

Cloning and Expression of a Novel Phytase from *Trichoderma sp.*

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Phytases are special class of phosphatase that catalyzes the sequential hydrolysis of phytate (*myo*-inositol hexakisphosphate) to less phosphorylated *myo*-inositol derivatives and inorganic phosphate. Phytase is useful enzyme in feed industry and environmental engineering. Phosphorous (P) is an essential element for animal and plant production. In diets, such as corn and soy bean meal, about 67% of the total P exists as phytate P which bounds to phytic acid. However, excess or less P can be a problem for the both animal production and environment. Therefore, the application of phytase is useful in stockbreeding industry and to protect water and ground environment.

In this study, we searched a novel phytase(phyA) from *Trichoderma sp.* by gene cloning. This phytase was induced overexpression in eukaryotic expression system of *Pichia pastoris* and prokaryotic expression system of *E.coli*.

Currently, we attempted to characterize phyA and lead to common value expression in prokaryotic and eukaryotic expression system.