



Sunpure Extracts®
Private Limited

DUNALIELLA SALINA β-CAROTENE

- Active Component: Beta carotene
- Quality: Adheres to global standards
- Standardization: UV / HPLC
- Microbiology: Compliant to Pharmacopoeial standards
- Heavy metal: Compliant to Pharmacopoeial standards
- Pesticide: Under the limits / No Pesticides
- Consistent supply: Own culture
- Support: Assured supply chain
- Price: Highly competitive

Packing: 1 kg, 5 kgs, 10 kgs & 25 kgs

GRADES PRODUCES BY SEPL

Oil Formulation - 2% to 30%

Powder - 2% to 30%

Water Dispersible Powder – 2% to 20%

Direct Compressible Powder – 2% to 20%

Cold Water Soluble Powder - 1% to 10%

Natural Beta Carotene is produced from the marine algae, *Dunaliella salina* using a highly innovative proprietary process. The process has been developed by the in house Sunpure Research Incubation Centre (SRIC) facility of the company. The process by its innovation has brought about total reliability and repeatability in production that is represented in the constituency of output quality. The process has also brought about a major shift in algal biotechnology by adopting a unique approach in terms of understanding the methodology involved in production.

Derived from the algae, *D. Salina*, in its natural form is characterized by the presence of the cis and all trans isomers of Beta carotene.

Algal strain is a local isolate and Non GMO.

Manufactured using a highly innovative proprietary process.

Highest cis isomer content, a key factor in bioavailability and antioxidant ability of Beta carotene.

Dunaliella salina is a single celled, salt-water micro-algae that accumulates massive amounts of carotenoids under appropriate growth conditions. Natural Mixed Carotenoids found in *Dunaliella salina* are among nature's best antioxidants, containing a variety of carotenoids including Beta Carotene, Alphacarotene and Xanthophylls like Zeaxanthin, Cryptoxanthin and Lutein.

β-CAROTENE

Beta-carotene is a pro vitamin A carotenoid that is readily converted into vitamin A by the body on demand. Found in various plant-based foods, beta-carotene provides red, orange, and yellow pigmentation to many fruits and vegetables. Discovered in 1831 by Wilhelm Wackenroder, beta-carotene first got crystallized from carrots. Since then, this colorful pro vitamin has yielded many health benefits. Since too much vitamin A can be toxic, taking beta-carotene can be a safer option than taking a vitamin A supplement. The body will convert beta-carotene to vitamin A as needed, avoiding any potential vitamin A toxicity.

WHAT ARE THE BENEFITS OF BETA CAROTENE?

Beta-carotene has a variety of health benefits for many of the body's systems. From protecting the lungs to improving cognitive function, beta-carotene has a wide range of health-improving qualities.

EYE HEALTH

Pro vitamin A carotenoid beta-carotene may help prevent the onset of eye disease and can help promote good eye health. Research shows that a diet high in beta-carotene and other carotenoids may reduce the risk of developing age-related macular degeneration (AMD) by up to 35%. That is particularly true for smokers who are at increased risk of vision loss due to AMD.

Beta-carotene also helps to improve eye health by keeping the cornea the surface of the eye healthy and moist. Vitamin A may help improve night vision or low light vision due to its ability to help the eye convert light into a signal sent to the brain. As a powerful antioxidant, beta-carotene helps reduce the oxidative stress on our eyes caused by exposure to blue light from device screens and UV radiation. By boosting the immune system, vitamin A helps decrease eye inflammation and the risk of developing eye infections.

IMMUNE HEALTH

Because beta-carotene is an antioxidant, it can increase our immune health by reducing oxidative stress in the body. Oxidative stress directly contributes to chronic illnesses, including heart disease, arthritis, Alzheimer's disease, diabetes, stroke, atherosclerosis, and more.

