

DAFTAR PUSTAKA

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1. Zein R., Suhaili, R., Earnestly, F., Indrawaty and Munaf, E. 2010. Removal of Pb(II), Cd(II) and Co(II) From Aqueous Solution Using *Garcinia Mangostana L.* Fruit Shell. *Hazardous Materials* 181: 52-56
2. Kariuki Z., Kiptoo, Jackson and Onyancha, Douglas. 2017. Biosorption Studies of Lead and Copper Using Rogers Mushroom Biomass 'LepiotaHystrix'. *South African Journal of Chemical Engineering*.doi:10.1016/j.sajce. 2017. 02. 001
3. Bordoloi, Neonjyoti., Goswami, Ritusmita., Kumar, Manish and Kataki, Rupam. 2017. Biosorption of Co(II) from Aqueous Solution Using Algal Biochar: Kinetics and Isotherm Studies. *Bioresource Technology* 244: 1465–1469
4. Jastrzebska A.M., Karcz, Joanna., Karwowska, Ewa and Andrzej. 2017. Biosorption Properties of RGO/Al₂O₃ Nanocomposite Flakes Modified with Ag, Au, and Pb for Water Purification. *Journal of Alloys and Compounds* 724: 869-878
5. Kalhori E.M., Yetilmezsoy, Kaan., Uygur, Nihan., Zarrabi, Mansur., Shmeis and M. Abu Reham. 2013. Modeling of Adsorption of Toxic Chromium on Natural and Surface Modified Lightweight Expanded Clay Aggregate (LECA). *Applied Surface Science* 287: 428–442
6. Kumar, Vasanth K and Sivanesan S. 2005. Prediction of Optimum Sorption Isotherm: Comparison of Linear and Non-Linear Method. *Journal of Hazardous Materials* 126 :198–201
7. Brouers, F and Al-Musawi, Tariq J. 2015. On the Optimal Use of Isotherm Models for the Characterization of Biosorption of Lead onto Algae. *Journal of Molecular Liquids* 212 : 46–51
8. Shahbeig, Hossein., Bagheri, Nafiseh., Ghorbanian, Ali Sohrab., Hallajisani Ahmad and Poorkarimi, Sara. 2013. A New Adsorption Isotherm Model of Aqueous Solutions on Granular Activated Carbon. *World Journal of Modelling and Simulation*. ISSN 1 746-7233. (9) : 243-254
9. Munaf, Edison., Abdullah, Zulfi., Kurniawan, Meilia Innes., Hidayat, Nazris, Nazaruddin., Zein, Rahmiana And Aziz, Hermansyah. 2014. New Empirical Model For Heavy Metals Biosorption. *Asian Journal of Chemistry* Vol. 26, No. 23 :8093-8097
10. Zein R., Arrisujaya, D., Hidayat., Elfia, M and Munaf, E. 2014. Sugar Palm(*Arenga pinnata merr*) Fruit Shell as Biosorben to Remove Cr(III), Cr(VI), Cd(II) And Zn(II) from Aqueous Solution. *J. Water Supply: research and Technology, AQUA*

11. Vimoneses, V., S. Lei, B. Jin, C.W.K. Chow and C. Saint. 2009. Kinetic Study And Equilibrium Isotherm Analysis of Congo Red Adsorption by Clay Materials. *Chem. Eng. J.* 148: 354-364
12. Lestari, Intan., Salmariza, Sy., Hamiwati., Kurniawati D., Alif, A., Zein R and Aziz, H. 2015. Equilibrium and Kinetic Modelling Biosorption of Zn(II) in Aqueous Solution Using Durian (*Duriozibethinus*) Seeds as Low-Cost Biosorbent. *J. Chem. Pharm. Res.* 7(9S), 111-122
13. Castellan, G.W. 1983. Physical Chemistry NewYork: Addison-Wesley Publising Company
14. Kalalagh, Sh. Shahmohammadi., Babazadeh, H., Nazemi, A. H and Manshouri, M. 2011. Isotherm and Kinetic Studies on Adsorption of Pb, Zn and Cu by Kaolinite. *Caspian J. Env. Sci.*(9) : 243-255
15. Al-Duri, B. 1995. A Review in Equiliberium in Single and Multicomponent Liquid Adsorption System. *Review in Chemical Engineering*11: 101-143
16. Chatterjee, S., S.H Lee, M.W and Woo. 2010. Adsorption of Congo Red by Chitosan Hydrogel Beads Impregnated with Carbon Nanotubes. *Bioresource Technol* 101: 1800-1806.
17. Chatterjee, S., Chatterjee T and S.H. Woo. 2011. Adsorption of Congo Red from Aqueous Solutions Using Chitosan Hydrogel Beads Formed by Various Anionic Surfactants. *Sep. Sci. Technol* 46: 986-996.
18. Ho, Y.S., Porter, J.F and Mckay, G. 2002. Equilibrium Isotherm Studies for the Sorption of Divalent Metal Ions onto Peat: Copper, Nickel and Lead Single Component Systems. *Water Air Soil Pollut* 141: 1–33.
19. Rangabhashiyam, S., Anu, N., Nandagopa, Giri M.S and Selvaraju, N. 2014. Relevance of Isotherm Models in Biosorption of Pollutants by Agricultural by Products. *Journal of Environmental Chemical Engineering* 2: 398–414
20. Suyono, T., Yuser, Mhd. A., Munaf, E., Azis, H., Tjong, D.H. and Zein R. 2015. Removal of Pb(II) Ions by Using Papaya (*Carica papaya L*) Leaves and Petai (*Parkia Speciosa Hassk*) Peels as Adsorbent. *J. of Chem and Pharm. Res.*7(9), 100-106
21. Dada, A.O., Olalekan, A.P and Olatunya, A.M. 2012. Langmuir, Freundlich, Temkin and Dubinin–Radushkevich Isotherms Studies of Equilibrium Sorption of Zn²⁺ Unto Phosphoric Acid Modified Rice Husk. *IOSR Journal of Applied Chemistry (IOSR-JAC)*. ISSN: 2278-5736 (3): 38-45
22. Fallou, Helene., Cimetiere, Nicolas Sylvain., Giraudet., Wolbert, Dominique and Cloirec, Pierre Le. 2016. Adsorption of Pharmaceuticals onto Activated Carbon Fiber Cloths Modeling and Extrapolation of Adsorption Isotherms at Very Low Concentrations. *Journal of Environmental Management* 166: 544-555

