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

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Replacing GB/T 8607-1988, GB/T 8608-1988

Specified wheat flour

专用小麦粉

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1 Scope

This document lays down the classification, quality requirements, inspection rules, labelling, packaging, storage and transport requirements for specified wheat flour, and describes the inspection methods.

This document applies to specified wheat flour for food use. It does not apply to wholemeal flour.

2 Normative references

The contents of the following documents constitute indispensable provisions of this document through normative reference in the text. 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 1351 Wheat; GB/T 1355 Wheat flour; GB 5009.3 National food safety standard - Determination of moisture in foods; GB 5009.4 National food safety standard - Determination of ash in foods; GB/T 5490 Inspection of grain and oils - General rules; GB/T 5491 Inspection of grain and oilseeds - Methods for sampling and sample division; GB/T 5492 Inspection of grain and oils - Identification of colour, odour and taste of grain and oilseeds; GB/T 5497 Inspection of grain and oilseeds - Methods for determination of

moisture content.

GB/T 5506.1 Wheat and wheat flour - Gluten content - Part 1: Determination of wet gluten by a manual method; GB/T 5506.2 Wheat and wheat flour - Gluten content - Part 2: Determination of wet gluten by mechanical means; GB/T 5508 Inspection of grain and oils - Determination of sand content in flours; GB/T 5509 Inspection of grain and oils - Determination of magnetic metal particles in flours; GB/T 5510 Inspection of grain and oils - Determination of fat acidity value of grain and oilseeds; GB 5749 Standards for drinking water quality.

GB/T 10361 Wheat, rye and their flours, durum wheat and durum wheat semolina - Determination of the falling number according to Hagberg-Perten; GB/T 14614 Inspection of grain and oils - Determination of rheological properties of wheat flour dough - Farinograph method; GB/T 14615 Inspection of grain and oils - Determination of rheological properties of wheat flour dough - Extensograph method; GB/T 17892 High quality wheat - Strong gluten wheat; GB/T 17893 High quality wheat - Weak gluten wheat; GB/T 24872 Inspection of grain and oils - Determination of ash content in wheat flour - Near-infrared method; GB/T 24905 Grain packaging - Wheat flour bags; JJF 1070.2 Rules of metrological testing for net quantity of products in prepackages - Wheat flour; LS/T 6102 Determination of wet gluten quality in wheat flour - Gluten index method.

3 Terms and definitions

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

3.1 Specified wheat flour. Wheat flour made from wheat by milling, with or without the addition of food ingredients, food additives and other components, suitable for the production of one or several kinds of wheat-based food.

3.2 Wet gluten content. The amount of the viscoelastic material, formed mainly by the hydration of the two protein fractions of wheat, glutenin and gliadin, and not dehydrated or dried, obtained by the method specified in GB/T 5506.1 or GB/T 5506.2. Note: expressed as the mass fraction, in percent, of wet gluten in the total mass of the test sample.

3.3 Gluten index. The percentage of the mass of gluten that does not pass through the sieve after the wet gluten has been centrifuged, relative to the mass of the whole wet gluten.

3.4 Falling number. The total time required, from the moment a given quantity of wheat flour or other cereal flour mixed with water in a specified viscosity tube is immersed in a boiling water bath, until the viscosity stirrer has fallen freely through a specified distance, the mixture being liquefied by the action of alpha-amylase so that the stirrer descends. Note: the unit is the second.

3.5 Farinograph stability, stability time. The difference in time between the point at which the

upper edge of the farinograph curve first crosses the 500 FU line and the point at which it falls away below that line. Note: the unit is the minute. Source: GB/T 14614-2019, 3.5.

3.6 Maximum resistance. The height from the highest point of the extensograph curve to the horizontal axis of the curve, that is, the resistance to extension at which the dough test piece breaks. Note: the unit is EU. Source: GB/T 14615-2019, 3.7.

4 Classification

According to the quality characteristics of the flour and the food it is used for, three classes are distinguished.

