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

GB/T 24870-2010

**Inspection of grain and oils -- Crude protein and crude fat
determination in soybean -- Near-infrared method**

粮油检验 大豆粗蛋白质、粗脂肪含量的测定 近红外法

(English Translation)

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Table of Contents

Foreword
1 Scope
2 Normative references
3 Terms and Definitions
5 Equipment
6 Determination
6.1 Determination of preparation before

Foreword

This revised standard adopts the American Association of Cereal Chemists Standard AACC39-20.1999 "Determination of soy protein and fat in the near-infrared External reflection method "(English Version)
(AACCMETHOD39-20.1999Near-infraredreflectancemethodforproteinandoil to facilitate the use of 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 original standard in Chapter 1, "object" Adjust this standard Chapter 4, "principle"; the original standard in Chapter 2, "instrument" Adjust this standard Chapter 5, "equipment"; the original standard in Chapter 3, "step" is adjusted based the standard Chapter 6, "Determination," and adds the corresponding secondary and tertiary entry number;

--- With GB/T 14489.2 instead of the original standard "Method44-61A", both because the test method used was a Caused;

--- With GB/T 14488.1 instead of the original standard "Method30-25", both because the test method used is the same;

--- With GB/T 5497 instead of the original standard "Method44-15A", both because the test method used 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 "AACCMETHOD39-10", because AACCMETHOD39-10 standards limit the use of near-infrared

transmission type instrument;

--- Cancel the original standard on near-infrared "reflection type" is defined as the "purpose" of the "reflection";

--- Modify the original standard sample grinding equipment to facilitate this standard applies to all types of NIR analyzer;

--- 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 ";

--- Canceled about 5.3 microcomputer provisions;

--- For ease of use and control, the original standard involved about AACC standard method as a standard reference material is attached to this after that.

This standard is based on the classical method based on soybean crude protein, crude fat content of fast testing method for arbitration test shall be National standards have been prescribed a conventional method, namely GB/T 14489.2 and GB/T 14488.1 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, Henan Grain Branch Testing Center, Liaoning Province, grain and oil quality inspection.

1 Scope

This standard specifies the soybean crude protein, crude fat content (dry basis) terms and definitions near infrared test methods, principles, equipment, measuring Set, results processing and presentation, and asked to confirm the process, accuracy and precision and test reports abnormal samples.

This standard applies to soy protein and crude fat content (dry basis) of a quick test.

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 5497 grain and oilseeds - Determination of water test GB/T 14488.1 Determination of oil content of oil plants Determination of GB/T 14489.2 Inspection of grain and oil plant crude protein GB/T 24895 Inspection of grain NIR calibration model validation and network management and maintenance of general rules

3 Terms and Definitions

GB/T 24895 "Inspection of grain NIR calibration model validation and network management and maintenance of common rules" established terms and definitions Justice apply to this standard.

Principle 4

Use of protein or fat molecule N H, C H, O H, C O bond and other pan-frequency vibration or rotation of the near-infrared light Absorption characteristics, to establish the correlation between soy Near Infrared Spectroscopy and its crude protein content or fat content between using chemometric methods, Calculation of crude protein content of soybean samples or fat content.

5 Equipment

5.1

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.

5.2

Sample comminution device (for testing powder sample NIR analyzer). according to the requirements NIR analyzer Operating manual configuration Appropriate grinding equipment. Crushed particle size distribution and homogeneity of the sample should meet the requirements of near-infrared analyzer calibration model established when using the same process should be used when preparing and model calibration and verification.

6.1 Determination of preparation before

6.1.1

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

6.1.2

Sample finishing to remove impurities in the sample and broken kernels.