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BIOCHAR FROM *Prosopis africana* SHELL AND PALM KERNEL SEEDS: PHYSICAL, CHEMICAL AND ADSORPTION PROPERTIES

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Abstract
Physical and Chemical properties of the raw *Prosopis africana* shell and palm kernel seeds as well as the biochar prepared from them by pyrolysis at 350^0C for ten minutes and two hours respectively was evaluated. Adsorption studies was also carried out on the materials to see their effectiveness in trapping heavy metals [Fe(III), Mn(II), Ni(II), Cu(II), Zn(II), Cr(III), Pb(II) and Cd(II)] from aqueous solution by varying the adsorbent dosage and the initial concentration of the metal ion. The result showed that adsorption of the metal ions increased with increase in the adsorbent dosage from 0.1-0.5g, but decreased with increase in the initial concentration of the metal ion (10-40ppm). This suggests that *Prosopis africana* shell and palm kernel seeds waste can be used as a cost effective adsorbent for heavy metal remediation.