



Trace Minerals-B₁₂TM

8050 90 Tablets

NON
DAIRY

NON
SOY

VITAMINS
& MINERALS

- Combines important nutrients to support enzymatic reactions in the body*
- Provides a spectrum of minerals that support a healthy body, including essential cofactors for healthy cell functioning*
- Provides iodine, which is required for healthy thyroid
- Among other functions, these trace minerals support ligament, cartilage, and bone structure; immune system response function and thyroid function; fat metabolism; and calcium utilization*
- Excellent source of vitamin B₁₂, iodine, zinc, copper and manganese

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.

Warning: This product should only be used under the direct supervision of a qualified health care professional. Please consult your health care professional if you are pregnant, nursing, or taking any antithyroid medicines. Keep out of reach of children.

Supplement Facts

Serving Size: 1 Tablet

Servings per Container: 90

	Amount per Serving	%Daily Value
Vitamin B12	4.2 mcg	175%
Iron	1.4 mg	8%
Iodine	300 mcg	200%
Zinc	2.7 mg	25%
Copper	0.3 mg	33%
Manganese	16 mg	696%
Proprietary Blend	210 mg	†
Kelp, organic alfalfa (aerial parts) juice powder, magnesium citrate, organic pea vine juice powder, bovine orchic extract, bovine bone, organic buckwheat (aerial parts) juice powder, organic buckwheat flour, oat flour, defatted wheat germ, veal bone, organic carrot, and rice bran.		

†Daily Value not established.

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

Contains: Wheat.

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Trace Minerals Support Important Endocrine & Musculoskeletal Functions

The trace minerals found in our Trace Minerals-B₁₂TM formula support a variety of important functions in the body, especially within the endocrine and musculoskeletal systems.*



Thyroid Health

Iodine is a key component of the thyroid hormones thyroxine (T₄) and triiodothyronine (T₃), incorporating molecules of iodine into the hormone structure.^{1,2} Thyroid hormone is required for fetal growth and metabolism in adults.¹⁻³



Ligament, Cartilage, Bone Structure

Manganese supports healthy bone and connective tissue synthesis as a cofactor of glycosyltransferases: enzymes involved in the synthesis of proteoglycans.^{2,4} Proteoglycans are important structural components of connective tissues including cartilage and bone.^{2,5,6}

Copper acts as an essential cofactor for lysyl oxidase: an enzyme involved in collagen synthesis.⁴ Lysyl oxidase is normally secreted by connective tissue cells in bone, blood vessels, and other tissues, and its role is to promote cross-links between connective tissue proteins, including collagen and elastin, that are important to stabilize the extracellular matrix.⁴ Inadequate copper intake decreases the strength of connective tissues due to decreased activity of the enzyme lysyl oxidase.⁴

Iron is a cofactor for the enzymes lysine dioxygenase and proline dioxygenase, which are involved in collagen synthesis.⁴ Collagen is an important component of bone, cartilage, skin, and blood vessels.



Immune System Function

Zinc has a key role in aspects of healthy immune function, including both innate and adaptive immune responses.⁷⁻¹² For example, thymulin — a zinc-dependent hormone — regulates the differentiation and function of maturing T cells in the thymus gland and blood.⁴



Lipid Metabolism

Zinc is part of multiple enzymes and impacts most major metabolic pathways. Three zinc atoms are required for proper activity of polyglutamate hydrolase, which is a membrane-bound enzyme that produces DAG (diacylglycerol) and IP3 (1,4,5-trisphosphate). Both DAG and IP3 are important lipid second messengers that control various cellular processes and act as substrates for synthesis of other signaling molecules.⁴

Trace Minerals-B₁₂™ Provides Essential Cofactors for Healthy Cell Function

Micronutrient & Role	Function ¹⁻⁴
Vitamin B₁₂ Cofactor for enzymes	<ul style="list-style-type: none"> Homocysteine metabolism Energy production Heme synthesis
Iron Cofactor for enzymes; component of iron-dependent proteins	<ul style="list-style-type: none"> ATP production Antioxidant effects Thyroid hormone synthesis Carbohydrate metabolism
Zinc Cofactor for hundreds of enzymes; Structural component of transcription factors	<ul style="list-style-type: none"> Carbohydrate, protein, and lipid metabolism DNA and RNA synthesis Gene expression Cellular membrane integrity Immune function
Copper Cofactor for enzymes	<ul style="list-style-type: none"> Iron utilization Antioxidant function ATP production Collagen synthesis Neurotransmitter activation Immune system function Gene expression
Manganese Co-activator of enzymes; constituent of metalloenzymes; modulates second messenger pathways	<ul style="list-style-type: none"> Urea synthesis Carbohydrate and amino acid metabolism Antioxidant function Calcium-dependent processes

Since 1929,
Standard Process
has been changing
lives with our whole
food philosophy.

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