Antioxidants boost our immune function by scavenging and destroying free radicals. Free radicals cause damage to our tissues, thereby contributing to chronic inflammation and disease formation. Researchers have shown beta-carotene to increase the activity and quantity of immune cells. Carotenoids like beta-carotene have been linked to gene regulation and angiogenesis, or the growth and development of new blood vessels, affecting immune function.





Health Studies suggest that a diet rich in beta-carotene is beneficial to lung health. Beta-carotene gets converted to vitamin A in the body, which helps with proper lung function. Due to its involvement in maintaining epithelial cells, or cells in the linings of tissues, vitamin A is vital for a healthy respiratory tract. Vitamin A deficiency during pregnancy can have long-term adverse effects on the offspring's lung health.

Vitamin A deficiency, along with protein malnutrition, is the most common nutritional disorder in the world. While

this mainly affects children in developing countries, more than 20% of the population in the developed world gets less than two-thirds of the recommended intake of vitamin A. Both liver and plasma levels are below the accepted normal range in this 20% due to modern society's habits of eating foods with poor nutritional value. Vitamin A deficiency increases the risk of developing and dying from various infections and developing respiratory tract illnesses. Taking beta-carotene supplements can help elevate vitamin A levels safely without the risk of vitamin A toxicity.

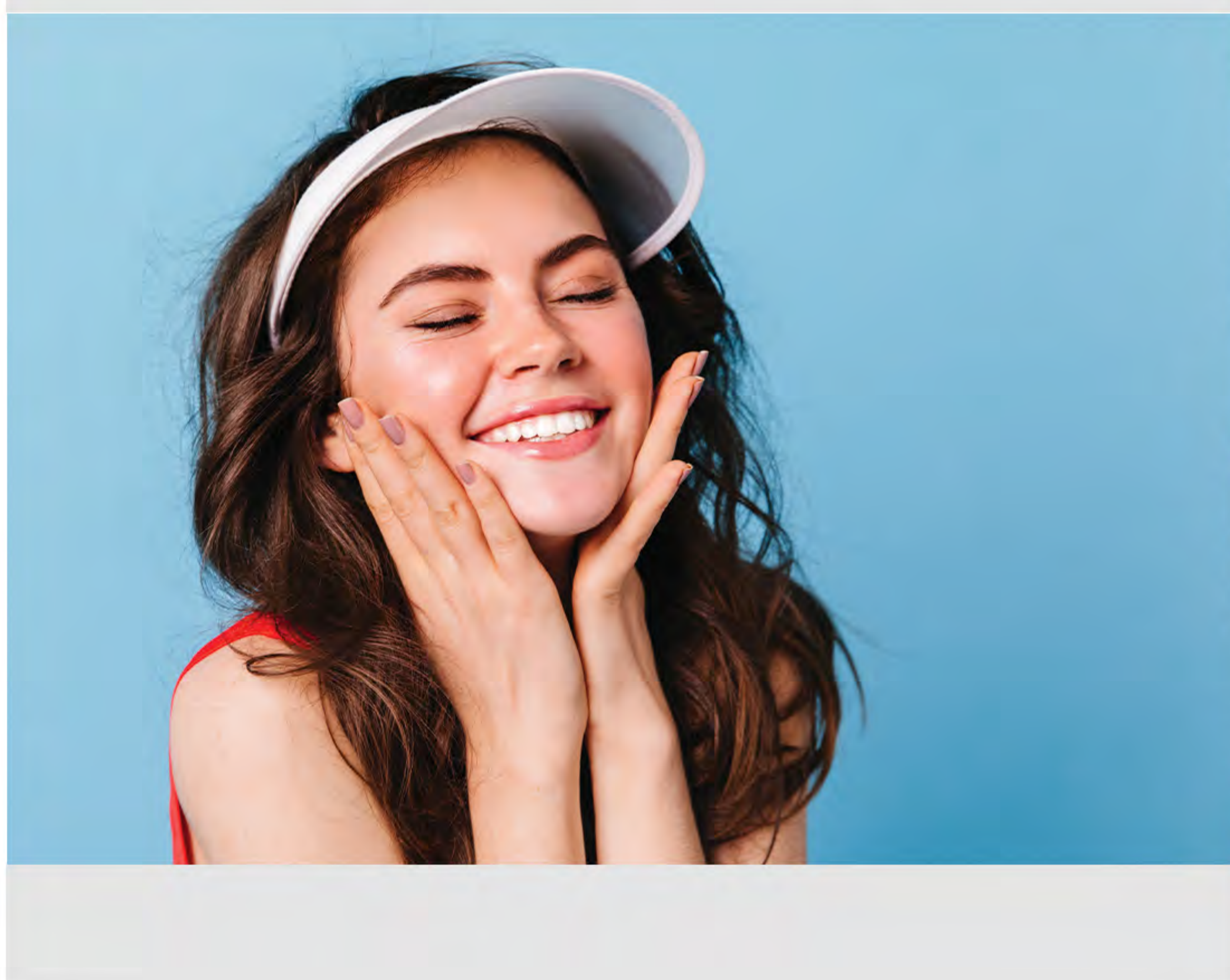
SKIN HEALTH

Primarily attributed to its function as an antioxidant, beta-carotene can help improve skin health and appearance. Studies show a diet rich in phytochemicals such as beta-carotene helps improve the skin's defense against UV radiation from the sun. This protection will help the skin maintain its elasticity and decrease the effects of sun damage, including fine lines, wrinkles, and sunspots.

Beta-carotene's effects may help prevent acne and reduce skin blemishes. It also has a natural exfoliation ability by promoting cell turnover, improving your skin's health and appearance. If having a natural tan is your goal, eating foods high in beta-carotene can increase skin pigmentation.

