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

GB/T 22427.8-2024

Replacing GB/T 22427.8-2008

**Starches and dervied products - Determination of sulphated
ash**

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Foreword

This document is in accordance with the provisions of GB/T 1.1-2020 "Guidelines for standardization work Part 1. Structure and drafting rules for standardization documents"

Drafting.

This document is Part 8 of GB/T 22427. GB/T 22427 has been published in the following parts.

- GB/T 22427.4 Determination of starch spots;
- GB/T 22427.5 Determination of starch fineness;
- GB/T 22427.6 Determination of starch whiteness;
- GB/T 22427.7 Determination of starch viscosity;
- GB/T 22427.8 Determination of sulfated ash for starch and its derivatives;
- GB/T 22427.10 Determination of nitrogen content of starch and its derivatives;
- GB/T 22427.13 Determination of sulfur dioxide content in starch and its derivatives.

This document replaces GB/T 22427.8-2008 "Determination of sulfated ash content of starch and its derivatives" and is consistent with GB/T 22427.8-2008.

In addition to structural adjustments and editorial changes, the main technical changes are

as follows.

- a) Added the normative reference document GB/T 12104 (see Chapter 3);
- b) The water requirements have been changed (see 5.1, Chapter 5 of the 2008 edition);
- c) The test method for moisture has been changed (see Chapter 8, Chapter 8 of the 2008 edition).

This document is modified to adopt ISO 5809:1982 "Determination of sulfated ash content of starch and its derivatives".

This document has the following structural adjustments compared to ISO 5809:1982.

--- Chapter 5 corresponds to Chapter 5 of ISO 5809:1982, of which 5.1 corresponds to the introductory words of Chapter 5 of ISO 5809:1982, and 5.2

and 5.4 correspond to 5.1 in ISO 5809:1982, and 5.3 and 5.5 correspond to 5.2 in ISO 5809:1982;

--- Chapter 8 corresponds to 8.1 of ISO 5809:1982;

--- Chapter 9 corresponds to 8.2 and 8.3 of ISO 5809:1982, of which 9.1 corresponds to 8.2 of ISO 5809:1982, and 9.2 corresponds to

8.3 of ISO 5809:1982;

--- Chapter 10 corresponds to Chapter 9 of ISO 5809:1982.

The technical differences between this document and ISO 5809:1982 and their reasons are as follows.

--- Added GB/T 12104 (see Chapter 3) and GB/T 6682 (see 5.1) as normative references;

--- Replaced ISO 1666 with GB 5009.3 as the normative reference, and replaced ISO 1741 and GB/T 22428.4 with GB/T 22428.3 as the normative reference

Replaced ISO 1742 (see Chapter 9) to adapt to my country's technical conditions.

Introduction

GB/T 22427 is intended to describe the determination methods of a series of indicators of starch and its derivatives, and to provide a basis for the quality evaluation of starch and its derivatives.

The test method is to be composed of seven parts.

---GB/T 22427.4 Determination of starch spots. The purpose is to determine the determination principle and method of starch and modified starch spots.

---GB/T 22427.5 Determination of starch fineness. The purpose is to determine the principle

and method for determining the fineness of starch and modified starch.

---GB/T 22427.6 Determination of starch whiteness. The purpose is to determine the principle and method for determining the whiteness of starch and modified starch.

---GB/T 22427.7 Determination of starch viscosity. The purpose is to determine the principle and method for determining the viscosity of starch and modified starch.

---GB/T 22427.8 Determination of sulfated ash content of starch and its derivatives. The purpose is to determine the sulfated ash content of starch and its derivatives.

Principles and methods of ash determination.

---GB/T 22427.10 Determination of nitrogen content of starch and its derivatives. The purpose is to determine the determination of nitrogen content of starch and its derivatives

Principles and methods.

---GB/T 22427.13 Determination of sulfur dioxide content in starch and its derivatives.

Principle and method for determination of sulfur content.

Determination of sulfated ash content of starch and its derivatives

1 Scope

This document describes a method for the determination of sulfated ash of starch and its derivatives.

This document applies to starch and its derivatives.

2 Normative references

The contents of the following documents constitute the essential clauses of this document through normative references in this document.

For referenced documents without a date, only the version corresponding to that date applies to this document; for referenced documents without a date, the latest version (including all amendments) applies to

This document.

GB/T 6682 Specifications and test methods for water used in analytical laboratories (GB/T 6682-2008, ISO 3696.1987, MOD)

GB 5009.3 National Food Safety Standard Determination of Water Content in Food

GB/T 12104 Terminology of starch and its derivatives

GB/T 22428.3 Determination of loss on drying of glucose (GB/T 22428.3-2008, ISO 1741.1980, IDT)

GB/T 22428.4 Determination of dry matter in glucose syrup (GB/T 22428.4-2008, ISO 1742.1980, IDT)

3 Terms and definitions

The terms and definitions defined in GB/T 12104 and the following apply to this document.

3.1

Sulphated ash

The residue obtained after the sample is treated with sulfuric acid and then incinerated.

4 Principle

The sample with sulfuric acid added is incinerated at 525 degrees C $\pm$ 25 degrees C to obtain the residual mass of the sample. The role of sulfuric acid is to help destroy organic substances and avoid losses due to volatilization of chlorides.

5 Reagents

Unless otherwise specified, only analytical grade reagents were used.

5.3 Concentrated hydrochloric acid. $\rho_{20} = 1.19 \text{ g/mL}$.

5.4 Sulfuric acid solution. Slowly add 100 mL of concentrated sulfuric acid (5.2) into 300 mL of water and mix.

5.5 Hydrochloric acid solution. Slowly add 100 mL of concentrated hydrochloric acid (5.3) into 500 mL of water and mix.