

DAFTAR PUSTAKA

- Amalia, L., & Hakim, D. L. (2015). Pemanfaatan Ampas Buah Merah Untuk Pembuatan Dodol the Use of Red Fruit Waste for Making Dodol Lunkhead. *Pertanian*, 92–97.
- Amirah, P., Sulizi, S., & Mobarak, N. N. (2020). Kinetic Studies And Absorption Isothermal Of Methylene Blue By Using N,O-Carboxymethyl Chitosan (Kajian Kinetik dan Isoterma Serapan Metilena Biru Menggunakan N,O-Karboksimetil Kitosan). *Malaysian Journal of Analytical Sciences*, 24(1), 21–32.
- Astuti, D. H., Sani, Yuandana, Y. G., & Karlin. (2018). Pirolisis Study Biochar ' S Characteristic From Tobacco Stem , Papaya Stem and Rice Straw With Pyrolysis Process. *Jurnal Teknik Kimia*, 12(2), 41–46.
- Badriyah, L., & Putri, M. P. (2017). The swallowing of chemical compounds by helminths. *Acta Parasitologica Polonica*, 28(25–37), 357–368.
- Bansal, S., Pandey, P. K., & Upadhayay, S. (2021). Methylene Blue Dye Removal from Wastewater Using Ailanthus Excelsa Roxb as Adsorbent. *Water Conservation Science and Engineering*, 6(1), 1–9. <https://doi.org/10.1007/s41101-020-00097-3>
- Bhattacharya, K. G., & Sharma, A. (2005). Kinetics and thermodynamics of Methylene Blue adsorption on Neem (Azadirachta indica) leaf powder. *Dyes and Pigments*, 65(1), 51–59. <https://doi.org/10.1016/j.dyepig.2004.06.016>
- Bulut, Y., & Aydin, H. (2006). A kinetics and thermodynamics study of methylene blue adsorption on wheat shells. *Desalination*, 194(1–3), 259–267. <https://doi.org/10.1016/j.desal.2005.10.032>
- Darmadi, Choong, T. S., & Robiah Yunus Taufiq Yap, T. Y. (2008). Adsorption of Methylene Blue from Aqueous Solutions on Carbon Coated Monolith. *AJChE*, 8(1), 27–38.
- Darmansyah. (2015). *Pemodelan Adsorpsi Biogas Dengan Metode Ono-Kondo dan Langmuir Kondo Dan Langmuir Pada Material Aluminasilikat Mcm -41*.
- Dinas Pertanian dan Pangan Provinsi Papua. (2020). *Blue Print Pengembangan Buah Merah Di Provinsi Papua*. 62.
- Do, D. D. (1998). *Fundamentals of Diffusion and Adsorption in Porous Media* (Vol. 2). https://doi.org/10.1142/9781860943829_0007

