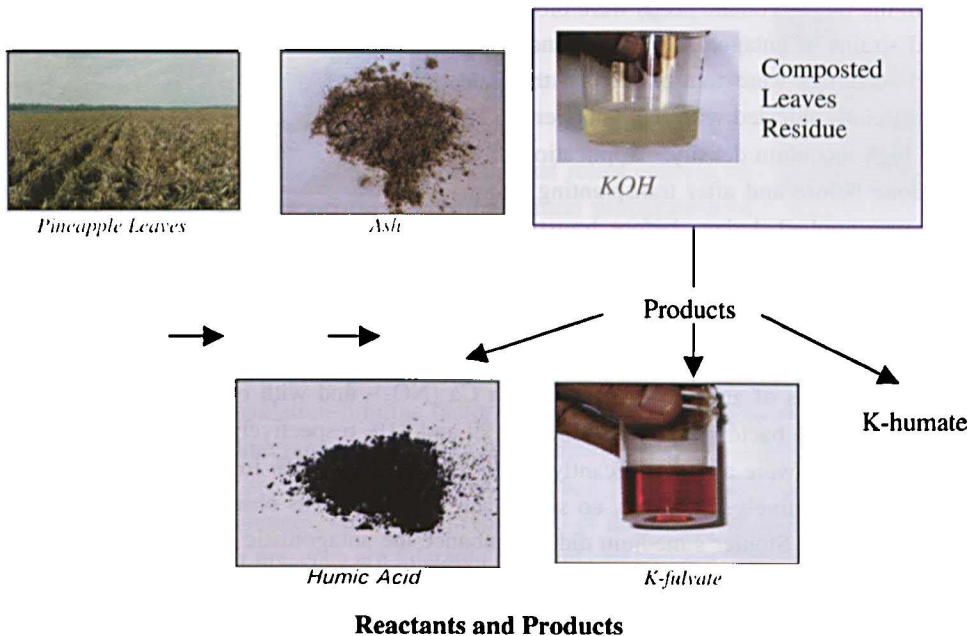


## Value Addition to Pineapple Leaves Residue: I. Extraction of Humic Acid

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Humic substances are acidic, predominantly aromatic, and hydrophobic. They are grouped into three main fractions namely: humic acid (HA), fulvic acid, and humin. Humic acid is the fraction of humic substances that is not soluble in water under acid conditions (pH 1 to 2) but becomes soluble at higher pH. Humic acids are proven metal complexing agent, good dispersants and can act as redox agents.



Potassium hydroxide (0.1M KOH) from incinerated pineapple leaves extracted 20% HA from composted pineapple leaves residue while that of analytical grade (0.1 M KOH) extracted 30%, however, the elemental composition (C, H, N, O, and S), the functional groups (carboxylic, phenolic OH, and total acidity), and the spectra characteristics of the HA extracted using these extractants were generally similar. Potassium hydroxide from ashed pineapple leaves can therefore be used to extract reasonable amount of HA without appreciably altering the elemental and functional groups constitution as well as the spectra characteristics of this humic substance. The potential of using KOH extracted from incinerated pineapple leaves for the extraction of humic substances therefore looks promising. Useful products such as K-humate, and K-fulvate were also produced.

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