

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、幾丁質分解之活性、pH 值及 N-乙醯幾丁寡醣產量之影響，並進行幾丁質分解之純化與特性分析。以 α -chitin 為碳源比以 β -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% α -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質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% α -chitin 與 0.4 g/L 酵母萃取物與蛋白質混合物培養此菌株 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⁺ 對幾丁質分解之活性抑制較大，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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