INTERNATIONAL STANDARD

ISO 734

Third edition
2023-01

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

Tourteaux de graines oléagineuses — Détermination de la teneur en huile — Méthode par extraction à l'hexane (ou à l'éther de pétrole)

Reference number
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Foreword

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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 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.