

ABSTRACT

The present study is concerned with the optimization of cultural conditions for the production of enzyme invertase by *Kluyveromyces fragilis* NRRL Y-2415. The optimum levels of sucrose, peptone and yeast-extract were 20, 30 and 15 g/l, respectively. Inoculum at a level of 2.0 % (v/v) was found to be the best for maximum production of invertase. Incubation time was 48 h while optimum pH of fermentation medium was 4.0. In kinetic parameters the highest value for $Y_{p/x}$ (1.49 g/g cells) was noted with 20 g/l sucrose. Similarly 20 g/l sucrose revealed higher value for $Y_{p/s}$ (1.52 g/g) than the other concentration of sucrose.

The effect of different parameters on invertase activity was also studied. Sodium acetate buffer (pH 4.5) and the incubation temperature (37°C) were optimized. The overall enhancement in invertase production was 2.19 fold higher.