ABSTRACT

The xylanase 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℃, the others were 70℃. The thermal stability for all were 30℃ to 60℃. 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