SLOVENSKI STANDARD
SIST EN ISO 12193:2004

01-maj-2004

Ģivalske in rastlinske maģļ obe in olja - Doloļ evanje svinca z direktno atomsko absorpcijsko spektrometrijo z grafiļ no kiveto (ISO 12193:2004)

Animal and vegetable fats and oils - Determination of lead by direct graphite furnace atomic absorption spectroscopy (ISO 12193:2004)

Tierische und pflanzliche Fette und Öle - Bestimmung von Blei durch direkte Graphitofen -Atomabsorptionsspektrometrie (ISO 12193:2004)

Corps gras d'origines animale et végétale - Détermination de la teneur en plomb par spectrométrie d'absorption atomique directe avec four en graphite (ISO 12193:2004

Ta slovenski standard je istoveten z: **EN ISO 12193:2004**

ICS:

67.200.10	Rastlinske in ģivalske maģļ obe in olja	Animal and vegetable fats and oils

SIST EN ISO 12193:2004 **en**

EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

EN ISO 12193

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English version

Animal and vegetable fats and oils - Determination of lead by direct graphite furnace atomic absorption spectroscopy (ISO 12193:2004)

Corps gras d'origines animale et végétale - Détermination de la teneur en plomb par spectrométrie d'absorption atomique directe avec four en graphite (ISO 12193:2004

Tierische und pflanzliche Fette und Öle - Bestimmung von Blei durch direkte Graphitofen-Atomabsorptionsspektrometrie (ISO 12193:2004)

This European Standard was approved by CEN on 19 February 2004.

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

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Foreword

This document (EN ISO 12193:2004) has been prepared by Technical Committee ISO/TC 34 "Agricultural 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of an identical text or by endorsement, at the latest by August 2004, and conflicting national standards shall be withdrawn at the latest by August 2004.

This document supersedes EN ISO 12193:1999.

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

Endorsement notice

The text of ISO 12193:2004 has been approved by CEN as EN ISO 12193:2004 without any modifications.

INTERNATIONAL STANDARD

ISO 12193

Second edition
2004-02-01

Animal and vegetable fats and oils — Determination of lead by direct graphite furnace atomic absorption spectroscopy

Corps gras d'origines animale et végétale — Détermination de la teneur en plomb par spectrométrie d'absorption atomique directe avec four en graphite

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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 2.

The main task of technical committees is to prepare International Standards. 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 document may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights.

ISO 12193 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 12193:1994), which has been technically revised.

Animal and vegetable fats and oils — Determination of lead by direct graphite furnace atomic absorption spectroscopy

1 Scope

This International Standard specifies a method for the determination of trace amounts (> 0,001 mg/kg) of lead in all types of crude or refined edible oils and fats.

2 Principle

The oil or fat is atomized in a graphite furnace, with or without a platform, connected to an atomic absorption spectrometer which has been previously calibrated using standard solutions of an organo compound of lead. The metal content is measured from the observed absorbance at a wavelength of 283,3 nm.

3 Reagents

Use only reagents of recognized analytical grade, unless otherwise specified, and distilled or demineralized water or water of equivalent purity.

3.1 Cyclohexane, analytical grade.

3.2 Lecithin, containing 2 % phosphorus.

3.3 Matrix modifier: 2 % (by mass/volume) lecithin solution prepared by dissolving 2 g of lecithin (3.2) in 100 ml of cyclohexane (3.1).

3.4 Blank oil, refined.

Any edible oil is suitable, stored in a metal-free polyethylene bottle. The lead content of the oil shall not be greater than 0,001 mg/kg.

3.5 Lead standard stock solution, c(Pb) = 10 mg/kg.

This is prepared by appropriate dilution of an organometallic standard with the blank oil (3.4).

NOTE A suitable standard is available from the following companies:[1)]

— Continental Oil Company, Ponca City, Oklahoma, USA (Conostan, 5 000 mg/kg);

— Merck KGaA, Darmstadt, Germany [Certipur 115051, lead standard dissolved in oil, c(Pb) = 1 g/kg] in standard oil;

— VWR International [Certipur 1.15051, lead standard dissolved in oil, c(Pb) = 1 g/kg] in standard oil;

— VWR International [Specpure ALFA019527.AD, lead, Organic AAS standard solution, Specpure, c(Pb) = 1 000 mg/g].

1) These are examples of suitable products available commercially. This information is given for the convenience of users of this International Standard and does not constitute an endorsement by ISO of these products.