

# COLOR Your World, the Way Nature Intended.

## Natural Colorants

■ Radish Red (Powder/Liquid)

■ Curcumin (Powder)

■ Beta-Carotene (Powder)

■ Gardenia Yellow (Powder)

■ Gardenia Blue (Powder)

■ Spirulina Blue

■ Red Cabbage Color (Powder)

■ Beet Root Red (Powder)

## Fruit and Vegetable Juice Concentrate

■ Radish Red Juice Concentrate

■ Beet Root Juice Concentrate

■ Black Carrot Juice Concentrate

■ Purple Sweet Potato Juice Concentrate

■ Spirulina Liquid Extract

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# Food Additives (with upper limits)

## - Natural Colorants

### Gardenia Yellow (Powder)

#### Description and Features

- **Description:** Extracted, purified, concentrated, blended, sterilized and spray-dried from *Gardenia Jasminoides* (Rubiaceae) fruit. It is an orange-yellow to orange-red powder.
- **Features:** Easily soluble in water, soluble in ethanol and propylene glycol, insoluble in oils. pH-insensitive color tone, good light and heat stability, and excellent coloring performance on proteins and starches.

#### Scope of Use

- Widely used for coloring noodles, bakery, jellies, formulated wines, preserves and other foods.

#### Specifications

- E30\50\80\100\150



### Red Cabbage Color (Powder)

#### Description and Features

- **Description:** Pure natural water-soluble red colorants from edible red cabbage (*Brassica oleracea var. capitata L.*), via selection, cleaning, chopping, extraction, purification and other processes.
- **Features:** Dark red powder, brownish-purple liquid. Soluble in water, ethanol, acetic acid and propylene glycol solutions, insoluble in oils. Aqueous solution: purple-red at pH<3, pink and stable at pH4-6, blue to green at pH>6; good light and heat stability in acidic conditions.

#### Scope of Use

- Formulated wines, carbonated drinks, fruit juice/drink beverages, jams, candies, pastries, etc.

#### Specifications

- E10\E30\E50\E80



### Gardenia Blue (Powder)

#### Description and Features

- **Description:** Made from *Gardenia jasminoides* (Rubiaceae) fruit via extraction, purification, concentration, spray drying, etc. It is a dark blue powder.
- **Features:** Easily soluble in water, insoluble in oils. Aqueous solution is bright blue, pH-insensitive color tone, and strong dyeing power on proteins.

#### Scope of Use

- Widely used for coloring frozen drinks, jams, instant grain products, bakery, formulated wines and other foods.

#### Specifications

- E30\50\80\100\150



### Beet Root Red (Powder)

#### Description and Features

- **Description:** Extracted and purified from red beet roots, main component is betanin. It is a fuchsia powder, easily soluble in water and slightly soluble in ethanol.
- **Features:** Bright color and strong dyeing power. Poor light and heat resistance, greatly affected by water activity. Aqueous solution is fuchsia and color-stable at pH4.0-6.0.

#### Scope of Use

- Widely used for coloring various foods.

#### Specifications

- E50



# Food Additives (with upper limits)

## - Natural Colorants

### Radish Red (Powder/Liquid)

#### Description and Features

- **Description:** It is made from red radish through processes such as washing, selection, pressing, concentration, blending, sterilization, and spray drying. Its color ranges from red to deep red.
- **Features:** Easily soluble in water, with good light and heat stability under acidic conditions.

#### Scope of Use

- As a food ingredient, it can be widely applied in various food fields.

#### Specifications

- Powder: E30\40\50\60\70\80
- Liquid: E15\20\30\30



### Beta-Carotene (Powder)

#### Description and Features

- **Description:**  $\beta$ -carotene emulsion is a homogeneous mixture of  $\beta$ -carotene crystals, glycerin, sucrose fatty acid esters, etc. It is an orange to brown liquid with fine, uniform dispersion.
- **Features:** Excellent water dispersibility and color stability, with good acid, heat and light resistance. As a carotenoid and vitamin A precursor, it has health benefits like antioxidation, free radical scavenging, immunity boosting and eye support.

#### Scope of Use

- Used as a natural colorant for beverages, candies, jellies, instant drinks, dairy products, frozen foods, noodles, pasta, biscuits, snacks. It can also be used in pharmaceuticals, health products, cosmetics and feed additives.

