

# Frequen *Sea*

## Sea Mineral / Vegetable Blend with Astaxanthin and Frankincense

Added with the following Proprietary blends, Sea water, and Ionic Liquid Sea Trace Minerals. A special blend of herbs and sea vegetables, as well as a Proprietary blend of Aloe Vera, Cranberry, Blueberry, and Sweet Mexican Lime Concentrates. These special blends provide the following naturally occurring ingredients.

### Ionic Sea Minerals in naturally occurring trace amounts:

Antimony, Barium, Beryllium, Bismuth, Bromide, Calcium, Carbonate, Cerium, Cesium, Chromium, Cobalt, Copper, Dysprosium, Erbium, Europium, Gadolinium, Gallium, Gold, Hafnium, Holmium, Iodine, Iron, Lanthanum, Lutetium, Manganese, Molybdenum, Neodymium, Nickel, Niobium, Nitrogen, Phosphorus, Praseodymium, Rhenium, Rubidium, Samarium, Scandium, Selenium, Silicon, Silver, Strontium, Tantalum, Tellurium, Terbium, Thallium, Thorium, Thulium, Tin, Titanium, Tungsten, Uranium, Vanadium, Ytterbium, Yttrium, Zinc, Zirconium, plus the other elements found naturally in sea water.

### Macro Minerals:

Calcium, Magnesium, Phosphorus, Potassium.

### Nutrients:

Bioflavonoids, Quercetin, Proanthocyanidins.

### Enzymes:

Amylase, Protease, Cellulase, Lipase.

### Co-Enzymes:

Co-Q6, 7, 8, 9, 10.

### Amino Acids:

Isoleucine, Leucine, Lysine, Methionine, Phenylalanine, Threonine, Tryptophan, Valine, Alanine, Arginine, Aspartic Acid, Citulline, Crystiene, Cysteine, Ellagic Acid, Glutamine, Glycine, Histidine, Ornithine and more.

### Supplement Facts

Serving Size: 1 oz.

Servings per Container: 16

	Amount per Serving	% DV
Calories	10	<1%
Total Carbohydrate	2.5 gm	1%
Sugars ( <i>natural fruit juices</i> )	2.5 gm	
Vitamin B-1	.75 mg	50%
Vitamin B-6	1 mg	50%
Vitamin B-12	3 mcg	50%
Vitamin C	30 mg	50%
Magnesium ( <i>Ionic Sea Mineral Blend</i> )	16 mg	4%
Potassium ( <i>Citrate</i> )	50 mg	1.4%
Selenium	10 mcg	14%
Chloride ( <i>Ionic Sea Mineral Blend</i> )	47.52 mg	1.4%
Silver ( <i>Ionic Sea Mineral Blend</i> )	10 ppm*	
Boron ( <i>Ionic Sea Mineral Blend</i> )	80 mcg*	
Sea Mineral Blend ( <i>Ionic Sea Mineral Blend</i> )	500 mg*	
Herb & Sea Vegetables ( <i>Proprietary Blend</i> )	60 mg	*
Cranberry Concentrate ( <i>See Ingredients Below</i> )	1500 mg	*
Blueberry Concentrate ( <i>See Ingredients Below</i> )	900 mg*	

\* Daily Value (DV) not established

**Ingredients** (in addition to the above): Proprietary Blend of the following: Aloe Vera, Cranberry Concentrate, Blueberry Concentrate, Ionic Sea Trace Minerals, Special Blend of Sea and Purified Water, Herb and Sea Vegetable Blend: Bladderwrack, Spirulina, Irish Moss, Kelp, Pau d'arco, Organic Frankincense, Nutmeg, Astaxanthin Sea Algae, Ginger, Orange, Mexican Sweet Lime, Citric Acid, Rosemary Anti-Oxidant.

## Astaxanthin – Super Sea Algae

Astaxanthin is a powerful, natural, biological antioxidant extracted from the marine micro-algae, *Haematococcus pluvialis*. It is the carotenoid responsible for the pink pigmentation in the flesh of salmon, lobster, krill and other aquatic animals and plants. Carotenoids, like astaxanthin, are also the red, orange and yellow plant pigments that give fruits and vegetables their vivid colors.

The carotenoid complex contains Astaxanthin and other carotenoids, primarily; carotene, canthaxanthin and lutein, and Omega 3 and Omega 6 essential fatty acids. These natural compounds are important nutrients and protectants for the skin and for whole body health. Astaxanthin also crosses the blood-brain barrier, which makes it available to the eyes, brain and central nervous system to alleviate oxidative stresses that contribute to ocular and neurodegenerative diseases, such as glaucoma, macular degeneration or Parkinson's Disease and may also destroy *H. pylori* bacteria.

