環境因子對本土菌株所生產之角蛋白?′〝吨尬v響

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摘 要

自本地養雞場附近土壤中所篩選出具角蛋白分解能力之菌株，經初步鑑定為Bacillus菌屬之thuringiensis，初步命名為B. thuringiensis Wu2，可在兩週內將羽翼及部分羽軸完全分解。以傅立葉轉換紅外光譜儀(FTIR)的分析，經B. thuringiensis Wu2降解後，羽毛結構官能基之間的鍵結均遭角蛋白?破壞而減少。B. thuringiensis Wu2菌?培養於37℃及pH 7的環境下，在第68小時其菌量可達到最高1.135 g/L。 B. thuringiensis Wu2培養於pH 7，角蛋白?之最佳活性表現溫度為40℃，經36小時培養角蛋白?活性可達3.50 kU/mL。當培養環境溫度55℃以上、pH值低於3或高於11，培養72小時後所測得角蛋白?的活性趨近於0，表示在強酸、強鹼及高溫的環境下B. thuringiensis Wu2耐受性低或在此環境下分泌的酵素的能力下降。培養基中額外添加不同來源的氮原素（Peptone、Urea、NH4Cl及NaNO3）對角蛋白?的活性並無助益，甚至有導致角蛋白?活性下降的現象。

關鍵詞 : Bacillus sp.，角蛋白?，飼料添加劑，羽毛

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