

Animal and vegetable fats and oils - Determination of cadmium content by direct graphite furnace atomic absorption spectrometry (ISO 15774:2017)

EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

See Eesti standard EVS-EN ISO 15774:2017 sisaldab Euroopa standardi EN ISO 15774:2017 ingliskeelset teksti.	This Estonian standard EVS-EN ISO 15774:2017 consists of the English text of the European standard EN ISO 15774:2017.
Standard on jõustunud sellekohase teate avaldamisega EVS Teatajas.	This standard has been endorsed with a notification published in the official bulletin of the Estonian Centre for Standardisation.
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English Version

Animal and vegetable fats and oils - Determination of
cadmium content by direct graphite furnace atomic
absorption spectrometry (ISO 15774:2017)

Corps gras d'origines animale et végétale -
Détermination de la teneur en cadmium par
spectrométrie d'absorption atomique à four graphite
(ISO 15774:2017)

Tierische und pflanzliche Fette und Öle - Bestimmung
von Cadmium mit Direkt-Graphitofen-
Atomabsorptionsspektrometrie (ISO 15774:2017)

This European Standard was approved by CEN on 15 February 2017.

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

CEN-CENELEC Management Centre: Avenue Marnix 17, B-1000 Brussels

European foreword

This document (EN ISO 15774:2017) has been prepared by Technical Committee ISO/TC 34 “Food products” in collaboration with 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of an identical text or by endorsement, at the latest by August 2017, and conflicting national standards shall be withdrawn at the latest by August 2017.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CEN [and/or CENELEC] shall not be held responsible for identifying any or all such patent rights.

This document supersedes EN ISO 15774:2001.

According to the CEN-CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this European Standard: Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, Former Yugoslav Republic of Macedonia, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and the United Kingdom.

Endorsement notice

The text of ISO 15774:2017 has been approved by CEN as EN ISO 15774:2017 without any modification.

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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.

The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular the different approval criteria needed for the different types of ISO documents should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2 (see www.iso.org/directives).

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For an explanation on the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the World Trade Organization (WTO) principles in the Technical Barriers to Trade (TBT) see the following URL: www.iso.org/iso/foreword.html.

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 15774:2000), which has been technically revised to exclude its applicability for fat coming from milk and milk products.

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

1 Scope

This document 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.

Milk and milk products (or fat coming from milk and milk products) are excluded from the scope of this document.

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

3 Terms and definitions

No terms and definitions are listed in this document.

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

- IEC Electropedia: available at <http://www.electropedia.org/>
- ISO Online browsing platform: available at <http://www.iso.org/obp>

4 Principle

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.

5 Reagents

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

5.1 Water, of grade 1 according to ISO 3696.

5.2 Cyclohexane.

5.3 Hydrochloric acid.

5.4 Palladium chloride.