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Animal and vegetable fats and oils — Determination of cadmium content by direct graphite furnace atomic absorption spectrometry

Corps gras d'origines animale et végétale — Détermination de la teneur en cadmium par spectrométrie d'absorption atomique à four graphite

Reference number
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Contents

Page

Foreword ... **iv**

1 Scope ... **1**

2 Normative references ... **1**

3 Terms and definitions ... **1**

4 Principle ... **1**

5 Reagents ... **1**

6 Apparatus ... **2**

7 Procedure ... **3**
7.1 General ... 3
7.2 Treatment of samples, vegetable oil and standards ... 3
7.3 Preparation of apparatus ... 3
7.4 Determination ... 4
7.4.1 Graphite tube blank ... 4
7.4.2 Vegetable oil ... 4
7.4.3 Calibration of apparatus ... 4
7.4.4 Oil (liquid) samples ... 4
7.4.5 Fat samples with melting point 40 °C and higher ... 4
7.4.6 Number of determinations ... 5

8 Expression of results ... **5**

9 Precision ... **5**
9.1 Interlaboratory test ... 5
9.2 Repeatability ... 5
9.3 Reproducibility ... 5

10 Test report ... **5**

Annex A (informative) **Results of interlaboratory test** ... **6**

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Foreword

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The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular the different approval criteria needed for the different types of ISO documents should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2 (see www.iso.org/directives).

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For an explanation on the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the World Trade Organization (WTO) principles in the Technical Barriers to Trade (TBT) see the following URL: www.iso.org/iso/foreword.html.

This document 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 15774:2000), which has been technically revised to exclude its applicability for fat coming from milk and milk products.

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Animal and vegetable fats and oils — Determination of cadmium content by direct graphite furnace atomic absorption spectrometry

1 Scope

This document describes a method for the determination of trace amounts (micrograms per kilogram) of cadmium in all types of crude or refined edible oils and fats.

Milk and milk products (or fat coming from milk and milk products) are excluded from the scope of this document.

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements 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 3696, *Water for analytical laboratory use — Specification and test methods*

3 Terms and definitions

No terms and definitions are listed in this document.

ISO and IEC maintain terminological databases for use in standardization at the following addresses:

— IEC Electropedia: available at http://www.electropedia.org/

— ISO Online browsing platform: available at http://www.iso.org/obp

4 Principle

The oil or fat is incinerated and atomized in a suitable graphite tube furnace with a platform connected to an atomic absorption spectrometer, previously calibrated using standard solutions of an organo-compound of cadmium. The metal content is determined from the observed absorption at a wavelength of 228,8 nm. Palladium is added as a matrix modifier in order to prevent loss of cadmium during the thermal pretreatment.

5 Reagents

Use only reagents of recognized analytical grade, unless otherwise specified.

5.1 Water, of grade 1 according to ISO 3696.

5.2 Cyclohexane.

5.3 Hydrochloric acid.

5.4 Palladium chloride.

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