- a) High-gluten wheat flour: wheat flour with a high gluten content and strong gluten strength, suitable for making bread and similar foods.
- b) Medium-gluten wheat flour: wheat flour with a moderate gluten content, suitable for making steamed bread, noodles and similar foods.
- c) Low-gluten wheat flour: wheat flour with a low gluten content, suitable for making cakes and biscuits.

5 Technical requirements

5.1 Requirements for raw materials. The wheat shall comply with GB 1351 or with GB/T 17892 and GB/T 17893. The water used in production shall comply with GB 5749.

5.2 Quality requirements. The quality indicators of each class of specified wheat flour shall meet the requirements of Table 1. Table 1 is arranged by class - high-gluten, medium-gluten and low-gluten - and, within each class, by grade 1 and grade 2. It fixes wet gluten content and ash content on a dry basis for each class and grade, and a dash means that the indicator is not required for that class.

For high-gluten wheat flour, Table 1 requires a gluten index of not less than 90 for grade 1 and not less than 80 for grade 2, a farinograph stability, stability time, of not less than 12.0 min for grade 1 and not less than 8.0 min for grade 2, and a maximum resistance of not less than 500 EU for grade 1 and not less than 400 EU for grade 2. These three indicators are not required for medium-gluten and low-gluten flour.

The following limits apply to every class and grade in Table 1: falling number not less than 200 s; fat acidity value, on a wet basis and expressed as potassium hydroxide, not more than 80 mg per 100 g; moisture content not more than 14.5 percent; sand content not more than 0.02 percent; magnetic metal content not more than 0.003 g/kg; colour and odour normal; and appearance a powder or fine granules, free of lumps.

5.3 Net content. See the Measures for the Metrological Supervision and Administration of Prepackaged Commodities.

6 Inspection methods

- 6.1 Sampling and sample division: in accordance with GB/T 5491.
- 6.2 Inspection of wet gluten content: in accordance with GB/T 5506.1 or GB/T 5506.2, GB/T 5506.2 being the referee method.
- 6.3 Inspection of gluten index: in accordance with LS/T 6102.
- 6.4 Inspection of farinograph stability, stability time: in accordance with GB/T 14614.
- 6.5 Inspection of maximum resistance: in accordance with GB/T 14615, using the test data at 135 min.
- 6.6 Inspection of ash content: in accordance with the method of GB 5009.4 or GB/T 24872, GB 5009.4 being the referee method.
- 6.7 Inspection of falling number: in accordance with GB/T 10361.
- 6.8 Inspection of fat acidity value: in accordance with GB/T 5510.
- 6.9 Inspection of moisture content: in accordance with GB 5009.3 or GB/T 5497, GB 5009.3 being the referee method.
- 6.10 Inspection of sand content: in accordance with GB/T 5508.
- 6.11 Inspection of magnetic metal content: in accordance with GB/T 5509.
- 6.12 Inspection of colour and odour: in accordance with GB/T 5492.
- 6.13 Inspection of appearance: in accordance with GB/T 1355.
- 6.14 Net content: in accordance with the method specified in JJF 1070.2.

7 Inspection rules

- 7.1 General rules: in accordance with GB/T 5490.
- 7.2 Factory release inspection. The items inspected are wet gluten content, moisture content, odour, colour and appearance. For high-gluten wheat flour, at least one of the three indicators gluten index, farinograph stability and maximum resistance shall also be tested.
- 7.3 Inspection lot. Products of the same kind made from the same raw material, by the same process, on the same equipment and on the same date form one lot.
- 7.4.1 High-gluten wheat flour. Where any one of the three indicators gluten index, farinograph stability, stability time, and maximum resistance meets the requirements for high-gluten wheat flour in Table 1, and all the other indicators meet the requirements of Table 1, the sample or lot is graded at the highest grade reached by any one of those three indicators. Where none of the three indicators meets the requirements for high-gluten wheat