- Doğan, M., Abak, H., & Alkan, M. (2009). Adsorption of methylene blue onto hazelnut shell: Kinetics, mechanism and activation parameters. *Journal of Hazardous Materials*, 164(1), 172–181. <https://doi.org/10.1016/j.jhazmat.2008.07.155>
- Frikha, K., Limousy, L., Claret, J. P., Vaultot, C., Florencio, K., Garcia, B. C., & Bennici, S. (2022). *Potential Valorization of Waste Tires as Activated Carbon-Based Adsorbent for Organic Contaminants Removal*. 1–24.
- Fu, J., Chen, Z., Wang, M., Liu, S., Zhang, J., Zhang, J., Han, R., & Xu, Q. (2015). Adsorption of methylene blue by a high-efficiency adsorbent (polydopamine microspheres): Kinetics, isotherm, thermodynamics and mechanism analysis. *Chemical Engineering Journal*, 259, 53–61. <https://doi.org/10.1016/j.cej.2014.07.101>
- Gago, J., & Ngapa, Y. D. (2021). *Optimizing of Competitive Adsorption Methylene Blue and Methyl Orange Using Natural Zeolite From Ende-Flores*. 6(1), 39–48.
- Gani, A. (2009). Potensi Arang Hayati Biochar sebagai Komponen Teknologi Perbaikan Produktivitas Lahan Pertanian. *Iptek Tanaman Pangan*, 4(1), 33–48.
- Han, Chu, L., Liu, S., Chen, T., Ding, C., Yan, J., Cui, L., & Quan, G. (2015). Removal of methylene blue from aqueous solution using porous biochar obtained by KOH activation of peanut shell biochar. *BioResources*, 10(2), 2836–2849. <https://doi.org/10.15376/biores.10.2.2836-2849>
- Han, R., Wang, Y., Han, P., Shi, J., Yang, J., & Lu, Y. (2006). Removal of methylene blue from aqueous solution by chaff in batch mode. *Journal of Hazardous Materials*, 137(1), 550–557. <https://doi.org/10.1016/j.jhazmat.2006.02.029>
- Han, R., Zhang, L., Song, C., Zhang, M., Zhu, H., & Zhang, L. J. (2010). Characterization of modified wheat straw, kinetic and equilibrium study about copper ion and methylene blue adsorption in batch mode. *Carbohydrate Polymers*, 79(4), 1140–1149. <https://doi.org/10.1016/j.carbpol.2009.10.054>
- Hanum, F., Gultom, R. J., & Simanjuntak, maradona. (2017). Adsorpsi Zat Warna Metilen Biru Dengan Karbon Aktif Dari Kulit Durian Menggunakan KOH Dan NaOH Sebagai Aktivator. *Jurnal Teknik Kimia USU*, 6(1), 49–55. <https://doi.org/10.32734/jtk.v6i1.1565>
- Hubbe, M. A., Azizian, S., & Douven, S. (2019). Implications of apparent pseudo-second-order adsorption kinetics onto cellulosic materials: A review. *BioResources*, 14(3), 7582–7626. <https://doi.org/10.15376/biores.14.3.7582-7626>
- Hwang, N., & Barron, A. R. (2011). BET Surface Area Analysis of Nanoparticles*. *OpenStax-CNX*, 1(3), 1–11.

- Islam, M. A., Sabar, S., Benhouria, A., Khanday, W. A., Asif, M., & Hameed, B. H. (2017). Nanoporous activated carbon prepared from karanj (*Pongamia pinnata*) fruit hulls for methylene blue adsorption. *Journal of the Taiwan Institute of Chemical Engineers*, 74, 96–104. <https://doi.org/10.1016/j.jtice.2017.01.016>
- Kumar, K. V. (2007). Pseudo-second order models for the adsorption of safranin onto activated carbon: Comparison of linear and non-linear regression methods. *Journal of Hazardous Materials*, 142(1–2), 564–567. <https://doi.org/10.1016/j.jhazmat.2006.08.018>
- Kurniawati, D., Bahrizal, Sari, T. K., Adella, F., & Sy, S. (2021). Effect of Contact Time Adsorption of Rhodamine B, Methyl Orange and Methylene Blue Colours on Langsat Shell with Batch Methods. *Journal of Physics: Conference Series*, 1788(1), 7–13. <https://doi.org/10.1088/1742-6596/1788/1/012008>
- LabChem. (2012). Methylene Blue Safety Data Sheet. *LabChem: Performance Though Chemistry*, 7(58), 1–7. www.big.be/antigif.htm
- Larasati, A., & Notodarmojo, S. (2014). Kesetimbangan Dan Kinetika Penyisihan Orthofosfat Dari Dalam Air Dengan Metode Adsorpsi-Desorpsi. *Jurnal Teknik Lingkungan*, 20(1), 38–47. <https://doi.org/10.5614/jtl.2014.20.1.5>
- Liu, L., Deng, G., & Shi, X. (2020). Adsorption characteristics and mechanism of p-nitrophenol by pine sawdust biochar samples produced at different pyrolysis temperatures. *Scientific Reports*, 10(1), 1–11. <https://doi.org/10.1038/s41598-020-62059-y>
- Maryudi, M., Amelia, S., & Salamah, S. (2019). Removal of Methylene Blue of Textile Industry Waste with Activated Carbon using Adsorption Method. *Reaktor*, 19(4), 168–171. <https://doi.org/10.14710/reaktor.19.4.168-171>
- Md Tamez, U., Md Akhtarul, I., Shaheen, M., & Md. rukanuzzaman. (2009). Adsorptive removal of methylene blue by tea waste. *Journal of Hazardous Materials*, 164(1), 53–60. <https://doi.org/10.1016/j.jhazmat.2008.07.131>
- Mentari, A. V., Handika, G., & Maulina, S. (2018). The Comparison of Function Group and Surface Morphology of Activated Carbon from Oil Palm Frond Using Phosphoric Acid (H₃PO₄). *Jurnal Teknik Kimia USU*, 7(1), 16–20.
- Mu'in, R., Wulandari, S., & Pertiwi, N. P. (2017). Pengaruh Kecepatan Pengadukan dan Massa Adsorben Terhadap Penurunan Kadar Phospat pada Pengolahan Limbah Laundry. *Jurnal Teknik Kimia*, 23(1), 67–76.

