

# Trace Minerals-B<sub>12</sub><sup>TM</sup>

Combines Minerals, Plus Vitamin B<sub>12</sub>, to Support Hundreds of Important Enzymatic Reactions in the Body

Trace minerals are important cofactors for many enzymatic reactions in the body. Trace Minerals-B12 is comprised of several whole food sources of trace minerals including kelp, alfalfa, buckwheat, and oats. Kelp is a rich source of iodine, and contains iron as well as B vitamins, like thiamin, riboflavin, and vitamin B12. Alfalfa contains the trace minerals iron, zinc, copper, and manganese. Buckwheat and oats are both good sources of manganese. Iodine is a trace mineral required for thyroid hormone synthesis. Iron is required for oxygen transport and storage, energy metabolism, and many nutrient interactions. Copper, manganese, and zinc are also cofactors involved in many important enzymatic reactions in the body. Vitamin B12 is a cofactor to two enzymes that support protein and hemoglobin synthesis and the production of energy from fats and proteins.†

## How Trace Minerals-B<sub>12</sub> Keeps You Healthy

### Maintains healthy thyroid function

Kelp is an excellent source of iodine. Iodine is required to produce the two hormones in the thyroid gland responsible for regulating the body's rate of metabolism, reproductive functions, and growth and development.†

### Contains zinc and copper—minerals that are crucial for several of the body's enzymatic reactions

Zinc is needed in more than 100 enzymatic reactions in the body. Zinc supports growth and development, as well as immune, neurological, and reproductive functioning. At the cellular level, zinc supports DNA synthesis, cell signaling, and supports protein and cell structure and function. Zinc also plays a role in releasing hormones and supporting nerve impulse transmission. Many enzymatic reactions are dependent on copper. This mineral is involved in producing cellular energy, synthesizing neurotransmitters, supporting the body's natural antioxidant functions, and helping to regulate gene expression.†

### Supports healthy tissues and cells

Manganese is required for the synthesis of proteoglycans, important components of connective tissue that are needed to support cartilage, bone, and collagen formation. Copper supports the formation of connective tissue, myelin, and melanin. Vitamin B12 is essential for the formation of red blood cells and myelin synthesis. Iron is needed to combine with protein to make hemoglobin for red blood cells.

Hemoglobin is responsible for carrying oxygen from the lungs to all the tissues of the body.†

Please copy for your patients.



Introduced in 1951

#### Content:

90 tablets

**Suggested Use:** One tablet per day, or as directed.

#### Supplement Facts:

Serving Size: 1 tablet

Servings per Container: 90

	Amount per Serving	%DV
Calories	1	
Vitamin B <sub>12</sub>	5 mcg	80%
Iron	1.4 mg	8%
Iodine	145 mcg	100%
Zinc	2.7 mg	20%
Copper	0.3 mg	20%
Manganese	16 mg	820%

#### Proprietary Blend: 210 mg

Kelp, para-aminobenzoate, alfalfa (whole plant), magnesium citrate, dried pea (vine) juice, bovine orchid extract, bovine bone, dried buckwheat (leaf) juice, buckwheat (seed), oat flour, defatted wheat (germ), veal bone, carrot (root), and rice (bran).

Other Ingredients: Manganese lactate, honey, dicalcium phosphate, zinc liver chelate, iron liver chelate, copper liver chelate, calcium stearate, prolamine iodine (zein), and cyanocobalamin.

**Warning:** Accidental overdose of iron-containing products is a leading cause of fatal poisoning in children under 6. Keep this product out of reach of children. In case of accidental overdose, call a doctor or poison control center immediately.

Sold through health care professionals.



800-558-8740 | standardprocess.com

†These statements have not been evaluated by the Food & Drug Administration. These products are not intended to diagnose, treat, cure, or prevent any disease.

# Trace Minerals-B<sub>12</sub><sup>TM</sup>

## How Trace Minerals-B12 Keeps You Healthy (continued)

### Stimulates healthy metabolism of micro- and macronutrients

Buckwheat and oats are rich sources of manganese, a cofactor in the metabolism of carbohydrates, amino acids, and cholesterol. Copper supports iron metabolism. Enzymes supported by vitamin B12 are involved in protein synthesis and the production of energy from fats and proteins.†

## What Makes Trace Minerals-B<sub>12</sub> Unique

### Product Attributes

Trace Minerals-B<sub>12</sub> is a unique combination of vital trace minerals

- › This combination helps support the thyroid gland, general metabolism, fat metabolism, and energy production†

### Multiple mineral product derived from plant sources

- › Kelp, alfalfa, buckwheat juice and seed, and pea vine juice are whole food ingredients used in this product†

