ABSTRACT

Increasing demand and depleting supply of fossil fuel brings the biofuel into limelight especially from lignocellulosic agreicultural wastes. The search for enzymatic arsenal diverts the attention from mesophilic to thermophilic micro-organisms. As the conditions like temperature, pH, metal ions and other surfactents require for lignocelulosic conversion into sugars are extremely high. Plenty of work has been coming globally so this quest led us towards the isolation and cloning of a Cellulolytic gene from a hyperthermophilic bacteria, *Thermotoga petrophila* through cloning vector pTZ57R/T and pET21a(+) expression vector into *Escherichia coli* BL21. I cloned a fragment 825bp with celluloytic function from *Thermotoga petrophila* and checked its expression by partial purification for optimum temperature, pH and various substrates.