# Palm oil - Determination of the deterioration of bleachability index (DOBI) and carotene content (ISO 17932:2011)

This document is a preview generated by EVS

EESTI STANDARDIKESKUS
ESTONIAN CENTRE FOR STANDARDISATION

| EESTI STANDARDI EESSÕNA | NATIONAL FOREWORD |
|---|---|
| Käesolev Eesti standard EVS-EN ISO 17932:2011 sisaldab Euroopa standardi EN ISO 17932:2011 ingliskeelset teksti. | This Estonian standard EVS-EN ISO 17932:2011 consists of the English text of the European standard EN ISO 17932:2011. |
| Standard on kinnitatud Eesti Standardikeskuse 30.09.2011 käskkirjaga ja jõustub sellekohase teate avaldamisel EVS Teatajas. | This standard is ratified with the order of Estonian Centre for Standardisation dated 30.09.2011 and is endorsed with the notification published in the official bulletin of the Estonian national standardisation organisation. |
| Euroopa standardimisorganisatsioonide poolt rahvuslikele liikmetele Euroopa standardi teksti kättesaadavaks tegemise kuupäev on 15.09.2011. | Date of Availability of the European standard text 15.09.2011. |
| Standard on kättesaadav Eesti standardiorganisatsioonist. | The standard is available from Estonian standardisation organisation. |

This document is a preview generated by EVS

**ICS** 67.200.10

**Standardite reprodutseerimis- ja levitamisõigus kuulub Eesti Standardikeskusele**

Andmete paljundamine, taastekitamine, kopeerimine, salvestamine elektroonilisse süsteemi või edastamine ükskõik millises vormis või millisel teel on keelatud ilma Eesti Standardikeskuse poolt antud kirjaliku loata.

Kui Teil on küsimusi standardite autorikaitse kohta, palun võtke ühendust Eesti Standardikeskusega:
Aru 10 Tallinn 10317 Eesti; www.evs.ee; Telefon: 605 5050; E-post: info@evs.ee

**Right to reproduce and distribute belongs to the Estonian Centre for Standardisation**

No part of this publication may be reproduced or utilized in any form or by any means, electronic or mechanical, including photocopying, without permission in writing from Estonian Centre for Standardisation.

If you have any questions about standards copyright, please contact Estonian Centre for Standardisation:
Aru str 10 Tallinn 10317 Estonia; www.evs.ee; Phone: 605 5050; E-mail: info@evs.ee

EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

# EN ISO 17932

September 2011

ICS 67.200.10

Supersedes EN ISO 17932:2007

English Version

## Palm oil - Determination of the deterioration of bleachability index (DOBI) and carotene content (ISO 17932:2011)

Huile de palme - Détermination de la détérioration de l'indice de blanchiment (DOBI) et de la teneur en carotène (ISO 17932:2011)

Palmöl - Bestimmung des Bleichindex zur Beurteilung der Qualität von rohem Palmöl (DOBI Deterioration of bleachability index) sowie des Carotingehaltes (ISO 17932:2011)

This European Standard was approved by CEN on 14 September 2011.

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 CEN-CENELEC Management Centre 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 CEN-CENELEC Management Centre has the same status as the official versions.

CEN members are the national standards bodies of 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, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland and United Kingdom.

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

**Management Centre: Avenue Marnix 17, B-1000 Brussels**

© 2011 CEN All rights of exploitation in any form and by any means reserved worldwide for CEN national Members.

Ref. No. EN ISO 17932:2011: E

This document is a preview generated by EVS

# Foreword

This document (EN ISO 17932:2011) 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 March 2012, and conflicting national standards shall be withdrawn at the latest by March 2012.

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 17932:2007.

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, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland and the United Kingdom.

**Endorsement notice**

The text of ISO 17932:2011 has been approved by CEN as a EN ISO 17932:2011 without any modification.

This document is a preview generated by EVS

# Palm oil — Determination of the deterioration of bleachability index (DOBI) and carotene content

This document is a preview generated by EVS

## 1 Scope

This International Standard specifies a method for the determination of the deterioration of bleachability index (DOBI) of crude palm oil and the carotene content of crude or bleached palm oil and their fractions by spectrophotometric examination in the ultraviolet and visible range of the spectrum.

## 2 Normative references

The following referenced documents are indispensable for the application 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 661, *Animal and vegetable fats and oils — Preparation of test sample*

ISO/IEC 17025, *General requirements for the competence of testing and calibration laboratories*

ISO Guide 34, *General requirements for the competence of reference material producers*

## 3 Terms and definitions

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

**3.1**
**deterioration of bleachability index**
**DOBI**
$I_{\mathrm{DoB}}$
ratio of the absorbance of the test portion at 446 nm to that at 269 nm, as determined spectrophotometrically in a 10 mm (1 cm) pathlength cell

NOTE DOBI is expressed to one decimal place without a dimension.

**3.2**
**carotene content of vegetable oil**
$w_{\mathrm{c}}$
mass fraction of β-carotene in oil

NOTE The carotene content of vegetable oil is expressed in milligrams per kilogram.

## 4 Principle

A homogenized sample is dissolved in isooctane and the absorbance is measured spectrophotometrically at 446 nm and 269 nm. The DOBI value is the ratio of the absorbance at 446 nm to that at 269 nm. The test is a measure of the ease of refining crude palm oil. A low DOBI value can indicate difficulty in refining the oil to a low Lovibond colour. The absorbance at 446 nm is used for calculation of the carotene content.

## 5 Reagents

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

© ISO 2011 – All rights reserved