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

**GB 14963-2011**

Replacing GB 14963-2003; GB 18796-2005

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**National food safety standards -- Honey**

蜂蜜

**(English Translation)**

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### Foreword

This standard replaces GB 14963-2003 "honey health standards" and GB 18796-2005 "honey" in the corresponding index.

This standard compared with GB 14963-2003 main changes are as follows.

- Modify the range;
- Added the definition of honey;
- The raw material requirements to nectar requirements, and identify the major nectar plants poisonous species name;
- Modify the sensory requirements;
- Modify the physical and chemical properties;
- Increased contaminant limits, veterinary drug residue limits, MRL requirements;
- Added osmophilic yeasts requirements.

National Food Safety Standard honey

### 1 Scope

This standard applies to honey, not applicable to honey products.

## 2 Terms and definitions

honey

Bees collect nectar, honeydew secretions or plants, mixed with their own secretions, sufficiently brewed naturally sweet substance.

### 3.1 Requirements nectar

Bees collect nectar plants, honeydew secretions or should be safe, non-toxic, can not be derived from triptolide (*Tripterygium wilfordii* Hook.F.), cordata [*Macleaya cordata* (Willd.) R.Br], *Euphorbia* (*Stellera chamaejasme* L.) and other toxic nectar plants.

### 3.2 Sensory requirements

Sensory requirements shall comply with the requirements of Table 1.

Table 1 Sensory requirements

Project requires test methods Color according to different varieties of honey from water white (near colorless) to dark (dark brown) Press SN/T 0852 corresponding methods of test Taste, smell has a unique taste, smell, no odor at room temperature was a viscous fluid-like state, and all or part of the natural crystalline state was observed under light, check whether the Impurity not contain bee body, the larvae, wax crumbs and normal vision visible Impurities (wax nest honey except crumbs)

### 3.3 Physical indicators

Physical and chemical indicators should be consistent with the provisions of Table 2.

Table 2. Physical and chemical indicators

Item Index Test Method Fructose and glucose/(g/100 g)  $\geq 60$  GB/T 18932.22  
 Sucrose/(g/100 g) Eucalyptus honey, citrus honey, alfalfa honey, litchi honey, Wild Honey  
 Osmanthus  $\leq 10$  Other honey  $\leq 5$  Zinc (Zn)/(mg/kg)  $\leq 25$  GB/T 5009.14

### 3.4 Limits of contaminants

Limits of contaminants shall comply with the provisions of GB 2762.

#### 3.5.1 Veterinary drug residue limits

Veterinary drug residue limits shall comply with the relevant standards.

### 3.5.2 Pesticide Residue Limits

Pesticide residue limits should be consistent with GB 2763 and related regulations.

### 3.6 Microbiological

Microbial limits should be consistent with Table 3.

Table 3 microbiological limits

Item Index Test Method a Cfu/(CFU/g)  $\leq 1000$  GB 4789.2 Coliform/(MPN/g)  $\leq 0.3$  GB 4789.3 Mold counts/(CFU/g)  $\leq 200$  GB 4789.15 Osmophilic yeasts/(CFU/g)  $\leq 200$  Appendix A Salmonella 0/25g GB 4789.4 Shigella 0/25g GB/T 4789.5 Staphylococcus aureus 0/25g GB 4789.10 Analysis and treatment of a sample according to GB 4789.1 execution.

#### Appendix A

#### Osmophilic yeasts

A.1 equipment and materials in addition to the microbiological laboratory conventional sterilization and cultivation equipment, other equipment and materials as follows.

A.1.1 incubator.  $25\text{ }^{\circ}\text{C} \pm 1\text{ }^{\circ}\text{C}$ .

A.1.2 refrigerator.  $2\text{ }^{\circ}\text{C} \sim 5\text{ }^{\circ}\text{C}$ .

A.1.3 homogenizer homogeneous and aseptic bags, homogenized or sterilized milk cup bowl.

A.1.4 Balance. a sense of the amount of 0.1 g.

A.1.5 sterile tube. 18 mm x 180 mm.

A.1.6 sterile pipette. 1 mL (0.01 mL with scale), 10 mL (with 0.1 mL scale), or micropipette and suction head.

A.1.7 sterile flasks. 500 mL, 250 mL.

A.1.8 sterile Petri dish. a diameter of 90 mm.

A.1.9 sterile L-type coating bar. glass, plastic or stainless steel, rod diameter should not exceed 2 mm.

A.1.10 microscope. 10 x ~ 100 x.

A.2 media and reagents A.2.1 30% glucose solution ( $\text{pH } 6.5 \pm 0.5$ ) A.2.1.1 ingredient

### 30.0 G anhydrous glucose

100 mL of distilled water A.2.1.2 Method Weighing an appropriate amount of glucose was dissolved in distilled water, if necessary, adjusting the pH to about 6.4. After packing, 115 °C autoclaving Bacteria 20 min.

A.2.2 clonazepam amine 18% Glycerol (DG18) Agar A.2.2.1 ingredient Casein peptone 5.0 g 10.0 g anhydrous glucose 1.0 g of potassium dihydrogen phosphate Magnesium sulfate ( $\text{MgSO}_4 \cdot \text{H}_2\text{O}$ ) 0.5 g Clonazepam amine 0.002 g Anhydrous glycerol 200 g Agar 15 g Chloramphenicol 0.1 g 1000 mL of distilled water A.2.2.2 Method in addition to chloramphenicol, heated to boiling until all components completely dissolved, if necessary, adjust the pH to about 6.4. Adding anti Streptozotocin, 121 °C autoclaving 15 min, the final pH should be  $5.6 \pm 0.2$ . After sterilization, immediately water bath at 44 °C ~ 47 °C Cooled to below 50 °C, pour about 15 mL ~ 20 mL sterile medium in each dish placed in a horizontal table Cooled and solidified spare. If necessary, it can be placed in 36 °C incubator overnight to allow the agar surface dry and free of water drops. Stored.

A.3 inspection procedures Osmophilic yeast test program shown in Figure A.1.

Figure A.1 Figure osmophilic yeast inspection procedures

#### A.4 Procedure

A.4.1 Sample Collection and preservation After sample collection, testing should be promptly as possible. If not timely inspection, a common sample should be set to 2 °C ~ 5 °C refrigerator, Test within 24 h. Frozen samples should not exceed 15 min below 45 °C or 2 °C ~ 5 °C not more than 18 h thaw.

A.4.2 sample dilution A.4.2.1 Sampling Aseptically weighed on the balance solid or liquid specimen sample 25 g, 30% glucose diluent 225 g, rotary Blade homogenizer at 8000 r/min homogenized 1 min, or slap slap type homogenizer 2 min, to prepare a uniform diluted 1.10 liquid. If no homogenizer, then the sample was placed in a sterile glass beads are added Erlenmeyer flask, and thoroughly shaken.

#### A.4.2.2 dilution

With a sterile pipette 1.10 dilution of 1 mL, injected into a test tube containing 9 mL 30% glucose solution diluted, placed swirling Vortex mixing the suspension device, prepared 1. 100 dilution. Another 1 mL sterile pipette, according to Preparation 10 times before the operation successively incremented Dilution increments every once dilution replace it with a 1 mL sterile pipette.

A.4.3 coating and culture A.4.3.1 According to the estimates of the subject like pollution, choose two to three consecutive suitable dilutions, each dilution inoculated 2 A DG18 agar plates. After thorough mixing dilution immediately after the surface was inoculated 0.1 mL in each plate, followed by a sterile L-type coating bar full of agar surface coating. Note that the