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NATIONAL STANDARD OF THE

PEOPLE'S REPUBLIC OF CHINA

GB 30616-2020

National food safety standard - Food flavor

食品安全国家标准 食品用香精

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State Administration for Market Regulation.

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departments/personnel, identifies and evaluates the samples and determine them as specific substances for inspection.

2.6 Liquid flavor

Various flavors in liquid form.

2.7 Emulsified flavor

Various flavors in the form of emulsions.

2.8 Paste flavor

Various flavors in the form of paste.

2.9 Mixed solid (powder) flavor

The flavor in which aroma and/or aroma components are mixed with a solid (including powder) carrier.

2.10 Capsule-type solid (powder) flavor

The granular flavor in which aroma and/or aroma components are wrapped in a solid wall material in the form of a core material.

3 Technical requirements

3.1 Raw material requirements

Food spices used in food flavors shall comply with the provisions of GB 2760 "National Food Safety Standard - Food Additive Usage Standard". The raw materials and process requirements of heat-processed spice for food shall meet the requirements of Appendix A. Edible alcohol shall meet the requirements of GB 31640 "National Food Safety Standard - Edible Alcohol". Vegetable oil shall meet the requirements of GB 2716 "National Food Safety Standard - Vegetable Oil". See Appendix B for the list of permitted food flavor auxiliary materials.

3.2 Sensory requirements

Sensory requirements shall meet the requirements of Table 1.

Appendix A

Raw material and process requirements for heat-processed spices for food

A.1 Raw materials of heat-processed spices for food

The raw materials of heat-processed spices for food include protein nitrogen sources, reducing sugar sources, fat or fatty acid sources, and other raw and auxiliary materials that are allowed to be used during thermal processing.

A.1.1 Protein nitrogen sources

- **A.1.1.1** Protein nitrogen includes foods (livestock, poultry, eggs, dairy products, aquatic products, grains, beans, fruits and vegetables, yeast) and their extracts.
- **A.1.1.2** The above hydrolysate, autolyzed yeast/yeast extract, peptides, amino acids and/or their salts.

A.1.2 Reducing sugar sources

- **A.1.2.1** Foods containing carbohydrates (cereals, beans, fruits and vegetables) and their extracts.
- **A.1.2.2** Single, double and polysaccharides (sugar, dextrin, starch, edible gum).
- **A.1.2.3** The above hydrolysate.

A.1.3 Fat or fatty acid sources

- **A.1.3.1** Foods containing edible fats and oils.
- **A.1.3.2** Edible fats and oils from plants and animals.
- A.1.3.3 Trans-esterified and/or fractionated fats and oils.
- **A.1.3.4** The above hydrolysate.

A.1.4 Other raw and auxiliary materials allowed to be used during thermal processing

See Table A.1 for other raw and auxiliary materials allowed to be used during thermal processing.

Appendix C

Inspection methods

C.1 General

When other requirements are not specified, the reagents and water used in this Standard refer to analytical reagents and the grade 3 water specified in GB/T 6682. When other requirements are not specified, the standard solutions, standard solutions for impurity determination, preparations and products used in the test are all prepared in accordance with GB/T 601, GB/T 602, and GB/T 603. The solution used in the test refers to an aqueous solution when it is not specified which solvent is used for preparation.

C.2 Verification of color and state

C.2.1 Liquid flavor and paste flavor

PLACE the sample and the reference sample respectively in a 50 mL or 100 mL small beaker of the same volume with a scale to the same scale; visually observe whether there is any difference.

C.2.2 Solid (powder) flavor

PLACE the sample and the reference sample on a clean white paper respectively; visually observe whether there is any difference.

C.3 Assessment of aroma

C.3.1 Preparation of test solution

According to the category of flavored product, choose one of the following methods to prepare:

- a) WEIGH 0.01 g~0.1 g respectively, accurate to 0.001 g; PLACE the sample and reference sample in a 50 mL or 100 mL small beaker, respectively; ADD the sugar solution (8 g~12 g of sucrose, 0.10 g~0.16 g of citric acid, add distilled water to 100 mL to prepare), respectively; MAKE into a sugar solution containing 0.01%~0.1% flavor. STIR evenly and it is the test solution;
- b) WEIGH 0.2 g~0.5 g respectively, accurate to 0.01 g; PLACE the sample and reference sample in a 50 mL or 100 mL small beaker, respectively; ADD saline solution (0.5 g of table salt, add boiling water to 100 mL to

- a) Refractive index of the emulsified flavor to be tested: INPUT according to the measured value;
- b) Density of the emulsified flavor to be tested: INPUT according to the measured value:
- c) Refractive index of dispersion medium (water): 1.33;
- d) Absorbance value: 0.001;
- e) Cycle times: 3 times;
- f) Sample measurement time is set to 5 s~15 s, respectively.

C.4.1.2.2.3 Determination procedure

FILL the beaker with 500 mL~800 mL of purified water; TURN on the stirring; speed is about 2000 r/min (when the sample grains are large, and the detector shading is unstable, the pump speed may be appropriately increased or the ultrasound be turned on. If the sample has agglomeration, the ultrasound can be turned on to help dispersion).

MEASURE the background first. When the background measurement is completed and "add sample" is prompted, slowly add dropwise the sample to be measured into the beaker, until the shading display is stable within the set range (usually 5%~15%). Then click "Start" or press "Measure sample" to start the granularity distribution measurement of the sample; the instrument will measure the sample. For each measurement, the result will record the number and time and save them in the specified file. Finally, the collected measurement data of 3 cycles creates an average result on the software.

C.4.2 Capsule-type solid (powder) flavor

USE standard sieving method to determine.

Method 1: Unless otherwise specified, weigh 10 g of sample, accurate to 0.1 g; PLACE it in a standard sieve of the specified size. COVER the sieve and equip it with a tight receiving container under the sieve. Rotate and shake in the horizontal direction for more than 3 min; TAP the sieve in the vertical direction from time to time. TAKE the grains and powder in the receiving container and weigh them; calculate their percentage (%).

Method 2: Unless otherwise specified, weigh 30 g of sample, accurate to 0.1 g; PLACE it in a large standard sieve of the specified size. COVER the sieve and equip it with a tight receiving container under the sieve. Rotate and shake in the horizontal direction for at least 3 min; TAP the sieve in the vertical direction from

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