteristik Selulosa dari Daun Nanas dan Jerami. *National Conference Proceeding on Waste Treatment Technology*, 2623, 59–
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64.

Yandri, Y., Nadila, N., Suhartati, T., Satria, H., & Hadi, S. (2020). Peningkatan Kestabilan Enzim A–Amilase Dengan Penambahan Gliserol. *Analit: Analytical and Environmental Chemistry*, 5(02), 143–154. <https://doi.org/10.23960/aec.v5.i2.2020.p143-154>

Yousif, I. E., & Saleh, A. M. (2023). Butanol-gasoline blends impact on performance and exhaust emissions of a four stroke spark ignition engine. *Case Studies in Thermal Engineering*, 41(November 2022). <https://doi.org/10.1016/j.csite.2022.102612>