#### Specifications

- Content 1%



### Curcumin (Powder)

#### Description and Features

- **Description:** Curcumin is a yellow colorant extracted from the rhizomes of turmeric (*Curcuma longa*) and other plants of the Zingiberaceae family. It appears as an orange-yellow powder with a characteristic aromatic odor and a melting point of 183°C, and is lipophilic.
- **Features:** Strong coloring ability, bright color, high heat stability, safe and non-toxic. It is easily soluble in glacial acetic acid, ethyl acetate, and alkaline solutions, soluble in 95% ethanol and propylene glycol, but insoluble in water.

#### Scope of Use

- Used in candies, ice cream, carbonated drinks, jellies, chewing gum, frozen drinks, batters, coatings, frying powders, seasonings and baked goods, etc.

#### Specifications

- E40\60



### Spirulina Blue

#### Description and Features

- **Description:** Natural edible blue colorants extracted from spirulina, mainly containing phycocyanin and phycobiliprotein.
- **Features:** Typically blue granules or powder. Soluble in water, insoluble in alcohol and oils. Unstable to heat, light and acid; stable in weak acid-neutral conditions, precipitates in acid and fades in strong alkali. Weak stability to metal ions and low dyeing power.

#### Scope of Use

- Suitable for candies, jellies, popsicles, ice cream, sorbets, dairy products and fruit juice/drink beverages.

#### Specifications

- E18



# Food Ingredients

## - Fruit and Vegetable Juice Concentrate

### Radish Red Juice Concentrate

- Liquid/Powder
- Specifications: E15

#### Description and Features

- **Description:** The radish red juice concentrated powder is made from red radish via cleaning, pressing, concentration, spray drying, etc. It appears red to dark red.
- **Features:** Easily soluble in water; light and heat stable under acidic conditions.

#### Scope of Use

- Radish red is suitable for fruit-flavored drinks, fruit and vegetable juice (pulp) drinks, compound seasonings, frozen drinks (excluding edible ice), candies, pastries, preserves, vinegar, jams, sauce products, formulated wines, jellies.



### Beet Root Juice Concentrate

- Liquid/Powder
- Specifications: E4.5-5.5

#### Description and Features

- **Description:** Made from beetroots via cleaning, pressing, concentration, spray drying, etc. Available as red liquid concentrate or spray-dried powder.
- **Features:** Easily soluble in water; light and heat stable at pH 4-6.

#### Scope of Use

- Providing bright colors for beverages, ice cream, candies, pastries, meat products, etc.



### Black Carrot Juice Concentrate

- Liquid/Powder
- Specifications: E10-80

#### Description and Features

- **Description:** Made from black carrots via extraction, purification, concentration, spray drying, etc.
- **Features:** Easily soluble in water, ethanol, etc. Stable under acidic conditions with good light and heat resistance.

#### Scope of Use

- Widely used in candies, beverages, fruit juices, meat products, baked goods, etc.
- Advantage: Dual function as both colorant and food ingredient.



### Purple Sweet Potato Juice Concentrate

- Liquid/Powder
- Specifications: E4-12

#### Description and Features

- **Description:** Made from purple sweet potatoes via cleaning, pressing, concentration, spray drying, etc. Available as fuchsia liquid/powder.
- **Features:** Easily soluble in water; light and heat stable under acidic conditions.

#### Scope of Use

- Suitable for formulated wines, fruit juice beverages, pickled products, candies, jellies, preserves, pharmaceuticals, etc.
- Advantage: Dual function as both colorant and food ingredient.



### Spirulina Liquid Extract

- Liquid
- Specifications: YE3

#### Description and Features

- **Description:** A blue liquid product made by compounding phycocyanin powder for enhanced stability.
- **Features:** Soluble in water, insoluble in alcohols and oils. Unstable to heat, light and acid; stable in weak acid-neutral conditions, precipitates in acid, and decolorizes in strong alkali. Poor stability to metal ions and low dyeing power.

#### Scope of Use

- Suitable for candies, jellies, popsicles, ice cream, sorbets, dairy products and fruit juice/flavored beverages.



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