

Astaxanthin Powder

Cat. No. SE-009

Lot. No. (See product label)



Product Name

Astaxanthin Powder

Product Overview

Astaxanthin is a group of ketocarotenoids containing metabolites of zeaxanthin and canthaxanthin. Astaxanthin is known for its antioxidant properties that help stave off cellular degradation. It has therapeutic applications in Alzheimer's disease, athletic muscle improvement, and skin rejuvenation. Its market demand and commercial importance are high owing to its applications in human, animal and aquaculture dietary supplements.

Description

Under oxidative stress, the freshwater green alga *Haematococcus pluvialis* can produce and store astaxanthin. This aids in photoprotection, energy transfer to chlorophyll, and light harvesting during photosynthetic reactions. The main component of astaxanthin is 3,3'-dihydroxy-carotene-4,4'-dione.

Haematococcus pluvialis develops cysts when exposed to adverse environmental conditions such as low nutrient, high light intensity, high temperature and salt stress. During cyst formation, the cells also produce large amounts of carotenoids, mainly astaxanthin. With the help of astaxanthin as a protectant, this cyst form helps protect lipids from oxidative degradation. In these red cysts, the cells can live for up to 40 years until the right growth conditions are found to begin the cycle of germination and vegetative development.

Algal Species

Freshwater microalgae *Haematococcus Pluvialis*

Applications

Astaxanthin as a Dietary Supplement:

- Because of its many health benefits, astaxanthin is primarily used in dietary supplements in pure form and fortified with other nutritional supplements.
- Astaxanthin is used as a food coloring agent in salmon, crab, shrimp, chicken and egg production.

Pharmaceutical:

- Astaxanthin is recommended for various diseases and conditions as a good nutritional supplement for quick recovery.
- People use astaxanthin to improve athletic performance, relieve aging skin, and exercise-induced muscle soreness. In addition, it improves the protection of the eyes and the consistency of the skin.

Cosmetic:

- Astaxanthin is known to increase the skin's moisture levels, making it more elastic and helping to reduce wrinkles.
- Astaxanthin is used in skin regenerating cosmetic formulations such as body lotions, face creams, moisturizers and sunscreen lotions.

For seafood and animals

- Astaxanthin provides a range of physiological advantages to aquaculture fish and animals. This includes improving survival, growth performance, fecundity, stress tolerance, disease resistance and immune-related gene expression.
- Astaxanthin is recommended as an additive in formulated feeds to enhance and improve coloration in many aquatic animal species, thereby improving product quality.
- Contains 1 mg to 1.6 mg of astaxanthin per 20 lbs. daily. Animal weights suggested by researchers.

Product Function

1. Fortifying astaxanthin into foods and nutritional supplements can help reduce a variety of diseases, including diabetes, cardiovascular disease, liver disease, and vision loss associated with aging.
2. Diabetes: Problems with the pancreas, which produces insulin, are the root cause of type 2 diabetes. The antioxidant power of astaxanthin may help protect pancreatic beta cells by reducing glycemic toxicity and oxidative stress.
3. Heart disease: Astaxanthin can reduce the level of bad cholesterol in the blood. This helps to avoid the formation of atherosclerosis and cardiovascular diseases. Taking astaxanthin can also increase levels of adiponectin and HDL (good cholesterol). It improves blood circulation and reduces reactive oxygen species in the blood.

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4. Blood pressure: Astaxanthin shows great promise in preventing and reducing high blood pressure and improving its side effects. In addition, it reduces blood oxidative stress and relaxes blood vessel walls to fight high blood pressure.

5. Liver disease: Oxidative stress caused by persistent liver inflammation is a major contributor to fatty liver. Astaxanthin helps to restore normal liver function and prevent liver damage and anemia by scavenging extra free radicals caused by metabolic diseases.

6. Age-related macular degeneration (AMD) can lead to vision loss and blindness. Astaxanthin has been identified as a key nutrient that may protect the eyes and slow the progression of ADM

7. Due to its antioxidant potential, astaxanthin may reduce damage to nerve cells by reactive oxygen species and improve mental health in patients with neurodegenerative diseases. It also strengthens the immune system by stimulating the growth of immune cells.

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