MENTAL HEALTH

Beta-carotene may improve mental health, including cognitive function and memory, thanks to its antioxidant status. A series of studies found that long-term beta-carotene supplementation improved both memory and cognitive function. Other studies show that antioxidant supplementation remains useful in patients with stress-induced psychiatric disorders, including anxiety and depression. Additional research demonstrates beta-carotene has antidepressant-like activity in stressed mice. Another study found that long-term beta-carotene supplementation for 15 years or longer may help prevent cognitive decline in men.



APPLICATIONS OF NATURAL β-CAROTENE PRODUCED BY SEPL

- Potent antioxidant - used as Vitamin A antioxidant supplement. As there is no drug to drug interaction, safely combined with other - vitamins including Vitamin E.
- Co-prescribed product along with other drugs in chronic diseases.
- As health food during convalescence.
- Natural coloring agent in fruit juices and dairy products.
- Adds nutritive value to food by mixing the product gets a value addition.
- Safe, potent part of Diabetic diet, Cancer and other diseases.
- Aquaculture - Fish and shrimp food
- Poultry – To promote egg yolk color

PRODUCT IDENTIFICATION

CAS No: 7235-40-7
INCI name: Carotene
E No: E 160 a (ii) Plant Carotenes
Chemical Name: Beta- Carotene
Chemical Formulae: C₄₀H₅₆
Molecular Weight: 536.88

DOSAGE

For use as a dietary supplement- 6 to 15 milligrams (mg) of beta-carotene (the equivalent of 10,000 to 25,000 Units of vitamin A activity) per day.

AVAILABLE IN POWDER | GRANULES | OIL | WATER SOLUBLE POWDER
AND GRANULES FOR BEVERAGE GRADE

Sunpure Extracts Private Limited has evolved a frontrunner in botanical extracts and nutraceutical ingredients in India & global platform with a cutting-edge cGMP Manufacturing Plant spread in pristine pollution free environment, **Sunpure Research Incubation Centre (SRIC)** has team of dedicated scientists and full spectrum testing facilities. **SRIC** supports company in achieving new bioactives / derivatives along with filing DMFs, Dossiers, patents and working in compliance and tandem with Global Regulatory Bodies.



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* 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.