



RESEARCH PAPER

Combined mutagenic improvement of *Bacillus licheniformis* SK7 for cost-effective protease production

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The strain improvement of developed *Bacillus licheniformis* SK7 was achieved with the combination of physical and chemical agents *i.e.*, UV + NTG + EMS by gradually mutation and positive selection. In case of UV light 99 per cent killing for successful selection of mutants was 6 min and 10 cm distance from source, while in case of EMS and NTG the concentration found effective was 200 μ M, 30 μ M, respective for 15 min. The mutant *Bacillus licheniformis* SK7 SN 43 was successfully developed and found stable having higher production of protease (662 U/ml) under optimized medium and physical conditions of fermentation than the wild type *Bacillus licheniformis* SK7 (472 U/ml) under the same conditions of fermentation.

Key words : Mutagenesis, NTG, UV light, Strain improvement, Protease

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