



BSI Standards Publication

## **Vegetable fats and oils — Determination of toluene insoluble matter**

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## National foreword

This British Standard is the UK implementation of ISO 28198:2018. It supersedes BS ISO 28198:2009, which is withdrawn.

The UK participation in its preparation was entrusted to Technical Committee AW/307, Oilseeds, animal and vegetable fats and oils and their by-products.

A list of organizations represented on this committee can be obtained on request to its secretary.

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**Vegetable fats and oils —  
Determination of toluene  
insoluble matter**

*Corps gras d'origine végétale — Détermination des matières  
insolubles dans le toluène*



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ISO copyright office  
Ch. de Blandonnet 8 • CP 401  
CH-1214 Vernier, Geneva, Switzerland  
Tel. +41 22 749 01 11  
Fax +41 22 749 09 47  
copyright@iso.org  
www.iso.org

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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](http://www.iso.org/directives)).

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. Details of any patent rights identified during the development of the document will be in the Introduction and/or on the ISO list of patent declarations received (see [www.iso.org/patents](http://www.iso.org/patents)).

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](http://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 28198:2009), which has been technically revised to include a procedure for turbid samples.

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](http://www.iso.org/members.html).

# Vegetable fats and oils — Determination of toluene insoluble matter

## 1 Scope

This document specifies a method for the determination of the content of toluene insoluble matter (TIM) in lecithin formulations, which indicates the presence of impurities such as protein, carbohydrate-containing extraction residues and other solid contaminants. This method is applicable to all types of vegetable lecithin.

The purpose of the method is to enable the analysis of lecithin under several regulations. Lecithin [Codex International Numbering System for Food Additives (INS) No. 322] is a generally permitted additive and the determination of the TIM is part of many specifications. The purity requirement with regard to TIM content is based on the method specified.

Toluene is the replacement for the carcinogenic benzene, which was used in older methods.

## 2 Normative references

There are no normative references in this document.

## 3 Terms and definitions

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

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

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

### 3.1

#### **toluene insoluble matter**

#### **TIM**

$w_{\text{TIM}}$

quantity of those substances that are insoluble in toluene under the conditions specified in this document

Note 1 to entry: The toluene insoluble matter content is expressed as a mass fraction in grams per 100 g.

## 4 Principle

**4.1** The sample is dissolved in toluene and filtered through a glass filter crucible of defined pore size (P 40). The insoluble residue is dried at  $(103 \pm 2)$  °C and weighed.

**4.2** Glass filter crucibles with other pore sizes give different results and shall not be used.

## 5 Reagents

**WARNING — Attention is drawn to the regulations which specify the handling of hazardous substances. Technical, organizational and personal safety measures shall be followed.**