Purification and characterization of four xylanase from Streptomyces actuosus A-151

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ABSTRACT

Abstract The xylanase which produced by Streptomyces actuosus A-151 was used to be studied. Four β-xylanases (FI-A、FI-B、FII-A、FII- B) were purified from the culture filtrate of Streptomyces actuosus A-151. The specific activities were up to 9.91、62.48、14.76、61.74 after purifying and the recovery rate of activity were 1.33%、4.02%、5.70%、2.21%.The optimum pH for FII- B was 4, the others were 5 to 6. The pH stability were 5 to 8、3 to 8、5 to 9、2 to 9 respectively. The optimum temperature for FI-A was 60°C, the others were 70°C. The thermal stability for all were 30°C to 60°C. The molecular weights of β-xylanases were 30、43、25、21KDa. The activities of FI-A、FI-B、FII-B were stimulated by MnSO4, but inhibited by SDS and HgCl2(FI-A). Adding xylan、SCSP and orange peel to medium will stimulate the production of xylanase.

Keywords : xylan ; xylanase

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