

Production of methane gas from organic fraction municipal solid waste (OFMSW) via anaerobic process: Application methodology for the Malaysian condition

Abstract

Solid waste management in Malaysia is confronted with many problems, including low collection coverage, irregular collection services, inadequate equipment used for waste collection, crude open dumping and burning without air and water pollution control systems, inadequate legal provisions and resource constraints. These problems have various effects on the development of the solid waste management system in Malaysia. Anaerobic digestion has been suggested as an alternative method for removing high concentrations of organic waste. In this study, two types of anaerobic digesters which are Simulated Landfill Bioreactor (SLBR) and Anaerobic Solid-Liquid (ASL) reactor were proposed. The reactors were operated at a temperature 60°C, analysed for biogas production and volatile fatty acid.

Keywords

Anaerobic digestion; Malaysia; Methane gas; Organic fraction municipal solid waste