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

GB/T 24871-2010

**Inspection of grain and oils -- Crude protein determination in
wheat flour -- Near-infrared method**

粮油检验 小麦粉粗蛋白质含量测定 近红外法

(English Translation)

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Table of Contents

- Foreword
- 1 Scope
- 2 Normative references
- 3 Terms and Definitions
- 5 Instruments
- 6 Determination
 - 6.1 Preparation before the test
 - 6.2 Determination of wheat flour samples

Foreword

This revised standard adopts the American Association of Cereal Chemists Standard AACC39-11.1999 "wheat flour protein near infrared reflectance party Law "(English Version) (AACC Method39-11.Near-infraredreflectancemethodforproteindeterminationin wheatflour).

For ease of use, this standard made the following editorial changes.

- In order to be consistent with our existing system phase-change the standard name;
- According to GB/T 1.1-2000 "Standardization Guide Part 1. Structure and rules are written standard" and GB/T 20000.2-2001. provisions "Standardization Guide Part 2 of the rules of international standards", and without compromising the standard of comparison by changing the structure of the text, the AACCMetho39-11.1999 in Chapter 1, "purpose" section of this standard adjustment 4. "principle"; the AACCMetho39-11.1999 in Chapter 2, "instrument" Adjust this standard Chapter 5, "Instrument";
- The AACCMetho39-11.1999 in Chapter 3, "step" Adjust this standard Chapter 6, "Determination," and adds phase the corresponding secondary and tertiary entry number;
- With GB/T 5511 instead AACCMetho39-11.1999 standard "Method46-12", because both employed the measurement method is the same;
- With GB/T 24895 "Inspection of grain NIR calibration model validation and network management and maintenance of common rules" instead of the original Standard "AACCMetho39-10", because AACC Method39-10 standard defines a near-infrared instruments Types of;
- Cancel the original standard defined about the near-infrared "reflex Class";

--- Increased Chapter 1, "" and Chapter 2, "Normative references", Chapter 3, "Terms and Definitions", Chapter 7, "and the result of the processing table Show ", Chapter 8," identify and address abnormal samples, "Chapter 9," accuracy and precision "and Chapter 10," Test Report ";

--- Cancel the provisions of 5.2 and 5.3 about grinding equipment and microcomputer;

--- Increasing the sample 6.1.1 concerning sampling and sample provision;

--- For ease of use and control the AACCMETHOD 39-11.1999 standard related to AACC standard method involved as Reference annexed to this standard after.

This is a standard method for rapid determination of crude protein content in wheat flour is built on the basis of classical methods for arbitration test shall be to the country. Conventional methods have been prescribed home standards, namely GB/T 5511 "Determination of cereals and legumes nitrogen content and calculation of crude protein content Kjeldahl" Prevail.

Appendix A of this standard is a normative appendix.

The standard proposed by the National Food Authority.

This standard by the National Standardization Technical Committee OILS.

This standard was drafted. Henan University of Technology, Institute of Cereals, Oils and standardization, Beijing foodstuff Control, Liaoning Province, grain and oil quality inspection the Yunnan Province, grain and oil products Quality Supervision, Inspection and Test Center.

1 Scope

This standard specifies the method for determining the near-infrared crude protein content of wheat flour (dry basis) of the terms and definitions, principles, instruments, measurement results at Management and representation, recognition and processing requirements, accuracy and precision and test reports of abnormal samples.

This standard applies to wheat flour crude protein content (dry basis) of rapid determination.

This standard does not apply to arbitration inspection.

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 5511 Cereals and pulses - Determination of nitrogen content and calculation of crude protein content Kjeldahl method GB/T 24895 Inspection of grain NIR calibration model validation and network management and maintenance of general rules

3 Terms and Definitions

Terms and definitions GB/T 24895 apply to this standard established.

Principle 4

The use of a protein molecule C H, N H, O H, C O bond and other pan-frequency vibration or rotation of the near-infrared light absorption Characteristics, establish the correlation between wheat flour with near-infrared spectroscopy with a crude protein content between chemometrics methods to calculate the coarse wheat flour samples Protein content.

5 Instruments

NIR analyzer. Add OILS NIR network equipment should comply with GB/T 24895 requirements. No added OILS near infrared Analysis of network equipment, verify eligibility in accordance with GB/T 24895 in the provisions relating to the calibration model validation.

6.1 Preparation before the test

6.1.1

Sampling and sample decimation executed according to the provisions of GB 5491.

6.1.2

according to the near-infrared analyzer (Chapter 5) specification requirements for instrument self-test and warm-up test.

6.1.3

In the case where the state of at least a day of near infrared analyzer (Chapter 5) monitor with a monitor samples. You should track and monitor the daily knot as a result, the measurement results of the same sample monitoring compared with the initial measurement result, shall ensure compliance with the provisions of 9.2. Preparation of the samples in accordance with Appendix monitor A provision of execution.

6.1.4

The monitoring results do not meet the requirements of 9.2, shall cease to be adjusted or repaired and reported to the network administrator or use the instrument manufacturer.

6.1.5

Test sample temperature should be controlled within a calibration model validation tests specified temperature range.

6.2 Determination of wheat flour samples

Press NIR analyzer (Chapter 5) specification requirements, take appropriate samples for testing, measurement data recording. Each sample shall be determined two