

DAFTAR PUSTAKA

- Aini, A., Sriasih, M., & Kisworo, D. (2017). Studi Pendahuluan Cemar Air Limbah Rumah Potong Hewan di Kota Mataram. *Jurnal Ilmu Lingkungan*, 15(1), 42–48. <https://doi.org/10.14710/jil.15.1.42-48>
- Alviomora, C. (2018). Fitoremediasi Tanaman Daun Kiambang Dan Kayu Apu Terhadap Penurunan Kadar COD Limbah Cair Batik Home Industri Batik. In *Universitas Muhammadiyah Semarang* (Issue 28).
- APHA, AWWA, & WEF. (2023). *Standard Methods for the Examination of Water and Wastewater* (W. Lipps, E. Braun-Howland, & BaxterTE (eds.); 24th Editi). APHA Publisher.
- Assidiqy, A. M. (2017). Perencanaan Bangunan Instalasi Pengolahan Air Limbah Domestik Dengan Proses Anaerobic Baffled Reactor Dan Anaerobic Filter Pada Hotel Bintang 5 Di Surabaya. *Jurnal Teknik ITS*, 143.
- Atima, W. (2015). BOD dan COD Sebagai Parameter Pencemaran Air Dan Baku Mutu Air Limbah. *Biosel: Biology Science and Education*, 4(1), 83. <https://doi.org/10.33477/bs.v4i1.532>
- Batubara, F., Ritonga, N. A., & Turmuzi, M. (2018). Start-Up of Upflow Anaerobic Sludge Blanket (UASB) Reactor Treating Slaughterhouse Wastewater. *Journal of Physics: Conference Series*, 1116(4). <https://doi.org/10.1088/1742-6596/1116/4/042008>
- Bhattacharyya, B. C., & Banerjee, R. (2007). Upflow Anaerobic Sludge Blanket. *Environmental Biotechnology*, 252–253.
- Caporaso, J. G., Kuczynski, J., Stombaugh, J., Bittinger, K., Bushman, F. D., Costello, E. K., Fierer, N., Peña, A. G., Goodrich, J. K., Gordon, J. I., Huttley, G. A., Kelley, S. T., Knights, D., Koenig, J. E., Ley, R. E., Lozupone, C. A., Mcdonald, D., Muegge, B. D., Pirrung, M., ... Knight, R. (2010). Correspondence QIIME allows analysis of high-throughput community sequencing data Intensity normalization improves color calling in SOLiD sequencing. *Nature Publishing Group*, 7(5), 335–336. <https://doi.org/10.1038/nmeth0510-335>
- Cassir, N., Benamar, S., & Scola, B. La. (2015). Clostridium butyricum: from beneficial to a new emerging pathogen. *Clinical Microbiology and Infection*. <https://doi.org/10.1016/j.cmi.2015.10.014>
- Chan, Y. J., Chong, M. F., Law, C. L., & Hassell, D. G. (2009). A review on anaerobic-aerobic treatment of industrial and municipal wastewater. *Chemical Engineering Journal*, 155(1–2), 1–18. <https://doi.org/10.1016/j.cej.2009.06.041>
- Daniswari, T., & Sali, W. (2021). Pengaruh Dosis Serbuk Biji Kelor (Moringa Oliefera) Terhadap Kadar Biochemical Oxygen Demand Air Limbah Rumah Pemotongan Ayam Tahun 2021. *Jurnal Kesehatan Lingkungan (JKL)*, 11(2). <https://doi.org/10.33992/jkl.v11i2.1611>

- Doma, H. S., El-Kamah, H. M., & El-Qelish, M. (2016). Slaughterhouse wastewater treatment using UASB reactor followed by down flow hanging sponge unit. *Research Journal of Pharmaceutical, Biological and Chemical Sciences*, 7(2), 568–576.
- Doma, H. S., El-kamah, H. M., El-qelish, M., & April, M. (2016). *Slaughterhouse Wastewater Treatment Using UASB Reactor Followed by Down Flow Hanging Sponge Unit. November 2018.*
- Effendi, H. (2003). *Telah Kualitas Air bagi pengelolaan sumberdaya dan lingkungan perairan*. Kanisius.
