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IRISH STANDARD

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ICS 67.250

**MATERIALS AND ARTICLES IN CONTACT
WITH FOODSTUFFS - PLASTICS - PART 14:
TEST METHODS FOR 'SUBSTITUTE TESTS'
FOR OVERALL MIGRATION FROM PLASTICS
INTENDED TO COME INTO CONTACT WITH
FATTY FOODSTUFFS USING TEST MEDIA
ISO-OCTANE AND 95% ETHANOL**

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English version

Materials and articles in contact with foodstuffs - Plastics - Part 14: Test methods for 'substitute tests' for overall migration from plastics intended to come into contact with fatty foodstuffs using test media iso-octane and 95 % ethanol

Matériaux et objets en contact avec les denrées alimentaires - Matière plastique - Partie 14: Méthodes d'essai pour des 'tests de substitution' pour la migration globale des matières destinées au contact avec les denrées alimentaires gras en utilisant des liquides simulateurs tels que l'isooctane et l'éthanol à 95 %

Werkstoffe und Gegenstände in Kontakt mit Lebensmitteln - Kunststoffe - Teil 14: Prüfverfahren für "Ersatzprüfungen" für die Gesamtmigration aus Kunststoffen, die für den Kontakt mit fettigen Lebensmitteln bestimmt sind, unter Verwendung der Prüfmedien Iso-Octan und 95 %igem Ethanol

This European Standard was approved by CEN on 29 April 2002.

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 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 Management Centre has the same status as the official versions.

CEN members are the national standards bodies of Austria, Belgium, Czech Republic, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Malta, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and United Kingdom.



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

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EN 1186-14:2002 (E)

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Foreword

This document EN 1186-14 has been prepared by Technical Committee CEN/TC 194 "Utensils in contact with food", the secretariat of which is held by BSI.

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 2003, and conflicting national standards shall be withdrawn at the latest by March 2003.

This document supersedes ENV 1186-14:1999.

For relationship with EU Directive(s), see informative annex ZA, which is an integral part of this document.

This European Standard has been prepared as one of a series of test methods for plastics materials and articles in contact with foodstuffs.

WARNING — Both iso-octane and ethanol are volatile flammable solvents. Take care to ensure that the test specimens are well stoppered, closed and covered to prevent solvent volatilizing into the interior of the oven, incubator or refrigerator and generating an explosive mixture. Care should be taken at all times when handling these solvents to prevent contact with sources of ignition.

EN 1186-14 should be read in conjunction with EN 1186-1, EN 1186-3, EN 1186-5, EN 1186-7, and EN 1186-9.

Further Parts of this standard have been prepared concerned with the determination of overall migration from plastics materials into food simulants. Their titles are as follows:

EN 1186 - Materials and articles in contact with foodstuffs – Plastics –

- | | |
|---------|--|
| Part 1 | Guide to the selection of conditions and test methods for overall migration |
| Part 2 | Test methods for overall migration into olive oil by total immersion |
| Part 3 | Test methods for overall migration into aqueous food simulants by total immersion |
| Part 4 | Test methods for overall migration into olive oil by cell |
| Part 5 | Test methods for overall migration into aqueous food simulants by cell |
| Part 6 | Test methods for overall migration into olive oil using a pouch |
| Part 7 | Test methods for overall migration into aqueous food simulants using a pouch |
| Part 8 | Test methods for overall migration into olive oil by article filling |
| Part 9 | Test methods for overall migration into aqueous simulants by article filling |
| Part 10 | Test methods for overall migration into olive oil (modified method for use in cases where incomplete extraction of olive oil occurs) |
| Part 11 | Test methods for overall migration into mixtures of ¹⁴ C-labelled synthetic triglyceride |
| Part 12 | Test methods for overall migration at low temperatures |
| Part 13 | Test methods for overall migration at high temperatures |

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Part 15 Alternative test methods to migration into fatty food simulants by rapid extraction into iso-octane and/or 95 % ethanol

Annex A is informative.

According to the CEN/CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this European Standard: Austria, Belgium, Czech Republic, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Malta, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and the United Kingdom.

1 Scope

This European Standard specifies test methods for 'substitute tests' performed with volatile test media, iso-octane and 95 % v/v aqueous ethanol, for the determination of overall migration from plastics intended to come into contact with fatty foodstuffs at all temperatures and for any period of time.

These test methods are suitable for plastics samples in a wide variety of forms.

NOTE 1 The iso-octane and 95 % v/v aqueous ethanol volatile test media used in these test methods are those specified for 'substitute tests' in Commission Directive 82/711/EEC [3] and its subsequent amendments [4], [5]. In addition to the use of iso-octane and 95 % v/v aqueous ethanol as test media for 'substitute tests', Commission Directive 82/711/EEC and its subsequent amendments specifies the use of modified polyphenylene oxide as a test medium for use at temperatures of 100 °C and above. For a test method for overall migration from plastics intended to come into contact with fatty foodstuffs using modified polyphenylene oxide as a test medium, see EN 1186-13.

NOTE 2 These test methods can also be used for the 'alternative tests' described in Council Directive 82/711/EEC and its subsequent amendments, when the chosen volatile test media are iso-octane and 95 % aqueous ethanol, provided equivalence is shown with olive oil, see EN 1186-1:2002.

2 Normative references

This European Standard incorporates by dated and undated reference, provisions from other publications. These normative references are cited at the appropriate places in the text, and the publications are listed hereafter. For dated references, subsequent amendments to and revisions of any of these publications apply to this European Standard only when incorporated in it by amendment or revision. For undated references the latest edition of the publication referred to applies (including amendments).

EN 1186-1:2002, *Materials and articles in contact with foodstuffs – Plastics – Part 1: Guide to the selection of conditions and test methods for overall migration.*

EN 1186-3:2002, *Materials and articles in contact with foodstuffs – Plastics – Part 3: Test methods for overall migration into aqueous food simulants by total immersion.*

EN 1186-5:2002, *Materials and articles in contact with foodstuffs – Plastics – Part 5: Test methods for overall migration into aqueous food simulants by cell.*

EN 1186-7:2002, *Materials and articles in contact with foodstuffs – Plastics – Part 7: Test methods for overall migration into aqueous food simulants using a pouch.*

EN 1186-9:2002, *Materials and articles in contact with foodstuffs – Plastics – Part 9: Test methods for overall migration into aqueous food simulants by article filling.*

EN 10088-1:1995, *Stainless steels - Part 1: List of stainless steels.*

ISO 648, *Laboratory glassware - One mark pipettes.*

ISO 4788, *Laboratory glassware - Graduated measuring cylinders.*

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