

Citric acid production by Aspergillus niger A 185 under submerged fermentation was investigated, A. niger A 185 could produce citric acid by using hydrolysed starch as a carbon source. The suitable medium composition for the production of citric acid in shaken flask consisted of hydrolysed starch 450 g/l, ammonium sulfate 2.5 g/l, potassium monohydrogen phosphate 0.4 g/l, potassium dihydrogen phosphate 0.4 g/l and magnesium sulfate heptahydrate 0.4 g/l and medium was adjusted to 6.5. The optimal cultivation conditions were incubation at 30 °C. with shaking at 250 rpm. The inoculum contained 1×10^7 spore/ml.

Under the above conditions, citric acid production by A. niger A 185 was increased from 106 g/l to 156 g/l in shaken flask at pH 1.5 - 2.0. Using the same conditions in 5-L fermentor, it was found that citric acid production was still considerably low when compared to that of in shaken flask.