



META

Comparative study of  $^{110m}\text{Ag}(\text{I})$  removal from aqueous media by humic substances

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Abstract

[en] In this study, humic substances - dry cowdung powder and humic acid were used for the removal of precious metal ion Ag(I) from aqueous solution. The effect of process parameters such as contact time, adsorbent dose, pH, and metal ion concentration on the adsorption process was estimated. These novel sorbents exhibited high percentage removal of Ag(I) as 95% and 77%, with a biosorption capacity of  $19.0 \text{ mg g}^{-1}$  and  $3.88 \text{ mg g}^{-1}$  for dry cowdung powder and humic acid respectively. High uptake percentages along with thermodynamic and kinetic calculations prove this process to be economical, practicable and the most eco-friendly amongst the available techniques. (author)

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