

Oilseed meals - Determination of oil content -
Extraction method with hexane (or light petroleum)
(ISO 734:2023)

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EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

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ICS 67.200.20

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EUROPEAN STANDARD

EN ISO 734

NORME EUROPÉENNE

EUROPÄISCHE NORM

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Supersedes EN ISO 734:2015

English Version

Oilseed meals - Determination of oil content - Extraction method with hexane (or light petroleum) (ISO 734:2023)

Tourteaux de graines oléagineuses - Détermination de la teneur en huile - Méthode par extraction à l'hexane (ou à l'éther de pétrole) (ISO 734:2023)

Ölsamenschrote - Bestimmung des Ölgehaltes - Extraktionsverfahren mit Hexan (oder Petrolether) (ISO 734:2023)

This European Standard was approved by CEN on 13 February 2023.

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

CEN-CENELEC Management Centre: Rue de la Science 23, B-1040 Brussels

European foreword

This document (EN ISO 734:2023) 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of an identical text or by endorsement, at the latest by August 2023, and conflicting national standards shall be withdrawn at the latest by August 2023.

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

This document supersedes EN ISO 734:2015.

Any feedback and questions on this document should be directed to the users' national standards body/national committee. A complete listing of these bodies can be found on the CEN website.

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, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Republic of North Macedonia, Romania, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Türkiye and the United Kingdom.

Endorsement notice

The text of ISO 734:2023 has been approved by CEN as EN ISO 734:2023 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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Any trade name used in this document is information given for the convenience of users and does not constitute an endorsement.

For an explanation of the voluntary nature of standards, 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 www.iso.org/iso/foreword.html.

This document was prepared by Technical Committee ISO/TC 34, *Food products*, Subcommittee SC 2, *Oleaginous seeds and fruits and oilseed meals*, in collaboration with the European Committee for Standardization (CEN) Technical Committee CEN/TC 307, *Oilseeds, vegetable and animal fats and oils and their by-products — Methods of sampling and analysis*, in accordance with the Agreement on technical cooperation between ISO and CEN (Vienna Agreement).

This third edition cancels and replaces the second edition (ISO 734:2015), which has been technically revised in order to include some safety warnings.

Any feedback or questions on this document should be directed to the user's national standards body. A complete listing of these bodies can be found at www.iso.org/members.html.

Introduction

A method for the determination of the oil content of oilseeds is specified in ISO 659. To provide for the control of oil production, this document specifies a reference method for the determination of the oil content of oilseed meals in the same way.

Oilseed meals — Determination of oil content — Extraction method with hexane (or light petroleum)

1 Scope

This document specifies a method for the determination of the hexane extract (or light-petroleum extract), called “oil content”, of meals (excluding compounded products) obtained by the extraction of oil from oilseeds by pressure or solvents.

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 771, *Oilseed meals — Determination of moisture and volatile matter content*

ISO 5502, *Oilseed residues — Preparation of test samples*

3 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

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

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

3.1

oil content

all of the substances extracted under certain operating conditions of the product as received

Note 1 to entry: For the purposes of this document, the operating conditions are those specified in this document.

Note 2 to entry: It is expressed as a mass fraction, in per cent.

Note 3 to entry: The oil content may also be expressed relative to dry matter.

4 Principle

A test portion of the product is extracted in a suitable apparatus, with technical hexane or, failing this, light petroleum. The solvent is eliminated and the extract obtained is weighed.

5 Reagents

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

5.1 Technical hexane, *n*-hexane or light petroleum, essentially composed of hydrocarbons with six carbon atoms, of which less than 5 % (volume/volume) distils below 40 °C and more than 95 % (volume/volume) distils between 40 °C and 60 °C or between 50 °C and 70 °C, and which has a bromine value of less than 1. The residue on complete evaporation shall not exceed 2 mg per 100 ml.