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## Membrane Microfiltration Fermentation of Glucose Oxidase with Cell Recycling

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**摘要** Membrane microfiltration fermentation (MMF) with cell recycling was successfully applied to the production of glucose oxidase (GOD). A plate microfiltration module was found suitable for such purpose. By feeding whole medium in MMF, the productivity of GOD was much higher than that by feeding glucose alone. With increasing dilution rate the enzyme productivity increased and average enzyme activity decreased. The enzyme productivity of MMF under  $D = 0.12 \text{ h}^{-1}$  and  $0.20 \text{ h}^{-1}$  were 3871 and 3945  $\text{U}\cdot\text{h}^{-1}$  respectively, which was about 3 times as that of batch fermentation (BF) and the average enzyme activity was still as high as 37  $\text{U}\cdot\text{mL}^{-1}$  under  $D = 0.12 \text{ h}^{-1}$ . The relative efficiency of MMF applied to low yield strain was higher than that applied to high yield strain.

**关键词** [glucose oxidase](#) [membrane microfiltration fermentation](#) [cell recycling](#) [acetylcellulose membrane](#)

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**Key words** [glucose oxidase](#); [membrane microfiltration fermentation](#); [cell recycling](#); [acetylcellulose membrane](#)

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