

KEEP INGREDIENTS CO. LTD

No. 2019, Unit 1, Building 10, Yuexiucheng Phase 1, Guodu Xuefu Street, Chang'an District, Xi'an, Shaanxi, 710119, China

Phycocyanin Introduction

Introduction

Founded over 13 years, Complies with food GMP standards, our factory and products passed ISO9001, BRC, HACCP, as well as the US NOP and EU EC organic certification, has become a highly competitive phycocyanin manufacturer in China.

In 2017 with an annual output of 60- 100 tons, currently we have much higher than this quantity.



Products Details

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Source:

A phycobiliprotein purified from edible spirulina through water extraction and membrane separation technology is the most unique active substance in the nutritional components of spirulina.

Pure and clear blue. What is currently extracted is C-phycoerythrin, a mixture of phycoerythrin and isophycocyanin, mainly C-phycoerythrin, and a small amount of naturally occurring proteins and carbohydrates in spirulina.



Physical and chemical properties:

- 1. Bright blue powder.** It belongs to protein-binding pigment and has the same properties as protein.
- 2. It is easily soluble in water** (organic solvents will destroy it). It is sea blue in the range of pH3.5~ 10.5, stable in pH4~8, pH3.4 is its isoelectric point, and phycocyanin is precipitated. It is stable to light and sensitive to heat, and metal ions have adverse effects on it.

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3. **The aqueous solution has red fluorescence under light**, which is very beautiful and unique. When made into a liquid product, the fluorescent effect gives the product a magical charm!



Specification: E18, E25, E40 or Customized - Powder/Tablet - EU&NOP Organic or Conventional

1. When used as a pigment, the specifications are distinguished according to the color price:

At present, the **conventional specification is 180 color price** (the color price is converted by UV detection at 618nm under the specified dilution factor). Generally, trehalose is added as a carrier, which can increase the stability of the product.

You can also customize lower or higher color price or pure powder, and the customer chooses the carrier for compounding.

2. When used as a nutritional supplement, some customers differentiate specifications according to the content of phycocyanin: **currently they are customized according to the content specified by customers.**

Both color value and content represent the content of phycocyanin in the final product, and the higher the color value, the higher the content.

Generally, products with a color price of 180 correspond to a phycocyanin content of 25%-30%.

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Purity

The purity of phycocyanin indicates the level of C-phycocyanin in the total protein in the extract, not a percentage, but an empirical value.

Calculated with A618/A280. The purity of our regular specifications is above 2.5.

Food grade > 0.7

Cosmetic grade > 2.0

Analytical purity grade > 4.5

Usage

1. It can improve the body's anti-radiation ability
2. Antioxidant and anti-inflammatory effects - its antioxidant activity is much higher than that of commonly used antioxidant substances such as SOD (superoxide dismutase) and vitamin C.
3. Protects nervous tissue
4. Protect DNA from oxidative damage
5. Promote the immune function of the body
6. As a photosensitizer to treat cancer
7. Inducing tumor cell apoptosis to treat cancer
8. Inhibit tumor cell proliferation



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9. Liver protection activity - effectively inhibit alcohol damage to liver cells (can be added to wine)
10. Anti-aging activity

Regulations:

Phycocyanin passed GRAS in 2012 in the United States, and can be used as a food raw material in all foods and dietary supplements (**except baby food**)

As spirulina extract (Spirulina Extract), it can be used in candy, icing, ice cream, frozen pastry, pastry coating and decoration, solid beverage, yogurt, and There is no dosage limit in cheese, pudding, cheese, jelly candies, bread, ready-to-eat cereals, dietary supplements (tablets, capsules).

European Union: as Foods with colorful property (colored food) or colorant (pigment). Phycocyanin meets this standard and can be used as a food raw material in the form of spirulina extract or concentrate.

Application fields:

1. The most potential natural blue pigment in the field of food and beverage.

Can be widely used in ice cream, smoothies, yogurt, milkshakes, cold drinks, ready-to-drink drinks, Solid drinks, cold coffee, cream decorations, chocolates, refrigerated desserts, and more.

There are very few natural blue pigments that can be commercially extracted and utilized in nature. At present, the most potential and most sought after is phycocyanin:

A. Extracted from the food raw material spirulina through pure water, it can be eaten as a natural food itself, which is safer and more natural.

B. The color is more pure and clear, the appearance effect is good, and it is easy to mix with other natural pigments such as red and yellow to obtain purple, green and other colors with ideal hues. (Currently there are no green pigments from real natural food sources)

Blue is one of the three primary colors. There are many natural pigments such as red and yellow, but blue is almost only one kind of phycocyanin. If the natural blue is solved, the problem of compounding various color systems and hues with natural pigments can be solved.

C. It not only provides color, but also has rich nutrients and health benefits.

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2. It is favored by more and more brands and consumers as a nutritional supplement and SUPER FOOD in Europe, America and Japan.

It is an excellent plant protein itself, and it is a higher-end SUPER FOOD than spirulina and chlorella, and is more and more favored by European and American consumers.

It has significant health effects such as enhancing immunity, anti-tumor, anti-oxidation, and anti-aging. In addition to the traditional phycocyanin health products in Japan, there are more and more nutritional supplements based on phycocyanin in Europe and the United States.

The unique and beautiful color of the product is a marketing highlight that attracts the attention of consumers.



3. Natural Cosmetics (Manicure, eye shadow, lipstick, etc.)

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Factory advantage:

1. Self-owned spirulina breeding base (including organic spirulina breeding base) and specialized extraction factory, the extraction factory is next to the base, raw material testing, quality control, raw material cost are guaranteed.

The specialized extraction factory built in accordance with food GMP standards only produces phycocyanin. At present, the quality system certification is complete, such as ISO9001, BRC, HACCP, US NOP and EU EC organic certification;

2. Cost advantage brought by proprietary technology:

Specially farmed spirulina raw materials are high in phycocyanin.

Unique extraction technology and purification technology, high extraction rate and low purification loss rate.



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3. Geographical advantages:

Unique climate and environment (good water, good air, large temperature difference between day and night, few insects), suitable for the growth of spirulina, is the main production area of spirulina in China (accounting for more than 40%), good quality (heavy metals, microorganisms, Low PAHs, high phycocyanin content), and the breeding cost is lower than other domestic production areas.

Low land use costs and low energy costs.

Next to the natural soda lake, the trona used for cultivating spirulina is of good quality and low cost.

The spirulina breeding base extracts phycocyanin on site, reducing transportation costs.

Most of the time, the temperature is cool-cold, which is suitable for the extraction, purification and concentration process of phycocyanin at low temperature. It not only guarantees the quality but also saves energy consumption and cost.

Climates are dry and cold, making it easier to control microbes than hot and humid regions.