<http://jtk.unsri.ac.id/index.php/jtk/article/view/321/309>

- Nemr, A. El, El-Sikaily, A., & Khaled, A. (2010). Modeling of adsorption isotherms of Methylene Blue onto rice husk activated carbon. *Egyptian Journal of Aquatic Research*, 36(3), 403–425.
- Pathania, D., Sharma, S., & Singh, P. (2017). Removal of methylene blue by adsorption onto activated carbon developed from Ficus carica bast. *Arabian Journal of Chemistry*, 10, S1445–S1451. <https://doi.org/10.1016/j.arabjc.2013.04.021>
- Pratama, B. S., Aldriana, P., Bambang, I., & Saptati, A. . D. (2018). Konversi Ampas Tebu Menjadi Biochar dan Karbon Aktif untuk Penyisihan Cr (VI). *Jurnal Rekayasa Bahan Alam Dan Energi Berkelanjutan*, 2(1), 7–12. <http://rbaet.ub.ac.id/index.php/rbaet/article/view/45>
- Prayogo, C., Lestari, N. D., & Wicaksono, K. S. (2012). Karakteristik Dan Kualitas Biochar Dari Pyrolysis Biomassa Tanaman Bio-Energi Willow (Salix Sp). *Buana Sains*, 12(2), 9–18.
- Riapanitra, A., Setyaningtyan, T., & Riyani, K. (2004). Penentuan Waktu Kontak Dan Ph Optimum Penyerapan Metilen Biru Menggunakan Abu Sekam Padi Anung Riapanitra, Tien Setyaningtyas, Kapti Riyani Jurusan Kimia, Program Sarjana MIPA Unsoed Purwokerto. 41–44.
- Ridhuan, K., Irawan, D., Zanaria, Y., & Firmansyah, F. (2019). Pengaruh Jenis Biomassa Pada Pembakaran Pirolisis Terhadap Karakteristik Dan Efisiensi bioarang - Asap Cair Yang Dihasilkan. *Media Mesin: Majalah Teknik Mesin*, 20(1), 18–27. <https://doi.org/10.23917/mesin.v20i1.7976>
- Ristianingsih, Y., Istiani, A., & Irfandy, F. (2020). Keseimbangan Adsorpsi Zat Warna Metilen Blue dengan Adsorben Karbon Aktif Tongkol Jagung Terimpregnasi Fe₂O₃. *Jurnal Teknologi Agro-Industri*, 7(1), 47–55.
- Sahu, S., Pahi, S., Tripathy, S., Singh, S. K., Behera, A., Sahu, U. K., & Patel, R. K. (2020). Adsorption of methylene blue on chemically modified lychee seed biochar: Dynamic, equilibrium, and thermodynamic study. *Journal of Molecular Liquids*, 315, 113743. <https://doi.org/10.1016/j.molliq.2020.113743>
- Sandra, J. A., Lutfi, M., & Nugroho, W. A. (2014). Pengaruh Konsentrasi Asam Sulfat Terhadap Sifat Fisik dan Kimia Biochar dari Sludge Biogas pada Proses Aktivasi (Effect of Sulfuric Acid Concentration Against Physical and Chemical Properties of Sludge Biogas Biochar on Activation Process). *Journal Keteknikan Pertanian Tropis Dan Biosistem (Journal of Tropical Agricultural Engineering and Biosystems)*, 2(3), 205–210.