- Faisal, F., Machdar, I., Muhammad, S., Onodera, T., Syutsubo, K., & Ohashi, A. (2017). Unjuk Kerja Down-Flow Hanging Sponge (DHS) Bioreaktor sebagai Secondary Treatment untuk Pengolahan Limbah Domestik. *Jurnal Litbang Industri*, 7(1), 11. <https://doi.org/10.24960/jli.v7i1.2687.11-18>
- Fujihira, T., Seo, S., Yamaguchi, T., Hatamoto, M., & Tanikawa, D. (2018). High-rate anaerobic treatment system for solid/lipid-rich wastewater using anaerobic baffled reactor with scum recovery. *Bioresource Technology*, 263(February), 145–152. <https://doi.org/10.1016/j.biortech.2018.04.091>
- Gumilar, J., Triatmojo, S., Yusiati, L. M., & Pertiwiningrum, A. (2015). Pengaruh Penggunaan Enzim Keratinase dari Bakteri *Exiguobacterium* sp. Dg1 pada Proses Buang Rambut Ramah Lingkungan terhadap Kualitas Limbah Cair. *Jurnal Ilmu Ternak*, 15(1), 22–29. <https://doi.org/10.24198/jit.v15i1.8040>
- Hafid, S. A. (2016). *Sistem Kontrol Anaerobik pada Penanganan Limbah Cair Pengolahan Kopi Menggunakan Reaktor UASB*. Universitas Jember.
- Hatamoto, M., Okubo, T., Kubota, K., & Yamaguchi, T. (2018). Characterization of downflow hanging sponge reactors with regard to structure, process function, and microbial community compositions. *Applied Microbiology and Biotechnology*, 102(24), 10345–10352. <https://doi.org/10.1007/s00253-018-9406-6>
- Hermanto. (2016). Produksi Biogas dari Limbah Kelapa Sawit Menggunakan Bioreaktor Up-Flow Anaerobik Sludge Blanket (UASB). *Jurnal Riset Teknologi Industri*, 9(1), 56. <https://doi.org/http://dx.doi.org/10.26578/jrti.v9i1.1704>
- Kholik, A., & Ramdani, A. M. (2017). Rancang bangun dan uji karakteristik bubble reactor. *Skripsi DIII Teknik Kimia. Politeknik Negeri Bandung.*
- Koparal, A. S., Yildiz, Y. Ş., Keskinler, B., & Demircioğlu, N. (2008). Effect of initial pH on the removal of humic substances from wastewater by electrocoagulation. *Separation and Purification Technology*, 59(2), 175–182. <https://doi.org/10.1016/j.seppur.2007.06.004>
- Kotcheroen, W., Watari, T., Adlin, N., Tran P., T., Satanwat, P., Pungrasmi, W., Powtongsook, S., Takeuchi, Y., Hatamoto, M., Yamazaki, S., & Yamaguchi, T. (2023). Evaluation of an anaerobic baffled reactor (ABR) – downflow hanging sponge (DHS) system in treatment of black wastewater from a

- closed recirculating aquaculture system. *Aquacultural Engineering*, 100. <https://doi.org/10.1016/j.aquaeng.2022.102303>
- Kristaufan JP, Purwati Sri, & Setaiwan Yusup. (2010). Pengolahan Air Limbah Industri Kertas Karton Dengan Up-Flow Anarobic Sludge Blanket (Uasb) Dan Lumpur Aktif. *Berita Selulosa*, 45, 22–31.
- Kuroda, K., Chosei, T., Nakahara, N., Hatamoto, M., Wakabayashi, T., Kawai, T., Araki, N., Syutsubo, K., & Yamaguchi, T. (2015). High organic loading treatment for industrial molasses wastewater and microbial community shifts corresponding to system development. *Bioresource Technology*, 196, 225–234. <https://doi.org/10.1016/j.biortech.2015.07.070>
- Laksono, S. (2012). Pengolahan Biologis Limbah Batik Dengan Media Biofilter. In *Skripsi Ilmiah*.
- Lier, J. B. Van, Mahmoud, N., & Zeeman, G. (2008). Anaerobic Wastewater Treatment. In *Biological Wastewater Treatment : Principles, Modelling and Design* (pp. 401–442). <https://doi.org/10.1021/es00154a002>
- Lin, Y., Han, X., Lu, H., & Zhou, J. (2013). Study of archaea community structure during the biodegradation process of nitrobenzene wastewater in an anaerobic baffled reactor. *International Biodeterioration and Biodegradation*, 85, 499–505. <https://doi.org/10.1016/j.ibiod.2013.05.017>
- Lingkungan, P. T. (2007). Granulasi lumpur biogas anaerobik. *Jurnal Teknik Lingkungan*, 8(2), 128–136.
