**A Comparative Analysis and Characterization of Animal Bones as Adsorbent**

**Abstract**

Animal bone has been utilized to produce adsorbents for the decolourization of palm oil. The bones used are chicken, dog, goat and cow bones. The bones were carbonized at a temperature of 4000C in a muffle furnace for one hour in the absence of air. The residue was then ground to a fine particle size of 212 µm for each sample. Chemical activation with 250 ml of 2 M Hydrochloric acid (HCl) was then carried out with further processing to obtain activated carbon from each sample. From the characterization, the following parameters were determined: ash content, moisture content, yield charcoal, fixed carbon, pore volume and bulk (apparent) density. The adsorption capacity of the activated carbons was tested on the bleaching of palm oil. The following analyses were carried out on the bleached oil: iodine value, saponification value and acid or free fatty acid value. The rate of colouration was determine using a colorimeter in which chicken bone was found to be 275, goat bones was 268, dog bone was 261 and cow bones was 220 compared to the colour of the oil before bleaching which was found to be 279. Cow bones had the lowest value for colouration which shows from the result obtained that activated carbon from cow bones is more effective in reducing acidity content of palm oil than those of chicken bones, goat bones and dog bones.