

Q&A MINERALS

Albion™
Advanced Nutrition

What are minerals?

As simple as it may seem, this question is the first step in examining the role of minerals in nutrition. Webster describes minerals as solid, crystalline substances (diamond, copper, quartz, etc.) not of animal or vegetable origin. Important in this definition is the indication that their origin is not from animal or vegetable sources. Minerals for nutritional purposes cannot be synthesized by the body. They must be utilized as natural elements from nature.

Q Why are minerals important?

A The following table shows various systems in the body which utilize minerals. Research is showing that imbalances or deficiencies in mineral nutrition can affect these systems.

IMMUNE SYSTEM Copper, Zinc, Iron, Selenium
ENERGY PRODUCTION Magnesium, Phosphorous, Manganese
HORMONE SYSTEM Iron, Manganese, Zinc, Copper, Magnesium, Potassium
VITAMIN PRODUCTION Cobalt
BLOOD PRODUCTION Copper, Iron
ENZYME SYSTEMS Zinc, Copper, Potassium, Manganese, Iron, Calcium, Molybdenum
SKELETAL SYSTEM Calcium, Magnesium, Zinc, Manganese, Boron, Phosphorous
REPRODUCTION Phosphorous, Copper, Potassium, Manganese, Zinc, Magnesium

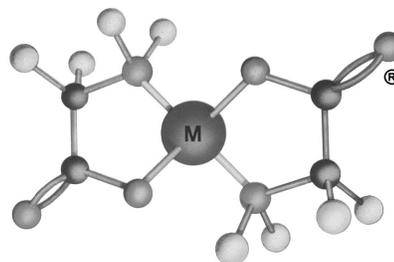
Q Why are minerals bound to amino acids to form a chelate?

A The body is very efficient at absorbing amino acids. Of the nutritional substances that cross the intestinal wall after digestion, dipeptides (two amino acids linked together through a special bond) and single amino acids rank highly. In fact, dipeptides appear to be absorbed at a higher rate than the single amino acids. Chelating minerals to amino acids, in a dipeptide-like fashion, allows

this mineral form to be smuggled via this special active transport system across the intestinal lining into the system.

Q Why is it important for the mineral to have a stable bond to the amino acid?

A Simply mixing inorganic minerals with amino acids in a liquid or dry mixture does not form a true amino acid chelate and does not produce a stable product. Special processing must be performed to create a stable (covalent) bond which is important for greater bioavailability. Albion Laboratories has patented processes to assure this bond is formed. There are many products on the market which report to be chelates but do not fit into the definition of true amino acid chelates. These lose integrity during digestion, becoming unstable and compromising availability. When looking for bioavailable minerals, Albion chelates guarantee purity and stability.



Q What makes Albion chelates so effective?

A There are three critical components that make a chelate effective: Size, stability and neutrality. Albion's patented process guarantees all three.

SIZE: Picture in your mind the fuel filter on your car engine. The filter allows fuel to pass through but holds back large

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particles from entering the engine. The same idea applies to the absorption of minerals from the intestine to the blood stream. Large particles cannot easily pass through the intestinal wall. Many mineral products on the market have molecular weights too large to be absorbed intact. Through patented technology, Albion has been able to produce chelated minerals with molecular weights small enough to pass easily through the intestinal wall. The result is a compound similar to that which the body itself produces by natural chelation.

STABILITY: The Albion chelation process guarantees pH stability which is maintained throughout the entire pH range encountered during the digestion process. This assures maximum presence of intact mineral chelate for absorption. The body cannot utilize traditional mineral compounds in their natural state. Zinc sulfate, iron sulfate or any mineral sulfate, oxide or carbonate must be broken apart and restructured to allow it to be transported through the intestinal wall. A similar situation exists with some reported chelates or complexed mineral products. Not properly stabilized, they break apart, exposing the raw, ionized

The Gold Standard in Minerals

What's the Albion Gold Medallion doing on my TyH products?



Albion Laboratories awards the Gold Medallion to help consumers locate products containing the highest quality mineral ingredients based on scientific research. The Gold Medallion on a product is a mark of excellence.

According to Albion, “with the myriad of mineral ingredients that can be found on a typical nutritional supplement label, the selection of the most effective and highest quality mineral can oftentimes be overwhelming”. Albion is recognized as a premier supplier of patented mineral amino acid chelates and often called *The Mineral People™*.

Albion currently holds more than 70 patents in the field of mineral nutrition. Albion scientists have authored textbooks, conducted and published research, and addressed distinguished scientific congresses throughout the world on the benefits of nutritionally functional mineral amino acid chelates. Thus, it's understandable that Albion's Gold Medallion is given to only products with the highest mineral quality.

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mineral. These minerals then become charged ions, and their absorbability comes into jeopardy. These charged free minerals are known to block the absorption of one another, or to combine with other dietary factors to form compounds that are unabsorbable. Albion chelates are manufactured to maintain stability and thus bio-availability of its mineral amino acid chelates.

NEUTRALITY: The process of chelation results in the final mineral compound becoming neutral, i.e., containing no electrical charge. Why is this important? Mineral compounds that have electrical charges can interact with other dietary components, such as phytates and other oppositely charged molecules, and form substances that are not absorbable. In addition, mineral compounds that have an electrical charge are reactive, and as such they can deactivate other important nutrient factors, such as: vitamin E, ascorbic acid, various B-vitamins, as well as important medications.

Q Why are Albion chelated minerals better?

A Only Albion Laboratories has developed the ability to closely duplicate the natural chelation process which occurs in the body. Essentially, Albion has the ability to turn inorganic rocks (mineral sources) into small organic molecules. This makes them highly bio-available and therefore more effective. It is a reliable means of providing mineral nutrition.

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Health POINTS

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You'll find patented Albion Minerals in the following TyH Products:

Fibro-Care™ Capsules & Tablets *Gold Medallion*
Fibro-Care Cal™ *Gold Medallion*