- Lipczynska-Kochany, E. (2018). Humic substances, their microbial interactions and effects on biological transformations of organic pollutants in water and soil: A review. In *Chemosphere* (Vol. 202, pp. 420–437). Elsevier Ltd. <https://doi.org/10.1016/j.chemosphere.2018.03.104>
- Lu, J., Zhang, Y., Wu, J., & Wang, J. (2020). Nitrogen removal in recirculating aquaculture water with high dissolved oxygen conditions using the simultaneous partial nitrification, anammox and denitrification system. *Bioresource Technology*, 305(February), 123037. <https://doi.org/10.1016/j.biortech.2020.123037>
- Lubis, I., Edhi, T., Soesilo, B., Lingkungan, S. I., Indonesia, U., Salemba, J., No, R., & Pusat, J. (2018). Pengelolaan Air Limbah Rumah Potong Hewan di RPH X , Kota Bogor , Provinsi Jawa Barat (Wastewater Management of Slaughterhouse in Slaughterhouse X, Bogor City, West Java Province). *Jurnal Manusia & Lingkungan*, 25(1), 33–44. <https://doi.org/10.22146/jml.35396>
- Lundberg, J. O., Weitzberg, E., & Gladwin, M. T. (2008). The nitrate-nitrite-nitric oxide pathway in physiology and therapeutics. *Nature Reviews Drug Discovery*, 7(2), 156–167. <https://doi.org/10.1038/nrd2466>

- Machdar, I., Harada, H., Ohashi, A., Sekiguchi, Y., Okui, H., & Ueki, K. (1997). A novel and cost-effective sewage treatment system consisting of UASB pre-treatment and aerobic post-treatment units for developing countries. *Water Science and Technology*, 36(12), 189–197. [https://doi.org/https://doi.org/10.1016/S0273-1223\(97\)00739-7](https://doi.org/https://doi.org/10.1016/S0273-1223(97)00739-7)
- Machdar, I., Sekiguchi, Y., Sumino, H., Ohashi, A., & Harada, H. (2000). Combination of a UASB reactor and a curtain type DHS (downflow hanging sponge) reactor as a cost-effective sewage treatment system for developing countries. *Water Science and Technology*, 42(3–4), 83–88. <https://doi.org/10.2166/wst.2000.0362>
- Maharjan, N., Dehama, K., Ohtsuki, K., Saito, Y., Miyaoka, Y., Tshering, T., Nakamura, A., Hatamoto, M., & Yamaguchi, T. (2014). An Integrated System of UASB-DHS-A2SBR for Effective Removal of Organic Matter and Nutrients from Municipal Wastewater. *Journal of Water and Environment Technology*, 12(5), 421–429. <https://doi.org/10.2965/jwet.2014.421>
- Maharjan, N., Hewawasam, C., Hatamoto, M., Yamaguchi, T., Harada, H., & Araki, N. (2021). Downflow Hanging Sponge System: A Self-Sustaining Option for Wastewater Treatment. In *Promising Techniques for Wastewater Treatment and Water Quality Assessment* (Vol. 32, pp. 137–144). <https://doi.org/10.5772/intechopen.94287>
- Mahmoud, N., Zeeman, G., Gijzen, H., & Lettinga, G. (2003). Solids removal in upflow anaerobic reactors, a review. *Bioresource Technology*, 90(1), 1–9. [https://doi.org/10.1016/S0960-8524\(03\)00095-6](https://doi.org/10.1016/S0960-8524(03)00095-6)
- Manurung, R. (2004). Proses Anaerobik Sebagai Alternatif Untuk Mengolah Limbah Sawit. *Universitas Sumatera Utara*.
- Marbun, J. A. (2019). *Perencanaan Unit Upflow Anaerobic Sludge Blanket (UASB) Pada IPAL Eksisting Industri Kelapa Sawit di Riau*.
- Maulana, L., Suprayogi, A., & Wijaya, A. P. (2015). Analisis Pengaruh Total Suspended Solid Dalam Penentuan Kedalaman Laut Dangkal Dengan Metode Algoritma Van Hengel Dan Spitzer. *Jurnal Geodesi Undip Jurnal Geodesi Undip*, 4(April), 86–94.
- Menteri Lingkungan Hidup dan Kehutanan Republik Indonesia. (2014). *Peraturan Menteri Lingkungan Hidup Republik Indonesia Nomor 5 Tahun 2014 tentang Baku Mutu Air Limbah*.
