



# RelePhos

MAXIMUM PHOSPHORUS RELEASE





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## What is Phytate?

On average, 60% to 70% of phosphorus found in plants is bound as phytate, an inositol ring, consisting of six phosphate groups. Phytate has multiple nutritional implications to monogastric animals, both due to their inability to digest phytate, as well as its anti-nutrient effects.

As an anti-nutrient, phytase has the capacity to bind to proteins and amino acids in the acidic conditions, as well as the ability to bind to minerals at a higher pH, interfering with the absorption of these nutrients by the

animal. This can have negative implications on the overall performance of the animal.

In addition to its anti-nutrient effects, producers are forced to supplement feeds with expensive phosphorus to meet the nutritional requirements of the animal. The inclusion of extra nutrients in animal feed increases the risk of unabsorbed nutrients in the animal's excreta. This can have serious environmental impacts such as the eutrophication of water sources.



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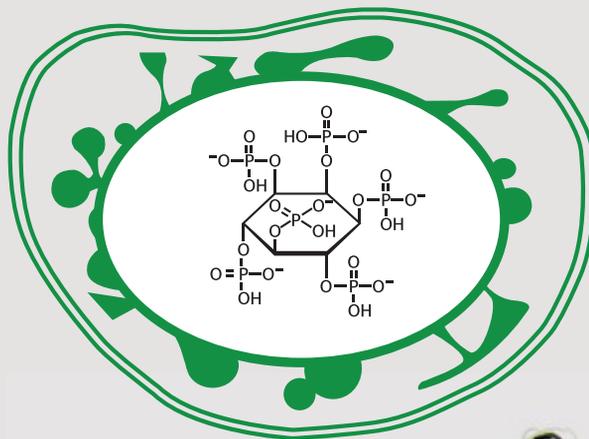
## The Solution

In an effort to combat the costly anti-nutrient effects of phytate, as well as to reduce the amount of phosphorus required to be supplemented to the animals diet, the enzyme phytase is introduced as a means of hydrolyzing phytate. However, the delicate nature of enzymes has made it difficult for processors to find a phytase enzyme stable enough to withstand the heat and pH fluctuations experienced during processing through to digestion.

## Why choose RelePhos?

RelePhos is a superior phytase enzyme that maintains its effectiveness in the low pH of the upper digestive system, this is crucial to limit the opportunity of the phytate to bind to other nutrients, thus increasing the nutrient availability of the feed, and subsequently optimizing the growth and performance of the animal.

In addition to this, RelePhos maintains its activity after exposure to high temperatures, specifically those experienced during the formation of pellets.





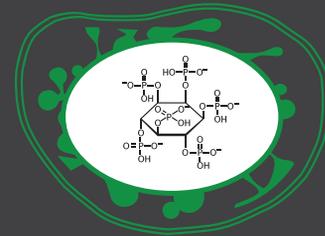
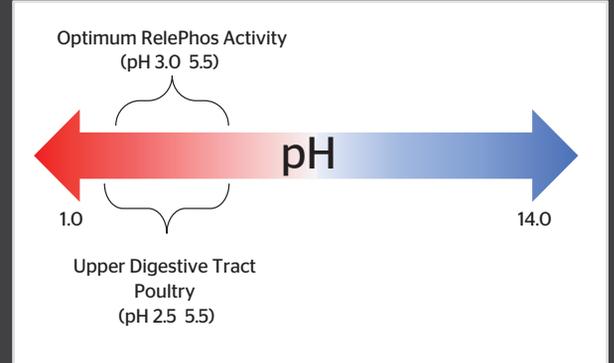
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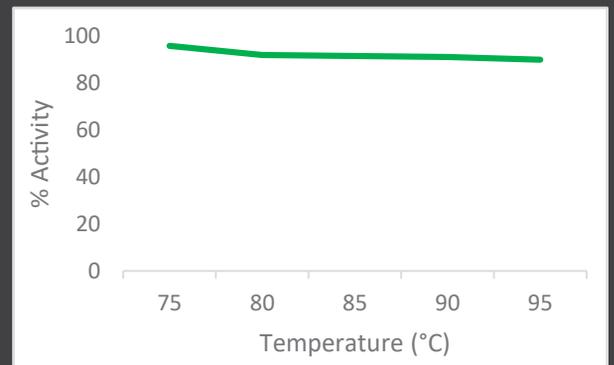
Through the use of cutting edge technology, ADDiCAN has formulated RelePhos by protecting the delicate phytase enzyme with the hearty cell wall of natural seaweeds. This unique coupling allows not only for the exceptional rate of enzyme activity despite processing conditions, but also offers the added benefits associated with seaweed. Seaweed is an excellent source of useful minerals, trace elements, and vitamins. The addition of Seaweed to the animal diet has been found to act as a prebiotic, improving overall gut, and animal health. The consumption of seaweed has also been attributed to a reduction in the microbial load in the digestive tract of the animal, as well as overall improved immune status.

Producers have a responsibility to both their animals and the environment. RelePhos is an economical solution that:

- Achieves maximum post-pelleting Phytase Activity.
- Reduces the anti-nutrient effect of Phytase early in the digestion process.
- Reduces need for additional phosphorus sources by making those in the plant material available to the animal.
- Reduces the risk of unabsorbed nutrients in the excreta, thus reducing the associated environmental implications.
- Acts as a source of vitamins and minerals, optimizing animal growth and performance.



Innovative protection of Phytase using Seaweed cell wall



### ADDiCAN Memberships:



### Developed & Manufactured at ADDiCAN Processing Plants Located At:

Mount Vernon, Washington, USA - Ebenezer Business Park, New Glasgow, Canada

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