

Translated English of Chinese Standard: GB4789.46-2024

www.ChineseStandard.net → Buy True-PDF → Auto-delivery.

Sales@ChineseStandard.net

GB

NATIONAL STANDARD OF THE
PEOPLE'S REPUBLIC OF CHINA

GB 4789.46-2024

**National food safety standard - Food microbiology testing -
Sampling and sample processing for fresh fruits and
vegetables and their products, edible fungus products, nut
and seed foods**

食品安全国家标准 食品微生物学检验 生鲜果蔬及其制品、
食用菌制品、坚果与籽类食品采样和检样处理

Issued on: February 8, 2024

Implemented on: August 8, 2024

**Issued by: National Health Commission of the People's Republic of China;
State Administration for Market Regulation.**

Table of Contents

Foreword	3
1 Scope	4
2 Equipment and materials	4
3 Sampling	4
4 Sample processing	5
5 Inspection	8

National food safety standard - Food microbiology testing - Sampling and sample processing for fresh fruits and vegetables and their products, edible fungus products, nut and seed foods

1 Scope

This standard specifies the sampling and sample processing methods for fresh fruits and vegetables and their products, edible fungus products, and nut and seed foods.

This standard applies to the sampling and sample processing for fresh fruits and vegetables and their products, edible fungus products, and nut and seed foods. This standard does not apply to beverages or frozen drinks made from fruits and vegetables.

2 Equipment and materials

2.1 Sampling tools

Sampling tools shall be made of stainless steel or other materials of appropriate strength, with smooth surfaces, rounded corners, and no gaps. Sampling tools shall be cleaned, sterilized, and kept dry before use. Sampling tools include stirring utensils, sampling spoons, scoops, knives, sampling drills, scissors, tweezers, etc.

2.2 Sample container

The material (such as glass, stainless steel, and plastic) and structure of the sample container shall be able to fully ensure the original state of the sample. Containers and lids shall be clean, sterile, and dry. The sample container shall be of sufficient volume so that the sample can be fully mixed before testing. Sample containers include sampling bags, sampling tubes, sampling bottles, etc.

2.3 Other supplies

The alcohol lamp, thermometer, aluminum foil, sealing film, marker pen, sampling registration form, etc. are included.

3 Sampling

3.1 Sampling principles and sampling plans

possible, both prepackaged and bulk samples shall be mixed in the original packaging container.

4.2.2 For vegetables and their products containing antibacterial substances, such as onions, garlic (garlic sprout), leeks, and scallions, it is necessary to reduce the antibacterial activity of the sample before testing, such as increasing the dilution, or adding potassium sulfite (K_2SO_3) to the initial diluent, so that the final concentration reaches 0.5%.

4.2.3 If required by the test method, the initial diluent and enrichment solution of the sample can be adjusted to pH 7.0 ± 0.5 with 1 mol/L NaOH or 1 mol/L HCl.

4.2.4 For products with high-fat content, such as nut and seed pastes and purees, an appropriate proportion of sterilized Tween 80 can be added to the diluent or enrichment solution used in sample processing according to different fat contents for emulsification and mixing; the additive amount can be calculated by adding 1 g/L for every 10% fat content (for example, if the fat content is 40%, add 4 g/L).

4.3 Fresh food

4.3.1 Fresh fruits

4.3.1.1 For fresh-cut fruits, chop all the test samples and mix them evenly; weigh 25 g, put them into a sterile homogenizing bag containing 225 mL of diluent or enrichment solution, homogenize, and then test.

4.3.1.2 For fruits that need to be peeled in whole, such as watermelons, kiwis, citrus fruits, and bananas, first rinse the surface with tap water, then disinfect it with 75% ethanol, and open it aseptically; take the edible part, put it into a sterile container, and homogenize it with a homogenizer for 1 min~2 min.

4.3.1.3 For fruits that do not need to be peeled, such as tomatoes and pears, take the whole fruit, cut it into small pieces under sterile conditions, mix it or homogenize it with a homogenizer for 1 min to 2 min; weigh 25 g, put it into a sterile homogenizing bag containing 225 mL of diluent or enrichment solution, and inspect it after homogenization.

