

DAILY MINERALS

FOOD COMPOUND VITAMIN

Vitamin, Mineral & Herbal Formula



Balanced Minerals to
Promote Cardiovascular Health

Full Spectrum of Major & Trace Minerals

100% Amino Acid Chelated Minerals

Enhanced Bioavailability



FOR PROFESSIONAL USE ONLY
©2003 BioSan Labs
Permission Required for Reprint

*Product Rationale
By Cynthia Pileggi*



RIGHTFOODS™ *DAILY MINERALS*

Rationale

The fundamental reasons and logical basis used to formulate RIGHTFOODS™ Daily Minerals.

To Maximize Nutrient Utilization by Providing A Complete Active Range™ of Foods In A Broad Spectrum Formula.

No Nutrient Works Without The Benefit Of Food.

The latest research indicates that Food Compounds in food are needed to deliver nutrients to the cells. When these factors naturally occur you have the most efficient delivery mechanism. Food is the most effective method of nutrient delivery.

RIGHTFOODS™ Provides The Foods That Make The Vitamins And Minerals Work.

Recent science has proven that food is the key to nutrient delivery and utilization. Cutting edge scientific research on optimum health maintenance and preventative care indicates the undeniable importance of food. The broadest spectrum of Food Compounds from food, and the factors found in food, such as pigments, the enzymes and protein chaperones, are the most direct path to optimal Health.

A Broad Range Of Supplemental Components.

The human body needs a broad spectrum of nutrients to maintain optimal health. Eating to stay healthy is not as easy as it seems. A study in the July 16, 1999, issue of *Science* reports that people living in the United States and other industrialized nations often fail to obtain recommended daily minimums of essential nutrients. This is despite the fact that meals contain a nearly endless variety of food.

Research reveals an enhanced physiological response is obtained from moderate amounts of a broad spectrum of foods and food compounds. This broad spectrum of moderate supplemental and nutritive components provides greater health benefits than large amounts of one isolated supplement fraction or the isolated active constituents of a plant.

Full Color Spectrum

RIGHTFOODS™ DAILY MINERALS is the first Full Color Spectrum formula. Our carefully crafted Full Color Spectrum Whole Foods enhances bioavailability of the formula and provides a broad range of naturally-occurring health supportive natural color pigments.

Worldwide research, including studies done by The National Cancer Institute, indicates the importance of including a full spectrum of colorful whole foods (red, blue, green, yellow, orange) in the daily diet. The color pigments in whole foods such as anthocyanins, carotenes, chlorophyll and flavonoids are recognized as being essential protective components of our diet. RightFoods™ Daily Minerals helps meet this challenge by including a daily dose of full color spectrum pigments.

Scientific research indicates that color pigments in whole foods are important aspects of protective food compounds.

Protein Chaperones™, Food Compounds and Nutrient Delivery

Nobel Laureate's have confirmed that **FOOD IS THE KEY TO NUTRIENT UTILIZATION**. Nutrient utilization is dependent on Food Compounds and Protein Chaperones™.

Food Compounds

In 1937, Albert Szent-Györgyi was awarded the Nobel Prize for discovering and isolating a fraction of vitamin C known as ascorbic acid. Professor Szent-Györgyi discovered that vitamin C rich concentrated whole food is more bioavailable than isolated ascorbic acid. This increase in bioavailability is due to the presence of enzymatic activity and important complex food factors known as the Food Compounds.

Protein Chaperones™

The 1999 Nobel Prize was awarded to Dr. Günter Blobel for his work that concluded “Each protein (chaperone) carries in its structure the information needed to specify its proper location in the cell”.

The Protein Chaperones™ are the key delivery mechanisms, the “addresses” and “zip codes”, that carry the nutrients to the specific sites within the cell, where they are utilized. These chaperones are necessary for nutrient utilization.

Research and identification of these Food Compounds has begun to unravel the complexity of food and its use within the body. The discovery of Protein Chaperones™ has led to an enhanced understanding of nutrient utilization. By definition, no isolated food fraction (vitamin or mineral) can provide Food Compounds. The exact structure of food is unknown. There are at least 103,000 known food compounds (a tomato contains at least 10,000). One isolated fraction of a tomato, such as ascorbic acid, cannot be considered as beneficial, or a substitute for, the whole tomato.

Classes of Food Compounds

Research into the compounds that make up food is experiencing remarkable growth. This knowledge of the benefits of the Food Compounds is expanding at an ever-increasing rate. Your body makes more kinds of chemicals than all the drug companies put together. 103,000 food compounds have been isolated, and current estimates say the actual number may be in the millions. With increasing knowledge of the important health benefits of the Food Compounds many scientists believe that the Food Compounds will prove to be more important to supplementation than vitamins and minerals by themselves.

