本土菌株Aeromonas hydrophila DYU-Too18之幾丁質分解探討

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摘 要

本研究的目的為，篩選可生產幾丁質分解?之菌株，實驗菌株Aeromonas hydrophila DYU-Too18以CB培養基培養，探討不同碳、氮源對其還原醣生成量、幾丁質分解?活性、pH值及N-乙醯幾丁寡醣產量之影響，並進行幾丁質分解?純化與特性分析。以β-chitin為碳源比以α-chitin為碳源有較高的還原醣生成量，且可生成N-乙醯幾丁三醣；以5% β-chitin培養時，還原醣量達到最高，可生成1.42 g/L；以酵母萃取物與蛋白?混合物為氮源可生成較高的N-乙醯幾丁三醣，其中以0.4 g/L為氮源，所生成之N-乙醯幾丁三醣為最高，可達1.17 g/L。以含5% β-chitin與0.4 g/L酵母萃取物與蛋白?混合物培養此菌株96 h，離心取得粗酵素液，經硫酸銨沉澱、透析、DEAE-Sepharose CL-6B及Sephacry S-100等純化步驟後，酵素之比活性為3.66 U/mg protein，純化倍率為1.21。純化酵素之最適反應溫度為40℃，最適反應pH值為5.0，而Fe2+、Hg2+、Zn2+對幾丁質分解?活性抑制較大，尤以Hg2+幾乎完全抑制酵素活性。

關鍵詞 : N-乙醯幾丁三醣、純化、幾丁質分解?

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