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

GB/T 1536-2021

Replacing GB 1536-2004

Rapeseed oil

菜籽油

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Foreword

This document is drafted in accordance with GB/T 1.1-2020 "Directives for standardization - Part

1.Rules for the structure and drafting of standardizing documents". This document replaces GB/T 1536-2004 "Rapeseed oil". Compared with GB/T 1536- 2004, the main technical changes are as follows: - Modify the scope (see Clause 1; Clause 1 of the 2004 edition); - Modify some terms and definitions (see 3.2, 3.3, 3.4, 3.5, and 3.6; 3.1, 3.2, 3.4, 3.5, and

3.6 of the 2004 edition); - Delete some terms and definitions (see 3.7, 3.8, 3.9, 3.10, 3.11, 3.12, 3.13, 3.14, 3.15, 3.16, 3.17, 3.18, 3.19, 3.20, 3.21, 3.22, and

3.23 of the 2004 edition); - Add some terms and definitions (see 3.1); - Modify the classification (see Clause 4; Clause 4 of the 2004 edition); - Modify the quality requirements; set "Basic composition and main physical parameters" (see 5.1, 5.2, and 5.3; Clause 5 of the 2004 edition); - Add the general rules for inspection (see 7.1); - Add sales requirements (see 9.4). This document was proposed by National Food and Strategic Reserves Administration. This document shall be under the jurisdiction of National Technical Committee 270 on Grain and Oil of Standardization Administration of China (SAC/TC 270). Drafting organizations of this document. Wuhan Polytechnic University;

Standard Quality Center of National Food and Strategic Reserves Administration; Academy of National Food and Strategic Reserves Administration; Oil Crops Research Institute, Chinese Academy of Agricultural Sciences; Jiangnan University; Henan University of Technology; Grain, Oil and Food Quality Supervision and Testing Center of Hubei Province; Grain and Oil Central Monitoring Station of Sichuan Province; Chengdu New Shine Oil and Grain Co., Ltd.; COFCO Corporation Co., Ltd.; Yihai Kerry Arawana Holdings Co., Ltd.; Hubei Aoxing Grain and Oil Industry Co., Ltd.; Chang'an Hua Grain & Oil Co., Ltd.; Zhejiang Xinshi Oil Stock Co., Ltd.; Daodaoquan Grain and Oil Co., Ltd.; AUSCA Oils and Grains Industries Co., Ltd.; Zhongxing Energy (Hubei) Co., Ltd.; Tibet Characteristic Industry Co., Ltd.; Hunan Vchen Oil Industry Co., Ltd.; Hubei Hongsen Tianli Oil Biotechnology Co., Ltd. Main drafters of this document. He Dongping, Tang Ruiming, Long Lingli, Xu Guangchao, Xue Yalin, Zhang Sihong, Huang Fenghong, Wang Xingguo, Liu Yulan, Xiong Ning, Yang Jun, Jiang Minjie, Yu Lei, Pan Kun, Liu Heng, Yao Li, Yang Mei, Liang Hongxing, Zhang Jialiang, Bao Lilin, Zhang Hui, Deng Bin, Liu Zhixiang, Zhang Xiaozhong, Peng Hua, Hong Chuanlin, Jiao Shanhai. The releases of previous editions of this document and the document it replaces were as follows: - It was first issued as GB 1536-1986 in 1986; revised for the first time in 2004; - This is the second revision. Rapeseed oil

