



ChemTech

International Journal of ChemTech Research

CODEN (USA): IJCRGG, ISSN: 0974-4290, ISSN(Online):2455-9555
Vol.10 No.13, pp 333-338, 2017

Preparation new immobilized phytase from *Bacillus sp* for improve its thermal stability

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Abstract : The aim of this study is to evaluate the biological importance of free and immobilized phytase enzyme. The support material used for phytase immobilization was alginate with concentration 2%. Mostly, the immobilization of phytase in gel alginate exhibit more thermal stability than the free enzyme. The effect of metal ions Mg²⁺, Fe³⁺, Hg²⁺, Cu²⁺, Na⁺ and Ca²⁺ at a concentration 0.2 M used in the study showed inhibitory effect on free more than the immobilized phytase enzyme. These results highlighted the biochemical and technical advantage benefit of immobilized phytase over the free enzyme.

Key words : phytase; kinetic studies; thermal stability; inhibitor and immobilized.

Enas N. Danial *et al* /International Journal of ChemTech Research, 2017,10(13): 333-338.
