DAFTAR PUSTAKA

Agarwala, R., & Mulky, L. (2023). Adsorption of Dyes from Wastewater: A Comprehensive Review. Dalam *ChemBioEng Reviews* (Vol. 10, Nomor 3, hlm. 326–335). John Wiley and Sons Inc. https://doi.org/10.1002/cben.202200011

Al-Ghouti, M. A., & Da'ana, D. A. (2020). Guidelines for the use and interpretation of adsorption isotherm models: A review. Dalam *Journal of Hazardous Materials* (Vol. 393). Elsevier B.V. https://doi.org/10.1016/j.jhazmat.2020.122383

Ali, A., Zhang, N., & Santos, R. M. (2023). Mineral Characterization Using Scanning Electron Microscopy (SEM): A Review of the Fundamentals, Advancements, and Research Directions. Dalam *Applied Sciences (Switzerland)* (Vol. 13, Nomor 23). Multidisciplinary Digital Publishing Institute (MDPI). https://doi.org/10.3390/app132312600

Amanda, P., Kurniawan, Y. D., Prasetiyo, K. W., Hasan, F., & Amelia, A. (2024). Adsorption of Congo Red from Aqueous Solutions by Alginate-Nanocellulose-Polyethyleneimine Hydrogel Beads. *Trends in Sciences*, *21*(1). https://doi.org/10.48048/tis.2024.7262

Amma Nur Aulia, D., Shofiyani, A., Anita Zaharah, T., & Hadari Nawawi, J. H. (2017). *Penentuan Stabilitas Kimia dan Termal Membran Komposit Kitosan Tercetak Ion Logam pada Permukaan Karbon* (Vol. 6, Nomor 4).

Aragaw, T. A., Bogale, F. M., & Gessesse, A. (2022). Adaptive Response of Thermophiles to Redox Stress and Their Role in the Process of dye Degradation From Textile Industry Wastewater. Dalam *Frontiers in Physiology* (Vol. 13). Frontiers Media S.A. https://doi.org/10.3389/fphys.2022.908370

Arinze, A. H., Uchendu, V. U., Friday, A. G., Thomas, T. S., Ekene, R., Desmond, U., Ewezugachukwu, O. B., & Nsikan, K. A. (2025). Adsorption Technique: A Narrative Review. Dalam *Int. j. adv. multidisc. res. stud* (Vol. 5, Nomor 4). www.multiresearchjournal.com

Arivumani, V., Singh, V., Geetha, C., & Senthilkumar, C. (2024). Activated rice husk biochar for azo dye removal: Batch adsorption, kinetics and thermodynamic studies. *Global Nest Journal*, *26*(2). https://doi.org/10.30955/gnj.005498

Ayawei, N., Ebelegi, A. N., & Wankasi, D. (2017). Modelling and Interpretation of Adsorption Isotherms. Dalam *Journal of Chemistry* (Vol. 2017). Hindawi Limited. https://doi.org/10.1155/2017/3039817

Banerjee, S., & Chattopadhyaya, M. C. (2017). Adsorption characteristics for the removal of a toxic dye, tartrazine from aqueous solutions by a low cost agricultural by-product. *Arabian Journal of Chemistry*, *10*, S1629–S1638.

https://doi.org/10.1016/j.arabjc.2013.06.005

Ching, S. H., Bansal, N., & Bhandari, B. (2017). Alginate gel particles–A review of production techniques and physical properties. *Critical Reviews in Food Science and Nutrition*, *57*(6), 1133–1152. https://doi.org/10.1080/10408398.2014.965773

De Caro, C. A., Toledo, M., & Claudia, H. (2025). *UV/Vis Spectrophotometry-Fundamentals and Applications*. https://www.researchgate.net/publication/321017142

Delgado, R. (2022). Misuse of Beer-Lambert Law and other calibration curves. *Royal Society Open Science*, *9*(2). https://doi.org/10.1098/rsos.211103

Destiarti, L. (2021). Penentuan Kadar Mangan (Mn) Pada Air Gambut Secara Spektrofotometri Uv-Vis Dengan Perbandingan Metode Kurva Kalibrasi Dan Adisi Standar (Determination Of Manganese In Peat Water Using Uv-Vis Spectrophotometer: Comparation Of Calibration Of Curve And Standard Addition Method). Dalam / *Indo. J. Pure App. Chem* (Vol. 4, Nomor 1). http://jurnal.untan.ac.id/index.php/IJoPAC

D'Souza, E., Fulke, A. B., Mulani, N., Ram, A., Asodekar, M., Narkhede, N., & Gajbhiye, S. N. (2017). Decolorization of Congo red mediated by marine Alcaligenes species isolated from Indian West coast sediments. *Environmental Earth Sciences*, *76*(20). https://doi.org/10.1007/s12665-017-7077-8

