



SLOVENSKI STANDARD
SIST EN ISO 15774:2001

01-december-2001

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Animal and vegetable fats and oils - Determination of cadmium content by direct graphite furnace atomic absorption spectrometry (ISO 15774:2000)

Tierische und pflanzliche Fette und Öle - Bestimmung von Cadmium mit Direkt-Graphitofen - Atomabsorptionsspektrometrie (ISO 15774:2000)

Corps gras d'origines animale et végétale - Détermination de la teneur en cadmium par spectrométrie d'absorption atomique a four graphite (ISO 15774:2000)

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Ta slovenski standard je istoveten z: EN ISO 15774:2001

ICS:

67.200.10	Üæ dā • \ ^ Á Á ã ç \ ^ { æ [à ^ Á Á æ	Animal and vegetable fats and oils
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EUROPEAN STANDARD
NORME EUROPÉENNE
EUROPÄISCHE NORM

EN ISO 15774

August 2001

ICS 67.200.10

English version

**Animal and vegetable fats and oils - Determination of cadmium
content by direct graphite furnace atomic absorption
spectrometry (ISO 15774:2000)**

Corps gras d'origines animale et végétale - Détermination
de la teneur en cadmium par spectrométrie d'absorption
atomique à four graphite (ISO 15774:2000)

Tierische und pflanzliche Fette und Öle - Bestimmung von
Cadmium mit Direkt-Graphitofen -
Atomabsorptionsspektrometrie (ISO 15774:2000)

This European Standard was approved by CEN on 23 June 2001.

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 Management Centre 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 Management Centre 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

Management Centre: rue de Stassart, 36 B-1050 Brussels

EN ISO 15774:2001 (E)

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 February 2002, and conflicting national standards shall be withdrawn at the latest by February 2002.

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.

NOTE FROM CMC: The foreword is susceptible to be amended on reception of the German language version. The confirmed or amended foreword, and when appropriate, the normative annex ZA for the references to international publications with their relevant European publications will be circulated with the German version.

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The text of the International Standard ISO 15774:2000 has been approved by CEN as a European Standard without any modification.

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INTERNATIONAL STANDARD

ISO 15774

First edition
2000-02-15

Animal and vegetable fats and oils — Determination of cadmium content by direct graphite furnace atomic absorption spectrometry

*Corps gras d'origines animale et végétale — Détermination de la teneur en
cadmium par spectrométrie d'absorption atomique à four graphite*

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Reference number
ISO 15774:2000(E)

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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.

International Standards are drafted in accordance with the rules given in the ISO/IEC Directives, Part 3.

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.

Attention is drawn to the possibility that some of the elements of this International Standard may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights.

International Standard ISO 15774 was prepared by Technical Committee ISO/TC 34, *Agricultural food products*, Subcommittee SC 11, *Animal and vegetable fats and oils*.

Annex A of this International Standard is for information only.

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Animal and vegetable fats and oils — Determination of cadmium content by direct graphite furnace atomic absorption spectrometry

1 Scope

This International Standard describes a method for the determination of trace amounts (micrograms per kilogram) of cadmium in all types of crude or refined edible oils and fats.

2 Normative reference

The following normative document contains provisions which, through reference in this text, constitute provisions of this International Standard. For dated references, subsequent amendments to, or revisions of, this publication do not apply. However, parties to agreements based on this International Standard are encouraged to investigate the possibility of applying the most recent edition of the normative document indicated below. For undated references, the latest edition of the normative document referred to applies. Members of ISO and IEC maintain registers of currently valid International Standards.

ISO 3696, *Water for analytical laboratory use — Specification and test methods*.

3 Principle

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The oil or fat is incinerated and atomized in a suitable graphite tube furnace with a platform connected to an atomic absorption spectrometer, previously calibrated using standard solutions of an organo-compound of cadmium. The metal content is determined from the observed absorption at a wavelength of 228,8 nm. Palladium is added as a matrix modifier in order to prevent loss of cadmium during the thermal pretreatment.

4 Reagents

Use only reagents of recognized analytical grade, unless otherwise specified.

- 4.1 **Water**, of grade 1 according to ISO 3696.
- 4.2 **Cyclohexane**.
- 4.3 **Hydrochloric acid**.
- 4.4 **Palladium chloride**.
- 4.5 **Matrix modifier**, 0,1 % (mass/volume) palladium solution.

Dissolve 0,167 g of palladium chloride (4.4) in 50 ml water (4.1) in a 100 ml volumetric flask (5.4), adding 1 ml hydrochloric acid (4.3) and making up to volume with water.

- 4.6 **Vegetable oil**, refined.