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

GB/T 15686-2008

Replacing GB/T 15686-1995

Sorghum -- Determination of tannin content

高粱 单宁含量的测定

(English Translation)

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Foreword

This revised standard adopts ISO 9648. 1988 "Determination of tannin content Sorghum" (in English).

This standard and ISO 9648. 1988 is a technical difference.

--- Since the original standard referenced standard "ISO 950. 1979 grain samples (grain)" has been abolished, it is changed to refer to "GB 5491 Grain, oil inspection for sampling, and sample method. " for ease of use, this standard made the following editorial changes.

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

--- Remove the preface international standards, add new foreword;

--- The original text of the "reference standard" to "normative references" and add "undated reference standard, the latest version this applies to this standard, "the text;

--- References "ISO 712. 1985 Cereals and measurement (routine reference method) moisture content cereal product" to quote "GB/T 21305 Cereals and cereal products - Determination of moisture content of the General Law";

--- In order to more clearly articulate the tannin content of Chapter 9 of the formula $Ba \times m1 \ 100-H$ Ba to $X = 2 \times m1 \ 100-H$ this standard replaces GB/T 15686-1995 "Determination of tannin content of sorghum." this standard and GB/T 15686-1995 compared to the main changes are as follows.

--- Tannic acid standard using ISO 9648. 1988 have recommended Merck's 773 tannic acid;

The standard proposed by the National Food Authority.

This standard by the National Standardization Technical Committee OILS.

This standard was drafted. Henan University.

1 Scope

The standard provides a general method for the determination of tannin sorghum, this assay is not for a certain type of polyphenols the test substance. Between the results of animal experiments with the rooster measured metabolizable energy of sorghum with the method of determination and has a good negative correlation, Demonstrate the effectiveness of this method.

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 21305 Cereals and cereal products - Determination of moisture conventional method (GB/T 21305-2007, ISO 712:1998, IDT) Principle 3 After the extraction of tannin sorghum with dimethyl formamide solution by centrifugation, the supernatant was added to a solution of ferric ammonium citrate and ammonia solution, color, water Blank control, measured by a spectrophotometer absorbance at 525nm Department, with tannic acid standard curve measured sorghum tannin content.

4 Reagents

All reagents were of analytical grade, distilled water or water of equivalent purity.

4.1 2g/L tannic acid solution. The solution can be stored for a week.

Note: Due to different sources of tannic acid standard curve impact, therefore, recommend the use of Merck's 773 tannic acid (Merckreference773tannic acid) 1) as a reference to facilitate comparison between laboratory measurement results.

1) Merck 773 tannic acid is a commercially available product, the user of this standard to provide such information, does not mean it has been approved ISO the product.

4.2 8.0g/L ammonia (NH₃) solution.

4.3 75% dimethyl formamide solution. Take-dimethylformamide 75mL solution in 100mL flask, diluted with water, after cooling add Water to the mark.

Warning --- When dimethylformamide is inhaled or in contact with the skin, harmful to health, and eye irritation.

4.4 3.5g/L ferric ammonium citrate (iron content of 17% to 20%) solution. 24h preparation

before use. Since the iron content of the citrate Movies Sound measurement results, should pay special attention to its content.

5 Instruments

Conventional laboratory equipment and the following instruments.

5.1

mill. pulverizing the sample and all through the sieve (5.2).

5.2

sieve. aperture of 0.5mm.

5.4

tube. capacity of about 50mL, with closures.

5.5

reciprocating mechanical stirrer or magnetic stirrer.