

Chemical composition and potential uses of *Leucaena leucocephala* stem bark

ABSTRACT

Leucaena leucocephala stem bark that was eleven years old was studied for its chemical composition and usage. The samples were subjected to chemical analyses based on ASTM standard procedures after being air-dried for several days. The results found that the bark of *L. leucocephala* has a pH value of 6.04 and that the solubility of the bark in 1% NaOH alkali is the highest compared to the solubility in hot water (14.45%) and cold water (14.36%), while the chemical composition of the bark of *L. leucocephala* was ash (15.76%); extractives (8.39%); holocellulose (132.85%); hemicellulose (103.66%); cellulose (29.19%) and lignin (38.24%). Based on the findings, *L. leucocephala* bark was less acidic. When used as a source of carbohydrates, bark has a high solubility, and its chemical composition may have an impact on how quickly it burns when it is pyrolysed.