

# Amino Acid Chelated Trace Minerals

*Better Nutrition Through Biotechnology*



*Advancing every animal's right to thrive*











When animals are your livelihood, they are a constant in your life. They don't fit into a 9-to-5 routine like a "normal" occupation; you can't turn them off at night or tuck them into a briefcase. You connect with them, one living, breathing organism to another.

You learn their personalities; you know their attitudes; you sense their moods. You notice when they are off their feed, when to contact the vet, when to worry. They are an emotional investment as well as a financial one.

You want them to be thriving, productive contributors to the planet you both share. Because they *are* your livelihood, you make decisions that you hope will benefit the total sustainability of the animal industry today and well into the future.

You know that while there may be small decisions, there are no unimportant ones. You recognize the impact of *every* detail on the wellbeing of your animal, on your livelihood, on the entire industry. That is why you choose your trace mineral supplement as carefully as you choose anything else that supports your animals.



# Trace minerals

## The small feed component with a big impact on animal health

Trace minerals are small but essential nutritional components of animal feed rations that make a significant contribution, not only to your animal's general health, but also specifically to more efficient food utilization, improved immunity and reproduction, all with a collective effect toward building a sustainable animal industry.

Not all trace minerals are created—or perform—equally. Choose real amino acid chelated trace minerals with documented efficacy to assure that your animals are deriving maximum benefit from their trace mineral supplementation.



## Targeted nutritional success begins at the molecular level

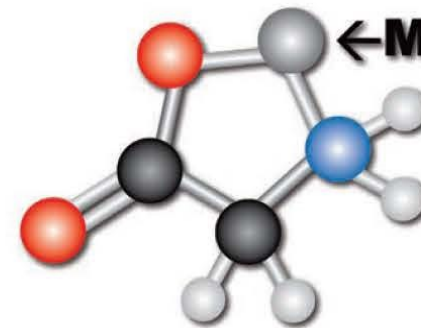
Tracer Minerals amino acid chelated trace minerals are products of proven chemistry and innovative technology, from processes perfected in more than 50 years of quality manufacture.

Our amino acid chelates are engineered by reacting trace minerals (zinc, copper, manganese, Iron, cobalt, magnesium, calcium) to a specific amino acid in a minimum molar ratio of 1:1. This creates a closed ring formation with both ends of the amino acid bound to the trace mineral, resulting in a molecule that is extremely stable.

This chelated structure serves two vital functions. The double bond enables the correct minerals to travel through the animal's digestive system and to be absorbed precisely where and when it is most advantageous to the animal—without getting tied up along the way by antagonistic ions (iron, molybdenum, sulfur) from feed or water and without losing structural integrity, which can compromise availability.

## Created by science, proven through research

Ongoing testing and clinical trials continue to reinforce and strengthen the data from several decades of quality manufacturing. Research shows that true amino acid chelates are the most bio-available, best absorbed, and most retained of all mineral forms currently on the market, including mineral complexes and sulfate compounds. Our research never stops. The future of trace mineral nutrition is being shaped by today's Tracer Minerals research.



*The unique heterocyclic ring formation that is characteristic of an amino acid chelate provides stability and protection during digestion for optimal mineral absorption.*





## What precisely do chelated trace minerals do?



Trace minerals are small part of your animal's diet, but a big contributor to your animal's overall wellbeing.

They are integral to the animal's internal defense mechanisms as a vital component in the formation of immunoglobulins, T cells, and B cells.



Trace minerals are required for the formation of hormones for reproductive success.



Trace minerals are essential to the animal's ability to convert feed intake into usable energy and achieve the highest possible coefficient of digestion, which is the difference between the amount of a nutrient that is ingested and the amount of that nutrient that is eliminated in urine and feces. The more complete the digestion, the more energy and benefit the animal derives from the food.



The potential of trace minerals to advance animal wellbeing is fully realized in Tracer Minerals real amino acid chelated trace minerals, due to their molecular stability and superior bioavailability. This ability to improve efficiency of digestion, reproductive success, and systemic immunity is also of economic significance to the producer.

## The positive economies of superior quality chelates



An effective trace mineral program is one of the most cost-effective management practices you can implement, with advantages in animal response as measured in net growth, resistance to disease, lower incidence of pulls and culls, and weight at harvest.

Priced competitively with other organic trace minerals, Tracer Minerals real amino acid chelated trace minerals offer efficiencies in feed utilization, reproduction, immunity, and productivity that contribute to a more sustainable animal industry.





## Specify the real amino acid chelate for optimum supplementation

Tracer Minerals real amino acid chelated trace minerals—zinc, copper, manganese, magnesium, potassium, cobalt, calcium, and iron—are available in a variety of liquid and dry forms as individual elements or combinations. We offer custom blending for precise supplementation to meet the trace nutrient requirements of specific forages and feeds.

Interested in organic forms? So is Tracer Minerals. We offer numerous trace mineral chelates that are OMRI listed.

Reevaluate your current trace mineral program. Whether for use in direct feed ingredient machines, added to premix, or delivered in water tanks, make sure your supplier knows you want the best quality trace minerals for your animal. Specify the advanced chemistry offered by Tracer Minerals real amino acid chelated trace minerals for your animals. Give them every advantage in nutrition performance, immunity, fertility, and longevity.

Our nutritional specialists look forward to helping you integrate our quality trace mineral chelates in your animal feeding program. Contact our representative with any questions or requests for additional information.









Visit [www.tracerminerals.com](http://www.tracerminerals.com) for a dealer near you or call 620-865-2041.



## Better Nutrition Through Biotechnology.

### What this means to us at Tracer Minerals. What this means to you.

This core statement defines our company, our philosophy, and our everyday working principles. Tracer Minerals is where science, technology, and engineering converge to advance the future of trace nutrition in the animal feed industry.

Applying knowledge and processes tested and proven over five decades, our dedicated team of engineers, animal scientists, and nutritionists focus on creating superior trace mineral chelates for quality animal feed supplementation.

Tracer Minerals' precise formulation assures the most efficient systemic delivery of trace minerals at the precise ratio to achieve optimum utilization for healthy, productive animals.



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