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Fed-batch Production of Poly-3-hydroxydecanoate from Decanoic Acid

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Highlights

- Decanoic acid is an ideal substrate for the synthesis of MCL-PHA, but its use for this purpose had only been studied in shake-flasks
- A fed-batch fermentation process was developed for the production of MCL-PHA from decanoic acid using *Pseudomonas putida* KT2440.
- Decanoic acid was kept in liquid form by heating or by mixing with acetic acid.
- Different ratios of decanoic acid:acetic acid:glucose (DA:AA:G) were fed.
- 75 g L⁻¹ biomass containing 74% PHA were produced with each gram of PHA requiring only 1.16 g of decanoic acid.

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