Since each of the Food Compounds exhibits different actions in the body, it is crucial that a broad and complete range of whole foods be included in the diet. When you consume a full range of the Food Compounds you will benefit from what is known as a complete range of action. The complete range of Food Compounds working cohesively protects your body from the onset of numerous illnesses and diseases. The Food Compounds ultimately provide the foundation for optimum health. RightFoods™ Daily Minerals contains the Complete Active Range™ of food compounds.

Nutrients Must Always Be Taken With Food

RightFoods™ is the first company to embrace the new science that food and food compounds are the essential keys to all nutrient delivery. These foods, when properly identified, enhance the effectiveness of the nutrients. Our goal is to provide the absolute best supplements with the most beneficial whole food extracts in all of our formulas.

Enhanced Utilization

Research shows that delivering vitamins and minerals with a Complete Active Range™ of whole herbs enhances utilization. Nutrients cannot be delivered to the cells without specific messengers. These messengers naturally occur in whole foods. Ascorbic acid functions better when taken with vitamin C-rich foods, calcium functions better when taken with calcium-rich foods.

Food Compounds

Nutrients do not function alone, but rather in synergy with the Food Compounds. These Food Compounds are shown to have powerful supportive effects on the physiology. Food Compounds are not produced by the body and must be supplied in our food.

Not Just Any Food - The Right Food

Vitamin Utilization can be achieved by taking nutrients with a high quality meal. However, not just any meal will do. Foods in the meal must be rich in the same nutrients you are supplementing in order to enhance utilization. The necessary messengers (Protein Chaperones™) must naturally occur in the food to create enhanced utilization.

The Quality Meal Solution

RightFoods™ Food Compound Vitamins: Each tablet provides quality whole foods extracts. The whole foods provide the food compounds you need to utilize your vitamins and minerals. The **right** whole foods, combined in the correct ratio with vitamins and minerals. **Daily Minerals™** is a Food Compound Vitamin designed to provide a balanced combination of major and trace minerals essential for the health of the skeletal, cardiovascular, nervous, and kidney systems. Since the average American adult consumes a diet that lacks optimal amounts of essential minerals in the right proportions, a balanced multi-mineral supplement is recommended to help achieve and maintain optimal wellness.

RightFoods™ has created **Daily Minerals™** by skillfully combining each mineral with nourishing whole food extracts. RightFoods™ whole food extracts are naturally rich in essential nutrients and a multitude of beneficial food compounds. Current research has identified food compounds to have several important health-promoting roles in the body including, acting as potent antioxidants, immune stimulators and detoxifiers. It has been proven, that a diet comprised mostly of fruits, vegetables, and whole grains, is an essential element to achieve and maintain good health. These are the foods rich in food compounds. Since the average American diet lacks enough servings of these nourishing foods per day, it is important to choose a Food Compound Vitamin. A Food Compound Vitamin will not only provide essential nutrients, but also all the right foods rich in food compounds.

Each of the thousands of identified food compounds has been placed by its organic structure into one of the seven classes: terpenes, organosulfurs, phenols, organic acids, polysaccharides, lipids, and amines. A diet that includes all seven classes is vital to optimal health because each food compound class exhibits unique health-promoting activities in the body.

Daily Minerals™ contains a select group of 31 foods naturally rich in minerals to fully represent each food compound class. This representation is called the Complete Active Range™, a quality unique to RightFoods™. Each tablet of **Daily Minerals™** includes foods such as *hydrilla* (an aquatic green plant), spinach, kale, onions, alfalfa, cabbage, flaxseed, broccoli, wild blueberries, rice bran, and more. No other multi-mineral offers as many foods providing a balanced source of major and trace minerals as RightFoods™ **Daily Minerals™**.

Maintaining a balance between minerals in the body is an essential factor to good health. Minerals have complex interactions within the body and if the level of one mineral is too high or too low, it directly affects the levels of the other minerals, resulting in an imbalance. If this imbalance is not corrected, any of a number of health conditions may arise. The best approach to maintaining a healthy balance between minerals is to include a broad array of mineral-rich foods. Foods naturally have balanced amounts and ratios of minerals, best suited for human nutrition. **Daily Minerals™** is a nutritionally advanced combination of minerals with complementary mineral-rich foods to help you achieve wellness.

