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

GB/T 15685-2011

Replacing GB/T 15685-1995

**Inspection of grain and oils -- Determination of sedimentation
index of wheat -- SDS test**

粮油检验 小麦沉淀指数测定 SDS法

(English Translation)

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Foreword

The Standard is a modified AACC method 56-70 (1999) "durum SDS precipitation test method" (in English).

56-70 (1999) The main technical differences between this standard and AACC method is as follows.

- Expanding the scope of the standard;
- SDS- mixture of lactic acid concentration by the "30g/L" to "20g/L";
- Omitted to read the volume with temperature correction requirements, test temperature were uniform regulations;
- Increasing the precision requirements;
- Deleted the comment part.

This standard is GB/T 15685-1995 "wheat flour sedimentation value determination" amendments.

This standard and GB/T 15685-1995 main technical differences are as follows.

- Original standard "sedimentation value" to "precipitate index";
- Increased precipitation index definition;
- Dosing apparatus by the "50mL graduated cylinder" to "50mL pipette";
- Reagent added to the stock solution of lactic acid reflux requirements;
- Canceled bromophenol blue solution;
- The test method is divided into mechanical method and manual method;
- Lactic acid mixture plus SDS- time from "4min" to "6min";

--- Plus SDS- lactic acid after mixture, mixing times in the 15s from the original "4" to "10 times." the standard proposed by the National Food Authority.

This standard by the National Standardization Technical Committee OILS.

1 Scope

This standard specifies the determination of wheat by SDS precipitation method index terms and definitions, principle, reagents, instruments, procedures, and results are shown.

This standard applies to wheat, wheat flour measured precipitation index.

2 Normative references

The following documents contain provisions which, through reference in this standard and become the standard terms. For dated references, subsequent Amendments (not including errata content) or revisions do not apply to this standard, however, encourage the parties to the agreement are based on research Whether the latest versions of these documents. For undated reference documents, the latest versions apply to this standard.

GB 5491 grain and oilseeds testing for sampling, and sample method GB/T 5497 grain and oilseeds - Determination of water test Laboratory use specifications and test methods GB/T 6682 Analysis

3 Terms and Definitions

The following terms and definitions apply to this standard.

Precipitation index sedimentationindex Under this standard conditions, the volume of wheat flour numerical precipitate formed in SDS- lactic acid mixture. In milliliters of precipitate FIG.

Principle 4

Under the conditions specified in this standard, wheat flour and sodium dodecyl sulfate (SDS) suspension, after shaking and allowed to stand, the suspension of small Scale expansion of cooperation with the amount of water, and the formation of flocculent precipitate, the precipitate cylinder (with stopper dedicated gluten flour with a surfactant SDS occur Cylinder volume) measured precipitate (mL).

5 Reagents

Unless otherwise specified, all reagents were of analytical grade. Test water should comply with GB/T 6682 in the three water requirements.

5.1

sodium dodecyl sulfate (SDS). purity > 99%.

Lactic acid 5.2. volume fraction of 85%.

5.3

lactate stock solution. Measure 100mL acid (5.2) in a flask (6.5), was added 800mL of water. Fitted with a condenser (6.5) in boiling water Bath reflux for 6h. After cooling to room temperature, 10mL, diluted with water to 100mL, phenolphthalein as an indicator, with 0.1mol/LNaOH Standard Solution. Under normal conditions, the concentration should be $1.2\text{mol/L} \pm 0.1\text{mol/L}$.

Note: The concentrated lactic acid molecules usually contain association, dissociation gradually diluted, reaches a state of equilibrium. Boil association can accelerate the process of molecular dissociation, it allows measurement results with good repeatability and reproducibility.

5.4

SDS- acid mixture. dissolve $20\text{g} \pm 0.2\text{g}$ sodium dodecyl sulphate (5.1) in 980mL of water was further added $20\text{mL} \pm 0.1\text{mL}$ lactate stock solution (5.3), mix, that is 20g/LSDS- lactic acid mixture.

6 Instruments

6.1

mill. 1.0mm hole with a sieve, the feed rate constant at 2g/s or 3g/s.