

Characterization and the Study of Energy Potential of Municipal Solid Waste Disposed in Bauchi Town and Environs

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Abstract : The characterisation and the energy potential of the municipal solid wastes in Bauchi town and environs were studied. It was found that, 35,000 tonnes of waste was generated annually at 0.19 kg/capital/day of which, the combination of plastics, rubber, polyethene bags constituted about 33%, followed by textile materials, leathers, wood 26%, combination of papers, cartons 19%, crop stalks/grass 11% and the remaining incombustible materials 11%. The heating value or calorific value of the wastes was determined using a digital calorimeter to be 6.43 MJ/kg, almost one-third of the energy content of peat which has a value of 15.9 MJ/kg. The calorific value of the fuel was found to be significant; hence, the waste could be used for energy generation.

Keywords : calorific value, characterization, digital calorimeter, incombustible, municipal solid waste

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