



Concentration of cadmium(II) trace amounts from large volumes of aqueous samples on chemically modified hemp fibers

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This study reveals the results of experiments designated to emphasize the practical usefulness of sulphhydryl hemp fibers. The concentration of trace amounts of Cd (II) from large volumes of aqueous samples on sulphhydryl hemp fibers was carried out under batch conditions. It was found that by using this material the concentration of cadmium in wastewaters might be reduced below allowable discharge limits. The recovered cadmium was greater than 95% and cadmium concentration factors over 30 were realized. More than 78% of cadmium(II) was recovered with 2M HNO₃. By calcining sulphhydryl hemp fibers at 800°C and dissolution of the obtained residue with HCl 1: 1, the percentage of cadmium recovery exceeded 95%. The results of this study suggest that sulphhydryl hemp fibers may be a promising sorbent provided for environmental technologies in the future.