# DAFTAR PUSTAKA

Abdullah, N., Ujang, Z., & Yahya, A. (2011). Aerobic granular sludge formation for high strength agro-based wastewater treatment. *Bioresource Technology*, *102*(1Abdullah, N., Ujang, Z. and Yahya, A. (2011) 'Aerobic granular sludge formation for high strength agro-based wastewater treatment', Bioresource Technology, 102(12), pp. 6778–6781. doi:10.1016/j.biortech.2011.04.009.2), 6778–6781. https://doi.org/10.1016/j.biortech.2011.04.009

Adav, S. S., Lee, D. J., & Lai, J. Y. (2009). Aerobic granulation in sequencing batch reactors at different settling times. *Bioresource Technology*, *100*(21), 5359–5361. https://doi.org/10.1016/j.biortech.2009.05.058

Adav, S. S., Lee, D. J., Show, K. Y., & Tay, J. H. (2008). Aerobic granular sludge: Recent advances. *Biotechnology Advances*, *26*(5), 411–423. https://doi.org/10.1016/j.biotechadv.2008.05.002

Adekanmi, A. A., Adekanmi, S. A., & Adekanmi, O. (2020). Biological Treatment of Fish Pond Waste Water by Coelastrum morum , a Green Microalgae. *International Journal of Engineering and Information System (IJEAIS)*, *4*(4), 62–77. https://www.researchgate.net/profile/Adekanmi-Abideen-Adeyinka-2/publication/347646685_Biological_Treatment_of_Fish_Pond_Waste_Water_by_Coelastrum_morum_a_Green_Microalgae/links/5fe2e65292851c13feb1a4ba/Biological-Treatment-of-Fish-Pond-Waste-Water-by-Coe

Ahmad, J. S. M. (2018). *Study on the Performance and Stability of Algal-bacterial Aerobic Granular Sludge in Wastewater Treatment Using Continuous-flow Reactors*. *15*(1), 165–175. https://core.ac.uk/download/pdf/196255896.pdf

Ananda, D. (2022). Evaluasi Waktu Proses Aerobic Granular Sludge - Sequencing Batch Reactor (AGS-SBR) Pada Pengolahan Limbah Cair Batik. *Departemen Teknik Kimia, Fakultas Teknik, Universitas Gadjah Mada.*

APHA. (2017). Standard Methods. *Encyclopedia of Forensic Sciences: Second Edition*, 522–527. https://doi.org/10.1016/B978-0-12-382165-2.00237-3

Azhari, D., & Tomasoa, A. M. (2018). Kajian Kualitas Air dan Pertumbuhan Ikan Nila (Oreochromis niloticus) yang Dibudidayakan dengan Sistem Akuaponik. *Akuatika Indonesia*, *3*(2), 84. https://doi.org/10.24198/jaki.v3i2.23392

Babatunde, T. A., Abdulkarim, B., Wagini, N. H., Usman, S. A., Argungu, L. A., & Lawal, U. (2022). Response of germination and seedling growth of Jute plant (Corchorus olitorius L.) on three different substrates in the tilapia aquaponic system. *Journal of Agriculture and Food Research*, *10*(March), 100366. https://doi.org/10.1016/j.jafr.2022.100366

Binsasi, A. (2020). *BIO-EDU : Jurnal Pendidikan Biologi Preferensi Pakan Ikan Tongkol ( Euthynnus affinis ) di Perairan Pantai*. *5*(April), 46–55.

Boopathy, R., Bonvillain, C., Fontenot, Q., & Kilgen, M. (2007). Biological treatment of low-salinity shrimp aquaculture wastewater using sequencing batch reactor. *International Biodeterioration and Biodegradation*, *59*(1), 16–19. https://doi.org/10.1016/j.ibiod.2006.05.003

Bunga, O. (2019). Gas- Sequencing Batch Reactor Sebagai Teknologi Pengolahan Air Limbah Rumah Pemotongan Ayam. *Journal of Chemical Information and Modeling*, *53*(9), 1689–1699.

