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Production and optimization of L-glutaminase from a terrestrial fungal *Fusarium oxysporum*

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Abstract : L-glutaminase produced by adiverse group of microorganisms including fungi. L-glutaminase is presently used in the treatment of leukemia, HIVand also as flavor enhancing agent in food industries. Although L-glutaminase activity was reported in mostly of microorganisms, in our current research, L-glutaminase production modality was scrutinized under submerged fermentation using *Fusarium oxysporum* as anovel terrestrial fungal isolate which isolated from Egyptian soil using rapid plate assay procedure, then identified using different morphological and microscopic features. The maximum yield of enzyme production (2777 U/ml) was achieved at pH 6, 35°C, and 0.025% glutamine concentration after 7 days. The medium was inoculated with 100 µml / 30 ml of used medium supplemented with 1 % sucrose as carbon source.

Keywords: L-glutaminase;*Fusarium oxysporum*; submerged fermentation; enzyme optimization.

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