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

GB/T 5506.3-2008

Replacing GB/T 14607-1993

**Wheat and wheat flour -- Gluten content -- Part 3: Determination
of dry gluten from wet gluten by an oven drying method**

小麦和小麦粉 面筋含量 第3部分：烘箱干燥法测定干面筋

(English Translation)

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Foreword

GB/T 5506 "gluten content of wheat and wheat flour" is divided into four parts.

- Part 1. Determination of wet gluten hand wash;
- Part 2. Determination of wet gluten instrument;
- Part 3. Determination of dry gluten drying oven;
- Part 4. Determination of dry gluten rapid drying.

This section GB/T 5506 Part 3.

This part identical with ISO 21415-3:2006 "wheat flour and wheat gluten oven drying wet gluten Determination of dry gluten-containing Amount "(in English).

For ease of use, this section for the following editorial changes.

- Remove the preamble to international standards;
- The "this International Standard" to "GB/T 5506 to the present section";

--- With a decimal point instead of the original international standard as a decimal point ",",
";";

--- Delete Section 6.1 "It should be noted here m1 and hand-washing method 'said sample portion' quality wheat flour are not equal.";

--- The "m is the test of the quality of the original wet gluten content of the dough sample 'Edit 7.1 formula is" m is the test of wet gluten content Quality raw wheat flour samples. ";

--- Remove 7.1 "Original quality recording extract wet gluten wheat flour for m1. It should be noted here m1 and hand-washing method 'said sample Quality wheat flour part 'is not equal... " Appendix A of this section is an informative annex.

This part is proposed by the National Food Authority.

This part of the National Grain and Oil Standardization Technical Committee centralized.

This section drafted by. Academy of State Grain Bureau, Beijing Municipal foodstuff and Inspection.

1 Scope

GB/T 5506 provisions of this section by the GB/T 5506.1 and GB/T 5506.2 resulting wet gluten by an oven measuring dry gluten the method of content.

This section also applies to the determination of moisture content of wet gluten.

2 Normative references

The following documents contain provisions which, through reference to GB/T 5506 to the present, constitute provisions of this section. For dated reference documents Member, all subsequent amendments (not including errata content) or revisions do not apply to this section, however, encouraged to reach under this section Parties to research agreement to use the latest versions of these documents. For undated reference documents, the latest versions apply to this section.

GB/T 5506.1 wheat and wheat flour gluten content - Part 1. Determination of wet gluten (GB/T 5506.1-2008 hand-washing method, ISO 21415-1:2006, MOD) GB/T 5506.2 wheat and wheat flour gluten content - Part 2. Determination of wet gluten (GB/T 5506.2-2008 instrumental method, ISO 21415-2:2006, IDT) GB/T 5506.4 wheat flour and wheat gluten content - Part 4. Determination of dry gluten fast drying (GB/T 5506.4-2008, ISO 21415-4:2006, IDT) GB/T 21305 Cereals and cereal products - Determination of moisture conventional method (GB/T 21305-2007, ISO 712:1998, IDT)

3 Terms and Definitions

The following terms and definitions apply GB/T 5506 of this section.

According to GB/T 5506.1 or GB/T 5506.2 provisions are mainly composed of two protein components of wheat (gluten and gliadin protein White) hydrated made without dried material having viscoelasticity.

The method according to this section or GB/T 5506.4 predetermined residual material drying wet gluten obtained.

Principle 4

According to GB/T 5506.1 or GB/T 5506.2 regulations get wet gluten, after drying said whichever quality.

5 Equipment

General laboratory equipment and the following equipment.

5.1

scalpel or a knife.

5.2

metal or plastic plate. 5cm x 5cm.

5.3

Oven. Maintain $130\text{ }^{\circ}\text{C} \pm 2\text{ }^{\circ}\text{C}$.

GB/T 5506.3-2008/ISO 21415-3:2006 5.4 dryer. with effective desiccant.

5.5

Balance. dividing the value of 0.01g.

6.1 Said sample

Quality weighing dish to the nearest 0.01g, recorded as m1 0. Taken by the GB/T 5506.1 or GB/T 5506.2 resulting wet gluten Balls on the plate, and the plate was weighed wet gluten quality, accurate to 0.01g, recorded as m1 5.

Preparation of wet gluten quality of the original recording of wheat flour for m1.

6.2 Detection

The dishes and gluten placed in $130\text{ }^{\circ}\text{C}$ oven (5.3) after drying 2h removed with a scalpel or a knife draw three in the first half of the dry gluten or four parallel incisions, then back into the oven and continue drying 4h, a total drying time of 6h.

Remove the plate and dry gluten, cooled in a desiccator to room temperature (usually takes 30min). Weigh dish and dry gluten, precise to 0.01g, recorded as m_{14} .

7.1 Calculation of dry gluten content

Test samples dry gluten content according to formula (1).

$G_{dry} =$

$\frac{m_{14} - m_{10}}{m_1} \times 100\%$

Where.

G_{dry} --- test sample dry gluten content of wheat flour in order to account for the original sample mass fraction;

m_{14} --- plates and dry gluten total mass in grams (g);

m_{10} --- empty dish in grams (g);

m_1 --- quality of the original test sample of wheat flour wet gluten content in grams (g).

The moisture content of the original sample by GB/T 21305 measured. Dry gluten content Considering this factor, the dry sample group according to formula (2) Calculated.

$G_{dm} = 100 \times$

$\frac{(m_{14} - m_{10})}{m_1} \times$

$\frac{100}{100 - M} \times$

100% (2)

Where.

G_{dm} --- moisture content of the wheat flour samples were tested dry gluten content, in order to account for the original sample (dry basis) of the mass fraction;

--- The original moisture content of the sample, expressed as a percentage by mass.

The results take the arithmetic average of the two tests.

7.2 Calculation of the moisture content of wet gluten

The moisture content of wet gluten by formula (3) Calculated.

$G = \frac{m_{15} - m_{14}}{m_{14}} \times 100\%$ (3) where.

G --- wet gluten moisture content (mass fraction);

The total mass m_{15} --- plates and wet gluten in grams (g).