1 Scope

China's national standard for rapeseed oil - one of the country's principal edible oils, pressed and extracted from rapeseed and sold both as a crude oil for refining and as a finished cooking oil. It specifies the terms and definitions, the classification, the quality requirements, the inspection methods and rules, and the labelling, packaging, storage, transport and sale of rapeseed oil. The classification is the part with the most riding on it. It separates the oil first by whether it is pressed or solvent-extracted, and then by degree of refining, from crude oil through to the fully refined grades - and the two distinctions carry different information for the buyer. Pressed and extracted oils differ in flavour, in colour and in what they carry from the seed, and in China the pressed oil retains a market and a premium for exactly that reason. The refining grade determines the acid value, the peroxide value, the colour and the content of the substances removed by refining, and it decides what the oil can be used for. The quality requirements are then the ones that describe an edible oil: the transparency, the odour and taste, the moisture and volatile matter, the insoluble impurities, the acid value, the peroxide value and the residual solvent, together with the colour. Two of them matter more than the rest. The acid value measures the free fatty acids formed as the oil ages and as the seed deteriorates before pressing, and the peroxide value measures the extent to which the oil has oxidised - which is to say, gone rancid. Both rise with time and with bad storage, and both are the reason the storage and transport clause is part of the standard rather than an afterthought. Issued on 11 October 2021 and in force since 1 May 2022, it replaces GB 1536-2004. Amendment 1, GB/T 1536-2021/XG1-2023, forms part of the same document.

This document specifies the terms and definitions, classification, quality requirements, inspection methods and rules, labeling, packaging, storage, transportation, and sales of rapeseed oil. This document applies to finished rapeseed oil and crude rapeseed oil. The quality indicators for crude rapeseed oil are only applicable to the trade of crude rapeseed oil. This document does not apply to high-oleic rapeseed oil.

2 Normative references

The contents of the following documents, through normative references in this text, constitute indispensable provisions of this document. Among them, for dated references, only the edition corresponding to that date applies to this document. For undated references, the latest edition (including all amendments) applies to this document.

GB/T 191 Packaging - Pictorial marking for handling of goods

GB/T 5009.37 Method for analysis of hygienic standard of edible oils

GB 5009.168 National food safety standard - Determination of eicosapentaenoic acid and docosahexaenoic acid in foods

GB 5009.227 National Food Safety Standard - Determination of peroxide value in food

3 Terms and definitions

The following terms and definitions apply to this document.

3.1 Rapeseed oil Oil made from rapeseed.

3.2 Low-erucic acid rapeseed oil Rapeseed oil whose fatty acid composition contains not more than 3% erucic acid. [Translator note. "Low-erucic acid" should be "Low-erucic acid".]

3.3 Crude rapeseed oil An oil product made from rapeseed that meets the crude oil quality indicators in this document and cannot be directly used for human consumption.

4 Classification

According to the degree of processing, rapeseed oil is divided into two types. crude rapeseed oil and finished rapeseed oil. According to the erucic acid content of rapeseed oil, it is divided into common rapeseed oil and low-erucic acid rapeseed oil.

5 Quality requirements

5.1 Basic composition and main physical parameters The basic composition and main physical parameters of rapeseed oil are shown in Table

1. These compositions and parameters represent the basic characteristics of rapeseed oil.

5.2 Quality indicators

5.2.1 Quality indicators of crude rapeseed oil The quality indicators of crude rapeseed oil are shown in Table 2.

5.3 Others Rapeseed oil must not be mixed with other edible oils and non-edible oils.

6 Inspection methods

6.1 Inspection of relative density. Carry out according to GB/T 5526.

6.2 Inspection of fatty acid composition. Carry out according to GB 5009.168.

6.3 Inspection of transparency, odor and flavor. Carry out according to GB/T 5525.

6.4 Color inspection. Carry out according to GB/T 5009.37.

6.10 Heating test. Carry out according to GB/T 5531.

6.11 Inspection of saponified matter content. Carry out according to GB/T 5533.

7 Inspection rules

7.1 General rules for inspection Carry out according to GB/T 5490.

7.2 Sampling Carry out according to the requirements of GB/T 5524.

7.4 Type inspection

7.4.1 When there are major changes in raw materials, equipment, and processes, or when the supervision and management department makes a request, type inspection shall be carried out.

7.5 Rules of determination

7.5.1 If the product is not marked with quality grade, it shall be determined as nonconformity.

8 Labeling and identification

8.1 Product name. Mark the product name according to the terms and definitions.

9.1 Packaging

9.2 Storage It shall be stored in a hygienic, cool, dry, and light-proof place. It shall be avoided from being stored together with harmful and toxic items, especially items with abnormal odors.

9.3 Transportation During transportation, safety shall be paid attention to. It shall prevent