

Influence Of Flow Rate Variation On Bio-Energy Generation During Anaerobic Co-Digestion

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ABSTRACT

The anaerobic biodegradability of a combination of petrochemical wastewater (PWW) and thickened manure activated sludge (TMAS) was measured with a 4.5 l pilot-scale continuous stirred tank reactor, ran at mesophilic (37 °C) condition. The anaerobic digestion, biogas generation, and energy assessment were analyzed for ten flow rates; 170, 220, 300, 370, 410, 475, 540, 600, 640 and 680 ml/day at mesophilic condition (37 °C). The analytical data revealed that the environmentally complied optimum flow rate was 370 ml/day, for bio-energy generation.

KEYWORDS: Anaerobic co-digestion; Petrochemical wastewater; Thickened manure activated sludge; Methane production

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