

ICS 67.180.20

CCS X 11



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

GB/T 22428.1-2008

Replacing GB/T 12099-1989

**Starch hydrolysis products -- Determination of reducing power
and dextrose equivalent**

淀粉水解产品 还原力和葡萄糖当量测定

(English Translation)

Issued on: October 19, 2008

Implemented on: March 1, 2009

Issued by: Standardization Administration of China

Table of Contents

Foreword

1 Scope

2 Normative references

3 Terms and Definitions

5 Reagents

5.1 Fehling reagent

Foreword

This standard is identical with ISO 5377. 1981 "starch hydrolysis products Determination of reducing power and dextrose equivalent Lane - Eynon titration" (In English), because of the older version, to meet current needs, slightly adjusted structure, contents remain the same, only made editorial changes.

This standard replaces GB/T 12099-1989 "starch hydrolysis products and reducing power equivalent determination of glucose." this standard and GB/T 12099-1989 compared to major changes are as follows.

--- Standard name changed to "starch hydrolysis products Determination of reducing power and dextrose equivalent";

--- Improve the standard format, according to the International System of Units standardized units;

--- Added "10 test report";

--- Added Appendix A;

--- Increased by reference.

Appendix A of this standard is an informative annex.

This standard is proposed and managed by China General Chamber of Commerce.

This standard was drafted. Chinese Chamber of Commerce Business Standard centers, food, Jiangnan University, China Starch Industry Association modified starch Professional Committee, Suzhou peak of Fine Chemical Co., Ltd., Roquette (China) Co., Ltd. Fine Chemicals.

1 Scope

This standard specifies Ryan - Determination of reducing power Eynon (LaneandEynon) titration starch hydrolysis products and glucose equivalents method.

This standard applies to starch hydrolysis products.

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 22427.8 starch and its derivatives sulfated ash determination (GB/T 22427.8-2008, ISO 5809. 1982, IDT) GB/T 22428.3 Determination of glucose Loss on drying (GB/T 22428.3-2008, ISO 1741. 1980, IDT) GB/T 22428.4 Determination of dry matter of glucose syrup (GB/T 22428.4-2008, ISO 1742. 1980, IDT) ISO 1743 Determination of dry matter of glucose syrup index method

3 Terms and Definitions

The following terms and definitions apply to this standard.

Reducing sugar content. With 100g of anhydrous D- glucose in the sample is expressed in grams.

Reducing ability starch hydrolysis products. 100g sample to dry anhydrous D- glucose numbers expressed in grams.

Principle 4

Methylene blue as indicator, with a known volume of Fehling reagent titration dextrose solution.

5 Reagents

Use analytical grade reagents and distilled water or equivalent purity.

5.1 Fehling reagent

5.1.1

accumulator A. The copper sulfate pentahydrate ($\text{CuSO}_4 \cdot 5\text{H}_2\text{O}$) 69.3g dissolved in water and dilute to 1000.0mL.

5.1.2

liquid B. potassium sodium tartrate tetrahydrate ($\text{KNaC}_4\text{H}_4\text{O}_6 \cdot 4\text{H}_2\text{O}$) 346.0g and sodium hydroxide (NaOH) 100.0g, add water Capacity to 1000.0mL. If precipitate filtered before use.

5.1.3

Mixed Fehling's solution. 100mL stock solution A (5.1.1) and 100mL stock solution B (5.1.2) into the dry reagent bottle, and mixed Uniform.

Note: This solution now with the current.

Anhydrous glucose 5.2 D-Anhydrous D- glucose should meet the following requirements.

a) concentration of 400g/L, so as to avoid turbidity and sedimentation and maintain a clear colorless solution, by Nessler tube (6.5) GB/T 22428.1-2008/ISO 5377. 1981