

**BIOSORPTION OF Cu(II) ONTO SULFURIC ACID TREATED
SPENT GRATED COCONUT (*Cocos nucifera*) IN FIXED-BED
COLUMN**

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ABSTRACT

BIOSORPTION OF Cu(II) ON MODIFIED SPENT GRATED (SGC) *Cocos nucifera* COCONUT BY COLUMN STUDY

Spent grated coconut treated with sulphuric acid had been evaluated as a potential low cost biosorbent. It had been used for the removal of copper(II) from the aqueous solution using fixed-bed column mode. The parameters were fixed for this study using; 50 mg/L influent concentration, 10 mL/min flow rate, 1.5 cm bed-depth and pH 5. The adsorption capacity obtained from breakthrough curve was 35.785 mg/g. The breakthrough time, t_b at 71.57 min, while $t_{50\%}$ at 118.36 min and exhaustion time, t_{exh} at 211.23 min for 2050 mL. The R^2 of Thomas model was 0.885 and q_o was 66.50 mg/g while R^2 of Yoon-Nelson model was 0.879 and q_{oYN} was 66.75 mg/g.

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