RightFoods™ exclusively uses amino acid chelated (AAC) minerals. Minerals in this form are chelated, meaning they are attached to amino acids, the building blocks of proteins. For dietary minerals to be properly absorbed into the body, they need to attach to amino acids in the digestive tract. More common forms of chelated minerals, such as gluconates or citrates, are attached to molecules other than amino acids. In order for these forms of minerals to be absorbed, the mineral must break away from the molecule like glu-

conate and attach to free amino acids in the digestive tract. A quality meal providing ample amounts of amino acids from digested protein needs to be consumed with these forms of minerals for efficient absorption to occur. Without enough of the right foods at the right time, the absorption rate of these forms of minerals is minimal. Studies have shown that since amino acid chelated minerals do not have to be broken apart through digestion and attached to free amino acids from food, they are up to 300 times more absorbable than other mineral complexes.

RightFoods™ has carefully selected the foods and amino acid chelated minerals for **Daily Minerals™** to create a Food Compound Vitamin with superior absorption and utilization. The whole food extracts in **Daily Minerals™** contain proteins and other compounds that act as “helping hands” in the absorption and delivery of minerals to the cells that need them. This delivery mechanism, defined as utilization, is where good health begins. Without efficient utilization, the nutritional value of dietary minerals and other nutrients essential to life are diminished.

MINERALS

If all the available forms of minerals were absorbed with equal efficiency, we could eat soil as the most direct source of nutrients. This soil source doesn't work because the minerals in the soil are in what is known as an "inorganic" form. Minerals are classified as organic only when they have been incorporated into living cells.

Most inorganic minerals are positively charged. The intestinal wall has a negative charge. The conflict between these charges causes the vast majority of minerals ingested in the inorganic form to be lost. Only a small percentage of inorganic minerals can be transformed within the body, into the organic form and delivered to the blood stream. For example, it is now generally accepted that only a small portion of iron, approximately 5 - 10%, is transformed and assimilated when it is ingested in the inorganic form. The rest has potential to be stored and create problems within the body.

Amino Acid Chelates

Since most forms of inorganic minerals are positively charged, the need arose to develop an organic mineral delivery system that is negatively charged. Amino acid chelates are an organic form which combines minerals with amino acids. This chelation process increases mineral assimilation by as much as 300%.

Some forms of minerals, such as citrates and gluconates, form weak organic complexes that rapidly ionize in the body. Evidence presently available indicates that these complexes do not significantly increase the utilization of minerals. In fact, a published study on intravenous (direct delivery to the blood) calcium gluconate delivery revealed no increase in utilization.* The organic structure that is best suited for mineral chelation is amino acids.

Amino Acid Chelate Utilization

It is theorized that Amino Acid Chelates enhance the body's ability to utilize the attached minerals through their affinity for other amino acids. These amino acids combine to form the Protein Chaperones™ that are necessary for the delivery of the mineral.

Amino Acid Chelate Safety

Another important aspect of the Amino Acid Chelate delivery system is the effect the amino acids have on the mineral ion. Inorganic minerals, when ionized, have the potential to fly around the body causing damage much like free radicals. When these inorganic minerals are attached to amino acids they are calmed and become safe.

*The American Journal Of Medicine, Evaluation of Intravenous calcium as Therapy for Osteoporosis Volume 55; pg. 14, 1973.

Calcium

Calcium is vital to the structure of bones and teeth, contraction of muscles, enzyme activity, regulation of the heart beat, release of neurotransmitters and clotting of the blood. It is also, an important factor in the health of the nervous system.

Magnesium

The primary function of Magnesium is that of enzyme activation, with participation in more than 300 enzymatic reactions in the body. It plays a critical role in energy production, bone structure, and muscle structure and function and is an important factor in the sodium and potassium pump, and in the metabolism of calcium.

Zinc

Zinc functions in many enzyme systems and body functions. It is important to immune function, wound healing, sexual function, sensory function and skin health as well as to healthy prostate function.

Iron

Iron is essential to the hemoglobin molecules of red blood cells where it functions in oxygen transportation. It is also, important to the production of DNA and energy.

Selenium

The primary function of Selenium is as a component of the vital antioxidant enzyme glutathione peroxidase, working with vitamin E to prevent free radical damage to cells. The levels in the soil directly effect the levels in food.

Molybdenum

This functions as a component of several detoxification enzymes including those involved in alcohol detoxification, uric acid formation and sulfur metabolism.

Potassium

An essential electrolyte that functions in the maintenance of water balance, heart, muscles, kidney, adrenal and nerve function. Potassium is found in many common foods.

