

Production of succinic acid in basket and mobile bed bioreactors — Comparative analysis of substrate mass transfer aspects

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Abstract

The glucose mass transfer in the biosynthesis of succinic acid with immobilized *Actinobacillus succinogenes* cells has been comparatively analyzed for a bioreactor with mobile bed vs. a stationary basket bioreactor. The process has been considered to occur under substrate and product inhibitory effects. The results indicated that the bioreactor with mobile bed is more efficient for biocatalyst particles with a diameter over 3 mm, while the basket bioreactor is more efficient for smaller biocatalyst particles and basket bed thickness below 5 mm. The performances of both configurations of immobilized *A. succinogenes* cell beds were found to be superior to the column packed bed bioreactor.