



产环己酰亚胺新菌株YIM41004种子培养基优化研究初报

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Preliminary study on the optimization of seed culture medium for cycloheximide-producing strain YIM41004

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摘要 对产环己酰亚胺新菌株*Streptomyces yunnanensis* YIM41004的摇瓶种子培养基进行了优化,获得最佳配方为葡萄糖25 g, 蛋白胨7.5 g, 酵母膏7.5 g, CaCO₃ 3 g, MgSO₄·7H₂O 1 g, MnSO₄·4H₂O 0.1 g, KH₂PO₄ 0.2 g, 水1 000 mL; 最佳培养条件为起始pH7.8, 500mL种子瓶装量100mL, 最佳种龄32~36 h. 用优化后的种子培养基培养种子用于摇瓶发酵, 结果表明在接种量为10%体积分数时, 环己酰亚胺产量达到最高, 为498.9 mg·L⁻¹, 比用原始种子培养基时的产量450 mg·L⁻¹高出10.7%.

关键词: *Streptomyces yunnanensis* YIM41004 环己酰亚胺 种子培养基 优化

Abstract: The composition of seed culture medium and the culture conditions for cycloheximide-producing new strain *Streptomyces yunnanensis* YIM41004 were optimized. The optimum composition was as following: glucose 25g, peptone 7.5g, yeast extract 7.5g, CaCO₃ 3g, MgSO₄·7H₂O 1g, MnSO₄·4H₂O 0.1g, KH₂PO₄ 0.2g, distilled water 1000mL. The optimal pH value was 7.8, the broth volume in 500mL flask was 100mL, and the optimal seed age was 32-36h. Inoculated with 10%(V/V) seed broth and cultured with the optimized seed culture medium, the cycloheximide production level of flask fermentation reached up to 498.9(mg·L⁻¹), which was 10.7% higher than that cultured with the original seed broth culture.

Key words: *Streptomyces yunnanensis* YIM41004 cycloheximide seed culture medium optimization

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