Copper

Functions in several key enzymatic reactions in the body, including SOD, enzymes involved in production of the skin, energy and neurotransmitters. It is important to iron utilization, proper anti-inflammatory response, cardiovascular health. Copper must be in a proper form, as copper sulfate causes oxidation of Vitamin C and is linked to cellular free radical damage.

Vanadium

Vanadium functions in hormone, cholesterol and blood sugar metabolism. Studies indicate better glucose tolerance, and improved mineralization of bones.

Iodine

The primary function of iodine is in the production of thyroid hormones which effect metabolism. It is also important to health of breast tissue. Food Sources: kelp, seaweed, iodized salt.

GTF Chromium

GTF Chromium is important to blood sugar control mechanisms as it works with insulin in facilitating the uptake of glucose into cells and is important to insulin functioning properly. It helps with the regulation of cholesterol and triglyceride levels.

Manganese

Manganese is important to the functioning of many enzyme systems including: blood sugar control, thyroid hormones, SOD and energy metabolism.

Iron

Iron is essential to the hemoglobin molecules of red blood cells where it functions in oxygen transportation. It is also, important to the production of DNA and energy.

Phosphorus

Phosphorus aids in the formation and maintenance of strong bones and teeth; important in energy metabolism.

SUPERIOR FOODS

Alfalfa (*Medicago sativa*)

This green food is rich in nutrients and food compounds including Chlorophyll, Calcium, Magnesium and Trace Minerals including Boron, as well as Vitamins K, C, A, E, Folic Acid and other B Vitamins, Flavonoids and Phytoestrogens.

Compounds include isoflavones, and research indicates that it stimulates or enhances estrogen production. Nourishes the blood, liver and the body in general. Also indicated as useful in cholesterol management and reduction. Only the leaf and stem are used, no seeds.

Hydrilla verticillata

Hydrilla Verticillata is a rooted macrophyte, meaning that its roots draw nutrients from the soil or base of freshwater lakes, rivers and streams. Unlike algae (known as surface macrophytes) which float on top of fresh water and absorb nutrients from the surface, hydrilla lives below, protected from air-borne contaminants. Submerged macrophytes like *Hydrilla* accumulate more nutrients from the soil and water than surface macrophytes mineral content.

Hydrilla provides an abundant source of: Calcium, Magnesium, Potassium, Phosphorus, Manganese, Iron, Chlorophyll, B-Complex, Beta Carotene, 17 Amino Acids, 8 Fatty Acids, Polysaccharides, and all Essential Trace Minerals. This green super food has potent antioxidant and free radical scavenging properties. Energy enhancing, it also enhances nutrient absorption. It is indicated as radio protective (Inhibits damage caused by radiation).

Supports muscle building and has anti-aging factors such as RNA/DNA, polysaccharides, SOD, and co-enzymes. *Hydrilla* is ecologically sound as it grows abundantly in fresh waters.

Complete Active Range™ Food Compounds:

Terpenes (Carotenoids*: Kelp 3:1, Carrot 3:1), (Limonoids: Orange 3:1, Lemon 3:1), (Saponins: Alfalfa 3:1), (Lycopene: Tomato Extract 4:1); Phenols (Betanin: Beet 3:1), (Anthocyanins: Cranberry 25:1, Wild Blueberry 7:1), (Flavonoids: Grape Extract, Citrus 3:1, Acerola 4:1, Rose Hips 4:1), (Isoflavones: Soy 4:1, Kudzu 10:1); Amines (Chlorophyll: Hydrilla 50:1), (Enzymes: Green Papaya 3:1, Ginger 5:1); Polysaccharides (Rice Bran 3:1, Reishi 7:1, Shiitake 3:1), (Pectin: Apple 3:1); Organosulfurs (Indoles: Cabbage 3:1), (Sulforaphanes: Broccoli 5:1), (Isothiocyanates: Kale 3:1), (Thiosulfonates: Onion 3:1); Lipids (Omega-3: Flax 3:1), (Sterols: Pumpkin Seed 4:1), (Isoprenoids: Spinach 3:1); Organic Acids (Ellagic Acid: Black Currant 3:1), (Coumaric Acid: Green Pepper 5:1).

*Carotenoids including Lutein, Zeaxanthin, Cryptoxanthin, Alpha-Carotene, and Lycopene.

Disclaimer: The information within is for educational purposes only and is not intended as medical advice. Consult your health care provider about any condition or symptoms that may require diagnosis or medical attention. The authors and RIGHTFOODS™, a division of BioSan Laboratories, disclaim any liability arising directly or indirect from the use of the information within.