4.3.2 Fresh vegetables

Use sterile scissors or a chopper to cut the edible part of the sample into small segments (pieces), and mix thoroughly and evenly. Weigh 25 g, put it into a sterile homogenization bag containing 225 mL of diluent or enrichment solution, and inspect after homogenization.

4.4 Fruit and vegetable products

4.4.1 Dehydrated, frozen foods (fruits, vegetables, edible fungi, etc.) and preserved fruits

4.4.1.1 Frozen samples shall be thawed for inspection. They can be thawed below 45 °C for no more than 15 minutes, at 18 °C to 27 °C for no more than 3 hours, or at 2 °C to 5 °C for no more than 18 hours (unless there are special provisions in the inspection method).

4.4.1.2 Use sterile scissors to cut the sample into small segments (pieces), and mix thoroughly and evenly; weigh 25 g, put it into a sterile homogenization bag containing 225 mL of diluent or enrichment solution, and inspect after homogenization.

4.4.1.3 For dehydrated products, increase the additive amount of diluent or enrichment solution appropriately according to the situation.

4.4.2 Sauces, purees and powders of fruits, vegetables, edible fungi, etc.

4.4.2.1 Use sterile tools to stir the test sample evenly or use a homogenizer to homogenize it for 1 to 2 minutes. Weigh 25 g, put it into a sterile homogenization bag containing 225 mL of diluent or enrichment solution, and inspect after homogenization.

4.4.2.2 The direct counting inspection of molds in tomato sauce or tomato juice of supplementary food for infants and young children shall be carried out in accordance with the provisions of GB 4789.15.

4.4.3 Pickled products (preserved vegetables, pickles, etc.)

4.4.3.1 According to eating habits, take the solid part or mix the liquid and solid for inspection.

4.4.3.2 If the solid part is taken, use sterile scissors to cut the solid into small segments (pieces), and then mix thoroughly and evenly. Weigh 25 g, put it into a sterile homogenization bag containing 225 mL of sterile distilled water or enrichment solution, and inspect after homogenization.

4.4.3.3 If mixing is necessary, homogenize all the solids and liquids of each sample for 1 to 2 minutes; weigh 25 g, put it into a sterile homogenization bag containing 225 mL of distilled water or enrichment solution, and inspect after homogenization.

4.4.3.4 For foods with high sugar or salt content, the amount of diluent or enrichment solution shall be appropriately increased to reduce the inhibitory effect on bacteria.

4.5 Nut and seed foods

4.5.1 For shelled nuts, use a sterile tool (hammer, etc.) to open them, and mix the edible part (without removing the coating) thoroughly; weigh 25 g, put it into a sterile

This is an excerpt of the PDF (Some pages are marked off intentionally)

Full-copy PDF can be purchased from 1 of 2 websites:

1. <https://www.ChineseStandard.us>

- SEARCH the standard ID, such as GB 4943.1-2022.
- Select your country (currency), for example: USA (USD); Germany (Euro).
- Full-copy of PDF (text-editable, true-PDF) can be downloaded in 9 seconds.
- Tax invoice can be downloaded in 9 seconds.
- Receiving emails in 9 seconds (with download links).

2. <https://www.ChineseStandard.net>

- SEARCH the standard ID, such as GB 4943.1-2022.
- Add to cart. Only accept USD (other currencies - <https://www.ChineseStandard.us>).
- Full-copy of PDF (text-editable, true-PDF) can be downloaded in 9 seconds.
- Receiving emails in 9 seconds (with PDFs attached, invoice and download links).

Translated by: Field Test Asia Pte. Ltd. (Incorporated & taxed in Singapore. Tax ID: 201302277C)

About Us (Goodwill, Policies, Fair Trading...): <https://www.chinesestandard.net/AboutUs.aspx>

Contact: Wayne Zheng, Sales@ChineseStandard.net

Linkin: <https://www.linkedin.com/in/waynezhengwenrui/>

----- The End -----