NutraMedix

Deep Ocean Trace Minerals

Applications

- Trace Mineral Support
- Athletic Support
- Energy Support
- Vitality Support

Introduction

NutraMedix Deep Ocean Trace Minerals contains essential minerals in trace amounts as they naturally occur, harvested from the pristine waters of the Pacific Ocean more than 600 meters below the surface. Essential macrominerals (needed in amounts greater than 100 mg/day) include calcium (Ca), chloride (Cl), magnesium (Mg), phosphorus (Ph), potassium (K), and sodium (Na). Essential microminerals/trace minerals (needed in amounts of 1-100 mg/day) include copper (Cu), iodine (I), iron (Fe), manganese (Mn), and zinc (Zn). Essential ultra-trace minerals (needed in amounts of less than 1 mg/day) include chromium (Cr), molybdenum (Mo), and selenium (Se).[1,2]

Though minerals make up only 5% of the human diet, they are vital to health.[2] Minerals serve many functions in the body, including structure, fluid balance, membrane permeability, acid-base balance, enzyme system activation, redox balance, cellular energy metabolism, and the action potentials needed to power muscle contraction and neurotransmission.*[3,4]

Some minerals serve additional roles as electrolytes, carrying a positive or negative electrical charge. The electrolyte minerals most important to human health are sodium (Na^+), potassium (K^+), magnesium (Mg^{2+}), calcium (Ca^{2+}), chloride (Cl^-), and phosphorus in the form of hydrogen phosphate (HPO_4^{2-}).[5] Sodium and potassium are needed for the sodium-potassium pump; magnesium participates in adenosine triphosphate (ATP) metabolism; and phosphate alternates with deoxyribose to form the backbone of DNA.*[6]

NutraMedix Deep Ocean Trace Minerals is free of gluten, soy, and dairy. NutraMedix rigorously follows current good manufacturing practices (cGMP), as do our suppliers, including stringent ID testing, microbial testing, and heavy-metal testing. This testing is conducted on both the raw material and after encapsulation.

Trace Mineral Support

Deep ocean trace minerals may help with trace mineral support, containing essential minerals in trace amounts.*

In one in vitro study, researchers compared a marine-source magnesium supplement including 72 trace minerals to magnesium chloride ($MgCl_2$) and magnesium oxide (MgO). They found that the marine-source magnesium with trace minerals was similar in bioavailability to $MgCl_2$, and both were significantly more bioavailable than MgO. The researchers hypothesized that the addition of trace minerals may contribute to the absorption of magnesium.*[7]

Athletic Support

Trace minerals may help with athletic support, maintaining normal tissue hemoglobin levels in

response to physical challenges and during post-exercise recovery.*

In a double-blind, placebo-controlled crossover study, 12 young and nine middle-aged men were given trace minerals harvested from deep in the ocean or a placebo in water at baseline, during a cycling exercise, and at exercise completion. Tissue hemoglobin was measured with near-infrared spectroscopy during cycling at 75% peak oxygen uptake.[8]

While cycling, there were no significant differences between groups in the plasma-lactate response or in time-to-exhaustion. Compared to the placebo, deep ocean minerals significantly supported healthy cerebral hemoglobin levels already within the normal range in both young and middle-aged men, with the middle-aged men experiencing the most support.* In addition, compared to the placebo group, the middle-aged men given deep ocean minerals maintained a neutrophil-to-lymphocyte ratio already within the normal range at cycling completion.*[8]

Ocean-harvested trace mineral consumption may also support normal high-intensity running capacity in healthy, recreationally active athletes, after short-term recovery from an initial bout of high-intensity running.* Nine healthy male soccer players completed an initial test to determine peak oxygen uptake; two familiarization trials; and two double-blind, placebo-controlled crossover trials. A seven-day break occurred between the familiarization and experimental trials. After the initial 60-minute experimental run at 75% peak oxygen uptake, the participants were randomly assigned to drink 1.35 liters of deep ocean mineral water or a placebo during a two-hour break. They then repeated an identical 60-minute run.[9]

Though there were no differences between groups in blood-glucose concentration, blood-lactate concentration, or urine osmolality, participants who consumed deep ocean mineral water during the two-hour break experienced significant support for high-intensity running capacity during the subsequent run, compared to the placebo group.*[9]

Safety and Cautions

Adverse effects are uncommon under the upper limit (UL) of each mineral. When taken as directed, the minerals in this product are in trace amounts only, below the recommended dietary allowance (RDA) or adequate intake (AI), and far below the UL. Stop use if adverse reactions develop.

