



# SLOVENSKI STANDARD SIST EN ISO 9832:2001

01-februar-2001

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Animal and vegetable fats and oils - Determination of residual technical hexane content  
(ISO 9832:1992, including Amendment 1:1998)

Tierische und pflanzliche Fette und Öle - Bestimmung des Gehalts an technischem  
Resthexan (ISO 9832:1992, einschließlich Änderung 1:1998)

Corps gras d'origines animale et végétale - Dosage de l'hexane technique résiduel (ISO  
9832:1992, Amendement 1:1998 inclus)

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Ta slovenski standard je istoveten z: EN ISO 9832:2000

### ICS:

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EUROPEAN STANDARD  
NORME EUROPÉENNE  
EUROPÄISCHE NORM

EN ISO 9832

March 2000

ICS 67.200

English version

Animal and vegetable fats and oils - Determination of residual  
technical hexane content (ISO 9832:1992, including Amendment  
1:1998)

Corps gras d'origines animale et végétale - Dosage de  
l'hexane technique résiduel (ISO 9832:1992, Amendement  
1:1998 inclus)

Tierische und pflanzliche Fette und Öle - Bestimmung des  
Gehalts an technischem Resthexan (ISO 9832:1992,  
einschließlich Änderung 1:1998)

This European Standard was approved by CEN on 20 January 2000.

CEN members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this European Standard the status of a national standard without any alteration. Up-to-date lists and bibliographical references concerning such national standards may be obtained on application to the Central Secretariat or to any CEN member.

This European Standard exists in three official versions (English, French, German). A version in any other language made by translation under the responsibility of a CEN member into its own language and notified to the Central Secretariat has the same status as the official versions.

CEN members are the national standards bodies of Austria, Belgium, Czech Republic, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and United Kingdom.

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EUROPEAN COMMITTEE FOR STANDARDIZATION  
COMITÉ EUROPÉEN DE NORMALISATION  
EUROPÄISCHES KOMITEE FÜR NORMUNG

Central Secretariat: rue de Stassart, 36 B-1050 Brussels

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## Foreword

The text of the International Standard from Technical Committee ISO/TC 34 "Agricultural food products" of the International Organization for Standardization (ISO) has been taken over as an European Standard by Technical Committee CEN/TC 307 "Oilseeds, vegetable and animal fats and oils and their by-products - Methods of sampling and analysis", the secretariat of which is held by AFNOR.

This European Standard shall be given the status of a national standard, either by publication of an identical text or by endorsement, at the latest by September 2000, and conflicting national standards shall be withdrawn at the latest by September 2000.

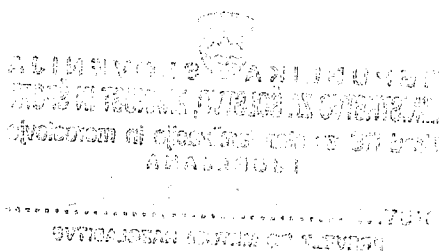
According to the CEN/CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this European Standard: Austria, Belgium, Czech Republic, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and the United Kingdom.

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The text of the International Standard ISO 9832:1992, including Amendment 1:1998, has been approved by CEN as a European Standard without any modification.

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NOTE: Normative references to International Standards are listed in annex ZA (normative).



**Annex ZA** (normative)**Normative references to international publications  
with their relevant European publications**

This European Standard incorporates by dated or undated reference, provisions from other publications. These normative references are cited at the appropriate places in the text and the publications are listed hereafter. For dated references, subsequent amendments to or revisions of any of these publications apply to this European Standard only when incorporated in it by amendment or revision. For undated references the latest edition of the publication referred to applies.

| <u>Publication</u> | <u>Year</u> | <u>Title</u>  | <u>EN</u>  | <u>Year</u> |
|--------------------|-------------|---|------------|-------------|
| ISO 661            | 1989        | Animal and vegetal fats and oils - Preparation of test sample | EN ISO 661 | 1995        |

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# INTERNATIONAL STANDARD

**ISO  
9832**

First edition  
1992-12-15

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## **Animal and vegetable fats and oils — Determination of residual technical hexane content**

**iTeh STANDARD PREVIEW**

*Corps gras d'origines animale et végétale — Dosage de l'hexane  
technique résiduel*

[SIST EN ISO 9832:2001](https://standards.iteh.ai/catalog/standards/sist/0e77cf08-3260-4a57-8169-e066aa576fc6/sist-en-iso-9832-2001)

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Reference number  
ISO 9832:1992(E)

## Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

Draft International Standards adopted by the technical committees are circulated to the member bodies for voting. Publication as an International Standard requires approval by at least 75 % of the member bodies casting a vote.

International Standard ISO 9832 was prepared by Technical Committee ISO/TC 34, *Agricultural food products*, Sub-Committee SC 11, *Animal and vegetable fats and oils*.

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International Organization for Standardization

Case Postale 56 • CH-1211 Genève 20 • Switzerland

Printed in Switzerland



# Animal and vegetable fats and oils — Determination of residual technical hexane content

## 1 Scope

This International Standard specifies a method for the determination of the residual technical hexane content of animal and vegetable fats and oils (referred to as fats hereinafter).

The method is suitable for the determination of hexane contents between 10 mg and 1 500 mg per kilogram of fat.

The method is not applicable to marine oils.

## 2 Normative reference

The following standard contains provisions which, through reference in this text, constitute provisions of this International Standard. At the time of publication, the edition indicated was valid. All standards are subject to revision, and parties to agreements based on this International Standard are encouraged to investigate the possibility of applying the most recent edition of the standard indicated below. Members of IEC and ISO maintain registers of currently valid International Standards.

ISO 661:1989, *Animal and vegetable fats and oils — Preparation of test sample.*

## 3 Definition

For the purposes of this International Standard, the following definition applies.

**3.1 residual technical hexane content:** Content of volatile hydrocarbons such as those remaining in fats following processing involving the use of hydrocarbon solvents, when determined by the method specified in this International Standard.

The content is expressed as milligrams of hexane per kilogram of sample.

## 4 Principle

Desorption of volatile hydrocarbons by heating at 80 °C in a closed vessel after addition of an internal standard. Determination of the particular volatile hydrocarbons content of the headspace by gas chromatography using packed or capillary columns.

## 5 Reagents

All reagents shall be of recognized analytical grade unless otherwise stated.

**5.1 Technical hexane,** with a composition similar to that of hexane used in industrial processing, or, if this is not available, *n*-hexane.

NOTE 1 It is recommended that technical hexane be used for the calibration. This reagent usually has an *n*-hexane content of 50 % (*m/m*) and consists mainly of C<sub>6</sub> isomers but may include C<sub>5</sub> and C<sub>7</sub> hydrocarbons.

**5.2 Internal standard,** *n*-heptane.

If this is not available, cyclohexane may be used, provided that the solvent (5.1) used for the extraction or calibration has a negligible content of cyclohexane and/or *n*-heptane or components with similar retention times.

**5.3 Carrier gas,** e.g. hydrogen, nitrogen or helium, etc., thoroughly dried and with an oxygen content of less than 10 mg/kg.

**5.4 Auxiliary gases,** hydrogen (99,9 % pure, free from organic impurities) and air (free from organic impurities).

**5.5 Calibration fat,** freshly refined and deodorized vegetable fat, the technical hexane content of which is negligible.

NOTE 2 This material should be free from peroxides or other components likely to decompose with the formation