The Difference is X

RUMINANT

ReaShure®-XC
Precision Release Choline

AminoShure™-XM
Precision Release Methionine

AminoShure™-L
Precision Release Lysine

NitroShure™
Precision Release Nitrogen

NiaShure™
Precision Release Niacin

Fibrase™
Rumen Fermentation Enhancer

KeyShure®
Chelated Minerals

MONOGASTRIC

PuraChol®
Choline Chloride

Tannin™50
Encapsulated Tannin

ProAcid™
Encapsulated Acid

KeyShure®
Chelated Minerals

Balchem has invested more than 50 years perfecting the art and science of encapsulation. And with X-Technology, encapsulation has taken a leap forward. This new encapsulation system optimizes core composition, coating technology and release timing to create a revolutionary new encapsulated methionine product.

Payload is in the Core
Through a proprietary process, the core of AminoShure-XM is created with the highest quality raw ingredients. These advancements in core development ensure delivery of the highest quality amino acid composition to the cow.

Coating Technology
Balchem uses a true encapsulation process that includes consistent layers of fatty acids around the core to create a protective barrier. Many other processes use matrix encapsulation, suspending the active ingredient in a fatty acid matrix. This process leaves some of the active ingredient exposed on the surface and available for degradation in the rumen.

Metered Release
AminoShure-XM is engineered to meter its methionine payload gradually in the small intestine, providing a continual supply of methionine to the cells. This allows the cells to absorb methionine as it is needed, versus a surge of methionine that may not be used as efficiently.

balchem®

Contact us to learn more about Balchem products:

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Built With X–Technology, Your New Methionine Option is Here

balchem®

AminoShure™-XM
Precision Release Methionine

AminoShure-XM™ *Precision Release Methionine* delivers the next generation in precision amino acid balancing technology. Through the proprietary X-Technology, AminoShure-XM delivers the methionine payload safely through the rumen and releases it gradually in the small intestine to more efficiently and cost effectively meet the cows' methionine needs.

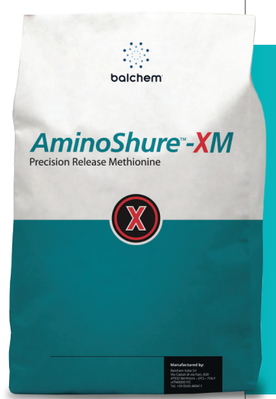
The X-Technology: The ultimate measure of an effective encapsulated methionine is the cost at which it can deliver a unit of bioavailable nutrient to the cow. This is a function of product cost, feed stability, rumen protection and intestinal digestibility. The X-Technology carefully balances these key, though somewhat antagonistic, characteristics to deliver the best value to our customers.

Cost: The new X-Technology has improved the nutrient bioavailability, which lowers the encapsulation cost per unit of metabolizable methionine.

Feed Stability: The new X-Technology employs a true lipid-based system that is more durable than polymer and ethylcellulose coatings.

Rumen Stability: The X-Technology is masterfully designed to resist ruminal degradation, maximizing the nutrient payload delivered to the small intestine.

Intestinal Release: The X-Technology gradually meters the methionine into the small intestine where it is absorbed and utilized by the cow to maximize productivity.



The Difference

Balchem's new X-Technology provides the optimal combination of cost, feed stability, rumen stability and intestinal release to deliver competitive cost per unit of available methionine. Numerous research studies at multiple universities were completed to accurately characterize and validate the attributes so you can be confident when choosing AminoShure-XM as your new rumen-protected methionine source.

Dairy cows do not have a protein requirement, but rather an amino acid requirement from which proteins are synthesized.

Methionine is an essential amino acid for mammals and a building block used to synthesize proteins required to build and maintain virtually every tissue in the body. If an animal is unable to consume enough methionine, protein synthesis will not proceed, compromising the health, productivity and life of the animal.

In dairy cattle, methionine is not only essential; it is among the first limiting amino acids. This means it is one of the first amino acids in short supply when a dairy cow synthesizes protein. Without sufficient methionine, a cow is unable to build the proteins that are required for tissue and organ maintenance, growth, reproduction, fetal growth, and perhaps most importantly, milk protein production.

A cow receives methionine from two primary sources; the feed she consumes and from microbial protein generated in the rumen. Traditional feed sources of methionine are highly degraded by rumen microbes, making them less available for absorption. Supplying methionine in a rumen- protected form is essential to ensure it reaches the small intestine for absorption.

The key benefits of balancing rations with AminoShure-XM are:

Increased Milk Protein Production

Milk protein is a highly valued milk component due to its importance in cheese production. Research shows that when the methionine supply is deficient, protein content in milk can drop as much as 0.10% to 0.20%.

Reduced Environmental Impact

Overfeeding protein is a common approach to helping meet the cow's methionine requirement. This results in higher levels of nitrogen and phosphorus excretion into the environment. With AminoShure-XM you can dial-in the ration's methionine level to meet the herd's needs, decreasing the potential for environmental impact.

Improved Transition and Early Lactation Performance

Research shows that cows in transition and early lactation respond well to supplemental methionine. This is primarily due to limited dry matter intake during very early lactation. Delivering this required amino acid leads to a smoother transition and higher peak milk production.

AminoShure™-XM
Precision Release Methionine