

## DAFTAR PUSTAKA

- Abas, S.N.A. Shah Ismail, M.H. Kamal, M, L. Izhar, S. 2013. Adsorption Process of Heavy Metals by Low-Cost Adsorbent : A Review. *World Applied Sciences Journal*. 28(11) : 1518-1530
- Abdul Vahab, A and Harindran, J. 2016. Hepatoprotective activity of barks extracts of *Terminalia catappa* Linn in Albino Rats. *World Journal of Pharmacy and Pharmaceutical Sciences*. 5(6) : 1002-1016
- Abu Hasan, H., Abdullah, S.R.S.,Kofli, N.T. Kamarudin, S.K. 2012. Isotherm equilibria of Mn<sup>2+</sup> biosorption in drinking water treatment by locally isolated Bacillus species and sewage activated sludge. *J. Environ. Manage*. 111 , 34-43
- Akpor, O.B., Ohiobor, G.O., Olalulu, T.D. 2014. Heavy metal pollutants in wastewater effluents : Sources, effects and remediation. *Advances in Biosciences and Bioengineering*. 2(4) , 37-43
- Aschner, M and Aschner, J.L. 1991. Manganese neurotoxicity : cellular effects and blood-brain barrier transport. *Neuroscience & Biobehavioral Reviews*.15 , 333-340
- Babadi, V.Y., Sadeghi, L., Amraie, E., Rezaei, M., Malekirad, A.A., Nejad, M.A. 2013. Manganese toxicity in the central nervous system : Decreasing of catecholamine in rat's brains. *SciRes* . 5(12) , 2146-2149
- Bairagi, H., Khan, M.M.R., Ray, L., Guha, A.K. 2011. Adsorption profile of lead on *Aspergillus versicolor* : a mechanistic probing. *J Hazard Mater*.186 , 156-64
- Bharat, K.G.,Kumari, D., Sravanthi, G., Rajeshwar, G., Umadevi, V., Kotla, N.G.2014. Anti ulcer activity of ethanolic extract of *Terminalia catappa* leaves against gastric ulcers by pyrolic ligation induced model rats. *International Journal of Pharmaceutical Sciences and Drug Research.*, 6(1) , 38-40
- Bhuvaneshvari, D.C. Kiran, K.K. Vaddana, J. Indravathi, G. 2014. Manganese Induced Toxic Effect on Oxidative System and mRNA Expression on Mn-Sod and Gpx in Albino Rat Brain :Protective Effect of Alpha-Tocopherol. *International Journal of Innovative Research In Science, Engineering and Technology*. 3(2) : 9252-9263
- Bortey-Sam, N. Nakayama, S.M.M. Ikenaka, Y. Akoto, O. Baidoo, E. Mizukawa, H. Ishizuka, M. 2016. Heavy metals and metalloid accumulation in livers and kidneys of wold rats around gold mining communities in Tarkwa, Ghana.*Journal of Enviromental Chemistry and Ecotoxicology*.8(7) : 58-68
- Calne, D.B., Chu, N.S., Huang, C.C., Lu,C.S., Olanow,W. 1994. Manganism and idiopathic parkinsonism : similarities and differences. *Neurology*. 44, 1583-1586

- Chatterjee, S.K., Bhattacharjee, I., Chandra, G. 2010. Biosorption of heavy metals from industrial waste water by *Geobacillus thermodenitrificans*. *J Hazard Mater.* 175 , 117-125
- Chtourou, Y. Garoui, E. Boudawara, T. Zeghal, N. 2014. Protective role of silymarin against manganese induced nephrotoxicity and oxidative stress in rat. *Environmental Toxicology* .29(10): 1147-1154
- Colak, F., Atar, N., Yazicioglu, D., Algun, A. 2011. Biosorption of lead from aqueous solutions by Bacillus strains possessing heavy metal resistance. *Chem Eng J.* 173 , 422-428
- Dauqan, E. Abdullah, A. Sani, H.A. 2013. Lipid peroxidation in rat liver using different vegetable oils. *The Malaysian Journal of Analytical Sciences.* 17(2) : 300-309
- Demirbas, A. 2008. Heavy metal adsorption onto agro-based waste materials : a review. *J Hazard Mater.* 157 , 220-229
- Duruibe, J.O., Ogwuegbu, M.O.C., Egwurugwu, J.N. 2007. Heavy metal pollution and human biotoxic effect. *International Journal of Physical Sciences.* 2 (5) , 112-118
- El-Saied, A. 2014. Hepatoprotective effect of sesame oil against lead induced liver damage in albino mice : Histological and biochemical studies. *American Journal of Biosciences.* 2(6-2) : 1-11
- El-Sayed, G.O., Dessouki, H.A., Ibrahiem, S.S. 2011. Removal of Zn(II), Cd(II) and Mn(II) from Aqueous Solutions by Adsorption on Maize Stalks. *The Malaysian Journal of Analytical Sciences.* 15 (1) , 8-21
- Fadel, M., Hassanein, N.M., Elshafei, M.M., Mostafa, A.H., Ahmed, M.A., Khater, H.M. 2014. Biosorption of manganese from groundwater by biomass of *Saccharomyces cerevisiae*. Housing and Building National Research Center.
- Ferner, D.J. 2001. Toxicity, heavy metals. *E Med.J.* 2(5) , 1-5
- Fosmire, G.J. 1990. Zinc Toxicity. *Am.J.Clin.Nutr.* 51(2) , 225-227
- Farlex Incorporated. 2005. Definition : Environment. The Free Dictionary Farlex Inc Publishing USA. ([www.thefreedictionary.com](http://www.thefreedictionary.com))
- Garcia-Nino, W.R and Pedraza-Chaverri, J. 2014. Protective effect of curcumin against heavy metals-induced liver damage. *Food and Chemical Toxicology.* 69 : 182-201
- Ghani, N.T.A and El-Chaghaby, G.A. 2014. Biosorption for metal ions removal from aqueous solutions : a review of recent studies. *International Journal of Latest Research in Science and Technology.* 3 (1) , 24-42