Specific RDAs, AIs, and ULs for each mineral in Deep Ocean Trace Minerals include:

Calcium (Ca): The RDA of calcium for both men and women ages 19–50 is 1,000 mg/day. For ages 51–70, the RDA is 1,000 mg/day for men and 1,200 mg/day for women. For ages 70 and older, the RDA is 1,200 mg/day for both men and women. For both men and women, the UL is 2,500 mg/day in ages 19–50 and 2,000 mg/day in ages 51 and older.[10]

Chloride (Cl): The AI of chloride is 2.3 g/day in younger adults, 2.0 g/day in older adults, and 1.8 g/day in the elderly. The UL is 3.6 g/day in men and women ages 19 and older.[11]

Chromium (Cr): The AI of chromium for men is 35 mcg/day in ages 19–50 and 30 mcg/day in ages 51 and older. For women, the AI is 25 mcg/day in ages 19–50 and 20 mcg/day in ages 51 and older. A UL has not been set for chromium.[12]

Copper (Cu): The RDA of copper for both men and women ages 19 and older is 900 mcg/day. The UL for both men and women ages 19 and older is 10,000 mcg/day.[13]

Iodine (I): The RDA of iodine is 150 mcg/day for both men and women ages 19 and older. For men and women ages 19 and older, the UL is 1,100 mcg/day.[14]

Iron (Fe): The RDA of iron for men is 8 mg/day for ages 19 and older. The RDA for women is 18 mg/day for ages 19–50 and 8 mg/day for ages 51 and older. For both men and women ages 14 and older, the UL is 45 mg/day for both males and females ages 14 and older.[15]

Magnesium (Mg): The RDA of magnesium for men is 400 mg/day in ages 19–30 and 420 mg/day in ages 31 and older. The RDA for women is 310 mg/day in ages 19–30 and 320 mg/day in ages 31 and older. The UL is 350 mg/day for both men and women ages 19 and older.[16]

Manganese (Mn): The RDA of manganese for men is 2.3 mg/day in ages 19 and older. For women,

the RDA is 1.8 mg/day in ages 19 and older. The UL for both men and women ages 19 and older is 11 mg/day.[17]

Molybdenum (Mo): The RDA of molybdenum for both men and women ages 19 and older is 45 mcg/day. The UL for men and women ages 19 and older is 2,000 mcg/day.[18]

Phosphorus (Ph): The RDA of phosphorus for both men and women ages 19 and older is 1,250 mg/day. The UL for both men and women is 4,000 mg/day in ages 19–70 and 3,000 mg/day in ages 71 and older.[19]

Potassium (K): The AI of potassium for men ages 19 and older is 3,400 mg/day, and the AI for women ages 19 and older is 2,600 mg/day.[20] A UL has not been set for potassium, but the European Food Safety Authority has proposed that side effects are unlikely at the amounts present in food (up to 5,000–6,000 mg/day for adults).[11,21]

Selenium (Se): The RDA of selenium is 55 mcg for both men and women ages 19 and older. The UL for men and women ages 19 and older is 400 mcg/day.[22]

Sodium (Na): The AI of sodium for both men and women ages 19 and older is 1,500 mg/day. The UL is 2,300 mg/day for men and women ages 19 and older.[23]

Zinc (Zn): The RDA of zinc is 11 mg/day for men and 8 mg/day for women ages 19 and older. The UL is 40 mg/day for both men and women ages 19 and older.[24]

Safety is not documented in breastfeeding or pregnant women, or in children under age 3, due to insufficient safety research.

***This statement has not been evaluated by the Food and Drug Administration. This product is not intended to treat, cure, or prevent any diseases.**

References

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NutraMedix®

KEEP OUT OF REACH OF CHILDREN

STORAGE: Keep tightly closed in a dry place at room temperature. (59-86°F or 15-30°C)

SUGGESTED USE: Take one to two capsules daily after a meal or as directed by your physician. Do not use if pregnant or nursing. Stop use if adverse reactions develop.

†These statements have not been evaluated by the Food and Drug Administration. This product is not intended to diagnose, treat, cure or prevent any disease.

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DEEP OCEAN TRACE MINERALS

ENERGY/VITALITY SUPPORT†

GLUTEN FREE SOY FREE DAIRY FREE

Dietary Supplement

60 Vegetable Capsules

Supplement Facts

Serving Size 2 Capsules
Servings Per Container 30

Amount Per Serving	% Daily Value
Deep Ocean Trace Minerals 1000mg*	

*Daily Value not established

Other Ingredients: Vegetable Capsule, Vegetable Magnesium Stearate, Silicon Dioxide

V3660016

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PROFESSIONAL USE ONLY