

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

SN/T 4592-2016

Determination of total flavonoids in export food

出口食品中总黄酮的测定

(English Translation)

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Foreword

This standard was drafted in accordance with the rules given in GB/T 1.1-2009.

This standard is proposed and managed by the National Certification and Accreditation Regulatory Commission.

Introduction

Flavonoids are a group of natural compounds (Flavonoids) having a benzopyran ring structure that are widely present in plants.

Most of them exist as glycosides. Flavonoids are one of the major antioxidant active ingredients in some foods and products. Flavonoids There are many methods for the determination of substances. For the separation of flavonoids and the quantitative analysis of single components, high performance liquid chromatography is often used.

law. For the determination of total flavonoids, spectrophotometry is mainly used.

This standard uses spectrophotometric method to determine the content of total flavonoids in exported foods. It has simple equipment requirements, simple operation and easy promotion.

And the characteristics.

Determination of total flavonoids in exported foods

1 Scope

This standard specifies the spectrophotometric method for the determination of total flavonoids in outbound foods.

This standard applies to the determination of flavonoids in plant-derived foodstuffs such as out-of-tart quail, tea, and wine.

2 Normative references

The following documents are indispensable for the application of this document. For dated references, only dated versions apply to this article. For undated references, the latest version (including all amendments) applies to this document.

GB/T 6682 Analysis Laboratory Water Specifications and Test Methods

3 Method summary

Flavonoids are the general term for a class of natural compounds with a benzopyran ring structure. This method utilizes its complexation with aluminum salts.

Should be generated under alkaline conditions yellow complexes, measured at 420nm wavelength absorbance, within a certain concentration range, the absorbance and the content of flavonoids is proportional to. The quantitative determination of total flavonoids in the test substance was compared with the rutin standard product.

4 Reagents and materials

Unless otherwise specified, all reagents are of analytical grade and water is a grade of water specified in GB/T 6682.

4.1

Aluminum nitrate $[\text{Al}(\text{NO}_3)_3 \cdot 9\text{H}_2\text{O}]$.

4.2

Aluminum nitrate solution (100g/L). Weigh 17.3g of $\text{Al}(\text{NO}_3)_3 \cdot 9\text{H}_2\text{O}$, dissolve with water, and dissolve it in a 100mL volumetric flask.

4.3

Potassium acetate (CH_3COOK).

4.4

Potassium acetate solution (98g/L). Weigh 9.814g of potassium acetate, dissolve with water, and dissolve it in a 100mL volumetric flask.

4.5

Rutin standard product, CAS number 153-18-4.

4.6

Rutin standard solution. accurately weigh 50 mg of rutin standard product that has been dried (120 °C under reduced pressure and dried) to constant weight, and dissolve it with anhydrous ethanol.

And set the volume in a 50mL volumetric flask.

4.7

Anhydrous ethanol (C₂H₅OH).

4.8 30% ethanol (absolute ethanol and distilled water at a ratio of 3.7).

5 Equipment

5.1

Spectrophotometer, using 1cm cuvette.

5.2

Analytical balance. The amount of sense is 0.01g and 0.0001g.

5.3

Organize the masher.

5.4

Ultrasonic cleaner.

5.5

Centrifuge.