

**Animal and vegetable fats and oils - Determination of iodine value**

**Animal and vegetable fats and oils - Determination of iodine value (ISO 3961:2013)**

## EESTI STANDARDI EESSÕNA

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See Eesti standard EVS-EN ISO 3961:2013 sisaldab Euroopa standardi EN ISO 3961:2013 ingliskeelset teksti.	This Estonian standard EVS-EN ISO 3961:2013 consists of the English text of the European standard EN ISO 3961:2013.
Standard on jõustunud sellekohase teate avaldamisega EVS Teatajas.	This standard has been endorsed with a notification published in the official bulletin of the Estonian Centre for Standardisation.
Euroopa standardimisorganisatsioonid on teinud Euroopa standardi rahvuslikele liikmetele kättesaadavaks 17.07.2013.	Date of Availability of the European standard is 17.07.2013.
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English Version

Animal and vegetable fats and oils - Determination of iodine  
value (ISO 3961:2013)

Corps gras d'origines animale et végétale - Détermination  
de l'indice d'iode (ISO 3961:2013)

Tierische und pflanzliche Fette und Öle - Bestimmung der  
Iodzahl (ISO 3961:2013)

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## Foreword

This document (EN ISO 3961:2013) 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of an identical text or by endorsement, at the latest by January 2014, and conflicting national standards shall be withdrawn at the latest by January 2014.

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

This document supersedes EN ISO 3961:2011.

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

### Endorsement notice

The text of ISO 3961:2013 has been approved by CEN as EN ISO 3961:2013 without any modification.

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# Animal and vegetable fats and oils — Determination of iodine value

## 1 Scope

This International Standard specifies a reference method for the determination of the iodine value (commonly known in the industry as IV) of animal and vegetable fats and oils, hereinafter referred to as fats.

[Annex B](#) describes a method for the calculation of the IV from fatty acid compositional data. This method is not applicable to fish oils. Furthermore cold-pressed, crude and unrefined vegetable oils as well as (partially) hydrogenated oils can give different results by the two methods. The calculated IV is affected by impurities and thermal degradation products.

NOTE The method in [Annex B](#) is based upon the AOCS Official method Cd 1c-85.<sup>[9]</sup>

## 2 Normative references

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

ISO 661, *Animal and vegetable fats and oils — Preparation of test sample*

## 3 Terms and definitions

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

### 3.1 iodine value IV

mass of halogen, expressed as iodine, absorbed by the test portion following the specified procedure, divided by the mass of the test portion

Note 1 to entry: The IV is expressed as a mass fraction in grams per 100 g of fat.

## 4 Principle

Dissolution of a test portion in solvent and addition of Wijs reagent. After a specified time, addition of potassium iodide and water, and titration of the liberated iodine with sodium thiosulfate solution.

NOTE [Annex B](#) describes a method for the calculation of the IV from fatty acid compositional data. However, this is not intended to be a rapid method. The method gives two results from one analytical procedure. The volumetric method is the reference method.

## 5 Reagents

Use only reagents of recognized analytical grade.

**WARNING — Attention is drawn to the regulations which specify the handling of hazardous substances. Technical, organizational and personal safety measures shall be followed. Wijs solution causes severe burns; vapours can cause lung and eye damage. A fume hood shall be used for the work.**