Many carotenoids, such as astaxanthin, act as antioxidants to protect our cells from free radicals. Astaxanthin's powerful antioxidant properties are related to its unique molecular structure. Astaxanthin has polar end groups that allow it to span across the cell membrane's bilayer. This means astaxanthin is available to work near the fat/water interface where free radical attack first occurs.

### Human Benefits of Astaxanthin

Astaxanthin is the platform for a wide range of products and can address each of the following human indications:

- Astaxanthin increases strength and endurance (2 - 8 times greater increase over baseline versus placebo in human study).\*
- Astaxanthin alleviates symptoms in patients with *H. pylori* (pre-ulcer indigestion).\*
- Astaxanthin protects cells and mitochondrial membranes from oxidative damage, thus protecting the cell from oxidative damage.\*\*
- Astaxanthin boosts immune system by increasing the number of antibody-producing cells.\*\*
- Astaxanthin prevents the initiation of cancer cells in the tongue, oral cavity, large bowel, bladder, uterus, and breast.\*\*
- Astaxanthin inhibits lipid peroxidation that causes plaque formation, thus reducing risk of cardiovascular disease.\*\*
- Astaxanthin alleviates stress and may assist in neurodegenerative conditions such as AMD, Alzheimer's, Parkinson's, ALS.\*\*
- Astaxanthin protects the eyes and skin from UV A and B damage by quenching singlet and triplet oxygen.\*\*
- Astaxanthin reduces the number of new and abnormal cells in the liver.\*\*

\* Confirmed in human clinical study.

\*\* Confirmed in preclinical studies.

### Unique Mechanisms of Astaxanthin Action

- Astaxanthin spans the cell membrane bilayer (fat/water) because of its polar end groups attached near the fat/water surface where free radical attack first occurs.
- Astaxanthin crosses the blood brain barrier... 1 of only 4 antioxidants known to do that.
- Astaxanthin inhibits the destruction of the fatty acids and proteins in the cell membrane and the mitochondrial membranes in the cells caused by peroxidation of fats.
- Astaxanthin stabilizes free radicals by adding them to its structure (long double-bonded chain) rather than donating an atom or electron.
- Astaxanthin is more resistant to chain reactions that can occur when fatty acids are oxidized, thus allowing it to scavenge or quench longer than an antioxidant who cannot stop this chain reaction.
- Astaxanthin neutralizes singlet and triplet oxygen by de-charging them.
- Astaxanthin traps more types of radicals (alkoxyl, hydroxyl, peroxy and singlet and triplet oxygen).
- Because it binds to a lipid, (fat) protein, Astaxanthin travels more readily in the body and is more available for use.

- Spanning the bilayer with its polar end groups Astaxanthin may increase cell membrane rigidity and mechanical strength.
- Astaxanthin inhibits reactive oxygen species that causes inflammation to the cells, thus anti-inflammatory capabilities.
- Astaxanthin transports alkoxyl radicals along its long chain (like a bridge) to fat/water interface, where water soluble antioxidants such as Vitamin C can scavenge them.

### **Astaxanthin Effectiveness and Synergy**

- Astaxanthin is at least 10 times more effective as an antioxidant than beta-carotene.
- Astaxanthin is 100 to 500 times more effective in inhibiting lipid peroxidation as an antioxidant than Vitamin E.
- Astaxanthin has greater anti-inflammatory capability than Vitamin E.
- Astaxanthin has at least 4 times the antioxidant capacity of lutein.
- Astaxanthin provides superior protection against UVA light-induced oxidative stress.
- Astaxanthin is more stable in scavenging and quenching than beta-carotene, canthaxanthin, and zeaxanthin.
- Astaxanthin is the most potent antioxidant in enhancing T1 helper cells and suppressing interferon-gamma.
- Astaxanthin is more effective than lycopene, lutein and beta-carotene in immune protection against initiation and promotion of tumors.
- Astaxanthin enhances the actions of Vitamins C, and E in the body.
- Astaxanthin enhances the release of retinol (Vitamin A) from the liver when needed.

### **Astaxanthin Safety**

- There are no known side effects.

### **References**

1. Britton, G. 1995. Structure and properties of carotenoids in relation to function. *FASEB J.* 9:1551-8.
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