

Reclamation of Pyrolysis Liquid from Medical Plastic Waste by Using Batch Reactor-Bangladesh Perspective

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Abstract

Medical waste has a dangerous effect on environment. The mismanagement of it may be a significant risk factor for diseases transmission, in developing countries like Bangladesh. This study is an attempt to reclamation of energy from medical plastic waste. Medical plastic waste can be converted into energy that may be alternative source of energy. Pyrolysis is the appropriate method of hazardous waste disposal and recovery of valuable energy. Pyrolysis process was accomplished at temperature range 200-350 oC in a batch reactor. The maximum amount of pyrolysis product yield is 65% at 260 oc temperature. FT-IR and GC-MS analysis of pyrolysis liquid are carried out in his study which specified the presence of aromatics rings, alkenes, alkanes and this liquid have carbon chain ranges from C₁₀-C₂₀. The chemical and physical properties of the liquid oil were examined and that was much closer to commercial fuel.

Keywords

Medical Plastic Waste, Batch Reactor, Thermal Pyrolysis, pyrolysis oil reclamation.

Biographies

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