Product Line

Mineralate	Zinc ZnAAC	20%
Mineralate	Copper CuAAC	16%
Mineralate	Manganese MnAAC	16%
Mineralate	Magnesium MgAAC	10%
Mineralate	Potassium KAAC Complex	10%
Mineralate	Iron FeAAC	10%
Mineralate	Cobalt CoAAC	10%
Mineralate	3 Chelate Blend ZnAAC MnAAC CuAAC	 9.45% 5.23% 3.32%
Mineralate	4 Chelate Blend ZnAAC CuAAC MnAAC CoAAC	 5.15% 2.18% 1.80% 0.18%
Mineralate	5 Chelate Blend ZnAAC MnAAC MgAAC CuAAC KAAC Complex	 4.48% 2.24% 2.20% 1.12% 2.20%
Mineralate	ZMC ZnAAC MnAAC CuAAC	 8% 4% 2%
Mineralate	ZMC-Fe ZnAAC MnAAC CuAAC FeAAC	 5% 2% 0.25% 10%
Mineralate	Life Boost ZnAAC CuAAC MnAAC	 6% 6% 2.50%
Mineralate	MgK MgAAC KAAC Complex	 5% 5%
Mineralate	Calcium CaAAC	 10%

Liquid Products

Mineralate	Life Base Liquid MgAAC CaAAC ZnAAC CuAAC MnAAC CoAAC	 0.28% 0.05% 0.18% 0.09% 0.06% 8 ppm
Mineralate	Life Enhancer Liquid CaAAC MgAAC ZnAAC CuAAC MnAAC CoAAC	 0.15% 0.27% 1800 ppm 130 ppm 530 ppm 18 ppm
Mineralate	Zinc Liquid	8.50%
Mineralate	Copper Liquid	6%
Mineralate	Manganese Liquid	6%

NuTech BioSciences, Inc.

NuTech Biosciences, Inc., a science based company located in Oneida, New York, manufactures Amino Acid Chelated trace minerals for the feed industry. NuTech has assembled an outstanding team of engineers, animal scientists, and nutritionists. We look forward to being your supplier of chelated trace minerals and your advisor on their most effective use.

NuTech Biosciences, Inc manufactures Amino Acid Chelates in dry and liquid forms. Individual elements and combinations of elements are available for many different applications. Please ask us about custom blends of liquid or dry products to meet your specific needs. We look forward to being your supplier of the highest quality trace minerals available.

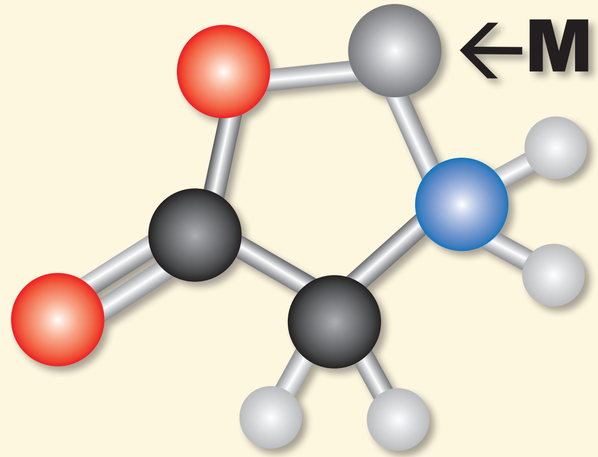
"Better Nutrition through Biotechnologies" defines our company. The concept of biotechnology in nutrition is to understand the biology of an animal, the functioning of its biological systems, and the mechanisms of how they function. We apply the principles of engineering and technology to create Chelated Trace Minerals. They are designed to utilize the animals own biological process for the most efficient delivery of trace minerals into the animals system. More efficient delivery of the correct minerals in the proper ratios means healthier, more productive animals with greater longevity and profitability.

Mission Statement

NuTech BioSciences, Inc. is founded to address challenges faced by Nutritionists in the field by providing solutions through innovative and advanced chemical and biotechnology products. NuTech as a company is dedicated to serve the animal agriculture. NuTech BioSciences, Inc. will have a product line that will promote the sustained profitability of the livestock industry. Our commitment to business growth is through investment in greater scientific research, product innovation, and forging additional manufacturing and distribution partnerships.

Mineralate™

Amino Acid Chelated Minerals



www.nutechbiosciences.com

Made in USA

Manufactured at:
537 Fitch Street
Oneida, NY 13421
(315) 505-6500
nutechbio@yahoo.com

NuTech BioSciences, Inc.

Better Nutrition
Through Biotechnologies

Mineralate

Inorganic Trace Minerals
A Hit - Or - Miss Approach

• Calcium, magnesium, potassium, zinc, copper, manganese, cobalt are required by livestock to develop proper bone and muscle, carbohydrate digestion and metabolism, breeding, reproductive performance, and enhance immunity.

• Each macro/trace mineral needs an organic “escort” before it gets absorbed in the animal’s digestive tract

• Unfortunately, many macro/trace minerals become attached to unwanted agents and excreted as waste.

