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

GB/T 5525-2025

Replacing GB/T 5525-2008

**Vegetable fats and oils - Method for identification of
transparency, odour and taste**

植物油脂 透明度、气味、滋味鉴定法

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Table of Contents

- 1 Scope
- 2 Normative references
- 3 Terms and definitions
- 4 Preparation of test samples
- 5 Identification of transparency
 - 5.1 Instruments and equipment
 - 5.2 Operating method
- 6 Identification of odour and taste
 - 6.1 Instruments and equipment
 - 6.2 Basic requirements for evaluating

Foreword

This document was drafted in accordance with the provisions of GB/T 1.1-2020 "Directives for standardization - Part

1. Rules for the structure and drafting of standardizing documents". This document replaces GB/T 5525-2008 "Vegetable fats and oils - Method for identification of transparency, odor and flavor". Compared with GB/T 5525-2008, in addition to structural adjustments and editorial modifications, the main technical changes are as follows:

a) ADD the terms and definitions of "odour" and "taste" (see 3.2, 3.3 of this document);

b) ADD the thermometer (see 5.1.2 of this document);

c) MODIFY the "Expression of results" (see 5.3 of this document; 5.3 of the 2008 edition);

d) MODIFY the basic requirements for evaluating (see 6.2 of this document; 6.3 of the 2008 edition);

e) DELETE the alcohol lamp (see

6.1.4 of the 2008 edition);

1 Scope

GB/T 5525-2025 is the Chinese national standard covering the sensory check on an oil - the temperature and settling before the transparency is read, the warming that releases the odour, and the tasting procedure, which is still the first test that catches a rancid or adulterated lot. It replaces GB/T 5525-2008, under the National Food and Strategic Reserves Administration. In force from 1 May 2026. Issued on 31 October 2025, it has been in force since 1 May 2026, replacing GB/T 5525-2008.

This document describes the methods for the preparation of test samples, identification of transparency, and identification of odour and taste of vegetable fats and oils. This document applies to the identification of transparency, odour, and taste of vegetable fats and oils.

2 Normative references

The following referenced documents are indispensable for the application of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

GB/T 15687 Animal and vegetable fats and oils - Preparation of test sample

3 Terms and definitions

For the purpose of this document, the following terms and definitions apply.

3.1 transparency Degree to which light can pass through.

3.2 odour Sensory characteristic perceived by the olfactory organs when smelling volatile substances in fats and oils.

3.3 taste Sensory characteristic perceived by the gustatory organs when tasting soluble substances in fats and oils.

4 Preparation of test samples

Prepare homogeneous laboratory samples according to GB/T 15687, but the samples do not need to be filtered or dried.

5.1 Instruments and equipment

5.1.1 Glass colorimetric tube. 100 mL, inner diameter 25 mm.

5.1.2 Thermometer. 0 °C ~ 100 °C.

5.1.3 Incandescent lamp. Milky white glass bulb.

5.1.4 Constant temperature water bath. 0 °C ~ 100 °C, temperature control accuracy ± 1 °C.

5.2 Operating method

5.2.1 When the fat and oil sample is liquid at room temperature, pour the sample into a glass colorimetric tube (5.1.1) to the 100 mL mark, let it stand at 20 °C for 24 h (48 h for castor oil), then place it in front of an incandescent lamp (5.1.3) (a white paper can be placed behind the colorimetric tube simultaneously) to observe the transparency and record the observation results.

5.2.2 When the fat and oil sample is solid or semi-solid at room temperature, melt the sample according to the melting point of the fat and oil, but the temperature shall not exceed the melting point by 5 °C. After the sample has melted, pour the sample into a glass colorimetric tube (5.1.1) to the 100 mL mark. Set the constant temperature water bath (5.1.4) according to the "transparency" specification in the product standard, place the colorimetric tube containing the sample in the constant temperature water bath, let it stand for 24 h, then place it in front of an incandescent lamp (5.1.3) (a white paper can be placed behind the colorimetric tube simultaneously). Quickly observe the transparency and record the observation results. NOTE. If there is no product standard, the temperature is set to the temperature at which the fat and oil sample completely melts.

5.3 Expression of results At the observation temperature, the results are expressed as "transparent", "slightly turbid", or "turbid". For example, transparency (20 °C). transparent. "Transparent" can also be expressed as "clear", "crystal clear", or "clear and transparent".

6.1 Instruments and equipment

6.1.1 Beaker. 100 mL.

6.1.2 Temperature-adjustable electric furnace. Voltage 220 V, 50 Hz, power less than 1000 W.

6.1.3 Thermometer. 0 °C ~ 100 °C.

6.2 Basic requirements for evaluating

6.2.1 Evaluating laboratory The evaluating room shall be well-ventilated, free from odours or residual smells, with a room temperature of 20 °C ~ 25 °C, no loud noise, sufficient light intensity, and soft colors, avoiding strong contrasts. The room or environment shall be kept quiet and undisturbed during evaluating.

6.2.2 Evaluator Evaluators shall possess keen sensory organs and identification abilities. Selection of evaluators shall be based on Annex A. During the evaluating, no communication is allowed, and the following shall be observed.

a) No smoking or eating one hour before evaluating, but water may be allowed;

- b) At normal physiological state during evaluating, neither hungry nor overly full;
- c) No use of cosmetics or other products with strong odours during evaluating;
- d) Rinse mouth with warm water before evaluating to remove any residue.

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