Hossain, M., Ngo, H.H., Guo, W.S., Setiadi, T. 2012. Adsorption and desorption of copper (II) ions onto garden grass. *Bioresour technol.* 121 , 386-195

Ibrahim, M.W. 2011. Biosorption of heavy metals ions from aqueous solution by red macroalgae. *J Hazard Mater.* 192 , 1827-1935

Inoue, K.I. 2013. Heavy Metal Toxicity. *J. Clinic. Toxicol.* 1-2

Kaur, R., Singh, J., Khare, R., Ali, A. 2012. Biosorption the Possible Alternatives to Existing Conventional Technologies for Sequestering Heavy Metal Ions from Aqueous Streams : A Review. *Universal Journal of Environmental Research and Technology.* 2(4) , 325-335

Kleinubing, S.J., da Silva, E.A., da Silva, M.G.C. , Guibal, E. 2011. Equilibrium of Cu(II) and Ni(II) biosorption by marine alga *Sargassum filipendula* in a dynamic system : competitiveness and selectivity. *Bioresour Technol.* 102 , 4610-4617

Krishnaveni, M. 2014. In vitro antioxidant activity of *Terminalia catappa* nuts. *Asian Journal of Pharmaceutical and Clinical Research.* 7(4) : 33-35

Li, Q. Liu, H. Alattar, M. Jiang, S. Han, J. Ma, Y and Jiang, C. 2015. The preferential accumulation of heavy metals in different tissues following frequent respiratory exposure to PM<sub>2.5</sub> in rats. *Scientific Reports:* 1-6

Mahmoud, S.M and Bahr, H.I. 2015. Potential Protective Effects of Ginkgo Biloba and Rosemary on Hepatoencephalopathy and Chromosomal Aberrations Induced by Manganese Chloride in Rats. *International Journal of Advanced Research.* 3(3) : 483-497

Mahmoud, M.S., Ahmed, S.M., Mohammad, S.G., Elmagd, A.M.A. 2014. Evaluation of Egyptian Banana Peel (*Musa sp.*) as a Green Sorbent for Groundwater Treatment. *International Journal of Engineering and Technology.* 4 (11) , 648-659

Mungapati, V.S., Yarramuthi, V., Nadavala, S.K., Alla, S.R., Abburi, K. 2010. Biosorption of Cu (II), Cd(II) and Pb(II) by *Acacia leucocephala* bark powder : Kinetics, equilibrium and thermodynamics. *Chem Eng J.* 157 , 357-365

Nazaruddin, N. Zein, R. Munaf, E. Jin, J. 2014. Biosorption of Copper(II), Lead(II), Cadmium(II) and Zinc(II) ions from aqueous solution by *Nypa fruticans* Merr Shell on batch method. *Journal of Chemical and Pharmaceutical Research.* 6(12) : 370-376

Neelavathi, P., Venkatalakshmi, P., Brindha, P. 2012. Antibacterial activities of aqueous and ethanolic extracts of *Terminalia catappa* leaves and bark against some pathogenic bacteria. *International Journal of Pharmacy and Pharmaceutical Sciences.* 5(1) , 114-120

Nuha, Y and Al-Harbi. 2013. Histological alteration induced by manganese chloride in the male testes, epididymis and kidney of the albino rats. *IOSR Journal of Pharmacy and Biological Sciences*. 4(6) : 5-8

Ofudje, E.A. Williams, O.D. Asogwa, K.K. Awotula, A.O. 2013. Assessment of Langmuir, Freundlich and Dubinin-Radushkevich Adsorption Isotherms for the Biosorption of Mn(II) Ions from Aqueous Solution by Untreated and Acid-Treated Corn Shart. *International Journal of Scientific & Engineering Research*. 4(7) : 1628-1640

O'Neal, S.L and Zheng, W. 2015. Manganese toxicity upon overexposure : A decade in review. *Current Environment Health Report*. 2(3) : 315-328

Othman, N and Mohd Asharuddin, S. 2013. Cucumis Melo Rind as Biosorbent to Remove Fe(II) and Mn(II) From Synthetic Groundwater Solution. *Advanced Materials Research*. 795: 266-271