### Certified Organic Farming

A healthy ecosystem is created by using organic farming techniques, such as rotating crops, fertilizing the soil with nutrient-rich cover crops and byproducts from our processing, practicing strict weed-control standards, and continually monitoring the health of our plants

- › Assures the soil is laden with minerals and nutrients
- › Ensures plants are nutritionally complete and free from synthetic pesticides

### Manufacturing and Quality-Control Processes

Upon harvesting, nutrient-rich plants are immediately washed and promptly processed

- › Preserves nutritional integrity

### Low-temperature, high-vacuum drying technique

- › Preserves the enzymatic vitality and nutritional potential of ingredients

### Not disassociated into isolated components

- › The nutrients in Trace Minerals-B<sub>12</sub> are processed to remain intact, complete nutritional compounds

Degreed microbiologists and chemists in our on-site laboratories continually conduct bacterial and analytical tests on raw materials, product batches, and finished products

- › Ensures consistent quality and safety

### Vitamin and mineral analyses validate product content and specifications

- › Assures high-quality essential nutrients are delivered

### Whole Food Philosophy

Our founder, Dr. Royal Lee, challenged common scientific beliefs by choosing a holistic approach of providing nutrients through whole foods. His goal was to provide nutrients as they are found in nature—in a whole food state where he believed their natural potency and efficacy would be realized. Dr. Lee believed that when nutrients remain intact and are not split from their natural associated synergists—known and unknown—bioactivity is markedly enhanced over isolated nutrients. Following this philosophy, even a small amount of a whole food concentrate will offer enhanced nutritional support, compared to an isolated or fractionated vitamin. Therefore, one should examine the source of nutrients rather than looking at the quantities of individual nutrients on product labels.

Studies on nutrients generally use large doses and these studies, some of which are cited below, are the basis for much of the information we provide you in this publication about whole food ingredients. See the supplement facts for Trace Minerals-B<sub>12</sub>.

Brody, T. (1999). *Nutritional Biochemistry* (2nd ed.). San Diego: Academic Press.

Carmel, R. (2006). Cobalamin (Vitamin B-12). In M. E. Shils, Shike, M., Ross, A.C., Caballero, B., Cousins, R.J. (Eds.), *Modern Nutrition in Health and Disease* (10th ed., pp. 462-497). Philadelphia: Lippincott Williams & Wilkins.

Cousins, R. J. (2006). Zinc. In B. A. Bowman, Russell, R.M. (Ed.), *Present Knowledge in Nutrition* (9th ed., Vol. 1, pp. 445-457). Washington D.C.: ILSI Press.

Dunn, J. T. (1998). What's happening to our iodine? *J Clin Endocrinol Metab*, 83(10), 3398-3400.

Harris, E. D. (1997). Copper. In B. L. O'Dell, Sunde, R.A. (Ed.), *Handbook of nutritionally essential minerals* (pp. 231-273). New York: Marcel Dekker, Inc.

Hetzel, B. S., Clugston, G.A. (1999). Iodine. In M. Shils, Olson, J.A., Shike, M., Ross, A.C. (Ed.), *Modern Nutrition in Health and Disease* (9th ed., pp. 253-264). Baltimore: Williams & Wilkins.

Keen, C. L., Zidenberg-Cherr, S. (1996). Manganese. In E. E. Ziegler, Filer, L.J. (Ed.), *Present Knowledge in Nutrition* (7th ed., pp. 334-343). Washington D.C.: ILSI Press.

Nielsen, F. H. (1999). Ultratrace minerals. In M. Shils, Olson, J.A., Shike, M., Ross, A.C. (Ed.), *Modern Nutrition in Health and Disease* (9th ed., pp. 283-303). Baltimore: Williams & Wilkins.

Trumbo, P., Yates, A. A., Schlicker, S., & Poos, M. (2001). Dietary reference intakes: vitamin A, vitamin K, arsenic, boron, chromium, copper, iodine, iron, manganese, molybdenum, nickel, silicon, vanadium, and zinc. *J Am Diet Assoc*, 101(3), 294-301.

Turnlund, J. R. (2006). Copper. In M. E. Shils, Shike, M., Ross, A.C., Caballero, B., Cousins, R.J. (Ed.), *Modern Nutrition in Health and Disease* (10th ed., pp. 289-299). Philadelphia: Lippincott Williams & Wilkins.

Uauy, R., Olivares, M., & Gonzalez, M. (1998). Essentiality of copper in humans. *Am J Clin Nutr*, 67(5 Suppl), 952S-959S.

Yip, R., Dallman, P.R. (1996). Iron. In E. E. Ziegler, Filer, L.J. (Ed.), *Present Knowledge in Nutrition* (7th ed., pp. 277-292). Washington D.C.: ILSI Press.

