

Research Article

Optimization of Physicochemical Parameters to Enhance the Production of L-glutaminase by *Pseudomonas aeruginosa* MM2 under SSF

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Abstract

Screening of various agro-industrial byproducts such as rice husk, pigeon pea husk, bengal gram husk, green gram husk, safflower oil cake and ground nut oil cake was carried out for the production of L-glutaminase by solid state fermentation. The marine isolate *Pseudomonas aeruginosa* MM2 at 2 per cent inoculum level produced the maximum L-glutaminase activity in green gram husk (231±0.041 IU/gds) and the least activity was recorded in pigeon pea husk (72±0.015 IU/gds). The enzyme production was maximum after 48 hours of incubation, at pH 8, temperature 40 C, and at 70 per cent moisture content. After optimization of different parameters the yield of L-glutaminase increased from 231 to 352 IU/gds.

Key words: Inoculum level, L-glutaminase, safflower oil cake, solid state fermentation

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