

GET YOUR COWS OFF TO THE RIGHT START AFTER CALVING

Include RumiLife® CAL24™
in your fresh cow protocol

IMMEDIATE AND EXTENDED RELEASE CALCIUM



GET FAST ACTING AND SUSTAINED RELEASE CALCIUM ABSORPTION

- ♦ Calcium chloride acts rapidly to increase calcium absorption through the rumen wall.
- ♦ Calmin, a steady and highly absorbable combination of calcium and magnesium regulates calcium absorption over time.
- ♦ Vitamin D helps facilitate active calcium transfer in the small intestine.

SAVE TIME & LABOUR WITH ONLY ONE TREATMENT

- ♦ Give two boluses (one package) after calving. This means you eliminate the hassle of handling fresh cows a second time to administer another dose.

RumiLife® CAL24™ calcium supplement is a uniquely formulated calcium bolus to help promote proper calcium levels in dairy cattle.

INTERESTED? Call your Alta sales rep or
1-800-465-8858 | canada.altagenetics.com

RumiLife® CAL24™ FAQ

What is RumiLife® CAL24™ calcium supplement?

RumiLife® CAL24™ calcium supplement is a uniquely formulated calcium bolus.

The product contains calcium chloride and Calmin as sources of readily available calcium to help promote optimum blood levels of calcium and magnesium. It also contains vitamin D and magnesium to optimize calcium absorption and utilization for the first 24 hours after calving or other times associated with low calcium levels.

When should you use RumiLife® CAL24™ calcium supplement?

AT CALVING: administer CAL24 to fresh cows after calving to help promote their blood calcium and magnesium levels. Also, in cases when a cow with milk fever needs a calcium injection, you can also administer CAL24 boluses 2–3 hours after the calcium injection to help provide sustained release supplementation.

OTHER INSTANCES OF LOW BLOOD CALCIUM: CAL24 is also your solution for instances associated with low calcium levels, such as supporting high-producing cows later in their lactation.

What is the recommended dosage?

The recommended dose of CAL24 is to give two boluses (one package) at freshening or other times of low calcium levels.

Is the product easy to administer?

Yes! The bolus is not only a tapered shape, but it also has a coating that is very slippery when it gets wet. That means you can have confidence that it's safe to administer in any breed.

Does RumiLife® CAL24™ replace a calcium IV?

No, it does not replace a calcium IV. If a cow is down with clinical milk fever, you should still administer an IV calcium solution. However, you can give CAL24 boluses 2–3 hours after the IV to help maintain her blood calcium levels.

What types of calcium are found in the product?

There are two forms of readily available calcium in RumiLife® CAL24™ calcium supplement.

CALCIUM CHLORIDE: fast-acting and immediately available in the rumen.

CALMIN: a seaweed-derived form of extended-release calcium carbonate to help promote calcium levels for longer periods of time.

CAL24 also contains a third type of calcium, which is in the form of calcium carbonate from limestone. This is less digestible, and its primary function in CAL24 is to act as a binder for the structural integrity of the bolus. CAL24 does not rely on the calcium carbonate from limestone to deliver the calcium load of the bolus to the cow's blood stream.

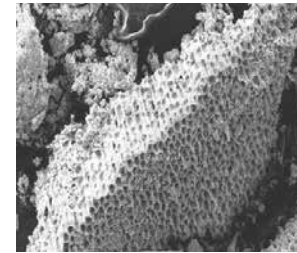
What is Calmin?

Calmin is a highly available and absorbable form of calcium and magnesium that comes from calciferous sea algae. It's proven to be more absorbable than other forms of supplemental calcium because the unique structure of Calmin allows a cow to break down and absorb the calcium before it passes through the digestive system.

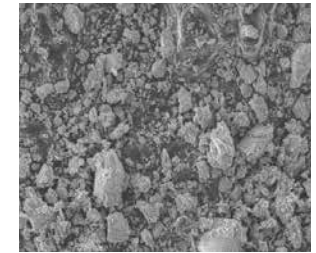
How is Calmin different than calcium carbonate?

The calcium in Calmin is chemically in the form of calcium carbonate. However, the physical form of the calcium carbonate in Calmin is vastly different than the physical form of mined calcium carbonate from limestone. Calmin is formed by marine sea algae and if you look at it under a microscope, you'll see it has a honeycomb-like physical structure. Limestone has a harsh, crystalline structure. It's that microscopic honeycomb structure that allows Calmin to become soluble at normal rumen pH over a period of eight to twelve hours.

Calmin:



Limestone:



Why does RumiLife® CAL24™ calcium supplement contain vitamin D and magnesium?

Vitamin D has long been known for its importance in calcium absorption. Magnesium plays a vital role in the cow's parathyroid gland, and in the activation of vitamin D as it relates to the natural regulation of blood calcium levels.

CAL24 was specifically designed with these components so that it can cover a cow's need for supplemental calcium. Because of the vitamin D and magnesium in the formulation, CAL24 can support the cow's homeostatic mechanisms and control blood calcium levels during the first 24 hours after calving and at other times associated with low calcium levels.

