

Translated English of Chinese Standard: GB1886.127-2016

www.ChineseStandard.net

Sales@ChineseStandard.net

GB

NATIONAL STANDARD
OF THE PEOPLE'S REPUBLIC OF CHINA

GB 1886.127-2016

**National food safety standard – Food additives –
Hawthorn nuclear smoked flavoring material I, II**

食品安全国家标准

食品添加剂 – 山楂核烟熏香味料 I 号、II 号

GB 1886.127-2016 How to BUY & immediately GET a full-copy of this standard?

1. www.ChineseStandard.net;
2. Search --> Add to Cart --> Checkout (3-steps);
3. No action is required - Full-copy of this standard will be automatically & immediately delivered to your EMAIL address in 0~60 minutes.
4. Support: Sales@ChineseStandard.net. Wayne, Sales manager

Issued on: August 31, 2016

Implemented on: January 01, 2017

Issued by: National Health and Family Planning Commission of the PRC

Table of contents

1	Scope	3
2	Terms and definitions	3
3	Technical requirements	3
	Appendix A Testing method	5

National food safety standard – Food additives – Hawthorn nuclear smoked flavoring material I, II

1 Scope

This standard applies to the water-soluble hawthorn nuclear smoked flavoring material I and II which uses the hawthorn nuclear as the raw material AND is produced by such methods as dry distillation (anaerobic cracking), condensation, separation and other methods at the temperature of not more than 800 °C.

This standard does not apply to the products manufactured by the water-insoluble oily substances and their products and other materials or by other methods, such as wood acid and the like.

2 Terms and definitions

2.1 Hawthorn nucleus

It refers to the particles produced by water washing and natural drying of the hawthorn nucleus which has a unique aroma and color. It shall not add other wood material or ingredients which may remove the original flavor.

2.2 Hawthorn nucleus smoked flavoring material

It refers to the product using the hawthorn nuclear as raw material which is subjected to dry distillation at 800 °C to produce fumigation, that is further condensed, separated, and refined. It is a complex compound which is composed of multiple smoked ingredients.

2.3 Hawthorn nucleus smoked flavoring material I

It refers to the fraction which is collected at 85 °C ~ 110 °C from the distillation of smoked condensate at normal pressure, is in light yellow to orange, AND has the smoked flavor.

2.4 Hawthorn nucleus smoked flavoring material II

It refers to the aqueous phase portion as refined from the smoked condensate after separation between water phase and oil phase. It is soluble in water, has the reddish brown to tan color, and has the smoked flavor.

3 Technical requirements

3.1 Sensory requirements

Sensory requirements shall comply with the requirements of Table 1.

Appendix A

Testing method

A.1 General provisions

The reagents and water used in this standard, unless otherwise specified, refers to the analytical pure reagents and the level III water as specified in GB/T 6682. The standard solutions, impurity standard solutions, preparations and products used in the tests shall be prepared in accordance with the provisions of GB/T 601, GB/T 602 and GB/T 603, unless otherwise specified. The solution used in the test, unless otherwise specified of the solvent, refers to the aqueous solution.

A.2 Determination of phenol content (expressed as 2,6-dimethoxyphenol) - modified Gibbs method

A.2.1 Method summary

The phenolic compounds in the smoked solution react with the colorant 2,6-dihydroquinone chloroimine (2,6-DcGc) in alkaline boric acid-potassium chloride buffer to form blue indophenol. After forming the color, the absorbance A is measured at 560 nm AND it is quantified by the absorbance standard curve of guaiacol (or other known phenol). This method cannot distinguish between the various phenols, BUT can only provide the total phenol content of guaiacol.

A.2.2 Reagents and materials

A.2.2.1 Boric acid-potassium chloride buffer solution: pH = 8.3. 125 mL of 0.4 mol/L boric acid solution; 125 mL of 0.4 mol/L potassium chloride solution; 40 mL of 0.2 mol/L sodium hydroxide solution. MIX these three solutions; USE water to dilute it to 1000 mL.

A.2.2.2 NaOH solution: 6 g/L.

A.2.2.3 Developer solution: WEIGH 0.25 g of 2,6-dihydroquinone chloride imine in 30 mL of absolute ethanol; COOL it before storage.

A.2.2.4 Guaiacol standard solution: USE water to prepare 1 µg/mL ~ 20 µg/mL standard solution, to draw the standard curve of absorbance A and the guaiacol concentration B (µg/mL).

A.2.2.5 Smoked sample solution: TAKE 0.5 mL of hawthorn nuclear smoked flavor, USE water to dilute it to 1000 mL (dilution factor is dependent on the concentration of sample, so that the absorbance A of the sample dilution is between 0.2 ~ 0.7).

The total carbonyl compound in the smoked flavor material and the 2,4-dinitrophenyl hydrazine (abbreviated as 2,4-DNPH) are converted to a red hydrazone derivative at 60 °C in an acidic medium, AND the absorbance A is measured at 430 nm, so as to calculate the content of the carbonyl compound (expressed as heptanal or other known aldehydes).

A.3.2.2 Reagents and materials

A.3.2.2.1 Methanol free of carbonyl compounds: ADD 1% 2,4-DNPH into methanol; ADD several drops of hydrochloric acid; LET it backflow for 3 h; DISTILL it.

A.3.2.2.2 2,4-DNPH saturated solution: USE the methanol free of carbonyl compounds to dissolve 2,4-DNPH; DILUTE it to make its content reach to 0.05%; SHAKE it for 1 h or PREPARE it 24 h in advance. It shall have the precipitation of insoluble 2,4-DNPH; FILTER and PRESERVE it, AND the shelf life is one week.

A.3.2.2.3 Potassium hydroxide solution: ADD 10 g of potassium hydroxide into 20 mL of water; USE the methanol free of carbonyl compounds to dilute it to 100 mL.

A.3.2.2.4 2-Butanone standard solution: USE the methanol free of carbonyl compounds to prepare 10 mg/100 mL of 2-butanone standard solution, which is used to draw the standard curve of absorbance A-2-butanone concentration (mg/100 mL).

A.3.2.2.5 0.05% sample solution: TAKE 1 mL of sample solution; USE water to dilute it to 200 mL. TAKE 1 mL of dilution; USE the methanol free of carbonyl compounds to dilute it to 10 mL (total dilution ratio 1:2000).

A.3.2.3 Instruments and equipment

Spectrophotometer.

A.3.2.4 Analytical procedures

A.3.2.4.1 ADD 1 mL of 2,4-DNPH to each of the three measuring cylinders. Then ADD 1 mL of sample solution into the first measuring cylinder. ADD 1 mL of 2-butanone standard solution into the second measuring cylinder. ADD 1 mL of methanol free of carbonyl compound into the third measuring cylinder as the blank control.

A.3.2.4.2 Accurately ADD 0.05 mL of hydrochloric acid to all measuring cylinders; MIX it thoroughly; PLACE it in a 50 °C water bath to heat it for 30 min.

A.3.2.4.3 After rapid cooling, ADD 5 mL of potassium hydroxide solution into each measuring cylinder.