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

GB/T 5511-2008

Replacing GB/T 5511-1985

**Cereals and pulses -- Determination of the nitrogen content and
calculation of the crude protein content -- Kjeldahl method**

谷物和豆类 氮含量测定和粗蛋白质含量计算 凯氏法

(English Translation)

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Table of Contents

- Foreword
- 1 Scope
- 2 Normative references
- 3 Terms and Definitions
- 5 Reagents

Foreword

This standard is equivalent to international standard ISO 20483:2006 "Determination of cereals and legumes nitrogen content and crude protein content calculated Kay S Law. " for ease of use, the standard ISO 20483:2006 includes the following editorial changes.

--- "This International Standard" be replaced by "this standard";

"," --- With a decimal point instead of a comma as the decimal point, "";

--- Delete foreword international standards;

--- The referenced file ISO 712 replace the current national standard GB/T 21305, ISO 6540 replace GB/T 10362.

This standard is GB/T 5511-1985 "grain and oilseeds crude protein assay test" amendments.

The main changes compared to 5511-1985 standard and GB/T as follows.

--- Increased by principle, normative references, terms and definitions, for sampling, sample preparation, water content determination, precision and test reports.

Since the implementation date of this standard instead of GB/T 5511-1985.

The Standard Appendix A, Appendix B and Appendix C are informative appendices.

The standard proposed by the National Food Authority.

This standard by the National Standardization Technical Committee OILS.

This standard was drafted. State Administration of Grain Science Institute.

1 Scope

This standard specifies the determination of the calculation of cereals, legumes and derived products Determination of nitrogen content and crude protein content by the Kjeldahl

method.

This method can not distinguish between protein nitrogen and non-protein nitrogen. If the determination of non-protein nitrogen content is very important, you can use other suitable Methods.

NOTE: Under certain circumstances, the use of this method for the determination of nitrate and nitrite nitrogen can not achieve complete recovery.

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/T 10362 maize water assay (GB/T 10362-1989, eqv ISO 6540. 1980) 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 to this standard.

Application procedures specified in this standard measured nitrogen content.

Note: The dry matter content expressed.

The application of this standard procedure prescribed measured by multiplying the nitrogen content of different protein conversion factor of grain or beans to give crude protein content.

Note: The dry matter content expressed.

Principle 4

Sample in the presence of a catalyst with sulfuric acid digestion, the reaction product with a base and after distillation. The ammonia released is absorbed by boric acid solution, the liquid absorbent Sulfuric acid solution titration, Determination of nitrogen content and calculation of crude protein content.

5 Reagents

In addition to reference materials, the use of nitrogen-free only confirmed analytical reagents, test water is distilled or deionized water or equivalent purity water.

Warning. Reagents and 5.12 5.4,5.8,5.11 mentioned should be used with caution.

5.1

potassium sulfate (K_2SO_4).

5.2

copper sulfate pentahydrate ($\text{CuSO}_4 \cdot 5\text{H}_2\text{O}$).

GB/T 5511-2008/ISO 20483:2006