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

GB/T 22500-2024

Replacing GB/T 22500-2008

**Animal and vegetable fats and oils - Determination of ultraviolet
absorbance expressed as specific UV extinction**

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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 is required.

This document replaces GB/T 22500-2008 "Animal and vegetable fats and oils-Determination of ultraviolet absorbance" and is consistent with GB/T 22500-2008.

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

Changed the principles (see Chapter 4, Chapter 3 of the.2008 edition);-

Reagents and materials have been changed (see 5.2, 5.3, 5.4, Chapter 4 of the.2008 edition); -

Changed instruments and equipment (see 6.2, Chapter 5 of the.2008 edition); -

The preparation of the test solution has been changed (see 9.1.2, 9.1.3, 9.1.4, 8.1 of the.2008 edition); -

The result calculation formula has been changed (see 10.1, 10.2, Chapter 9 of the.2008 edition).

This document is equivalent to ISO 3656.2011 "Animal and vegetable fats and oils - Determination of ultraviolet absorbance".

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

Incorporates the amendments to ISO 3656.2011/Amd.1.2017, and the outer margins of the clauses involved are indicated by vertical

Double lines (||) are marked;

The relevant formulas are numbered. -

1 Scope

This document describes a method for the determination of the UV absorbance of animal and vegetable oils and fats.

This document applies to animal and vegetable fats and oils and does not apply to milk and milk products (or fats obtained from milk and milk products).

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 latest version (including all amendments) applies to this document.

In this document.

ISO 661 Animal and vegetable fats and oils - Preparation of test specimens
sample

Note. GB/T 15687-2008 Animal and vegetable fats and oils - Preparation of test specimens (ISO 661.2003, IDT)

3 Terms and Definitions

The following terms and definitions apply to this document.

3.1

Specific extinction coefficient (K232-K268-K270)

1 g of sample was dissolved in 100 mL of isooctane or cyclohexane and measured at 232 nm, 268 nm and 270 nm in a 10 mm cuvette.

UV absorbance under.

4 Principles

The sample is dissolved in isooctane or cyclohexane and the absorbance is measured spectrophotometrically within a specific UV wavelength range.

10 mm cuvette, measure the sample solution with a concentration of 1 g/100 mL at 232 nm and 268 nm (when the solvent is isooctane) or

Absorbance values at 232 nm and 270 nm (when the solvent is cyclohexane).

5 Reagents and Materials

Warning - Please follow the regulations for handling hazardous chemicals. Be careful when using potassium dichromate solution. Inhalation of potassium dichromate solution may cause

Potassium dichromate and potassium chromate are CMR substances (carcinogenic, mutagenic, highly toxic), so care should be taken to avoid contact with skin.

or inhaled.

Unless otherwise stated, all reagents used were of analytical grade.

5.2 Cyclohexane. For measurements at wavelengths of 232 nm and 270 nm.

Note. Using distilled water as the reference solution and a 10 mm cuvette, the absorbance at 232 nm must be less than 0.12, and the absorbance at 250 nm must be less than 0.05.