

ABSTRACT

The cloned β -1, 4 endoxylanase gene of *Thermotoga petrophila* expressed in *Escherchia coli* BL21 codon plus, in which inserted gene was under the control of T7lac I promoter, resulted in a high level production of β -endoxylanase, when different complex media (LB-buffered, LB⁺, LB⁺ (3), ZYBM9, 3x ZYBM9, 3x ZYB and 4x ZB) were used. The inducing effect of lactose or IPTG on β -endoxylanase yield was also studied by using their different concentrations. It was found that enhanced recombinant protein production was achieved in ZYBM9 medium with 100 mM lactose as inducer. The enzyme showed 542 U/mg activity against birch wood xylan as substrate at optimal temperature of 100°C & pH-6.0.