Cahyani, R. D. (2021). *Evaluasi Performa Aerobic Granular Sludge dengan Sequencing Batch Reactor Untuk Pengolahan Limbah Cair Kelapa Sawit*.

Cetin, E., Karakas, E., Dulekgurgen, E., Ovez, S., Kolukirik, M., & Yilmaz, G. (2018).

Effects of high-concentration influent suspended solids on aerobic granulation in pilot-scale sequencing batch reactors treating real domestic wastewater. *Water Research*, *131*, 74–89. https://doi.org/10.1016/j.watres.2017.12.014

Corsino, S. F., Capodici, M., Torregrossa, M., & Viviani, G. (2016). Fate of aerobic granular sludge in the long-term: The role of EPSs on the clogging of granular sludge porosity. *Journal of Environmental Management*, *183*, 541–550. https://doi.org/10.1016/j.jenvman.2016.09.004

de Kreuk, M. K., Kishida, N., & van Loosdrecht, M. C. M. (2007). Aerobic granular sludge - State of the art. *Water Science and Technology*, *55*(8–9), 75–81. https://doi.org/10.2166/wst.2007.244

De Kreuk, M. K., Van Loosdrecht, M. C. M., & Heijnen, J. J. (2006). Aerobic granular sludge : scaling up a new technology. In *Department of Biochemical Engineering*.

Dharmayanti, N. K. S. A., Sumiyati, S., & Yulianti, N. L. (2021). Pengaruh Pemberian Aerasi Terhadap Pertumbuhan dan Produksi Selada (Lactuca sativa L.) pada Sistem Hidroponik Rakit Apung (Floating Raft Hydroponic System). *Jurnal BETA (Biosistem Dan Teknik Pertanian)*, *10*(1), 121. https://doi.org/10.24843/jbeta.2022.v10.i01.p12

Effendi, H., Amalrullah Utomo, B., Maruto Darmawangsa, G., & Elfida Karo-Karo, R. (2015). FITOREMEDIASI LIMBAH BUDIDAYA IKAN LELE (Clarias sp.) DENGAN KANGKUNG (Ipomoea aquatica) DAN PAKCOY (Brassica rapa chinensis) DALAM SISTEM RESIRKULASI. *Jurnal Ecolab*, *9*(2), 80–92. https://doi.org/10.20886/jklh.2015.9.2.80-92

Elham, O. S. J., Muda, S. A., Abu Hasan, H., & Sheikh Abdullah, S. R. (2018). Biological Treatment of Pb and Zn using Sequencing Batch Reactor. *Jurnal Kejuruteraan*, *30*(2), 201–207. https://doi.org/10.17576/jkukm-2018-30(2)-10

Fitriani, S. R., Daningsih, E., & Yokhebed, Y. (2017). Pengaruh Perbedaan Konsentrasi Fosfor Terhadap Pertumbuhan Kangkung Darat (Ipomoea reptans) pada Hidroponik Super Mini. *Jurnal Pendidikan Dan Pembelajaran*, *6*(5), 1–10.

Gao, X., Zhang, H., Xu, Y., Ni, Q., Zhang, Y., & Tan, H. (2022). *Effects of humic acid on the nitrogen utilization efficiency and microbial communities in aquaponic systems*. *547*(June 2021). https://doi.org/10.1016/j.aquaculture.2021.737475

Geetha Devi, M., Shinoon Al-Hashmi, Z. S., & Chandra Sekhar, G. (2012). Treatment of vegetable oil mill effluent using crab shell chitosan as adsorbent. *International Journal of Environmental Science and Technology*, *9*(4), 713–718. https://doi.org/10.1007/s13762-012-0100-4

Gerardi, M. H., Munro, M. A., & Silverman, D. J. (2010). *Wastewater Microbiology : Troubleshooting the Sequence Batch Reactor*.

