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Biosorption of cadmium and lead ions from aqueous solution of cashew (*Anacardium occidentale*) leaf

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The potential of using cashew (*Anarcardium occidentale*) leaf to remove Pb (II) and Cd (II) ions from aqueous solution was investigated. The influence of pH, contact time and initial metal ion concentration and temperature were studied using batch experiment. The biosorption of the metal ions was found to be pH dependent. Analysis of the FT-IR spectra showed the presence of ionizable functional groups (C=O, O-H) which were able to interact with cations and thus served as the active sites for the removal of positively charged Pb (II) and Cd (II) ions from solution. Thermodynamic parameters such as the free energy change (ΔG), ΔH and ΔS were evaluated it was found that the sorption process was feasible, spontaneous and endothermic.

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