El-Baz, A., Hendy, I., Dohdoh, A., & Srour, M. (2020). Adsorption technique for pollutants removal; current new trends and future challenges – A Review. *The Egyptian International Journal of Engineering Sciences and Technology*, *32*(1), 1–24. https://doi.org/10.21608/eijest.2020.45536.1015

Haris, M. N., & Maghfiroh, M. (2024). Efektivitas Adsorpsi Zat Warna Yellow Disperse oleh Limbah Cangkang Kerang Simping dengan Pendekatan Isoterm Adsorpsi. *Jurnal Penelitian Inovatif*, *4*(4), 2309–2316. https://doi.org/10.54082/jupin.880

Hemdan, S. S. (2024). The Dependence Of Acid-Base Equilbria And Acidity Constants Of Congo Red In Buffer Solutions On The Ionic Strength. *Journal of Chemical Technology and Metallurgy*, *59*(3), 505–512. https://doi.org/10.59957/jctm.v59.i3.2024.2

Hu, C., Lu, W., Mata, A., Nishinari, K., & Fang, Y. (2021). Ions-induced gelation of alginate: Mechanisms and applications. Dalam *International Journal of Biological Macromolecules* (Vol. 177, hlm. 578–588). Elsevier B.V. https://doi.org/10.1016/j.ijbiomac.2021.02.086

Jiao, C., Liu, D., Wei, N., Gao, J., Fu, F., Liu, T., & Wang, J. (2021). Efficient congo red removal using porous cellulose/gelatin/sepiolite gel beads: Assembly, characterization, and adsorption mechanism. *Polymers*, *13*(22). https://doi.org/10.3390/polym13223890

Karim, A., Nawaz, M. A., Aman, A., & Ul Qader, S. A. (2017). Role of Anionic Polysaccharide (Alginate) on Activity, Stability and Recycling Efficiency of Bacterial Endo (1→4) B-d-Glucanase of GH12 Family. *Catalysis Letters*, *147*(7), 1792–1801. https://doi.org/10.1007/s10562-017-2074-9

Karoyo, A. H., & Wilson, L. D. (2021). A review on the design and hydration properties of natural polymer-based hydrogels. *Materials*, *14*(5), 1–36. https://doi.org/10.3390/ma14051095

Khan, S. A., Khan, S. B., Khan, L. U., Farooq, A., Akhtar, K., & Asiri, A. M. (2018). Fourier transform infrared spectroscopy: Fundamentals and application in functional groups and nanomaterials characterization. Dalam *Handbook of Materials Characterization* (hlm. 317–344). Springer International Publishing. https://doi.org/10.1007/978-3-319-92955-2_9

Kosik-Bogacka, D., Łanocha-Arendarczyk, N., Kalisińska, E., Kot, K., Czernomysy-Furowicz, D., Pilarczyk, B., & Tomza-Marciniak, A. (2019). Iron, Fe. Dalam *Mammals and Birds as Bioindicators of Trace Element Contaminations in Terrestrial Environments: An Ecotoxicological Assessment of the Northern Hemisphere* (hlm. 181–212). Springer International Publishing. https://doi.org/10.1007/978-3-030-00121-6_6

Maniar, V., Kalsara, K., & Upadhyay, U. (2023). A Review of Ftir-An Useful Instrument. *International Journal of Pharmaceutical Research and Applications*, *8*, 2486. https://doi.org/10.35629/7781-080124862490

Meija, J., Coplen, T. B., Berglund, M., Brand, W. A., De Bièvre, P., Gröning, M., Holden, N. E., Irrgeher, J., Loss, R. D., Walczyk, T., & Prohaska, T. (2016). Atomic weights of the elements 2013 (IUPAC Technical Report). Dalam *Pure and Applied Chemistry* (Vol. 88, Nomor 3, hlm. 265–291). Walter de Gruyter GmbH. https://doi.org/10.1515/pac-2015-0305

Meila Anggriani, U., Hasan, A., Purnamasari, I., Teknik Kimia, J., Sriwijaya, N., Srijaya, J., Bukit, N., & Palembang, B. (2021). Kinetika Adsorpsi Karbon Aktif Dalam Penurunan Konsentrasi Logam Tembaga (Cu) Dan Timbal (Pb) Kinetic Adsorption Of Activated Carbon In Decreasing Concentrations Of Copper (Cu) And Lead (Pb) Metals. *Jurnal Kinetika*, *12*(02), 29–37. https://jurnal.polsri.ac.id/index.php/kimia/index

Mohammed, A., & Abdullah, A. (2018). *Scanning Electron Microscopy (SEM): A Review*. https://www.researchgate.net/publication/330168803

Moniz, L., Baunsele, A. B., Boelan, E. G., Kopon, A. M., Leba, M. A. U., Tukan, M. B., & Komisia, F. (2024). Optimasi Adsorpsi Metilen Biru Memanfaatkan Sabut Buah Lontar Teraktivasi Asam. *Cakra Kimia*, *12*.