Halauddin, H., Supiyati, S., & Suhendra, S. (2018). Perancangan Dan Pemanfaatan Teknologi Hidroponik Vertikal Hidro 40 Hole Bagi Karang Taruna Tri Tunggal Di Desa Talang Pauh. *Dharma Raflesia : Jurnal Ilmiah Pengembangan Dan Penerapan IPTEKS*, *16*(1), 41–51. https://doi.org/10.33369/dr.v16i1.4825

Hartami, P., Syahputra, N., & Erlangga, E. (2015). TEKNOLOGI AKUAPONIK DENGAN TANAMAN YANG BERBEDA TERHADAP PERFORMA PERTUMBUHAN IKAN NILA (Oreochromis niloticus). *Jurnal Perikanan Tropis*, *2*(1). https://doi.org/10.35308/jpt.v2i1.17

Hastuti, Y. P. (2011). Nitrifikasi dan denitrifikasi di tambak Nitrification and denitrification in pond. *Jurnal Akuakultur Indonesia*, *10*(1), 89–98.

Hendrasarie, N., Fadilah, K., & Ranno, M. R. (2022). Sequencing Batch Reactor to Treatment Tofu Wastewater Using Impeller Addition. *Journal of Ecological Engineering*, *23*(11), 158–164. https://doi.org/10.12911/22998993/153491

Ibrahim B. (2005). Kaji Ulang Sistem Pengolahan Limbah Cair Industri Hasil Perikanan Secara Biologis Dengan Lumpur Aktif. *Jurnal Pengolahan Hasil Perikanan Indonesia*, *8*(1), 31–41.

Jena, J., Kumar, R., Saifuddin, M., Dixit, A., & Das, T. (2016). Anoxic-aerobic SBR system for nitrate, phosphate and COD removal from high-strength wastewater and diversity study of microbial communities. *Biochemical Engineering Journal*, *105*(October 2017), 80–89. https://doi.org/10.1016/j.bej.2015.09.007

Kartika, D., & Wahyuningsih, P. (2019). Analisis Kandungan Amoniak dalam Limbah Outlet KPPL PT. Pupuk Iskandar Muda (PT. PIM) Lhokseumawe. *Quimica: Jurnal Kimia Sains Dan Terapan*, *1*(2), 6–11. https://ejurnalunsam.id/index.php/JQ/article/view/1692

Lalloo, R. (2010). *Development of a bioprocess for the production of an aquaculture biological agent Rajesh Lalloo Doctor of Philosophy ( Chemical Engineering ). December*.

Leal, C., Val del Río, A., Mesquita, D. P., Amaral, A. L., Castro, P. M. L., & Ferreira, E. C. (2020). Sludge volume index and suspended solids estimation of mature aerobic granular sludge by quantitative image analysis and chemometric tools. *Separation and Purification Technology*, *234*(September 2019), 116049. https://doi.org/10.1016/j.seppur.2019.116049

Li, D., Zhang, S., Li, S., Zeng, H., & Zhang, J. (2019). Aerobic granular sludge operation and nutrients removal mechanism in a novel configuration reactor combined sequencing batch reactor and continuous-flow reactor. *Bioresource Technology*, *292*(July), 122024. https://doi.org/10.1016/j.biortech.2019.122024

Liu, Y., Kang, X., Li, X., & Yuan, Y. (2015). Performance of aerobic granular sludge in a sequencing batch bioreactor for slaughterhouse wastewater treatment. *Bioresource Technology*, *190*, 487–491. https://doi.org/10.1016/j.biortech.2015.03.008

Liu, Y. Q., & Tay, J. H. (2006). Variable aeration in sequencing batch reactor with aerobic granular sludge. *Journal of Biotechnology*, *124*(2), 338–346. https://doi.org/10.1016/j.jbiotec.2005.12.037

Mohan, S. V., Rao, N. C., Prasad, K. K., Madhavi, B. T. V., & Sharma, P. N. (2005). Treatment of complex chemical wastewater in a sequencing batch reactor (SBR) with an aerobic suspended growth configuration. *Process Biochemistry*, *40*(5), 1501–1508. https://doi.org/10.1016/j.procbio.2003.02.001

Muflih, A. (2013). Sistem pengolahan limbah cair industri produk perikanan. *Samakia : Jurnal Teknik Perikanan*, *4*(2), 99–104.