- Morvan, C., Folgosa, F., Kint, N., Teixeira, M., & Martin-verstraete, I. (2021). *Minireview Responses of Clostridia to oxygen : from detoxification to adaptive strategies*. 23, 4112–4125. <https://doi.org/10.1111/1462-2920.15665>
- Ng, M., Dalhatou, S., Wilson, J., Kamdem, B. P., Temitope, M. B., Paumo, H. K., Djelal, H., Assadi, A. A., Nguyen-tri, P., & Kane, A. (2022). Characterization of Slaughterhouse Wastewater and Development of

Treatment Techniques: A Review. *Processes*, 10(7), 1–28.
<https://doi.org/10.3390/pr10071300>

- Nugroho, R., & Rifai, A. (2016). Kajian Kelayakan Ekonomi Rencana Pembangunan Instalasi Pengolahan Air Limbah (IPAL) Domestik Komunal Sistem UASB-DHS Di Kota Bogor. *Jurnal Teknologi Lingkungan*, 13(3), 269. <https://doi.org/10.29122/jtl.v13i3.1396>
- Nurcholis, N., & Muchlis, D. (2018). Preliminary Study of Contamination Wastewater Environment in Slaughterhouse of Merauke City. *E3S Web of Conferences*, 73, 05018.
- Nurhadi. (2010). Evaluasi Kinerja Reaktor Upflow Anaerobic Sludge Blanket (UASB) dan Downflow Hanging Sponge (DHS) dalam Mengolah Air Limbah Domestik : Kajian Terhadap Kualitas Air Waduk Setiabudi Jakarta Selatan. In *Magister Thesis, Universitas Indonesia*. Universitas Indonesia.
- Nurmiyanto, A., & Ohashi, A. (2019). Downflow Hanging Sponge (DHS) Reactor for Wastewater Treatment - A Short Review. *MATEC Web of Conferences*, 280, 05004. <https://doi.org/10.1051/mateconf/201928005004>
- Onodera, T., Sase, S., Choiesai, P., Yoochatchaval, W., Sumino, H., Yamaguchi, T., Ebie, Y., Xu, K., Tomioka, N., M., M., & S, K. (2017). Pengembangan Sistem Pengolahan untuk Air Limbah Molase: Efek Penghambatan Kation pada Proses Degradasi Anaerobik. *Bioresour Teknologi*, 131(1), 295–302.
- Palatsi, J., Viñas, M., Guivernau, M., Fernandez, B., & Flotats, X. (2011). Anaerobic digestion of slaughterhouse waste : Main process limitations and microbial community interactions. *Bioresource Technology*, 102(3), 2219–2227. <https://doi.org/10.1016/j.biortech.2010.09.121>
- Purnaweni, H., Djumiarti, T., Roziqin, A., & Santoso, B. (2024). How do local government strategies advance social accountability? The challenges from environmental management of Slaughterhouse in Semarang City, Indonesia. *Local Environment*, 29(2), 245–261.
<https://doi.org/10.1080/13549839.2023.2282094>
- Putra, A. A. (2021). *Development of Novel Fishmeal Treatment System By Modified Anaerobic Baffled Reactor* [Nagaoka University of Technology]. <https://nagaokaut.repo.nii.ac.jp/record/951/files/k984.pdf>
- Putra, A. A., Watari, T., Hatamoto, M., Konda, T., Matsuzaki, K., Kurniawan, T. H., & Yamaguchi, T. (2020). Performance of Real-Scale Anaerobic Baffled Reactor-Swim Bed Tank System in Treating Fishmeal Wastewater. *Journal of Environmental Science and Health - Part A Toxic/Hazardous Substances and Environmental Engineering*, 55(12), 1415–1423.
<https://doi.org/10.1080/10934529.2020.1802978>
- Putra, A. A., Watari, T., Maki, S., Hatamoto, M., & Yamaguchi, T. (2020). Anaerobic Baffled Reactor to Treat Fishmeal Wastewater With High Organic Content. *Environmental Technology and Innovation*, 17, 100586.
<https://doi.org/10.1016/j.eti.2019.100586>

- Putri, B. N., Rustanti, I., Wardoyo, E., Nurmayanti, D., Kriswandana, F., Sumiyarsono, E., & Bilad, M. R. (2023). Performance Effectiveness of Wastewater Treatment Plant of Meat Processing Industry in East Java Province. *Proceedings of the 6th International Conference of Health Polytechnic Surabaya (ICoHPS 2023)*, 6, 306–319. <https://doi.org/10.2991/978-94-6463-324-5>
- Rahayu, D., & Ratni, N. (2015). Limbah Rumah Potong Hewan dengan Proses Biofilter Anaerob-Aerob Menggunakan Media. *Jurnal Purifikasi*, 19(1), 25–36.