How fast does RumiLife® CAL24™ calcium supplement dissolve and become available to the cow after it is administered?

While there will be some differences between cows because of individual variation, our studies with CAL24 have shown that there is a statistically significant rise in the blood calcium level in cows with subclinical hypocalcemia within two hours after administering RumiLife® CAL24™ calcium supplement.

According to the research, how long are the blood calcium levels increased and maintained after RumiLife® CAL24™ is given?

The research shows that cows treated with CAL24 maintained normal blood calcium levels up to 24 hours after CAL24 was given as directed.¹

What are the differences in solubility between RumiLife® CAL24™ and other calcium boluses?

RumiLife® CAL24™ breaks down and becomes soluble in the rumen at a slower rate than some of the other calcium boluses on the market. This is by intentional design.

CAL24 provides enough ionized calcium to support passive transfer of calcium into the blood stream and significantly raise the blood calcium level in cows with subclinical hypocalcemia within two hours after it's administered. The Calmin portion of CAL24 then provides calcium that works with the magnesium to support the cow for a longer period of time as the bolus breaks down over a period of eight to 12 hours.

Why are both types of calcium important to the cow?

CALCIUM CHLORIDE is important for the cow because it facilitates the passive transfer of calcium ions across the rumen wall and into the blood stream. That's what allows for a rapid increase in her blood calcium level. You can see evidence of this in the Jersey cow study published by Contract Manufacturing Services¹.

CALMIN provides the second source of calcium plus magnesium. Calmin slowly solubilizes at the normal pH of the rumen and reticulum. According to Celtic Sea Minerals, if rumen pH drops to 5.5, greater than 98% of the calcium and magnesium in Calmin will become soluble within 8 hours². Other sources of magnesium oxide are only 26.2% available to the cow on average³.

Calmin is the unique ingredient in CAL24 that helps a cow maintain her blood calcium level for 24 hours without the need to administer another bolus 12 hours after the first dose.

Why does a CAL24 bolus gain weight in the cow?

Because CAL24's formulation includes anhydrous calcium chloride, it's going to absorb more water than another form, called calcium chloride dihydrate. That's because calcium chloride dihydrate is already partially hydrated and anhydrous calcium chloride is not.

The CAL24 bolus gains weight inside the cow because the fluid in the reticulum binds with the anhydrous calcium chloride found in CAL24. Competitor products use different forms of calcium chloride, which means their bolus may not react the same way in the stomach of the cow.

Why is it important to moderate the amount of calcium supplied by the bolus?

More is not always better. That's also true when it comes to calcium supplements.

Some boluses release a higher level of calcium than CAL24 in a short time period. Too much calcium, too quickly can actually have a negative impact on the cow's natural response to hypocalcemia.

A cow's metabolic mechanism naturally works to keep the blood calcium levels in a narrow range. When too much calcium is flooded into the cow's system it shuts down the metabolic pathways to bring more calcium into her bloodstream.

That's why CAL24 is formulated to deliver just the right amount of calcium in a short period of time, and then sustain that level of calcium through the high risk period. It's also why CAL24 has vitamin D and magnesium to help the cow with her ability to use and regulate calcium.

What happens if the cow's blood calcium level gets too high?

When a cow's blood calcium level gets too high, she can go into cardiac arrest.

It's very unlikely this will happen by giving oral calcium supplements, even if they receive two or three times the recommended dosage. However, it can happen on occasion when cows are given IV calcium.

With oral calcium supplements, our goal should be to get the cow's blood calcium into the normal range and keep it there

until the cow's normal homeostatic mechanisms can catch up. If the blood calcium level is higher than normal, the cow's homeostatic mechanisms will actually work to lower the blood calcium. That means if we give too much calcium chloride at one time, we will raise the blood calcium to a level that is higher than desired, and much of the excess calcium will be excreted in the urine. Plus, her calcium absorption from the intestinal tract and bone will also shut down.

Lastly, because calcium chloride acidifies, too much can cause problems. Some acidification is good – this is what we get when we feed an anionic ration to close-up dry cows. But too much can cause the cow to stop eating.

Why should you choose RumiLife® CAL24™?

CAL24 is the only bolus product on the market with research to show that when it is given as directed, cows with subclinical hypocalcemia post-calving will return to normal blood calcium levels 2 hours after calving and maintain normal blood calcium levels 24 hours after calving. There is no need to routinely administer another bolus 12 hours after the cow received her first bolus.¹

What is the shelf life of RumiLife® CAL24™ calcium supplement?

The shelf life of CAL24 is two years.

¹Evaluation of RumiLife® CAL24™ as a Supplement Given to Postpartum Dairy Cows; T.J. Arver, DVM, T.J. Silberhorn, MS (currently unpublished)

²Celtic Sea Minerals, 2011 <https://celticseaminerals.com/calmin/>

³Quantitative Prediction of Magnesium Absorption in Dairy Cows; Schonewille et al (J. Dairy Sci. 2008. 91:271-278)