Comparative Studies Of Characteristics Of *Saraca Thaipingensis* And *Codiaeum Variegatum* As Biosorbent With Activated Carbon

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ABSTRACT

The primary goal of this work was to do comparative studies of attributes of *Saraca thaipingensis* and *Codiaeum variegatum* leaves powder as biosorbent with activated carbon. The one of a kind of biosorbent and activated carbon usually known by the guideline of absorptivity which will be connected in contaminants and smell in the water and air. In this specific study, the properties of *Saraca thaipingensis* and *Codiaeum variegatum* leaves powder, and activated carbon were studied. The pH of CV, AC, and ST powder were found to be 7.04 ± 0.035, 9.53 ± 0.056, and 5.88 ± 0.021 individually. Moisture content for activated carbon was the highest amongst the three samples, which was 25 ± 1.53 %, while CV and ST were 10.75 ± 2.32 % and 2.33 ± 1.2 % respectively. CV (0.2033 ± 0.012 cm^3/g) has the better adsorption capability with pore volume than that of AC (0.1833 ± 0.007 cm^3/g) and ST (0.1633 ± 0.012 cm^3/g). The determination of surface area was done by using Sear's Method. The surface area for activated carbon (1399 ± 11.09 m^2/g) was higher than that of *Saraca thaipingensis* (1279.53 ± 2.13 m^2/g) and *Codiaeum variegatum* (1383 m^2/g) leaves powder, which demonstrates that activated carbon is a good adsorbate in removal of heavy metals. The elemental content for three examples were assessed and analyzed.