

Production of medium chain length polyhydroxyalkanoates from oleic acid using *Pseudomonas putida* PGA1 by fed batch culture

Deskripsi Lengkap: <https://lib.ui.ac.id/detail?id=119102&lokasi=lokal>

Abstrak

Bacterial polyhydroxyalkanoates (PHAs) are a class of polymers currently receiving much attention because of their potential as renewable and biodegradable plastics. A wide variety of bacteria has been reported to produce PHAs including *Pseudomonas* strains. These strains are known as versatile medium chain length PHAs (PHAs-mcl) producers using fatty acids as carbon source. Oleic acid was used to produce PHAs-mcl using *Pseudomonas putida* PGA 1 by continuous feeding of both nitrogen and carbon source, in a fed batch culture. During cell growth, PHAs also accumulated, indicating that PHA production in this organism is growth associated. Residual cell increased until the nitrogen source was depleted. At the end of fermentation, final cell concentration, PHA content, and productivity were 30.2 g/L, 44.8 % of cell dry weight, and 0.188 g/l/h, respectively.