Mulqan, M., Afdhal El Rahimi, S., Dewiyanti, I., Studi Budidaya Perairan Fakultas Kelautan dan Perikanan Universitas Syiah Kuala Darussalam, P., & Aceh, B. (2017). Pertumbuhan dan Kelangsungan Hidup Benih Ikan Nila Gesit (Oreochromis niloticus) Pada Sistem Akuaponik Dengan Jenis Tanaman Yang Berbeda The Growth and Survival rates of Tilapia Juvenile (Oreochromis niloticus) in Aquaponics Systems with Different Plants . *Jurnal Ilmiah Mahasiswa Kelautan Dan Perikanan Unsyiah*, *2*(1), 183–193.

Ngirfani, M. N., & Puspitarini, R. (2020). Potensi Tanaman Kangkung Air Dalam Memperbaiki Kualitas Limbah Cair Rumah Potong Ayam. *Bioma : Jurnal Biologi Dan Pembelajaran Biologi*, *5*(1), 66–79. https://doi.org/10.32528/bioma.v5i1.2897

Oktavia, D. A., Mangunwidjaja, D., Wibowo, S., & Sunarti, T. C. (2012). Pengolahan Limbah Cair Perikanan Menggunakan Konsorsium Mikroba Indegenous Proteolitik dan Lipolitik. *Agrointek*, *6*(2), 65–71.

Pandaan, I., & Java, E. (2018). *TEKNIK PEMBESARAN IKAN NILA ( Oreochromis niloticus ) DI INSTALASI BUDIDAYA AIR TAWAR PANDAAN , JAWA TIMUR*

*Enlargement Technique of Tilapia ( Oreochromis niloticus ) in Freshwater Aquaculture Data statistik Kementerian Kelautan dan Perikanan Indonesia men*. *7*(3), 3–8.

Qin, L., Liu, Y., & Tay, J. H. (2004). Effect of settling time on aerobic granulation in sequencing batch reactor. *Biochemical Engineering Journal*, *21*(1), 47–52. https://doi.org/10.1016/j.bej.2004.03.005

Reyes, D., Geelen, C., Cappon, H. J., Rijnaarts, H. H. M., Baganz, D., Kloas, W., Karimanzira, D., & Keesman, K. J. (2018). Aquacultural Engineering Model-based management strategy for resource e ffi cient design and operation of an aquaponic system. *Aquacultural Engineering*, *83*(March), 27–39. https://doi.org/10.1016/j.aquaeng.2018.07.001

Rosman, N. H., Nor Anuar, A., Othman, I., Harun, H., Sulong, M. Z., Elias, S. H., Mat Hassan, M. A. H., Chelliapan, S., & Ujang, Z. (2013). Cultivation of aerobic granular sludge for rubber wastewater treatment. *Bioresource Technology*, *129*, 620–623. https://doi.org/10.1016/j.biortech.2012.12.113

Saputra, R., Sukarti, K., Jurusan Budidaya Perairan Fakultas Perikanan dan Ilmu Kelautan Universitas Mulawarman, M., & Pengajar Jurusan Akuakultur Fakultas Perikanan dan Ilmu Kelautan Universitas Mulawarman, S. (2020). The increaising of protein and fat of Nile Tilapia (Orechromis niloticus) after being given artificial feed with addition of Azolla microphylla. *J. Aquawarman*, *6*(1), 182–190.

