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

GB/T 20795-2025

Replacing GB/T 20795-2006

Determination of smoke point for vegetable fats and oils

植物油脂烟点测定

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Foreword

This document complies with the provisions of GB/T 1.1-2020 "Standardization Work Guidelines Part

1. Structure and Drafting Rules of Standardization Documents". Drafting. This document replaces GB/T 20795-2006 "Determination of Smoke Point of Vegetable Oils". Compared with GB/T 20795-2006, the main differences are structural adjustments and... Aside from editorial changes, the main technical changes are as follows:

---Added requirements for the light source of the smoke point test chamber (see 4.2.2);

---Added a schematic diagram of the sample cup with a handle (see Figure 4);

---A stopwatch requirement has been added (see 4.2.8);

---Changed the requirements for the position of the thermometer mercury bulb and the temperature reached by rapid heating of grease (see 4.3.2,

5.3.4 in the.2006 edition);

---Added requirements for visual inspection of sample cup cleaning (see 4.3.3);

---The result representation requirements have been changed (see 4.4,

5.4 in the.2006 edition);

---Precision requirements have been increased (see 4.5);

---Heating devices such as alcohol lamps and gas lamps have been removed (see section 5.2.6 of the.2006 edition);

---The smoke point tester for vegetable oils has been removed (see Appendix A of the.2006 edition). Please note that some content in this document may involve patents. The issuing organization of this document assumes no responsibility for identifying patents. This document was proposed by the National Food and Strategic Reserves Administration. This

document is under the jurisdiction of the National Technical Committee on Standardization of Grain and Oil (SAC/TC270). This document was drafted by: the Standards and Quality Center of the National Food and Strategic Reserves Administration, the Shandong Provincial Grain and Oil Testing Center, and the National Food and Strategic Reserves Administration. The Beijing Municipal Institute of Food Safety and Inspection (Beijing Municipal Food Safety Monitoring and Risk Assessment Center), and the Heilongjiang Provincial Grain Quality and Safety Research Institute. Full monitoring and technology center, Anhui Provincial Grain and Oil Product Quality Supervision and Testing Station, Hubei Provincial Grain and Oil Food Quality Supervision and Testing Center, Tibet Autonomous Region Grain Bureau Grain and Oil Center Laboratory, Hainan Provincial Grain and Oil Product Quality Supervision and Inspection Station, Guangxi Zhuang Autonomous Region Grain and Oil Quality Inspection Center, Shaanxi Province Food Quality and Safety Center. The main drafters of this document are. Ren Lingyun, Yang Lifei, Dong Bin, Duan Zhangqun, Guo Qin, Yang Linlin, Jiang Yuanyuan, Liu Wenzhe, Ji Lanyang, and Hu Bin. Liu Li, Jiang Pengli, Ding Yunjie, Mao Yongrong, Li Hui, Xu Chunfeng, Tang Ying, Yang Yonglong, Wang Jing. The release history of this document and the document it replaces is as follows:

1 Scope

GB/T 20795-2025 is the Chinese national standard covering the temperature at which an oil first smokes - the apparatus and the lighting conditions under which the observation is made, and the reading itself, which is a direct measure of how much free fatty acid the refining left behind. It replaces GB/T 20795-2006, 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 20795-2006.

This document defines the terminology and definitions of smoke point for vegetable oils and describes the visual and automated methods for determining the smoke point of vegetable oils. This document applies to the determination of the smoke point of vegetable oils.

2 Normative references

The contents of the following documents, through normative references within the text, constitute essential provisions of this document. Dated citations are not included. For references to documents, only the version corresponding to that date applies to this document; for undated references, the latest version (including all amendments) applies. This document.

GB/T 5490-2010 General Rules for Inspection of Grains and Oils

GB/T 15687 Preparation of animal and vegetable oil samples

3 Terms and Definitions

The following terms and definitions apply to this document.

3.1 Smoking Point Under certain measurement conditions, the oil is heated to the temperature at which it begins to emit continuous blue smoke.

4 First Method. Visual Inspection

4.1 Principle Under specified testing conditions, low-boiling-point and thermally unstable substances in oils volatilize upon heating, producing fumes that are initially visible to the naked eye. The temperature at which blue smoke is emitted is called the smoke point value.

4.2 Instruments and Equipment

4.2.1 Smoke Point Test Chamber. See Figure 1 for the external view and Figure 2 for the internal structure.