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

GB/T 47225-2026

Replacing GB/T 14614.4-2005

**Inspection of grain and oils - Determination of the rheological
properties of wheat flour dough - Alveograph test**

粮油检验 小麦粉面团流变学特性测试 吹泡仪法

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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 supersedes GB/T 14614.4-2005 "Determination of Rheological Properties of Wheat Flour Dough - Bubble Tester Method", and is consistent with GB/T 14614.4- Compared to.2005, aside from structural adjustments and editorial changes, the main technical changes are as follows:

- The scope has been changed (see Chapter 1, Chapter 1 of the.2005 edition);
- Added terms and definitions (see Chapter 3);
- The principle has been changed (see Chapter 4, Chapter 3 of the.2005 edition);
- The reagents have been changed (see Chapter 5, Chapter 4 in the.2005 edition);
- The instrumentation has been modified (see Chapter 6, Chapter 5 of the.2005 edition);
- Sampling and subsampling methods have been changed (see Chapter 7, Chapter 6 in the.2005 edition);
- Preparation procedures have been modified (see 8.1, 7.2 in the.2005 edition);
- Instrument preparation has been modified (see 8.2, 7.1 in the.2005 version);
- Dough preparation has been modified (see 8.3, 7.3 in the.2005 edition);

1 Scope

GB/T 47225-2026 is the Chinese national standard covering the alveograph - the instrument that blows a bubble of dough until it bursts and records the pressure, giving the

tenacity, the extensibility and the deformation energy W by which a milling wheat is bought and sold. It replaces GB/T 14614.4-2005, moving the method to its own number in the grain inspection series. It was issued on 27 February 2026 and has been in force since 1 September 2026, replacing GB/T 14614.4-2005. The document is under the responsibility of the National Food and Strategic Reserves Administration. This page is published from the official record of the 2026 edition; the clause text of a standard this recent is not yet in circulation, and the figures, limits and tables it contains are those of the document itself, delivered in full with the English translation.

This document describes a method for determining the rheological properties of wheat flour dough using a bubble blower. This document applies to the determination of the rheological properties of wheat flour dough using a bubble blower.

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 5009.3 National Food Safety Standard - Determination of Moisture in Food

GB 5009.229 National Food Safety Standard - Determination of Acid Value in Food

GB/T 5491 Sampling and Divided Sampling Methods for the Inspection of Grains and Oils

GB/T 5497 Grain and Oil Inspection. Determination of Moisture Content in Grains and Oilseeds

GB/T 6682 Specifications and test methods for water used in analytical laboratories

3 Terms and Definitions

The following terms and definitions apply to this document.

3.1 bubble curve (alveograph curve) Curves obtained from testing the rheological properties of wheat flour dough using a bubble blower.

3.2 maximum pressure The maximum pressure required for the sheet to deform as the airflow increases.

Note. This value represents the dough's elasticity. The unit is millimeters of water column (mmH₂O), 1 mmH₂O =

3.3 The horizontal axis value is the value from the starting point of the bubble blowing curve to the point where the bubble bursts and the pressure suddenly drops.

Note. This value represents the dough's extensibility. The unit is millimeters (mm).

3.4 Sweling Index The square root of the air volume inside a bubble when it bursts is calculated from the x-coordinate value L of the burst point.

Note. The conversion formula between G and L is $G = 2.226L^{1/2}$.

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