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Olive oils and olive-pomace oils — Determination of aliphatic and triterpenic alcohols content by capillary gas chromatography

Huiles d'olive et huiles de grignons d'olive — Détermination de la teneur en alcools aliphatiques et triterpéniques par chromatographie en phase gazeuse sur colonne capillaire

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ISO copyright office
CP 401 • Ch. de Blandonnet 8
CH-1214 Vernier, Geneva
Phone: +41 22 749 01 11
Fax: +41 22 749 09 47
Email: copyright@iso.org
Website: www.iso.org

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Foreword

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This document was prepared by Technical Committee ISO/TC 34, *Food products*, Subcommittee SC 11, *Animal and vegetable fats and oils*.

This second edition cancels and replaces the first edition (ISO 12871:2010), which has been technically revised. The following change has been made:

— the determination of triterpenic alcohols has been introduced.

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Olive oils and olive-pomace oils — Determination of aliphatic and triterpenic alcohols content by capillary gas chromatography

1 Scope

This document specifies a procedure for the determination of the content, as a mass fraction expressed as milligrams per kilogram, of aliphatic and triterpenic alcohols in olive oils and olive-pomace oils.

NOTE This document is based on COI/T.20/Doc. 26 Rev.2:2017[4].

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

ISO 661, *Animal and vegetable fats and oils — Preparation of test sample*

3 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

ISO and IEC maintain terminological databases for use in standardization at the following addresses:

— ISO Online browsing platform: available at https://www.iso.org/obp

— IEC Electropedia: available at http://www.electropedia.org/

3.1
aliphatic alcohols content
sum of the aliphatic alcohols with carbon number C22, C24, C26, and C28, as a mass fraction, determined according to the method specified in this document

4 Principle

The oil, to which 1-eicosanol has been added as an internal standard, is saponified with ethanolic potassium hydroxide and the unsaponifiable matter extracted with diethyl ether. The alcoholic fraction is separated from the unsaponifiable matter by chromatography on a basic silica gel plate. The alcohols recovered from the silica gel are transformed into trimethylsilyl ethers (TMSE) and analysed by capillary gas chromatography.

5 Reagents

Technical, organizational and personal safety measures shall be followed.

During the analysis, unless otherwise stated, use only reagents of recognized analytical grade, and distilled or demineralized water or water of equivalent purity.

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