

## Abstract

The bacterial strain of *Bacillus siamensis*, a gram-positive, and mesophilic bacteria isolated from three samples arranged by GCU Lahore. Thirty strains were isolated and screened through submerged fermentation for amylase production. Only one strain designated as *IsoL2* gave maximum amylase activity as compared to other isolates. This bacterium gave high amylase activity in presence of ammonium nitrate as source of nitrogen while glucose as source of carbon in productive medium. The maximum activity of *IsoL2* medium was observed at temperature 37°C, pH 7, starch 1%, incubation period of 48 h, glucose as carbon source and ammonium nitrate as nitrogen source. The culture supernatant containing alpha-amylase was precipitated with the help of  $(\text{NH}_4)_2\text{SO}_4$  and dialyzed against Tris buffer of pH 7.0. The activity of amylase was hindered by metal ions like zinc, nickel, and mercury. The maximum amylase activity recorded was 98 U/ml by optimizing various culture conditions.