

ICS 67.060
CCS B 20



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

GB/T 5506.2-2024

Replacing GB/T 5506.2-2008

**Wheat and wheat flour - Gluten content - Part 2: Determination
of wet gluten and gluten index by mechanical means**

小麦和小麦粉 面筋含量 第2部分：仪器法测定湿面筋和面筋指数

(English Translation)

Issued on: November 28, 2024

Implemented on: June 1, 2025

**Issued by: State Administration for Market Regulation, China National
Standardization Administration**

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Foreword

This document is in accordance with the provisions of GB/T 1.1-2020 "Guidelines for standardization work Part 1: Structure and drafting rules for standardization documents" Drafting is required.

This document is Part 2 of GB/T 5506 "Gluten content of wheat and wheat flour". GB/T 5506 has been published for the following part. Part 1: Determination of wet gluten by hand washing method; Part 2: Instrumental determination of wet gluten and gluten index; Part 3: Determination of dry gluten by oven drying method;

Part 4: Determination of dry gluten by rapid drying method. - This document replaces GB/T 5506.2-2008 "Wheat and wheat flour gluten content Part 2: Instrumental determination of wet gluten" Compared with GB/T 5506.2-2008, in addition to structural adjustments and editorial changes, the main technical changes are as follows.

Added the term and definition of gluten index (see 3.3); - Added the determination principle of gluten index (see Chapter 4); - The requirements for centrifuges in instruments and equipment have been changed (see 6.3, 6.3 of the 2008 edition); - The sampling requirements have been changed (see Chapter 7, Chapter 7 of the 2008 edition); - The sample preparation requirements have been changed (see Chapter 8, Chapter 8 of the 2008 edition); - The operating steps have been changed (see 9.2, 9.5.4, 9.5.5, 9.6, 9.7, Chapter 9 of the 2008 edition); - Added the calculation formula for wet gluten content (14% moisture basis) (see 10.2); - Added the calculation formula of gluten index (see 10.3); - The precision requirements have been changed (see Chapter 11, Chapter 11 of the 2008 edition); - Deleted test report (see Chapter 12 of the 2008 edition). - This document is modified to adopt ISO 21415?2.2015 "Wheat and wheat flour gluten content Part 2: Instrumental method for determination of wet gluten content" Quantity and Gluten Index.

Compared with ISO 21415?2.2015, this document has the following structural adjustments.

Added Chapter 2 Normative References, and postponed other chapters accordingly; - Deleted Chapter 11 Inspection Report of ISO 21415?2.2015.- The technical differences

between this document and ISO 21415?2.2015 and their reasons are as follows.

The definition of wheat flour (see Chapter 3) has been changed to directly quote GB/T 1355, which is more suitable for practical application;

The sampling requirements (see Chapter 7) have been changed, and GB/T 5491 has been used instead of ISO 24333, which is more in line with the current grain storage situation in my country. of sampling;

The determination method of moisture content has been added (see Chapter 8). GB 5009.3 or GB/T 5497 is used to determine the moisture content. Convenient for calculation of wet gluten content (14% moisture basis);

The calculation formula for wet gluten content (14% moisture basis) has been added (see 10.2), so that the results can be directly used in some national standards;

The precision requirements have been changed (see Chapter 11), the requirements for the critical range of the standard have been deleted, and the precision calculation has been re-performed. More suitable for sample testing in my country;

The inspection report has been deleted to comply with the requirements of my country's inspection method standards. - The following editorial changes were also made to this document.

The ISO 5725?6 in the precision calculation method has been deleted and replaced with the informative references GB/T 6379.1-2004 and GB/T 6379.2-2004 replaces ISO 5725?1 and ISO 5725?2 (see Appendix C).

1 Scope

This document describes a method for the instrumental determination of the wet gluten content and gluten index of wheat and wheat flour.

This document applies to the testing of wet gluten content and gluten index of whole wheat flour and wheat flour.

2 Normative references

The contents of the following documents constitute the essential clauses of this document through normative references in this document.

For referenced documents without a date, the latest version (including all amendments) shall apply. in this document.

GB/T 1355 Wheat Flour

GB 5009.3 National Food Safety Standard Determination of Water Content in Food

GB/T 5491 Sampling and subsampling methods for grain and oilseed inspection

GB/T 5497 Grain and oilseeds - Determination of moisture content

GB/T 5506.1 Gluten content of wheat and wheat flour Part 1: Determination of wet gluten by hand washing method

3 Terms and definitions

The terms and definitions defined in GB/T 1355 and the following apply to this document.

3.1 Whole wheat flour

Whole wheat flour is made from whole wheat grains.

Note: Contains wheat germ and bran.

3.2 Wet gluten

A viscoelastic substance that is hydrated but not dehydrated.

Note: It is mainly composed of two hydrated protein components of wheat (glutenin and prolamin).

3.3 Gluten index

The percentage of gluten mass that does not pass through the sieve to the total wet gluten mass after centrifugation.

4 Principle

Whole wheat flour or wheat flour is added with sodium chloride solution to make dough. The dough is washed with sodium chloride solution to remove starch and other substances in the dough.

The excess water is removed by centrifugation, and the gluten is separated and weighed, which is the wet gluten. After the wet gluten is centrifuged, part of the wet gluten is The percentage of the mass of gluten that passes through the sieve holes and remains on the sieve to the mass of the total wet gluten is the gluten index.