<http://www.jkptb.ub.ac.id/index.php/jkptb/article/view/222>

- Saputra, J. (2012). Potensi Biochar dari Limbah Biomassa Perkebunan Karet Sebagai Amelioran dan Mengurangi Emisi Gas Rumah Kaca. *Warta Perkaratan*, 31(1), 43. <https://doi.org/10.22302/ppk.wp.v31i1.265>
- Sari, R. A., Firdaus, M. IUTIFI, & Elvia, R. (2017). Penentuan Kesetimbangan, Termodinamika Dan Kinetika Adsorpsi Arang Aktif Tempurung Kelapa Sawit Pada Zat Warna Reactive Red Dan Direct Blue. *Alotrop*, 1(1), 10–14.
- Sarioglu, M. (2018). Removal of methylene blue by using biosolid. *Global NEST Journal*, 8(2), 113–120. <https://doi.org/10.30955/gnj.000351>
- Schirmer, R. H., Adler, H., Pickhardt, M., & Mandelkow, E. (2011). “Lest we forget you - methylene blue...” *Neurobiology of Aging*, 32(12), 2325.e7-2325.e16. <https://doi.org/10.1016/j.neurobiolaging.2010.12.012>
- Sharma, S., Tiwari, D. P., & Pant, K. K. (2016). Model-fitting approach for methylene blue dye adsorption on Camelina and Sapindus seeds-derived adsorbents. *Adsorption Science and Technology*, 34(9–10), 565–580. <https://doi.org/10.1177/0263617416674949>
- Sianipar, F. R. D. N. (2016). Morphological And Anatomical Structure Of Red Fruit (Pandanus Conoideus Lam.). *KnE Social Sciences*, 1(1), 37–43. <https://doi.org/10.18502/kss.v1i1.432>
- Srivatsav, P., Bhargav, B. S., Shanmugasundaram, V., Arun, J., Gopinath, K. P., & Bhatnagar, A. (2020). Biochar as an eco-friendly and economical adsorbent for the removal of colorants (Dyes) from aqueous environment: A review. *Water (Switzerland)*, 12(12), 1–27. <https://doi.org/10.3390/w12123561>
- Syarif, S., Cahyono, R. B., & Hidayat, M. (2019). Pemanfaatan Limbah Kulit Kakao Menjadi Briket Arang sebagai Bahan Bakar Alternatif dengan Penambahan Ampas Buah Merah. *Jurnal Rekayasa Proses*, 13(1), 57. <https://doi.org/10.22146/jrekpro.41517>
- Syauqiah, I., Amalia, M., & Kartini, H. A. (2011). INFO TEKNIK, Volume 12 No. 1, Juli 2011. *Info Teknik*, 12(1), 11–20.
- Tan, K. L., & Hameed, B. H. (2017). Insight into the adsorption kinetics models for the removal of contaminants from aqueous solutions. *Journal of the Taiwan Institute of Chemical Engineers*, 74, 25–48. <https://doi.org/10.1016/j.jtice.2017.01.024>
- Tripathi, M., Sahu, J. N., & Ganesan, P. (2016). Effect of process parameters on production of biochar from biomass waste through pyrolysis: A review.

Renewable and Sustainable Energy Reviews, 55, 467–481.
<https://doi.org/10.1016/j.rser.2015.10.122>

Wang, Y., & Liu, R. (2017). Comparison of characteristics of twenty-one types of biochar and their ability to remove multi-heavy metals and methylene blue in solution. *Fuel Processing Technology*, 160, 55–63.
<https://doi.org/10.1016/j.fuproc.2017.02.019>

Widihati, I., Adhi Suastuti, N., & Yohanita Nirmalasari, M. (2012). Studi Kinetika Adsorpsi Larutan Ion Logam Kromium (Cr) Menggunakan Arang Batang Pisang (Musa Paradisiaca). *Jurnal Kimia*, 6(1), 8–16. <https://doi.org/10.24843/JCHEM>

Yakub, E., Agarry, S. E., Omoruwou, F., & Owabor, C. N. (2020). Comparative study of the batch adsorption kinetics and mass transfer in phenol-sand and phenol-clay adsorption systems. *Particulate Science and Technology*, 38(7), 801–811.
<https://doi.org/10.1080/02726351.2019.1616862>

Ying, Z., Chen, X., Li, H., Liu, X., Zhang, C., Zhang, J., & Yi, G. (2021). Efficient adsorption of methylene blue by porous biochar derived from soybean dreg using a one-pot synthesis method. *Molecules*, 26(3), 1–15.
<https://doi.org/10.3390/molecules26030661>

Yuanita, I. I. S. (2009). Pemanfaatan Ampas Buah Merah (Pandanus Conoideus) Sebagai Pakan Tambahan Ayam Pedaging : Penampilan Produksi Dan Status Kesehatan Ayam.