

**Animal and vegetable
fats and oils —
Determination of
peroxide value —
Potentiometric end-
point determination
(ISO 27107:2008,
corrected version
2009-05-15)**

ICS 67.200.10

National foreword

This British Standard is the UK implementation of EN ISO 27107:2010. It is identical to ISO 27107:2008. It supersedes BS EN ISO 27107:2008 which is withdrawn.

The UK participation in its preparation was entrusted to Technical Committee AW/307, Oil seeds, 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.

This publication does not purport to include all the necessary provisions of a contract. Users are responsible for its correct application.

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Date	Comments

English Version

Animal and vegetable fats and oils - Determination of peroxide value - Potentiometric end-point determination (ISO 27107:2008, corrected version 2009-05-15)

Corps gras d'origines animale et végétale - Détermination de l'indice de peroxyde - Détermination avec point d'arrêt potentiométrique (ISO 27107:2008, version corrigée 2009-05-15)

Tierische und pflanzliche Fette und Öle - Bestimmung der Peroxidzahl - Potentiometrische Endpunktbestimmung (ISO 27107:2008, korrigierte Fassung 2009-05-15)

This European Standard was approved by CEN on 13 March 2010.

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Foreword

The text of ISO 27107:2008, corrected version 2009-05-15 has been prepared by Technical Committee ISO/TC 34 “Food products” of the International Organization for Standardization (ISO) and has been taken over as EN ISO 27107:2010 by 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of an identical text or by endorsement, at the latest by October 2010, and conflicting national standards shall be withdrawn at the latest by October 2010.

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This document supersedes EN ISO 27107:2008.

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Endorsement notice

The text of ISO 27107:2008, corrected version 2009-05-15 has been approved by CEN as a EN ISO 27107:2010 without any modification.

Foreword

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ISO 27107 was prepared by Technical Committee ISO/TC 34, *Food products*, Subcommittee SC 11, *Animal and vegetable fats and oils*.

This corrected version of ISO 27107:2008 incorporates the following corrections:

- Introduction, lines 9 and 10, “greater than” and “less than or equal to” replace “>” and “≤”, respectively;
- Introduction, line 11, “0 mmol to 15 mmol” has become “0 meq to 30 meq”;
- 5.6, final sentence, has been reedited to correct details of blue colour formation;
- 6.5 now contains a readability figure of 0,000 1 g, not 0,001 g;
- 9.2.2, line 1, now refers to 0,001 g instead of 0,001 mg;
- 9.2.2, paragraph 4, now contains a reedited calculation of the factor, using symbol F rather than f ;
- the heading “10.1 Calculation” has been deleted;
- Clause 10, paragraph 1, has been revised to incorporate factor, F , from the revised 9.2.2;
- In Figure A.1, “PV =” has become “PV:” (five times).

Introduction

Over many years, various methods have been developed for the determination of peroxides in fats and oils. Their general principle is the liberation of iodine from potassium iodide in an acid medium. The method according to Wheeler (Reference [6]) was first adopted in standards more than 50 years ago by different bodies, and is widely used to control commodities by producers, receivers, and official laboratories. In national and international food legislation (including Codex Alimentarius), acceptable limits for peroxide values are often specified. Due to anomalies in the reproducibility of the results, it was noticed that there are slight differences between the standardized methods. A very important point is the dependence of the result on the amount of sample used for the determination. As the determination of the peroxide value (PV) is a highly empirical procedure, ISO/TC 34/SC 11 has decided to fix the sample mass at 5 g for PV greater than 1, and at 10 g for PV less than or equal to 1, and to limit the applicability of this method to animal and vegetable fats and oils with peroxide values from 0 meq to 30 meq of active oxygen per kilogram. The users of this International Standard should be aware that the results obtained can be slightly lower than with previous standards.