Pahlavanzadeh, H. Kesthkar, A.R. Safdari, J. Abadi, J. 2010. Biosorption of nickel (II) from aqueous solution by brown algae : Equilibrium, dynamic and thermodynamic studies. *Journal of Hazardous Materials*. 175 (1-3) : 304-310

Prabha, P.L. Fatima Rani, S.A. Ramachandramoorthy, T. Jayalakshmi, B. 2015. An investigation of adsorption of manganese(II) on to the clay collected from a pond in Tiruchirappalli, India. *World Journal of Pharmacy and Pharmaceutical Science*. 4(6) : 714-723

Prabha, M.R. 2015. In vitro antioxidant activity of anthocyanins from the pericarp of *Terminalia catappa* L. fruits. *International Journal of Pharma and Bio Sciences*. 6(3) : 72-76

Rachel, N.K. Nsami, N.J. Placide, B.B. Daouda, K. Victoire, A.A. Benadette, T.M. Mbadcam, K.J. Adsorption of Manganese (II) Ions from Aqueous Solutions onto Granular Activated carbon (GAC) and Modified Activated Carbon (MAC). *International Journal of Innovative Science, Engineering & Technology*. 2(8) : 606-614.

Rao, L.N., Prabhakar, G. 2012. Biosorption of Chromium ions from aqueous solution by using *Terminalia catappa* L : Equilibrium and Kinetic studies. *Journal of Environmental Science, Computer Science and Engineering & Technology*. 1(1) , 41-52

Roy, B.K. Kumari, S. and Singh, K.K. 2015. Manganese induced histochemical localization of oxygen derived free radicals and hepatotoxicity in poultry birds. *Agricultural and Biology Journal of North America*. 6(2) : 52-62

Sadeq, O.R. Al-Masri, I and Al-Kharaz, K. 2014. The effect of ibuprofen on hepatic glutamic puruvic transaminase (SGPT), glutamic oxaloacetic transaminase (SGOT)



and alkaline phosphatase (ALP) in dental patients. *International Journal of Pharma and BioSciences*. 5(4): 689-691

Santamaria, A.B. 2008. Manganese exposure, essentiality & toxicity. *Indian J Med Res*. 128 , 484-500

Sari, A., Uluozlu, O.D., Tuzen, M. 2011. Equilibrium, thermodynamics and kinetic investigation on biosorption of arsenic from aqueous solution by algae (*Maugeotia genuflexa*) biomass. *Chem Eng J*. 167 , 155-161

Sudha, B.R and Abraham, E. 2003. Studies on chromium (VI) adsorption using immobilized fungal biomass. *Biores. Technol*. 87 , 17-26

Suguna, M., Kumar, N.S., Subbaiah, M.V dan Krishnaiah, A. 2010. Removal of divalent manganese from aqueous solution using *Tamarindus indica* fruit nut shell. *J.Chem.Pharm.Res* . 2(1) , 7-20

Sulaiman, M.S. 2015. *Azadirachta indica* (Neem) an alternative biosorbent. *Applied Research Journal*. 1(4): 265-270

Suresh, Ch. Kumar Reddy, D.H. Harinath, Y. Naik, B.R. Sessaiah, K. Ramana Reddy, A.V 2014. Development of wood apple shell (*Feronia acidissima*) powder biosorbent and its application for the removal of Cd(II) from aqueous solution. *The Scientific World Journal*: 1-8

Tarasub, N. Tarasub, C. Na Ayutthaya, W.D. 2011. Protective role of curcumin on cadmium- induced nephrotoxicity in rats. *Journal of Environmental Chemistry and Ecotoxicology*. 3(2) : 17-24

Tumin, N.D. Chuah, A.L. Zawani, Z. Rashid, S.A. 2008. Adsorption of copper from aqueous solution by *Elaeis guineensis* kernel activated carbon. *Journal of Engineering Science and Technology*. 3(2) : 180-189

Venkatalakshmi, P. Brindha, P. and Vadivel, V. 2015. In vitro antioxidant and anti inflammatory studies on bark, wood and fruits of *T.catappa* L. *International Journal of Phytomedicine*. 7: 246-253

Wang, T and Sun, H. 2013. Biosorption of heavy metals from aqueous solution by UV-mutant *Bacillus subtilis*. *Environ Sci Pollut Res Int*. 20 , 7450-7463

World Health Organization (WHO). 2004. Guidelines for Drinking Water Quality, 3<sup>rd</sup> edition. Vol 1. Geneva, Italy

Xiao, X., Luo, S., Zeng, G., Wei, W., Wan, Y. Chen, L. 2010. Biosorption of cadmium by endophytic fungus (EF) *Microspheeropsis* sp LSE10 isolated from cadmium hyperaccumulator *Solanum nigrum* L. *Bioresour Technol*. 101 , 1668-1674

Zhang, Y. Zhao, J. Jiang, Z. Shan, D. Lu, Y. 2014. Biosorption of Fe(II) and Mn(II) Ions from Aqueous Solution by Rice Husk Ash. Hindawi Publishing Corporation:1-10