Musah, M., Azeh, Y., Mathew, J., Umar, M., Abdulhamid, Z., & Muhammad, A. (2022). Adsorption Kinetics and Isotherm Models: A Review. *Caliphate Journal of Science and Technology*, *4*(1), 20–26. https://doi.org/10.4314/cajost.v4i1.3

Nandiyanto, A. B. D., Ragadhita, R., & Fiandini, M. (2023). Interpretation of Fourier Transform Infrared Spectra (FTIR): A Practical Approach in the Polymer/Plastic Thermal Decomposition. *Indonesian Journal of Science and Technology*, *8*(1), 113–126. https://doi.org/10.17509/ijost.v8i1.53297

Nastaj, J., Przewłocka, A., & Rajkowska-Myśliwiec, M. (2016). Biosorption of Ni(II), Pb(II) and Zn(II) on calcium alginate beads: Equilibrium, kinetic and mechanism studies. *Polish Journal of Chemical Technology*, *18*(3), 81–87. https://doi.org/10.1515/pjct-2016-0052

Nasution, H., & Siregar, H. (2015). *Penentuan Waktu Kontak Dan pH Optimum Penyerapan Zat Warna Direct Yellow Menggunakan Abu Terbang (Fly Ash) Batubara (Determination Of Optimum Retention Time And pH Of Coal Fly Ash Adsorbent For Removing Direct Yellow Dye)*.

Nurohmah, L., Apriliani Wulandari, P., Fathoni, an, Sambaliung No, J., Gunung Kelua, K., Kunci, K., Jagung, K., & Kadar, P. (2019). Lutfi Nurohmah Paradila Apriliani Wulandari Rif'an Fathoni Kemampuan Adsorpsi Logam Berat Cu Dan Pb Dengan Menggunakan Adsorben Kulit Jagung (Zea Mays) Adsorption Ability Of Cu And Pb Heavy Metal Using Corn Skin Adsorben (Zea Mays). *Jurnal Chemurgy* (Vol. 03, Nomor 2).

Nyoman Candra, I., & Apriyanti, H. (2018). *Karakterisasi Isoterm Adsorpsi dari Ion Logam Besi (Fe) pada Tanah Di Kota Bengkulu*. (2), 14–19.

Pan, W., Liu, X., Yang, P., & Han, R. (2022). Use of iron-crosslinked sodium alginate beads for adsorption of phosphate from solution. *Desalination and Water Treatment*, *272*, 108–117. https://doi.org/10.5004/dwt.2022.28848

Persson, I. (2018). Ferric Chloride Complexes in Aqueous Solution: An EXAFS Study. *Journal of Solution Chemistry*, *47*. https://doi.org/10.1007/s10953-018

Rahayu, R., Nurlette, S., & Baunsele, A. B. (2023). The Effect of Contact Time and Optimum pH on the Adsorption of Methylene Blue Dye by Alginate-Chitosan Complex Polyelectrolyte Films. *Stannum : Jurnal Sains dan Terapan Kimia*, *5*(2), 87–92. https://doi.org/10.33019/jstk.v5i2.4371

Rápó, E., & Tonk, S. (2021). Factors affecting synthetic dye adsorption; desorption studies: A review of results from the last five years (2017–2021). Dalam *Molecules* (Vol. 26, Nomor 17). MDPI. https://doi.org/10.3390/molecules26175419

Rosales, E., Iglesias, O., Pazos, M., & Sanromán, M. A. (2012). Decolourisation of dyes under electro-Fenton process using Fe alginate gel beads. *Journal of Hazardous Materials*, *213–214*, 369–377. https://doi.org/10.1016/j.jhazmat.2012.02.005

Rowe, R. C., Sheskey, P. J., & Quinn, M. E. (2009). *Handbook of Pharmaceutical Excipients*. Pharmaceutical Press.

