



SLOVENSKI STANDARD SIST EN ISO 8294:2000

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Animal and vegetable fats and oils - Determination of copper, iron and nickel contents - Graphite furnace atomic absorption method (ISO 8294:1994)

Tierische und pflanzliche Fette und Öle - Bestimmung des Gehaltes an Kupfer, Eisen und Nickel - Graphitofen - Atomabsorptionsverfahren (ISO 8294:1994)

Corps gras d'origines animale et végétale - Détermination de la teneur en cuivre, fer et nickel - Méthode par spectrométrie d'absorption atomique avec four en graphite (ISO 8294:1994)

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Ta slovenski standard je istoveten z: EN ISO 8294:1999

ICS:

67.200.10 Animal and vegetable fats and oils

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EUROPEAN STANDARD
 NORME EUROPÉENNE
 EUROPÄISCHE NORM

EN ISO 8294

May 1999

ICS 67.200.10

English version

Animal and vegetable fats and oils - Determination of copper,
 iron and nickel contents - Graphite furnace atomic absorption
 method (ISO 8294:1994)

Corps gras d'origines animale et végétale - Détermination
 de la teneur en cuivre, fer et nickel - Méthode par
 spectrométrie d'absorption atomique avec four en graphite
 (ISO 8294:1994)

Tierische und pflanzliche Fette und Öle - Bestimmung des
 Gehaltes an Kupfer, Eisen und Nickel - Graphitofen -
 Atomabsorptionsverfahren (ISO 8294:1994)

This European Standard was approved by CEN on 15 April 1999.

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.

646806df2479/sist-en-iso-8294-2000



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

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

Page 2
EN ISO 8294:1999

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 November 1999, and conflicting national standards shall be withdrawn at the latest by November 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, Czech Republic, 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 8294:1994 has been approved by CEN as a European Standard without any modification.

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

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REPUBLIKA SLOVENIJA
INŠTITUT ZA STANDARDIZACIJO
SIST
SIST EN ISO 8294:2000

ISO 8294:1994
SIST EN ISO 8294:2000



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 vegetable fats and oils – Preparation of test sample	EN ISO 661	1995
ISO 3696	1987	Water for analytical laboratory use – Specification and test methods	EN ISO 3696	1995

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INTERNATIONAL
STANDARD

ISO
8294

First edition
1994-11-01

**Animal and vegetable fats and oils —
Determination of copper, iron and nickel
contents — Graphite furnace atomic
absorption method**
(standards.iteh.ai)

*Corps gras d'origines animale et végétale — Détermination de la teneur
en cuivre, fer et nickel — Méthode par spectrométrie d'absorption
atomique avec four en graphite*

<https://standards.iteh.ai/catalog/standards/sist/84f2-521-7be4-4134-b879-646806df2479/sist-en-iso-8294-2000>



Reference number
ISO 8294:1994(E)

ISO 8294:1994(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 8294 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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International Organization for Standardization
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Animal and vegetable fats and oils — Determination of copper, iron and nickel contents — Graphite furnace atomic absorption method

1 Scope

This International Standard specifies a method for the determination of trace amounts of copper, iron and nickel in animal and vegetable fats and oils, referred to hereinafter as fats.

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 3696:1987, *Water for analytical laboratory use — Specification and test methods*.

3 Principle

Vaporization of a test portion of the fat in a graphite furnace connected to an atomic absorption spectrometer, previously calibrated using standard solutions of organo compounds of the metals under test. Calculation of the metal contents from the absorbances at selected wavelengths.

4 Reagents

Use only reagents of recognized analytical grade and water in accordance with grade 2 of ISO 3696.

4.1 Aluminium oxide, analytical grade.

NOTE 1 A suitable aluminium oxide (Quality No. 1077) is available from Merck, D-1600 Darmstadt, Germany.¹⁾

4.2 Dilution oil, for example a refined edible oil, liquid at ambient temperature.

Store the oil in a metal-free polyethylene or polyethylene bottle (5.1). Metal contents of the oil shall be not greater than:

Cu, 3 µg/kg;

Fe, 5 µg/kg; and

Ni, 5 µg/kg.

NOTE 2 A sample of near-metal-free oil may be obtained by the following procedure.

Dissolve the oil in light petroleum (boiling range 40°C to 60 °C) in a ratio of 1 kg of oil to 3 litres of light petroleum. Prepare an aluminium oxide column (diameter/height ratio = 1/10) using twice the mass of aluminium oxide (activated by heating at 150 °C for 14 h) as the mass of the oil to be purified. Add the solution to the column and elute a volume of light petroleum 5/3 times as much as the volume the sample was dissolved in. Evaporate the light petroleum from the eluate on a heated water-bath using a gentle stream of nitrogen (2 l/min to 5 l/min). Remove the final traces of light petroleum under vacuum.

1) This information is given for the convenience of users of this International Standard and does not constitute an endorsement by ISO of this product.