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

GB/T 46952-2025

**Determination of aliphatic and triterpenic alcohols content in
olive oils and olive-pomace oils - Capillary gas chromatography**

橄榄油和橄榄果渣油中脂肪醇和三萜醇含量的测定 毛细管气相色谱法

(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 adopts ISO 12871:2019, "Determination of fatty alcohols and triterpenoids by capillary gas chromatography of olive oil and olive pomace oil".

content".

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

---To harmonize with existing standards, the standard name has been changed to "Determination of Fatty Alcohols and Triterpenoids in Olive Oil and Olive Pomace Oil".

"Capillary Gas Chromatography";

---Added a "Note" (see 3.1).

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 a method for determining the content of fatty alcohols and triterpenoids in olive oil and olive pomace oil using capillary gas chromatography.

This document applies to the determination of fatty alcohols and triterpenoid alcohols in olive oil and olive pomace oil.

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

The following terms and definitions apply to this document.

The sum of the mass contents of fatty alcohols C22, C24, C26 and C28 as determined by the method specified in this document.

Note: The unit of mass content is milligrams per kilogram (mg/kg).

4 Principles

Using 1-eicosanol as an internal standard, the oil was saponified with potassium hydroxide-ethanol, and the unsaponifiables were extracted with diethyl ether. Alcohols were then extracted using an alkaline thin-layer chromatography system.

The plates were separated from the unsaponifiables, and the collected alcohols were derivatized to trimethylsilyl ether (TMSE) and analyzed by capillary gas chromatography.

5 Reagents

Warning---Technical, organizational, and personal safety measures should be followed.

Unless otherwise specified, use only analytical grade reagents and distilled, deionized, or equivalent water.

5.1

Potassium hydroxide-ethanol solution (2 mol/L). Prepared under cooling conditions, add 130 g of potassium hydroxide (potassium hydroxide mass fraction not less than...) Dissolve 85% of the solution in 200 mL of water and bring the volume to 1 L with ethanol. Store the solution in a tightly sealed, light-proof glass bottle.

5.2

Potassium hydroxide-ethanol solution (0.2 mol/L). Dissolve 13 g of potassium hydroxide in 20 mL of water, and dilute to 1 L with ethanol.

5.3

Ether.

5.4

Anhydrous sodium sulfate.

5.5

Glass plate. coated with silicone, no fluorescent indicator, 0.25mm thick. Commercially available products are acceptable.