GB

NATIONAL STANDARD OF THE

PEOPLE'S REPUBLIC OF CHINA

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National Food Safety Standard - Food Additive - Spirulina Blue

食品安全国家标准 食品添加剂 藻蓝

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State Administration for Market Regulation.

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National Food Safety Standard - Food Additive - Spirulina Blue

1 Scope

This Standard is applicable to the food additive of spirulina blue that uses *Spirulina* cultivated in fresh water or seawater as raw materials and prepares through water extraction, purification and other processes.

2 Technical Requirements

2.1 Sensory requirements

The sensory requirements shall comply with the provisions of Table 1.

Table 1 -- Sensory Requirements

2.2 Physical and chemical indicators

The physical and chemical indicators shall comply with the provisions of Table 2.

Table 2 – Physical and Chemical Indicators

Appendix A

Test Methods

A.1 General rules

The reagents and water used in this standard refer to analytically-pure reagents and Class-III water specified in GB/T 6682 when no other requirements are indicated. The solution used in the test refers to the aqueous solution when the solvent is not specified.

A.2 Identification test

A.2.1 Solubility

It is easily soluble in water; shows blue clear liquid; insoluble in organic solvents such as absolute ethanol, ether, petroleum ether, etc. Take appropriate amounts of spirulina blue specimen (0.05g for powder product; 0.3g for liquid product); dissolve it in 10mL of water; slowly add 4.5g of ammonium sulfate solid powder; mix until it is completely dissolved; and let it stand to form a blue precipitate.

A.2.2 Stability

The 0.5% specimen solution prepared by phosphate buffer solution (pH 6.8) shall be blue and accompanied by red fluorescence. After heating at 90°C for 30 min, the fluorescence disappears.

A.2.3 Maximum absorption wavelength

A.2.3.1 Reagents and materials

Phosphate buffer: 0.1mol/L, pH 6.8. Prepare as follows:

a) Solution A (0.2 mol/L sodium dihydrogen phosphate aqueous solution): take 31.20g of $NaH_2PO_4 \cdot 2H_2O$; dissolved and make constant volume by water to 1000mL;

b) Solution B (0.2 mol/L disodium hydrogen phosphate aqueous solution): take 53.61g of $Na_2HPO_4 \cdot 7H_2O$ (or 71.63g of $Na_2HPO_4 \cdot 12H_2O$ or 35.61g of $Na_2HPO_4 \cdot 2H_2O$); dissolve and make constant volume by water to 1000mL;

c) Take 51.0mL of solution A and 49.0mL of solution B; and mix evenly and shake well. Add water to dissolve and make the constant volume to 200mL; and obtain 0.1mol/L phosphate buffer solution (pH 6.8).

A.2.3.2 Apparatus

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