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

**GB/T 26635-2025**

Replacing GB/T 26635-2011

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**Animal and vegetable fats and oils - Determination of  
tocopherol and tocotrienol contents - High-performance liquid  
chromatography**

动植物油脂 生育酚及生育三烯酚含量测定 高效液相色谱法

**(English Translation)**

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### Foreword

This document complies with the provisions of GB/T 1.1-2020 "Standardization Work Guidelines Part 1: Structure and Drafting Rules of Standardization Documents".

Drafting.

This document replaces GB/T 26635-2011 "Determination of Tocopherols and Tocotrienols in Animal and Vegetable Oils by High Performance Liquid Chromatography".

Compared with GB/T 26635-2011, the main technical changes in the "Law" are as follows, apart from structural adjustments and editorial modifications.

---The scope has been changed (see Chapter 1, Chapter 1 of the 2011 edition);

---The mobile phase has been changed (see 5.4, 2011 edition of 5.4);

--- Replace n-hexane in the reagent with n-heptane (see 9.2.1, 2011 version 9.2.1).

This document adopts ISO 9936:2016, "High-performance liquid chromatography for the determination of tocopherols and tocotrienols in animal and vegetable oils".

quantity".

The following minimal editorial changes have been made to this document.

---To align with existing standards, the standard name has been changed to "Determination of Tocopherols and Tocotrienols in Animal and Vegetable Oils by High Performance Liquid Chromatography".

Chromatography

---Change the paragraphs in 6.1 to list items in sequence for easier reading and use.

Please note that some content in this document may involve patents. The issuing organization of this document assumes no responsibility for identifying patents.

This document was proposed by the National Food and Strategic Reserves Administration.

This document is under the jurisdiction of the National Technical Committee on Standardization of Grain and Oil (SAC/TC270).

## 1 Scope

This document describes the determination of free alpha-, beta-, gamma-, delta-tocopherols and tocotrienols in animal and vegetable oils using high-performance liquid chromatography (HPLC).

Methods of measurement.

This document applies to the determination of tocopherol and tocotrienol content in animal and vegetable oils. It is applicable to the determination of tocopherol and tocotrienol esters.

The product is first subjected to saponification.

This document does not apply to milk and dairy products (including fats derived from milk and dairy products).

**Note:** A suitable method for low-temperature saponification is described in Appendix B.

## 2 Normative references

The contents of the following documents, through normative references within the text, constitute essential provisions of this document. Dated citations are not included.

For references to documents, only the version corresponding to that date applies to this document; for undated references, the latest version (including all amendments) applies.

This document.

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**Note:** GB/T 15687-2008 Preparation of animal and vegetable oil samples (ISO 661:2003, IDT)

## 3 Terms and Definitions

Tocopherol content

The mass fraction of monomeric tocopherol determined using the methods specified in this document.

**Note:** Content is expressed as an integer in milligrams per kilogram.

## 4 Principles

The test sample was dissolved in n-heptane, and the monomers were separated by high-performance liquid chromatography (HPLC). The correction factor determined by the standard solution was used to calculate...

Calculate the content of tocopherol and tocotrienol.

## 5 Reagents

All reagents used were of chromatographic grade or equivalent.

### 5.1

Standard substances of alpha-, beta-, gamma- and delta-tocopherols and tocotrienols.

When no tocopherol standard is available, a mixture of wheat germ oil and soybean oil is used to identify alpha-, beta-, gamma-, and delta-tocopherol.

When tocotrienol standards are unavailable, palm oil can be used to identify alpha- and gamma-tocotrienols, and the resulting chromatograms can be used to aid in identification.

When testing the peaks in the chromatogram of a sample, it is advisable to use the corresponding calibration factor for tocopherol.