



**NATIONAL STANDARD OF THE
PEOPLE'S REPUBLIC OF CHINA**

GB 28308-2012

**National food safety standard -- Food additive -- Vegetable
carbon black**

食品添加剂 植物炭黑

(English Translation)

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1 Application Scope

This Standard applies to food additive vegetable carbo black which is made from vegetable through carbonization and refining.

2.1 Chemical name

Carbon

3 Technical Requirements

3.1

Sensory requirements. as specified in Table 1.

Annex A

Test Methods

A.1 General

Unless specified otherwise, all reagents used for this Standard are analytically pure reagents and the water is water grade 3 specified in GB/T 6682-2008. Unless specified otherwise, the standard titration solutions used for this Standard and the standard solutions, preparations and products used for the determination of impurities shall be prepared in accordance with GB/T 601, GB/T 602 and GB/T 603. The solutions used in the test refers to aqueous solutions when the solvent is not indicated for the preparation.

A.2.1 Solubility test

Weigh 0.1 g of sample; add 100 mL of water; shake up and allow to stand for 10 min.

The solution shall show no colour.

Weigh 0.1 g of sample; add 100 mL of cyclohexane; shake up and allow to stand for 10 min. The solution shall show no colour.

A.3.2 Analytical procedure

Weigh about 2 g of sample, accurate to 0.000 1 g; place in a constant weighing bottle in a constant temperature drying oven at $120^{\circ}\text{C} \pm 2^{\circ}\text{C}$; dry in the constant drying oven at $120^{\circ}\text{C} \pm 2^{\circ}\text{C}$ for 4 h; take out sample and cool in a desiccator to room temperature.

A.3.3 Calculation of results

Loss on drying is calculated by mass fraction w_1 ; the value is expressed in %; it is calculated in accordance with Formula A.1.

A.5.1 Apparatus

A.5.1.1 Porcelain crucible. 30 mL.

A.5.1.2 High-temperature electric furnace.

A.5.2 Analytical procedure

Weigh about 1 g of sample, accurate to 0.000 1 g; place in a crucible burned to constant weight at $625^{\circ}\text{C} \pm 20^{\circ}\text{C}$. Place the crucible into a high-temperature electric furnace at temperature not exceeding 300°C ; open the crucible cover; increase temperature gradually; ash to constant weight at $625^{\circ}\text{C} \pm 20^{\circ}\text{C}$.

A.5.3 Ash content is calculated by mass fraction w_3 ; the value is expressed in %; it is calculated in accordance with Formula A.3.

A.6.1 Reagents and materials

Sodium hydroxide solution. 1 mol/L.

A.6.2 Analytical procedure

Weigh about 2 g of sample, accurate to 0.000 1 g; place in a 100 mL conical flask; add 20 mL of sodium hydroxide solution; heat slowly to boiling; filter after cooling. The filtrate shall show no colour, i.e. it passes the test.

A.7.2 Apparatus

Continuous extraction apparatus.

A.7.3.1 Preparation of quinine sulfate-sulfuric acid reference solution

Weigh about 0.1 g of quinine sulfate, accurate to 0.000 1g; add 100 mL of sulfuric acid solution; transfer to a 1 000 mL volumetric flask after dissolving; add sulfuric acid solution to the scale; shake up. Absorb 1 mL of the solution to transfer to a 1 000 mL volumetric flask;

add sulfuric acid solution to the scale and shake up as standby.

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