ABSTRACT

The bacterial strain of *Bacillus licheniformis,* a mesophilic, and gram positive bacteria was collected from GCU. This bacterium produced higher level of alpha amylase activity in the presence of starch as a carbon source in the LB medium of pH 7.0.at 37C after 8 hours of incubation. The maximum amylase activity obtained after optimizing the culture conditions was 9 U/ml. Crude enzymes was obtained from the culture medium after 8 hours of growth under optimum growth conditions. The culture supernatant containing alpha amylase was precipitated and dialyzed against phosphate buffer of pH 7.0.This concentrated sample was then subjected to FPLC and different fractions were collected. The SDS-PAGE analysis revealed a single band after purification process. The molecular weight of the purified band was 58 kD. The assay conditions were also studied. optimum assay temperature and pH were 80C and 7.0 respectively.