ABSTRACT

Present study describes the production and optimization of alkaline protease from *Brevibacillus reuszeri*. Different physical parameters were optimized for the maximum production of protease enzyme such as temperature, incubation time, pH of the medium and different carbon and nitrogen sources. The maximum production of protease was obtained after 48 hours at 60°C with optimum pH of 7.5. Sucrose was proved to be the best carbon source for maximum protease production. The medium containing (g/L) $MgSO_4.7H_2O$ (0.5), KH_2PO_4 (2), KCl (0.3), NH_4NO_3(10), Peptone (1), Trisodium citrate (10) showed the maximum protease production. Several meals were investigated such as canola meal, sunflower meal, soybean meal, rapeseed meal and wheat bran among which rapeseed meal was found to be the best substrate for protease production. Moreover, sucrose was found to be the best carbon source in terms of maximal enzyme activity at the concentration of 1.5 g. Yeast extract and ammonium sulphate showed significant yield of protease as nitrogen sources. The results of this study provide valuable insights into optimizing thermostable protease production.