

ICS 67.220



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

GB/T 18187-2026

General rule for the quality of vinegar

食醋质量通则

(English Translation)

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1 Scope

This Standard specifies definitions, product classification, technical requirements, test methods, inspection rules and labels, requirements for packaging, transport, storage of fermented vinegar.

This Standard is only applicable to fermented vinegar used for seasoning. It is not applicable to fermented vinegar used for health care.

2 Normative references

The following standards contain provisions which, through reference in this Standard, constitute provisions of this Standard. At the time of publication, the editions indicated are valid. All standards are subject to revision. The parties who are using this Standard shall explore the possibility of using the latest version of the following standards.

GB/T 601-1988, Chemical reagent - Preparations of standard volumetric solutions GB 2715-1981, Hygienic standard for grains GB 2719-1996, Hygienic standard of vinegar GB 2760-1996, Hygienic STANDARD for uses of food additives GB 4789.22-1994, Microbiological examination of food hygiene -Examination of flavorings GB/T 5009.41-1996, Method for analysis of hygienic standard of vinegar GB 5461-2000, Edible salt GB 5749-1985, Sanitary standard for drinking water GB/T 6682-1992, Water for laboratory use

- Specifications GB 7718-1994, General standard for the labelling of foods GB 10343-1989, Edible alcohol

3 Definitions

For the purposes of this document, the following definitions apply.

fermented vinegar

Liquid condiment that is made by microbial fermentation alone or in combination with various materials containing starch, sugar, or alcohol.

4 Product classification

Fermented vinegar is classified into two categories according to fermentation process.

4.1 Solid fermented vinegar

Vinegar that is made from grain and its by-products and fermented by solid vinegar.

4.2 Liquid fermented vinegar

Vinegar that is made from grain, sugar, fruit or alcohol and fermented by liquid vinegar.

5.1 Main raw materials and auxiliary materials

5.1.1

Grain. in accordance with GB 2715.

5.1.2

Brewing water. in accordance with GB 5749.

5.1.3

Edible salt. in accordance with GB 5461.

5.1.4

Edible alcohol. in accordance with GB 10343.

5.1.5 Sugar. in accordance with corresponding national standards or industrial standards.

5.1.6 Food additives. use the food additives allowed in GB 2760 and be in accordance with corresponding product standards of food additives.

5.2 Sensory characteristics

In accordance with the provisions of Table 1.

- a) Acidity meter. accuracy is ± 0.1 pH;
- b) Single-boiling distillation device;
- c) Alkali burette.

6.3.2 Reagents

- a) 0.05 mol/L sodium hydroxide standard titration solution. prepare and calibrate according to the method specified in GB/T 601;
- b) 1% phenolphthalein indicator. weigh 1g of phenolphthalein to dissolve in 100mL of 95% ethanol.

6.3.3 Analysis steps

Shake the sample well. Accurately pipette 2.00mL and move into the distillation tube of the single-boiling distillation device. Add 8mL of water to shake well.

Insert the distillation tube into the distillation bottle that is filled with right amount of water (its liquid level shall be higher than the liquid level of the distillate and lower than the exhaust port). Connect to the distiller and the condenser. And immerse the tube at the lower end of the condensate tube below the level of the conical flask that contains 10mL of water.

Open the exhaust port. Heat till water in the flask is boiling for 2min. Close the exhaust port to distill. During distillation, if a large amount of foam is generated in the distillation tube to affect the measurement, it shall re-conduct sampling.

Add a drop of refined vegetable oil or a small amount of tannin to distill. When the distillate reaches 180mL, open the exhaust port and turn off the power (to prevent vacuum in the distillation flask). Pour the remaining liquid into a 200mL beaker. Use water to rinse the distillation tube and the air inlet on the tube repeatedly. Combine the washing liquid into the beaker. Then add water until the total solution in the beaker is about 120mL.

Place the beaker that is filled with 120mL of residual liquid on the acidity meter tray. Activate the magnetic stirrer. Use 0.05mol/L sodium hydroxide standard titration solution to titrate pH8.2. Record the number of milliliters (V). Conduct blank test at the same time.

6.3.4 Calculation

The non-volatile acid content in sample is calculated according to formula (1).

Where,

6.4.1.3 Analysis steps

Pipette 2.00mL into the weighing bottle that has been dried to constant weight.

Move into $(103 \pm 2)^{\circ}\text{C}$ electric heating constant temperature drying oven. Place the bottle cap diagonally. After 4h, cover the bottle. Take it out and move into the dryer. Cool to room temperature (about 0.5h required). Weigh. Then dry 0.5h. Cool and weigh until the difference between the two weighings does not exceed 1mg, which shall be constant weight.

6.4.1.4 Calculation

The content of soluble total solids in sample is calculated according to formula (3).

Where,

X3 - Content of soluble total solids in sample, g/100mL;

m2 - Mass of soluble total solids after constant weight and mass of weighing bottle, g;

m1 - Mass of weighing bottle, g.

6.4.1.5 Tolerance

The measurement difference of parallel tests on the same sample shall not exceed 0.02g/100mL.

6.4.2.1 Instruments

Micro-burette.

6.4.2.2 Reagents

0.1mol/L silver nitrate standard titration solution. prepare and calibrate according to the method specified in GB/T 601.

Potassium chromate solution (50g/L). weigh 5g of potassium chromate and use water to dissolve; set volume to 100mL.

6.4.2.3 Analysis steps

Pipette 2.00mL of sample in a 250mL Erlenmeyer flask. Add 100mL of water and 1mL of potassium chromate solution, Mix well. At the background of white it shall also be carried out.

a) when main raw materials are changed;

b) when key process is changed;