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Coupling System for Food Wastes Anaerobic Digestion and Polyhydroxyalkanoates Production with *Ralstonia eutropha*

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摘要 A new technology was developed to couple the anaerobic digestion of food wastes with production of polyhydroxyalkanoates (PHAs). Acetic, propionic, butyric and lactic acids were produced during food wastes anaerobic digestion and their concentrations reached 5.5, 1.8, 27.4 and 32.7 g/L, respectively under appropriate digestion conditions. The fermentative acids were transferred through a dialysis membrane to an air-lift reactor for PHA synthesis by *Ralstonia eutropha*. Dry cell concentration and PHA content reached 22.7 g/L and 72.6%, respectively. The obtained PHA was a copolymer of b-hydroxybutyrate (HB) and b-hydroxyvalerate (HV) with 2.8% (mole ratio) of HV units in polymer.

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