Sarma, S. J., & Tay, J. H. (2018). Carbon, nitrogen and phosphorus removal mechanisms of aerobic granules. *Critical Reviews in Biotechnology*, *38*(7), 1077–1088. https://doi.org/10.1080/07388551.2018.1451481

Sharma, S., Sarma, S. J., & Tay, J.-H. (2019). Aerobic Granulation in Wastewater Treatment. In *Microbial Wastewater Treatment* (pp. 57–81). Elsevier. https://doi.org/10.1016/B978-0-12-816809-7.00004-X

Show, K. Y., Lee, D. J., & Tay, J. H. (2012). Aerobic granulation: Advances and challenges. *Applied Biochemistry and Biotechnology*, *167*(6), 1622–1640. https://doi.org/10.1007/s12010-012-9609-8

Sotyohadi, Wahyu Surya Dewa, & I Komang Somawirata. (2020). Perancangan Pengatur Kandungan TDS dan PH pada Larutan Nutrisi Hidroponik Menggunakan Metode Fuzzy Logic. *ALINIER: Journal of Artificial Intelligence & Applications*, *1*(1), 33–43. https://doi.org/10.36040/alinier.v1i1.2520

Sundaramurthy, S., Tripathi, ravi kant, & Rana, M. (2014). *2011 Review on Treatment of Industrial Wastewater Using Sequential Batch Reactor (Ijstm)*. *September*.

von Sperling, M. (1998). A new method for the design of sequencing batch reactors (sbr) using the concept of the hindered settling velocity of the sludge. *Environmental Technology (United Kingdom)*, *19*(12), 1223–1231. https://doi.org/10.1080/09593331908616782

Wang, C., Jiang, C., Gao, T., Peng, X., Ma, S., Sun, Q., Xia, B., Xie, X., Bai, Z., Xu, S., & Zhuang, X. (2022). Improvement of fish production and water quality in a recirculating aquaculture pond enhanced with bacteria-microalgae association. *Aquaculture*, *547*(June 2021), 737420. https://doi.org/10.1016/j.aquaculture.2021.737420

Wang, S. X., Zhang, J. Y., Du, X. K., Liu, D. J., Liu, L. X., & Shen, X. H. (2022). Comparative analysis of the intestinal microbiota in goldfish and crucian carps between different aquaponics and traditional farming. *Aquaculture Reports*, *25*(June), 101240. https://doi.org/10.1016/j.aqrep.2022.101240

Wijayanti, M., Khotimah, H., Sasanti, A. D., Dwinanti, S. H., & Rarassari, M. A. (2019). PEMELIHARAAN IKAN NILA (Oreochromis niloticus) DENGAN SISTEM

AKUAPONIK DI DESA KARANG ENDAH, GELUMBANG, KABUPATEN MUARA ENIM SUMATRA SELATAN. *Journal of Aquaculture and Fish Health*, *8*(3), 139. https://doi.org/10.20473/jafh.v8i3.14901

Yanuhar, U., Musa, M., & Wuragil, D. K. (2019). Pelatihan Dan Pendampingan Manajemen Kualitas Air Dan Kesehatan Pada Ikan Koi (Cyprinus Carpio). *Jurnal KARINOV*, *2*(1), 69–74. http://journal2.um.ac.id/index.php/jki/article/view/8270

Yiskadini, K., Intan, W., & Wiratni, S. (2023). *Perbandingan Kinerja Sequencing Batch Reactor dengan dan Tanpa Media Bioball untuk Mengolah Limbah Batik yang membuka banyak lapangan kerja dan berhasil menjadi market leader pasar*. *15*, 161–176.

Yulianto, A., Soewondo, P., Handayani, M., & Arisyady, H. D. (2015). Tinjauan Literatur Pengolahan Air Limbah Dengan Biomassa Granular Aerobik Pada Mode Operasi Kontinu. *Jurnal Sains &Teknologi Lingkungan*, *7*(2), 84–94. https://doi.org/10.20885/jstl.vol7.iss2.art3