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

*Huile de palme — Détermination de la détérioration de l'indice de
blanchiment (DOBI) et de la teneur en carotène*





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Foreword

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ISO 17932 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 17932:2005), which has been technically revised.

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

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_{DOBI}
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_{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.