- Ranti, W., & Amelia, S. (2021). *Operasional dan Pemeliharaan Instalasi Pengolahan Air Limbah (IPAL) di Rumah Potong Hewan Kota Padang Panjang (Laporan KP)*.
- Rittmann, B. E., & McCarty, P. L. (2001). Environmental biotechnology : principles and applications. *Current Opinion in Biotechnology*, 7(3).
- Rizki, N., Sutrisno, E., & Sumiyati, S. (2015). Penurunan Konsentrasi COD Dan TSS Pada Limbah Cair Tahu Dengan Teknologi Kolam (Pond) - Biofilm Menggunakan Media Biofilter Jaring Ikan Dan Bioball. *Jurnal Teknik Lingkungan*, 4(1).
- Rozali, Mubarak, & Nurrachmi, I. (2016). Patterns of distribution total suspended solid (TSS) in River Estuary Kampar Pelalawan. *Jurnal Online Mahasiswa Fakultas Perikanan Dan Ilmu Kelautan Universitas Riau*, 3(2).
- Rustam, R. (Editor). (2024). *Statistic of Livestack Slaughtered, Volume 24*. <https://www.bps.go.id/id/publication/2024/05/14/a2819808299c2e1e3ef488ce/statistik-pemotongan-ternak-2023.html>
- Said, N. I. (2017). *Teknologi Pengolahan Limbah Cair: Teori dan Aplikasi*. Erlangga.
- Saputra, M., Viena, V., & Elvitriana, E. (2020). Efektivitas Biofilter Dari Media Sedotan Plastik Untuk Penyisihan Limbah Cair Rumah Potong Hewan Kota Banda Aceh The Effectiveness Of Pipettes Waste Biofilter Media For The Removal Of Slaughterhouse Wastewater In Banda Aceh. *Jurnal TEKSAGRO*, 1(2), 30–38.
- Sari, E. D. A., Moelyaningrum, A. D., & Ningrum, P. T. (2018). Kandungan Limbah Cair Berdasarkan Parameter Kimia di Inlet dan Outlet Rumah Pemotongan Hewan (Studi di Rumah Pemotongan Hewan X Kabupaten Jember) Liquid Waste Content Based on Chemical Parameters at Animal Slaughterhouse's Inlet and Outlet (Study at Slaug. *Journal of Health Science and Prevention*, 2(September 2018), 88–94.
- Sari, F. R., Annisa, R., & Tuhuloula, A. (2013). Perbandingan Limbah dan Lumpur Aktif terhadap Pengaruh Sistem Aerasi Pada Pengolahan Limbah CPO. *Konversi*, 2(1), 39–44. <https://doi.org/10.20527/k.v2i1.128>

- Sari, F. R., Annissa, R., & Tuhuloula, A. (2013). Perbandingan Limbah dan Lumpur Aktif Terhadap Pengaruh Sistem Aerasi Pada Pengolahan Limbah CPO. *Konversi*, 2(1), 39. <https://doi.org/10.20527/k.v2i1.128>
- Septyana, I., Ardianto, R., & Samudro, G. (2013). Pengaruh Variasi Debit dan Jumlah Elektroda Terhadap Penurunan COD dan Produksi Listrik Dalam Reaktor Microbial Fuel Cells (MFCs) Studi Kasus : Air Limbah Rumah Potong Hewan (RPH) Kota Salatiga. *DIPA IPTEKS*, 1(1), 2–6.
