

chrysogenum to Increase Penicillin G Production.

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Penicillium chrysogenum has long been utilized in the production of penicillin. Results of the induction of P. chrysogenum A 88 spores mutation by UV light revealed that 120 seconds of exposure time was the optimal induction time for the mutation. The selected mutant strain, designated as P. chrysogenum CU 1, was found to produce a maximum penicillin G yield of 1.19 g/l which was 1.25 folds higher than that produced by the A 88. When spores of P. chrysogenum CU 1 were mutated with 1×10^{-6} - 1×10^{-2} M. NTG, the results showed that the optimal NTG concentration for the induction was 5×10^{-4} M. The selected mutant designated P. chrysogenum CN 1, was found to produce a maximum yield of penicillin G at 1.79 g/l which was 1.50 and 1.88 folds higher than the yields obtained from P. chrysogenum CU 1 and strain A 88 respectively. Under the same experimental conditions, the induction of spores P. chrysogenum CN 1 mutation by the optimal NTG concentration (5×10^{-4} M) gave rise to P. chrysogenum CNN 1 which was by far the best penicillin G producing mutant strain. The CNN 1 was found to produce a maximum yield of 3.65 g/l which was 2.04, 3.07 and 3.84 folds higher than the yields obtained from P. chrysogenum CN 1, CU 1 and A 88 respectively.