



ABSTRACT

In this study, Endo- β -1,4-glucanase of *Clostridium clariflavum* was cloned, expressed and characterized. TA cloning of endoglucanase was done and *E.coli* DH5 α was taken as a cloning host. Expression of enzyme was taken in pET21a(+) using *E.coli* BL21(DE3). Characterization of endoglucanase was done using different parameters. Enzyme was found to be stable at 70°C and pH 7. SDS-PAGE analysis shows that the enzyme has a molecular weight of 60 kDa. Endoglucanase was incubated with different metal ions and it was observed that enzyme activity is increased by addition of Ca⁺² ions. Among different inhibitors, enzymatic activity was mostly inhibited by HgCl₂. Thermostability of endoglucanase made it favourable enzyme for many industrial applications especially biofuel industry.