- Seredyńska-Sobecka, B., Tomaszewska, M., & Morawski, A. W. (2006). Removal of humic acids by the ozonation-biofiltration process. *Desalination*, 198(1–3), 265–273. <https://doi.org/10.1016/j.desal.2006.01.027>
- Siregar, F. A. (2021). *Studi Kinetika Degradasi Chemical Oxygen Demand (COD) dan Laju Produksi Biogas pada Proses Metanogenesis Limbah Cair Pabrik Kelapa Sawit (LCPKS) Universitas Sumatera Utara.* <https://repositori.usu.ac.id/handle/123456789/44965>
- Speece, R. E. (1983). Anaerobic biotechnology for industrial wastewater treatment. *Environmental Science & Technology*, 17(9), 416A-427A. <https://doi.org/10.1021/es00115a725>
- Suarni, S., Viena, V., & Yunita, I. (2021). The Application of Anaerobic Plastic Media Biofilter for Removal of Ammonia and Oil and Grease in Slaughterhouse Wastewater. *Serambi Journal of Agricultural Technology*, 3(1), 37–44. <https://doi.org/10.32672/sjat.v3i1.2984>
- Subadyo, A. T. (2018). Pengelolaan Dampak Pembangunan Rumah Potong Hewan Ruminansia Di Kota Batu. *Jurnal Pengabdian Masyarakat Universitas Merdeka Malang*, 2(2). <https://doi.org/10.26905/abdimas.v2i2.1812>
- Suoth, A. E., & Nazir, E. N. (2016). Karakteristik Air Limbah Rumah Tangga Pada Salah Satu Perumahan Menengah Keatas di Tangerang Selatan. *Jurnal Ecolab*, 10(2), 80–88. <https://doi.org/10.20886/jklh.2016.10.2.80-88>
- Suyasa, W. B. (2015). Pencemaran Air & Pengolahan Air Limbah. *Udayana University Press*, 1–153. <http://penerbit.unud.ac.id>
- Tajarudin, H. A. Bin. (2012). *A study of fatty acid production by Clostridium butyricum . A Study of Fatty Acid Production by Clostridium butyricum [Swansea University]*. This thesis investigates the fatty acid production from carbohydrates using C. butyricum. In nature a common route for the anaerobic degradation of carbohydrate in the environment is via methanogenesis. At the heart of these processes however, is the meta
- Tandukar, M., Machdar, I., Uemura, S., Ohashi, A., & Harada, H. (2006). Potential of a combination of UASB and DHS reactor as a novel sewage treatment system for developing countries: Long-term evaluation. *Journal of Environmental Engineering*, 132(2), 166–172. [https://doi.org/https://doi.org/10.1061/\(ASCE\)0733-9372\(2006\)132:2\(166](https://doi.org/https://doi.org/10.1061/(ASCE)0733-9372(2006)132:2(166)

- Tandukar, M., Uemura, S., & Machdar, I. (2005). A Low-cost municipal sewage treatment system with a combination of UASB and the “Fourth Generation” Down-flow Hanging Sponge (DHS) Reactors. *Water Science and Technology*, 52(1–2), 323–329.
<https://doi.org/http://dx.doi.org/10.2166/wst.2005.0534>
- Wahyuni, S. (2015). Panduan Praktis Biogas. In *Penebar Swadaya*. Penebar Swadaya. file:///C:/Users/TEMP.Santoso-PC/Desktop/r_i6CAAQBAJ.pdf
- Watari, T., Tanikawa, D., Kuroda, K., Nakamura, A., Fujii, N., Yoneyama, F., Wakisaka, O., Hatamoto, M., & Yamaguchi, T. (2015). Development of UASB-DHS System for Treating Industrial Wastewater Containing Ethylene Glycol. *Journal of Water and Environment Technology*, 13(2), 131–140.
<https://doi.org/10.2965/jwet.2015.131>
- Wulandari, D. T., Prihatini, N. S., & Nilawati, R. I. N. (2022). Penyisihan COD pada Limbah Cair Rumah Potong Hewan Martapura Dengan Sistem Lahan Basah Buatan Aliran Horizontal Bawah Permukaan Menggunakan Tanaman *Cyperus alternifolius* dan *Canna indica*. *Jurnal Reka Lingkungan*, 10(2), 125–134. <https://doi.org/10.26760/rekalingkungan.v10i2.125-134>
- Xi, H., Zhou, X., Arslan, M., Luo, Z., Wei, J., Wu, Z., & Gamal El-Din, M. (2022). Heterotrophic nitrification and aerobic denitrification process: Promising but a long way to go in the wastewater treatment. *Science of the Total Environment*, 805. <https://doi.org/10.1016/j.scitotenv.2021.150212>
- Zhang, F., Li, P., Chen, M., Wu, J., Zhu, N., Wu, P., & Chiang, P. (2015). Effect of operational modes on nitrogen removal and nitrous oxide emission in the process of simultaneous nitrification and denitrification. *CHEMICAL ENGINEERING JOURNAL*, 280, 549–557.
<https://doi.org/10.1016/j.cej.2015.06.016>
- Zhu, G., & Jha, A. K. (2013). Psychrophilic dry anaerobic digestion of cow dung for methane production: Effect of inoculum. *ScienceAsia*, 39(5), 500–510.
<https://doi.org/10.2306/scienceasia1513-1874.2013.39.500>
- Zulkifli, A. (2014). *Dasar-dasar Ilmu Lingkungan*. Salemba Teknika.