EESTI STANDARD

EVS-EN 14185-1:2003

Non-fatty food - Determination of N-methylcarbamate residues - Part 1: HPLC-method with SPE clean-up

Non-fatty food - Determination of N-methylcarbamate residues - Part 1: HPLC-method with SPE clean-up

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EESTI STANDARDI EESSÕNA	NATIONAL FOREWORD
Käesolev Eesti standard EVS-EN 14185-1:2003 sisaldab Euroopa standardi EN 14185-1:2003 ingliskeelset teksti. Käesolev dokument on jõustatud 16.05.2003 ja selle kohta on avaldatud teade Eesti standardiorganisatsiooni ametlikus väljaandes. Standard on kättesaadav Eesti standardiorganisatsioonist.	This Estonian standard EVS-EN 14185-1:2003 consists of the English text of the European standard EN 14185-1:2003. This document is endorsed on 16.05.2003 with the notification being published in the official publication of the Estonian national standardisation organisation. The standard is available from Estonian standardisation organisation.

Käsitlusala: This European Standard specifies a high performance liquid chromatographic (HPLC) method for the determination of N-methylcarbamate pesticides in cereals, fruits and vegetables. The method has been validated by collaborative study for carbaryl, carbofuran, methiocarb, methomyl, oxamyl and propoxur parent compounds and for methiocarb sulfoxide in green peppers and apples at levels between 0,08 mg/kg and 0,9 mg/kg	**Scope:** This European Standard specifies a high performance liquid chromatographic (HPLC) method for the determination of N-methylcarbamate pesticides in cereals, fruits and vegetables. The method has been validated by collaborative study for carbaryl, carbofuran, methiocarb, methomyl, oxamyl and propoxur parent compounds and for methiocarb sulfoxide in green peppers and apples at levels between 0,08 mg/kg and 0,9 mg/kg

ICS 67.060, 67.080.01

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English version

Non-fatty food - Determination of N-methylcarbamate residues - Part 1: HPLC-method with SPE clean-up

Aliments non gras - Dosages des résidus de N-méthylcarbamates - Partie 1: Méthode par CLHP avec purification SPE

Fettarme Lebensmittel - Bestimmung von N-Methylcarbamat-Rückständen - Teil 1: HPLC-Verfahren mit Reinigung durch Festphasenextraktion

This European Standard was approved by CEN on 20 February 2003.

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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.

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Foreword

This document (EN 14185-1:2003) has been prepared by Technical Committee CEN/TC 275 "Food analysis - Horizontal methods", the secretariat of which is held by DIN.

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

Annexes A and B are 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, Hungary, Iceland, Ireland, Italy, Luxembourg, Malta, Netherlands, Norway, Portugal, Slovakia, Spain, Sweden, Switzerland and the United Kingdom.

1 Scope

This European Standard specifies a high performance liquid chromatographic (HPLC) method for the determination of N-methylcarbamate pesticides in cereals, fruits and vegetables.

The method has been validated by collaborative study for carbaryl, carbofuran, methiocarb, methomyl, oxamyl and propoxur parent compounds and for methiocarb sulfoxide in green peppers and apples at levels between 0,08 mg/kg and 0,9 mg/kg.

No collaborative data are available for the performance of the method in the determination of other significant metabolites although it is known that the method will not work for oxamyl and methomyl oximes.

2 Normative references

This European Standard incorporates, by dated or 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 or 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 ISO 3696, *Water for analytical laboratory use — Specification and test methods (ISO 3696:1987).*

3 Principle

The sample is homogenized with acetone, dichloromethane and light petroleum and the homogenate is centrifuged to yield two layers of the supernatant. An aliquot portion of the upper layer is evaporated to dryness. Optionally, this extract may be cleaned up by solid phase extraction (SPE) using a cartridge packed with aminopropyl-bonded silica. In the extract solution, the N-methylcarbamates are determined by reversed-phase high performance liquid chromatography (HPLC) with post-column hydrolysis. The methylamine formed is allowed to react with o-phthaldialdehyde and 2-mercaptoethanol and the derivatives are detected with a fluorescence detector. For further information on this method, see [1] to [4].