

Heat-Resistant Phytase

Cat. No. HTPG-001

Lot. No. (See product label)

Introduction

Description

Heat-Resistant Phytase is a thermostable, acid-resistant phytase preparation produced by submerged liquid fermentation using an *Aspergillus niger* strain expressing phytase. It hydrolyzes phytic acid to inositol or inositol phosphates and orthophosphate, helping reduce the anti-nutritional effects of phytate, improve nutrient utilization, and reduce environmental pollution associated with organic phosphorus in animal feed.

Applications

Degradation of phytate to improve phosphorus utilization in feed. Reduction of the anti-nutritional effects of phytic acid on mineral elements and proteins. Promotion of nutrient digestion and absorption, feed intake, daily weight gain, and animal production performance. Reduction of phosphorus excretion.

Product Information

Species

Aspergillus niger

Source

Submerged liquid fermentation

Activity

≥10,000 U/g

pH Stability

Exhibits excellent acid resistance.

Thermal stability

Exhibits excellent thermostability.

Function

Hydrolyzes phytic acid into inositol or inositol phosphates and orthophosphate.

Substrates

Phytic acid; sodium phytate (activity assay)

Unit Definition

One unit of phytase activity (U) is the amount of enzyme required to liberate 1 μmol of inorganic phosphorus from a 5.0 mmol/L sodium phytate solution per minute at 37°C and pH 5.5.

Reaction

Phytic acid → inositol or inositol phosphates + orthophosphate

Advantages

Excellent thermostability and acid resistance. Improves nutrient utilization by degrading phytate. Reduces phosphorus excretion and environmental pollution associated with organic phosphorus.

Usage

Recommended dosage (based on 10,000 U/g activity): 50 g per metric ton of feed. Adjust according to specific feed formulation requirements. Formula adjustment: Use of the product allows a reduction of 5-10 kg of dicalcium phosphate per metric ton of feed.

Usage and Packaging

Preparation Instructions

Pre-mix the product with a small amount of feed premix, then progressively scale up the mixture before adding it to the final feed mixture.

Storage and Shipping Information

Storage

Protect from light and store at low temperature in a dry, well-ventilated

Storage

Protect from light and store at low temperature in a dry, well ventilated environment during transportation and storage. Keep in the original sealed packaging under cool, dry conditions.