

ICS 67.060

CCS B 20



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

GB/T 5503-2025

Replacing GB/T 5503-2009

Inspection of grain and oils - Determination of broken kernels

粮油检验 碎米检验法

Issued on: October 31, 2025

Implemented on: May 1, 2026

**Issued by: State Administration for Market Regulation;
Standardization Administration of the PRC**

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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 5503-2009 "Grain and Oil Inspection. Method for Testing Broken Rice". Compared with GB/T 5503-2009, the main differences are in the structural adjustments. Aside from editorial changes, the main technical changes are as follows:

---The scope of application has been changed (see Chapter 1, Chapter 1 of the.2009 edition);

---The term and definition "broken sorghum rice" have been removed (see

3.1 in the.2009 edition);

---The sensory testing method and the instrumental testing method are divided into two parts (see Chapters 4 and 5, and sections 7.1.1, 7.1.2, and

7.2 in the.2009 edition). 7.1.3);

---The technical requirements for grain screening have been revised (see 4.2.3, 5.3 in the.2009 version);

---Change the sample divider to a sample divider (see 4.2.4, 5.4 in the.2009 version);

---The rotation speed requirements for manual screening have been changed (see 4.4.1, 4.4.2, and

7.2 in the.2009 version);

---Precision requirements for instrumental testing methods have been added (see 5.4).

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: Henan University of Technology, Hubei Provincial Grain and Oil Food Quality Supervision and Inspection Center, and Henan Provincial Food and Salt Industry Inspection Technology Center. Research Institute (Henan Provincial Grain, Oil and Feed Product Quality Supervision and Inspection Center), Southwest University, Chongqing Grain and Oil Quality Supervision and Inspection Station, Guizhou Provincial Grain and Oil Product Quality Supervision and Inspection Station, Thermowell (Hubei) Intelligent Technology Co., Ltd., Anhui Gaozhe Information Technology Co., Ltd., China Grain Reserves Corporation Chengdu Storage Research Institute Co., Ltd., Chongqing Grain and Oil Industry Association. The main drafters of this document are. Zhang Qinghui, Tian Guojun, Zhang Mengya, Xiong Ning, Qin Yifang, Yang Hongwei, Lü Lei, Chen Weidong, Zhong Geng, and Lü Pengtao. Teng Lei, Zeng Yunjun, Mao Hongxia, Jiang Yan, Wang Yajing, Chu Yihong, Wu Yong, Dong Deliang, Wang Caihong, Wang Jinhui, Wan Chenxia, Yang Yuling. The release history of this document and the document it replaces is as follows:

1 Scope

GB/T 5503-2025 is the Chinese national standard covering counting broken rice - the sieve and the sample size, what counts as a broken kernel and what as a whole one, and the percentage that decides the grade and therefore the price of a lot. Issued on 31 October 2025, it has been in force since 1 May 2026, replacing GB/T 5503-2009.

This document describes the testing methods for the broken rice content of major rice grains. The sensory testing method described in this document is applicable to the determination of broken rice content in rice, millet, sorghum, sorghum, and foxtail millet; the instrumental testing method is applicable to... Determination of broken rice content in rice.

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 5491 Sampling and Divided Sampling Methods for the Inspection of Grains and Oils

GB/T 5494 Grain and Oil Inspection. Inspection of Impurities and Defective Grains in Grains and Oilseeds

GB/T 36091 Grain sieves for grain and oil machinery inspection LS/T 3545 Sample divider for inspection of grain and oil machinery

3 Terms and Definitions

This document does not contain any terms or definitions that need to be defined.

4 Sensory inspection method

4.1 Principle By combining sieving and manual sorting, small broken rice and broken rice in the sample were separated, weighed separately, and the mass of small broken rice was calculated. Rice and broken rice content.

4.2 Instruments and Equipment

4.2.1 Balance. Sensitivity 0.01g.

4.2.2 Sieve. Rotation speed 110r/min~120r/min, automatically controlled to rotate clockwise or counterclockwise at 1-minute intervals. 1 time.

4.2.3 Grain screening. meets the requirements of GB/T 36091.

4.2.4 Sample divider. conforms to the requirements of LS/T 3545.

4.2.5 Electric broken rice separator.

4.2.6 Analysis panel.

4.3 Sample Preparation

4.3.1 Sample preparation. Samples shall be taken and divided in accordance with GB/T 5491, and impurities in the samples shall be removed in accordance with GB/T 5494.