23. Gokhale, S.V., Jyoti, K.K and Lele, S.S. 2008. Kinetic and Equilibrium Modeling of Chromium (VI) Biosorption on Fresh and Spent *Spirulina platensis/Chlorella vulgaris* biomass. *Bioresource Technology* 99:3600–3608
24. Ofomaja, A.E., Unuabonah, E.I., Oladoja, N.A. 2010. Competitive Modeling for The Biosorptive Removal of Copper and Lead Ions from Aqueous Solution by Mansonia Wood Sawdust. *Bioresource Technology* 101 (2010) 3844–3852
25. Amrhar, Otheman., Hakima, Nassali and Elyoubi, Mohamed S. 2015. Two and Three-Parameter Isothermal Modeling for Adsorption of Crystal Violet Dye onto Natural Illitic Clay: Non linear Regression Analysis. *Journal of Chemical and Pharmaceutical Research.* ISSN : 0975-7384; 7(9): 892-903
26. Matouq M., Jildeh, Nina., Qtaishat, Mohammed., Hindiyeh, Muna and Al Syouf, Maha Q. 2015. The Adsorption Kinetics and Modeling for Heavy Metals Removal from Wastewater by *Moringa pods*. *Journal of Environmental Chemical Engineering* 3: 775–784
27. Rouquerol, J., Avnir, D., Fairbridge, C. W., Everett, D. H., Haynes, J. H., Pernicone, N., Ramsay, J. D. V., Sing, K. S. W. and Unger, K. K. 1994. Recommendations for the Characterization of Porous Solids. *International Union of Pure and Applied Chemistry. Physical Chemistry Division Commission on Colloid and Surface Chemistry.* 66 (1739-1758)
28. Wahyuni, D., Furqani, F., Astuti, A.W., Khoiriah., Indrawati., Zein, Rand Munaf,E. 2014. Removal of Cadmium(II) and Copper(II) from Aqueous Solution by Using Langsat Fruit (*Lansium domesticum Corr*) seed. *Res. J. Pharm. Biol. Chem.* 5(5) (1320-1328)
29. Hamzah, Uzami. 2013. Kulit Jengkol (*Pithecellobium jiringa prain.*) sebagai Biosorben untuk Penyerapan Ion Logam Pb(II) dan Cu(II) dari Air Limbah. *Skripsi.* Padang : Universitas Andalas
30. Munaf E., Hayuni, F., Zein, R and Suyani, H. 2014. The Use of Snake Fruit (*Salacca Sumatrana*) Seeds Powder for Removal of Cd(II), Cu(II) And Zn(II) Ions From Environmental Water. *Res. J. Pharm. Biol. Chem. Sci.* 5(2), 1535-1543
31. Mustika, Sewi Ardila. 2013. Pemanfaatan Ampas Daun Gambir (*Uncaria gambier roxb.*) untuk Mengurangi Ion Logam Cd(II) dan Zn(II) yang terdapat pada Air Sungai Batang Arau. *Skripsi.* Padang: Universitas Andalas
32. Nasution, A.N., Amrina,Y., Zein,R., Aziz, Hand Munaf, E. 2015. Biosorption Characteristics of Cd(II) Ions Using Herbal Plant of Mahkota Dewa (*Phaleria macrocarpa*), *J. of Chem and Pharm. Res.* 7(7), 189-196
33. Kurniawan, M.I., Abdullah, Z., Rahmadani, A., Zein, R and Munaf, E. 2014. Isotherm and Kinetic Modeling of Pb(II) and Cu(II) Uptake by *Annona Muricata L.* Seeds. *Asian J. Of Chem.* 25(12): 3588-3594

34. Hevira, Linda., Munaf, E and Zein, R. 2015. The use of *Terminalia catappa* L. fruit shell as biosorbent for the removal of Pb(II), Cd(II) and Cu(II) in liquid waste. *J. Chem. Pharm. Res.* 7(10) :79-89
35. Kurniawan, M.I., Munaf, E. And Zein, R. 2015. Adsorption Isoterm And Kinetic Modelings of Pb(II) and Cu(II) Uptake by *Dimocarpus longan* peels. *J. of Chem and Pharm. Res.* 7(8), 847-861
36. Ferawati. 2016. Biosorpsi ion Pb(II), Cd(II), dan Cu(II) dalam Larutan Menggunakan Biji Durian (*Durio zibethinus murr*). *Skripsi*. Padang: Universitas Andalas
37. Langmuir, I. 1916. The Constitution and Fundamental Properties of Solids and Liquids. *Journal of the American Chemical Society*. 38(11): 2221–2295.

