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BIOSORPTION OF ETL DYE FROM AQUEOUS SOLUTION BY LOW COST SORBENT

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This present study investigates the batch ETL dye sorption by grape seeds. The sorbent was synthesized and characterized by scanning electron microscope (SEM) and Fourier transform infrared spectroscopy (FTIR). The effects of pH, initial dye concentration, contact time and mass sorbent in the efficiency of ETL sorption were investigated. Furthermore, pseudo-first and second-order kinetic models were also used to analyze sorption kinetics. The equilibrium adsorption results were fitted by the Langmuir and Freundlich isotherms. Maximum amounts of ETL removal (2.36 mg/g) was observed at pH 2, sorbent weight 500 mg and contact time 60 mins. The Langmuir model feted well the experimental data.

Recent Publications

1. Fenglian F and Wang Q (2011) Removal of heavy metal ions from wastewaters: A review. Journal of Environmental Management 92:407-418.
2. Okoro A I and Okoro S O (2011) Agricultural by products as green chemistry absorbants for the removal and recovery of metal ions from waste water environments. Continental J Water, Air and Soil Pollution 2:15-22.
3. Sisca O, Febriana N, E Felycia Soetaredjo, Sunarso J and Suryadi I (2009) Review studies on potential applications of biomass for the separation of heavy metals from water and wastewater. Biochemical Engineering Journal 44:19-41.
4. Raize O, Argaman Y and Yannai S (2004) Mechanisms of biosorption of different heavy metals by brown marine macroalgae. Biotechnology and Bioengineering 87:451-458.
5. Ahalya N, Ramachandra T V and Kanamadi R D (2003) Biosorption of heavy metals. Research, Journal of Chemistry and Environment 7:71-78.

Biography

Yamina C has completed her PhD at the age of 32 years from Oran University, ALGERIA. She is the student of Mostaganem University, Algeria. She has one publication on journal of European Chemical Bulletin "Synthesis and Antimacrobial Activity of Some New L-Lysine Glycoside Derivatives".

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