

Optimization of Enniatin Production by Solid-Phase Fermentation of *Fusarium tricinctum*

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Enniatins are cyclic depsipeptides produced by fungi of the genus *Fusarium* that are of interest due to their pronounced biological activities; especially enniatins A, A₁, B, and B₁ possess anticarcinogenic and anti-HIV properties. In the present study, *F. tricinctum* was grown on seven solid media and in one liquid growth medium with or without addition of peptone or of amino acid precursors in order to identify favourable media with simple cultivation conditions for maximum enniatin production. Additionally, the optimal duration of growth was investigated for the highest yields of enniatins. From the different media analysed, white beans (*Phaseolus vulgaris*, solid medium) induced the highest accumulation of enniatins A, A₁, B, and B₁, that reached a maximum of 1,365 mg total enniatins in 1 L growth medium after 18 days of fermentation. Fermentation of *F. tricinctum* on white beans gave the highest yield of enniatins compared to all other media analysed in this study.

Key words: Enniatin, *Fusarium tricinctum*, Production Optimization