

# Phycocyanin Powder

Cat. No. SE-008

Lot. No. (See product label)



## Product Name

Phycocyanin Powder

## Product Overview

Microalgae-extracted phycocyanin powder or liquid is the best natural colorant for food, beverages, and cosmetics products. Phycocyanin pigment enhances the nutritional and aesthetic value by adding proteins, antioxidants, and a fresh appearance to ordinary food and cosmetics products.

## Description

Like allophycocyanin and phycoerythrin, phycocyanin is a pigment-protein complex from the light-harvesting phycobiliprotein (PBP) family that biologically cooperates with chlorophyll in photosynthesis. It is an accessory pigment of chlorophyll. Depending on the species, it has a distinctive light blue color and absorbs especially orange and red light around 620 nm. In addition, it also emits fluorescence around 650 nm (also depending on its type).

According to light energy absorption properties, PBP contains three components. PBP has high light energy and is called phycoerythrin (red) (R-PC). In addition, the medium light energy is phycocyanin (blue) (PC), and the lowest is allophycocyanin (blue) (A-PC). In addition, a type of blue-green algae called cyanobacteria obtains energy through photosynthesis. Finally, the organism's blue-green hue is caused by phycocyanin.

## Applications

Phycocyanin is used in food, pharmaceutical, and cosmetic preparations to improve the nutritional and aesthetic value of the product.

Food:

- Phycocyanin is a natural pigment widely used in food such as chewing gums, dairy products, and jellies.
- Phycocyanin possesses a yellow fluorescence by its coloring properties, which is used in dry sugar-drop candies for cake decoration (fluoresce under UV radiation).

Pharmaceutical:

- A variety of pharmacological actions of phycocyanin include anti-oxidation, anti-cancer, and anti-inflammatory, and also improves immune function and the body's overall illness resistance.
- Phycocyanin also promotes the regeneration of animal blood cells.
- Phycocyanin helps to improve the body's functioning and brain activity by removing free radicals from injured nerve cells, preventing DNA oxidative damage and apoptosis in neuronal cells in their genetic material.

Cosmetic:

- Phycocyanin serves the role of a light-harvesting complex. Its primary use in cosmetics is as a colorant due to its pigment characteristics.
- It can improve cutin degeneration, and has the effects of moisturizing, and nourishing the skin.
- The beneficial modulation of apoptotic pathways in skin cells exposed to UV radiation by phycocyanin has also been demonstrated. Additionally, phycocyanin has shown abilities in the healing of wounds.
- The phycocyanin-containing cosmetic is extremely safe, has no toxicity or adverse effects on people's bodies, and has no stimulating effects on people's skin.

## Advantages

1. Non-toxic
2. Water soluble pigment protein
3. Exhibits antioxidant, anti-inflammatory, hepatoprotective, and neuroprotective effects.

**FOR RESEARCH OR FURTHER MANUFACTURING USE ONLY**