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Abstract

The major obstacle for thermophilic anaerobic digestion (TAD) is the inhibited microorganism activity and process instability during the start-up period. This study proposed a strategy to accelerate and stabilize the thermophilic reactors start-up via adding conductive materials. The results show that methane production rate in conductive materials supplemented (CMS) reactors was almost two times higher than the control reactors. *Caloramator* sp., a candidate of electroactive bacteria, was significantly enriched in the carbon nano-tube (CNT) supplemented groups (12.89%)