

ICS 67.200
CCS X 04



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

GB/T 9823-2008

Replacing GB/T 9823-1988

**Inspection of grain and oils -- Determination of total nitrogen
content**

粮油检验 植物油料饼粕总含氮量的测定

(English Translation)

Issued on: November 4, 2008

Implemented on: January 20, 2009

Issued by: Standardization Administration of China

Table of Contents

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

Foreword

This standard is GB/T 9823-1988 "oilseed total nitrogen assay" amendments.

This standard and GB/T 9823-1988 main technical differences are as follows.

--- The standard name be changed to "Inspection of grain and oilseed plant total nitrogen content determination";

--- Added "Terms and Definitions";

--- Added "semi/fully automatic Kjeldahl distillation apparatus";

--- Increase the repeatability requirements.

From the date of implementation of this standard instead of GB/T 9823-1988.

The standard proposed by the National Food Authority.

This standard by the National Standardization Technical Committee OILS.

1 Scope

This standard specifies the oilseed plant total nitrogen determination of terms and definitions, principle, reagents, instruments, sample preparation, analysis step junction If the calculation and repeatability.

This standard applies to the determination of total nitrogen content of the meal with a compression method or leaching plant oil obtained after treatment.

This standard does not apply to plant oilseed products from the resulting composite.

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.

Preparation of GB/T 601 chemical reagent standard titration solution GB/T 10358 oilseed moisture and volatile matter content was measured (GB/T 10358-2008, ISO 771. 1977, IDT) GB/T 10360 for sampling oilseed residues (GB/T 10360-2008, ISO 5500. 1986, IDT)

3 Terms and Definitions

The following terms and definitions apply to this standard.

Plant oil residue after pressing or leaching process.

Principle 4

In the presence of a catalyst, sulfuric acid digestion of organic matter in the sample, so that nitrogen was converted into ammonium sulfate. Adding alkali and distillation of ammonia slip that, after absorption with boric acid, hydrochloric acid standard solution titration, calculate the total nitrogen content.

5 Reagents

Unless otherwise indicated, the reagents used were of analytical grade, test water is distilled water.

5.1

of concentrated sulfuric acid. 18mol/L.

5.2

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

5.3

potassium sulfate.

5.4 400g/L sodium hydroxide solution. Weigh 40g of sodium hydroxide (NaOH), dissolved in water and dilute to 100mL.

5.5 20g/L boric acid solution. Weigh 2g of boric acid (H_3BO_3), dissolved in water and dilute to 100mL.

Mixed indicator 5.6. 1 parts by 1g/L methyl red in ethanol (95%) and 5 parts of a solution of 1g/L of bromocresol green in ethanol (95%) was uniformly mixed.

5.7

boric acid absorption solution (with automatic program). 10g L boric acid solution 1000mL /, was added 1g/L bromocresol green ethanol (95%) solution 10mL, 1g/L methyl red in

ethanol (95%) was added 7mL, 400g/L aqueous solution of sodium hydroxide 0.5mL, mix well.

5.8

hydrochloric acid standard titration solution. Ba (HCl) = 0.01mol/L, according to GB/T 601 was prepared.

5.9

hydrochloric acid standard volumetric solution (half/full-auto program used). Ba (HCl) = 0.1mol/L, according to GB/T 601 was prepared.