Sangoremi, A. A. (2019). *Adsorption Kinetic Models and Their Applications: A*

Critical Review. https://doi.org/10.51244/IJRSI

Sariana Sarana Miri, N. (2022). *Volume 2. Nomor 2. Tahun 2022 JURNAL KIMIA DAN REKAYASA Review : Kajian Persamaan Isoterm Langmuir dan Freundlich pada Adsorpsi Logam Berat Fe (II) dengan Zeolit dan Karbon Aktif dari Biomassa Review : Equation Study of Langmuir and Freundlich Isotherms on Adsorption of Heavy Metal Fe (II) with Zeolite and Activated Carbon from Biomass*. http://kireka.setiabudi,ac.id

Septiana, R. (2023). *Pemanfaatan Karbon Aktif Kulit Pisang Kepok (Musa Paradisiaca) Sebagai Adsorben Zat Warna Congo Red Dalam Limbah Cair Industri Tekstil*.

Shravani S. More, S. S. M., Sandhya P. Kadam, S. P. K., & Dr. Vivekkumar K.Redasani, Dr. V. K. R. (2025). A Comprehensive Review of UV-visible spectroscopy. *International Journal of Pharmaceutical Research and Applications*, *10*(3), 114–134. https://doi.org/10.35629/4494-1003114134

Skjlk-Br, G., Grasdalen, H., & Smidsrod, O. (1989). lnhomogeneous Polysaccharide Ionic Gels. Dalam *Carbohydrate Polymers* (Vol. 10).

Suarsa, I. W. (2015). *Spektroskopi*. Fakultas Matematika dan Ilmu Pengetahuan Alam, Program Studi Kimia, Denpasar.

Sudarsan, S., Murugesan, G., Varadavenkatesan, T., Vinayagam, R., & Selvaraj, R. (2025). Efficient adsorptive removal of Congo Red dye using activated carbon derived from Spathodea campanulata flowers. *Scientific Reports*, *15*(1). https://doi.org/10.1038/s41598-025-86032-9

Sun, Z., Qu, K., Cheng, Y., You, Y., Huang, Z., Umar, A., Ibrahim, Y. S. A., Algadi, H., Castañeda, L., Colorado, H. A., & Guo, Z. (2021). Corncob-derived Activated Carbon for Efficient Adsorption Dye in Sewage. *ES Food and Agroforestry*, *4*, 61–74. https://doi.org/10.30919/esfaf473

Susandy, S. A., & Paramita, A. R. (2015). *Studi Kinetika Adsorpsi Pb menggunakan Arang Aktif dari Kulit Pisang* (Vol. 4, Nomor 1).

Tokarev, A., Agulhon, P., Long, J., Quignard, F., Robitzer, M., Ferreira, R. A. S., Carlos, L. D., Larionova, J., Guérin, C., & Guari, Y. (2012). Synthesis and study of Prussian blue type nanoparticles in an alginate matrix. *Journal of Materials Chemistry*, *22*(38), 20232–20242. https://doi.org/10.1039/c2jm33585a

Utomo, M. P., Prodjosantoso, A. K., Budiasih, K. S., Yunita, I., Triani, T. M., Dwi, V., & Rahmawati, N. (2023). Synthesis of Natural Zeolite/ZnO and Its Photodegradation Activity on Congo Red. Dalam *Indonesian Journal of Chemistry and Environment* (Vol. 6, Nomor 2).

Wang, B., Wan, Y., Zheng, Y., Lee, X., Liu, T., Yu, Z., Huang, J., Ok, Y. S., Chen, J., & Gao, B. (2019). Alginate-based composites for environmental applications: a critical review. *Critical Reviews in Environmental Science and*

Technology, *49*(4), 318–356. https://doi.org/10.1080/10643389.2018.1547621

Yang, C. H., Wang, M. X., Haider, H., Yang, J. H., Sun, J. Y., Chen, Y. M., Zhou, J., & Suo, Z. (2013). Strengthening alginate/polyacrylamide hydrogels using various multivalent cations. *ACS Applied Materials and Interfaces*, *5*(21), 10418–10422. https://doi.org/10.1021/am403966x

Ying, W. (2019). Pseudo-First and Second-Order Models for P Adsorption onto Termite Mound Soil (TMS). *IOSR Journal of Applied Chemistry (IOSR-JAC*, *12*(2), 11–16. https://doi.org/10.9790/5736-1202011116

Yuningrat, N. W., Retug, N., Gunamantha, I. M., Analis, J., & Fmipa, K. (2016). *Fotodegradasi Methyl OrangeDALAM Reaktor Fixed Bed Batu Apung-Semen* (Vol. 5, Nomor 1).

Zhao, D., & Shen, X. (2023). Preparation of Chitosan-Diatomite/Calcium Alginate Composite Hydrogel Beads for the Adsorption of Congo Red Dye. *Water (Switzerland)*, *15*(12). https://doi.org/10.3390/w15122254