

# Technical Bulletin

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Stan Bynum, Ph.D.  
Senior Director,  
Infinity<sup>2</sup> Product  
Formulation Team

## CHELATED MINERAL COMPLEX AN ADDITION TO THE INFINITY<sup>2</sup> NUTRITIONALS

One of several unique aspects of Infinity<sup>2</sup> is that we do not simply sell supplements. Rather we advocate a comprehensive system of natural health enhancement called the Complete Physique system. This system includes eating the right foods, exercise and attitudes that are scientifically proven to result in a higher state of wellness and vitality. It also includes supplements to replenish the nutritive factors missing from our daily intake.

The core of our program of supplementation is a group of formulas that are called the Nutritionals. The Nutritionals are limited to those supplement products for which more than ninety percent of the human population requires supplementation to achieve optimum health. Historically, these types of supplementation have been: Enzymes, Whole food vitamins, Antioxidants, Sugar and fat tolerance support, and Probiotics.

The Product Formulation Team of Infinity<sup>2</sup> is committed to maintaining an awareness of the current knowledge in nutrition and other health and to responding to changes in that knowledge with product improvement or new product development. As part of that commitment, we have added a new product to the Nutritionals: a complete combination of amino acid chelated minerals. This product has been named Chelated Mineral Complex. With this new product, Infinity<sup>2</sup> now has six core nutritional products to address the six identified categories of need for supplementation in today's human population:

1. Enzymes (Digest-a-Meal)
2. Whole food vitamins (Insure Plus)
3. Antioxidants (Life Force Super Antioxidant)
4. Sugar and fat tolerance support (Lipo-chromizyme)
5. Probiotics (Total Flora Support)
6. Bioavailable minerals (Chelated Mineral Complex)

### Establishing the Need for Minerals

Infinity<sup>2</sup> has always included certain minerals in our five basic Nutritionals. We have felt that the major source of minerals should be a healthy diet. However, two factors have influenced our Formulation Team to create a separate, all-inclusive mineral formula as a basic supplementation need. These factors are:

1. Studies performed at Rutgers University by a research group headed by Dr. Firman E. Bear have revealed an alarming decline in the mineral content of commercially grown foods. In these studies, samples of a variety of basic food crops from different regions of the U.S. were obtained and analyzed and the values recorded. This procedure was repeated each year using samples of the same foods obtained from the same regions until ten years of annual sampling had been performed. In almost every case, the nutrient mineral content values were lower each year than that of the previous year. These Rutgers University studies have been confirmed by similar results from a research group at the University of Missouri, headed by Dr. William Albrecht. Clearly, these results warn us that the foods that we have relied upon for our nutrient minerals are no longer dependable sources.

2. Even though we advocate a diet consisting of whole, fresh and raw foods as a first principle of health, we are aware that most people in our society have very busy and pressure-packed lifestyles making it very difficult to maintain a completely healthy food intake.

For these two very compelling reasons, we are convinced that a complete, high-potency supplemental intake of all the nutrient minerals is a part of the core nutritional supplementation program embodied in the Infinity<sup>2</sup> Nutritionals.

### Minerals Selected

Considerable confusion seems to exist in the dietary supplement industry on the subject of minerals as nutrients. In some cases, as with "colloidal minerals," it is assumed that all minerals have nutritional value. In fact, the minerals that are considered to be nutrients are strictly defined by six criteria:

1. Presence in healthy tissue of all living things.
2. Fairly constant concentration from one animal species to the next.
3. Withdrawal from the body induces the same abnormalities, regardless of species studied.
4. Re-introduction reduces or prevents these abnormalities.

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5. The abnormalities are always accompanied by specific biochemical changes, such as reduction in activity of a specific enzyme.
6. The biochemical changes can be prevented or cured when the deficiency is prevented or cured.

There are twenty-one minerals that meet these criteria. They are calcium, phosphorous, magnesium, sodium, potassium, chloride, iron, zinc, copper, selenium, chromium, iodine, manganese, molybdenum, fluoride, nickel, silicon, vanadium, arsenic, boron, and cobalt. Of these, there are not known to be deficiencies in humans of phosphorous, sodium, chloride, nickel, silicon or arsenic. Potassium, while sometimes deficient in certain diseases, is not one of the minerals that are depleted from commercially grown foods (because it is added to commercial fertilizers). Iodine is commonly added to foods, and its deficiency has become rare. Cobalt is only an essential nutrient in humans as vitamin B-12. Supplementation with fluoride is not considered prudent because its level of requirement is too close to the level at which toxicity occurs. This leaves calcium, magnesium, iron, zinc, copper, selenium, chromium, manganese, molybdenum, vanadium and boron as the appropriate ingredients of a complete mineral supplement, and these are the mineral ingredients of in Chelated Mineral Complex.

### Sources of Minerals

The quality of a source of minerals as a human dietary supplement is defined by two parameters:

1. Lack of toxicity, meaning that high doses of the mineral can be ingested without adversely affecting human health;
2. Bio-availability, meaning that once the supplement is ingested, its ingredients can actually be shown to reach the environment of the cell and produce benefit in terms of healthy function.

With respect to both of these parameters, the amino acid chelate minerals produced by Albion Laboratories of Clearfield, Utah, have (by far) the best record of research and performance. For example, studies conducted at the University of Nebraska by Dr. R. P. Heaney showed that the bio-availability of calcium given as the amino acid chelate is approximately three times that of most other sources of supplemental calcium. Numerous studies on toxic effects of various levels of supplemental minerals have revealed that the highest level of safety is obtained by supplementing minerals in the amino acid chelate form. For these reasons, only amino acid chelated minerals are utilized in the Chelated Mineral Complex. Fortunately, the Infinity<sup>2</sup> formulation team includes members of the scientific staff of Albion Laboratories, whose input was critical to the formulation of this unique mineral blend.