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Adsorption of Lead Ions on Carbonaceous Sorbents of Nutshell Obtained from Secondary Raw Material

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Abstract

The sorption of Pb (II) ions from an aqueous solution of lead nitrate on carbon sorbents, obtained from waste based on cellulose-containing materials, was studied. Particularly, among studied carbons [hazel nutshell, walnut shell, sawdust, activated carbon (fraction size—40 μ)] material obtained from walnut shell shows the best adsorptive properties. The possibility of their use for the purification of drinking and waste waters

contaminated with lead ions is established. The maximum amount of lead that can be bound by 1 g of sorbent is 154.0 mg/g, while 95% of metal ions are bound within 30–40 min.

Keywords

Sorption **Lead** **Adsorption** **Nutshell** **Carbon**

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Conflict of Interest

The authors declare that they have no conflict of interest.

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