

## ABSTRACT

In the present study, one hundred and twenty nine strains of *Aspergillus niger* were isolated and screened for citric acid production by submerged fermentation using cane molasses medium. Among all the strains isolated, *Aspergillus niger* GCB-117 strain gave relatively higher citric acid production ( $14.17 \pm 0.87$  g/l). This strain was subjected to UV treatment (5-30 min). Out of 54 mutants, *Aspergillus niger* UV-52 gave the maximum citric acid yield ( $27.4 \pm 1.21$  g/l) after 30 min exposure.

The effect of different cultural conditions such as sugar concentration (150 g/l), pH (5.5) and rate of citric acid production (168 h) were optimized. Methanol (3 %, v/v) was added as stimulant in the production medium 24 h after the coridial inoculation. Ferrocyanide (200 ppm) and  $\text{NH}_4\text{NO}_3$  (0.20 %) were found optimum for citric acid production i.e.,  $42.6 \pm 0.72$  g/l.