• Some dietary constituents such as calcium, phosphates, phytates, oxalates, or fiber may interfere with absorption by forming unavailable complexes with trace minerals fed in organic form.

Why Mineralate Amino Acid Chelates?

NuTech BioSciences Inc. uses glycine, an organic amino acid compound with the formula NH2CH2COOH having only two hydrogen atoms as its “side chain.” Glycine is the smallest of the 20 amino acids commonly found in proteins. Glycine is a colorless, sweet-tasting crystalline soild. It is unique among the proteinogenic amino acids in that it is not chiral. It can fit into hydrophilic or hydrophobic environments due to its two hydrogen atom side chain.

Requirements for Chelates

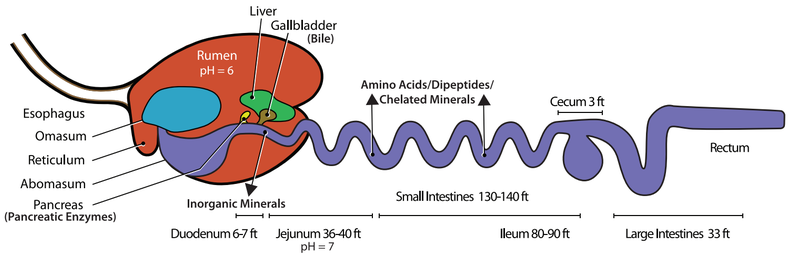
• Small molecular size < 800 Daltons

• Defined amino acid

• 1 : 1 Molar Ratio

• Heterocyclic ring formations

“You can trace every sickness, every disease and every ailment to a mineral deficiency.”
Quote from Nobel prize winner Dr. Linus Pauling



Amino Acid Chelated trace minerals are formed by reacting micro (trace) minerals (Zn, Cu, Mn, Fe, Co) or macro minerals (Mg, Ca) to an amino acid in a 1:1 molar ratio. When properly reacted a very stable, heterocyclic ring structure is formed with both ends of the amino acid attached to the target metal. Only when chelation occurs will you fully realize the benefits of chelated trace minerals. This process helps protect the metal from being tied up by antagonisms (Fe, Mo, S) during digestion and allows for the metal to remain part of this organic molecule as it is absorbed primarily in the jejunal area of the small intestine.

Amino acid complexes, proteinates, organic acid chelates and polysaccharide complexes can lose integrity during digestion becoming unstable which compromises availability.

Research shows that Amino Acid Chelated metals are the most available, best absorbed and most retained of all the mineral forms on the market including complexes and sulfate forms. The specific amino acid used to form the chelate also impacts absorption and retention. **Glycine origin chelates are shown to be superior to Methionine based products as shown in this university research study (see chart below).**

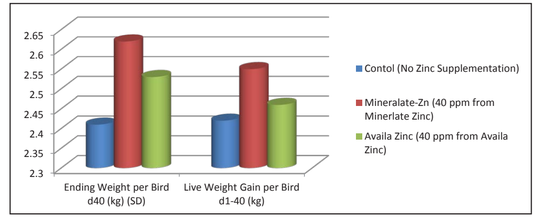
Effect of zinc concentration and source on apparent absorbtion and retention of zinc in steers.

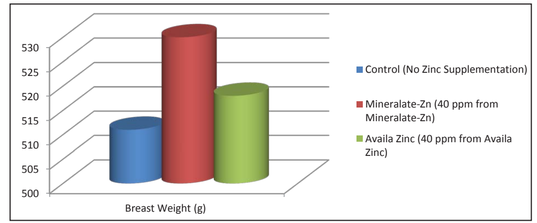
Item	Treatment				
	Control	$ZnSO_4$	ZnMet	ZnGly	S.E.
Dm intake (kg/day)	7.37	7.67	7.71	7.67	0.18
Diet Zn (mg/day)	20.9	43.1	41.0	44.8	
Zinc intake (mg/day)	152.0[a]	332.8[b]	315.3[c]	344.3[b]	5.0
Fecal Zn (mg/day)	134.5[a]	311.3[b]	294.0[b]	298.5[b]	18.8
Urine Zn (mg/day)	0.85[d]	1.05[d]	1.43[e]	1.45[e]	0.16
Absorbed Zn (mg/day)	17.5	21.5	21.3	45.8	16.8
Absorbed Zn (g/kg diet)	118	72	67	130	46
Retained Zn (mg/day)	16.7	20.7	19.8	44.3	16.8

[a, b, c] Means in a row not sharing a common superscript differ (P<0.01).
[d, e] Means in a row not sharing a common superscript differ (P<0.05).
J.W. Spears et al / Livestock Production Science 90 (2004) 211-217

Effect of Zinc Supplementation on Broiler Perfomance
Researcher Name: Joe Moritz, Dept. of Poultry Science
West Virginia University

Researcher has concluded that there is a very strong trend for a larger bird with Mineralate-Zn compared to Availa-Zn (0.2 lb heavier), P=0.052





There was a trend for Mineralate Zn to produce more tibia zn (mg/kg) compared to AvaliaZinc (P=0.18)