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**Animal and vegetable fats and oils —  
Determination of Lovibond® colour —  
Automatic method**

*Corps gras d'origines animale et végétale — Détermination de la  
couleur Lovibond® — Méthode automatique*



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## Foreword

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International Standards are drafted in accordance with the rules given in the ISO/IEC Directives, Part 2.

The main task of technical committees is to prepare International Standards. Draft International Standards adopted by the technical committees are circulated to the member bodies for voting. Publication as an International Standard requires approval by at least 75 % of the member bodies casting a vote.

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.

ISO 27608 was prepared by Technical Committee ISO/TC 34, *Food products*, Subcommittee SC 11, *Animal and vegetable fats and oils*.

## Introduction

This International Standard has been developed at the request of the industry for an automatic method to measure the colour of oils and fats. The traditional scale used for this parameter is the Lovibond® scale, as used in the manual method of colour measurement, ISO 15305<sup>[5]</sup>. It has proved impossible to get an automated instrument which gives results that exactly match those of the manual method. However, the repeatability and reproducibility limits of the manual method are quite large, and thus the automated method specified in this International Standard has been developed to include instruments which produce results within these limits.

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# Animal and vegetable fats and oils — Determination of Lovibond® colour — Automatic method

## 1 Scope

This International Standard specifies a method for the determination of Lovibond®<sup>1)</sup> colour of animal and vegetable fats and oils using automatic instrumentation.

NOTE 1 The interlaboratory trials have shown that these instruments are not suitable for use with oils and fats with a colour intensity above 4 Lovibond® red units, for which the manual reference method, ISO 15305<sup>[5]</sup>, is applicable.

NOTE 2 The trials also showed that these instruments are not suitable for samples with strong blue, green, and brown hues, for which the manual reference method, ISO 15305<sup>[5]</sup>, is applicable.

## 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*

## 3 Terms and definitions

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

### 3.1

#### **Lovibond® colour value**

value obtained by analysis of light transmitted through a known path length of liquid fat or oil and read from the display of a suitable instrument

NOTE Lovibond® colour value is displayed in terms of Lovibond® colour units.

## 4 Principle

The colour of the light transmitted through a known path length of liquid fat or oil is measured by the spectral response of the light arriving at a detector. The results of these calculations are expressed in terms of Lovibond® colour units.

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1) Lovibond is the trade name of a colour scale developed and supplied by The Tintometer Ltd (<http://www.tintometer.com>). This information is given for the convenience of users of this document and does not constitute an endorsement by ISO of the product named. Equivalent products may be used if they can be shown to lead to the same results.