



SLOVENSKI STANDARD SIST EN ISO 8420:1998

01-november-1998

Animal and vegetable fats and oils - Determination of polar compounds content (ISO 8420:1990)

Tierische und pflanzliche Fette und Öle - Bestimmung des Gehalts an polaren Bestandteilen (ISO 8420:1990)

Corps gras d'origines animale et végétale - Dosage des composés polaires (ISO 8420:1990)

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Ta slovenski standard je istoveten z: EN ISO 8420:1995

ICS:

67.200.10 Animal and vegetable fats and oils

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EUROPEAN STANDARD

EN ISO 8420

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EUROPÄISCHE NORM

April 1995

ICS 67.200.10

Descriptors: agricultural products, food products, animal fats, vegetable fats, animal oils, vegetable oils, chemical analysis, determination of content, polar components

English version

**Animal and vegetable fats and oils - Determination
of polar compounds content (ISO 8420:1990)**

STANDARD PREVIEW
(standards.iteh.ai)

Corps gras d'origines animale et végétale -
Dosage des composés polaires (ISO 8420:1990)

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REPUBLIKA SLOVENIJA
MINISTRSTVO ZA ZNANOST IN TEHNOLOGIJO
Urad RS za standardizacijo in meroslovje
LJUBLJANA

SIST..... EN ISO 8420

-11- 1998

PREVZET PO METODI RAZGLASITVE

This European Standard was approved by CEN on 1995-01-05. 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.

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CEN

European Committee for Standardization
Comité Européen de Normalisation
Europäisches Komitee für Normung

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Foreword

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

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 October 1995, and conflicting national standards shall be withdrawn at the latest by October 1995.

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

Endorsement notice

The text of the International Standard ISO 8420:1990 has been approved by CEN as a European Standard without any modification.

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NOTE: Normative references to international publications are listed in annex ZA (normative).

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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 (including amendments).

<u>Publication</u>	<u>Year</u>	<u>Title</u>	<u>EN</u>	<u>Year</u>
ISO 664	1990	Oilseeds - Reduction of laboratory sample to test sample	EN ISO 664	1995
ISO 5555	1991	Animal and vegetable fats and oils - Sampling	EN ISO 5555	1995

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INTERNATIONAL STANDARD

ISO
8420

First edition
1990-11-01

Animal and vegetable fats and oils — Determination of polar compounds content

iTeh STANDARD PREVIEW
*Corps gras d'origines animale et végétale — Dosage des composés
polaires*
(standards.iteh.ai)

[SIST EN ISO 8420:1998](#)

<https://standards.iteh.ai/catalog/standards/sist/d64410ad-c530-4eb0-836f-1426c6afd88d/sist-en-iso-8420-1998>



Reference number
ISO 8420:1990(E)

ISO 8420:1990(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 8420 was prepared by Technical Committee ISO/TC 34, *Agricultural food products*.

Annex A of this International Standard is for information only.

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Animal and vegetable fats and oils — Determination of polar compounds content

1 Scope

This International Standard describes a method for the determination of the content of polar compounds in animal and vegetable fats and oils, hereinafter referred to as fats.

NOTE 1 Polar compounds are formed during the heating of fats and thus the method serves to assess the deterioration of frying fats with use.

2 Normative references

The following standards contain provisions which, through reference in this text, constitute provisions of this International Standard. At the time of publication, the editions indicated were 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 editions of the standards 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*.

ISO 5555:—¹⁾, *Animal and vegetable fats and oils — Sampling*.

3 Definition

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

polar compounds: Constituents of fats which are determined by column chromatography under the conditions specified in this International Standard.

1) To be published. (Revision of ISO 5555:1983)

2) Merck No. 7734 is the trade-name of a product supplied by Merck. This information is given for the convenience of users of this International Standard and does not constitute an endorsement by ISO of the product named. Equivalent products may be used if they can be shown to lead to the same results.

Polar compounds include polar substances which occur in unused fats, such as monoglycerides, diglycerides and free fatty acids, as well as polar transformation products formed during heating as occurs during the frying of food. Non-polar compounds are mostly unaltered triglycerides.

4 Principle

Separation of a test portion by column chromatography into non-polar and polar compounds. Elution of the non-polar compounds and weighing of them. Determination of the polar compounds by difference.

5 Reagents and materials

All reagents shall be of recognized analytical grade and the water used shall be distilled water or water of equivalent purity.

5.1 Silica gel, of particle size 0,063 mm to 0,200 mm (70 mesh to 230 mesh), such as Merck No. 7734²⁾, adjusted to a water content of 5 % (*m/m*) as follows.

Place a shallow layer of the silica gel in a porcelain dish, dry in an oven at 155 °C to 160 °C for at least 4 h with occasional stirring and cool in a desiccator to room temperature. Adjust the water content of the silica gel to 5 % (*m/m*) by placing 152 g of silica gel and 8 g of water in a 500 ml flask. Stopper the flask and shake on a shaking machine for 20 min. Determine the water content by drying at 155 °C to 160 °C and, if necessary, adjust to 5 % (*m/m*) ± 0,2 % (*m/m*).