Animal feeding stuffs - Determination of OC-pesticides and PCB's by GC/MS

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NATIONAL FOREWORD

Käesolev Eesti standard EVS-EN 15741:2009 sisaldab Euroopa standardi EN 15741:2009 ingliskeelset teksti.	This Estonian standard EVS-EN 15741:2009 consists of the English text of the European standard EN 15741:2009.
Standard on kinnitatud Eesti Standardikeskuse 30.04.2009 käskkirjaga ja jõustub sellekohase teate avaldamisel EVS Teatajas.	This standard is ratified with the order of Estonian Centre for Standardisation dated 30.04.2009 and is endorsed with the notification published in the official bulletin of the Estonian national standardisation organisation.
Euroopa standardimisorganisatsioonide poolt rahvuslikele liikmetele Euroopa standardi teksti kättesaadavaks tegemise kuupäev on 25.02.2009.	Date of Availability of the European standard text 25.02.2009.
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Animal feeding stuffs - Determination of OC-pesticides and PCB's by GC/MS

Aliments des animaux - Détermination des pesticides organochlorés (OC) et des polychlorobiphényles (PCB) par GC/MS

Futtermittel - Bestimmung der OC-Pestizide und PCB's mittels GC/MS-Verfahren

This European Standard was approved by CEN on 24 January 2009.

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Foreword

This document (EN 15741:2009) has been prepared by Technical Committee CEN/TC 327 “Animal feeding stuffs”, the secretariat of which is held by NEN.

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of an identical text or by endorsement, at the latest by August 2009, and conflicting national standards shall be withdrawn at the latest by August 2009.

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1 Scope

This European Standard specifies a gas chromatographic/mass spectrometric method for the determination of organochlorine pesticides (OC's) and polychlorinated biphenyls (PCBs) in animal feeding stuffs and oil.

The method is applicable to animal feeding stuffs with a water content up to about 20 wt% and oil/fatty samples containing residues of one or more of the following OC's and PCBs and some of their isomers and degradation products:

— Aldrin;

— Dieldrin;

— Chlordane (= sum of Chlordane isomers and Oxychlordane);

— DDT (= sum of isomers op'-DDT, pp'-DDT, pp'-TDE (pp'-DDD), and pp'-DDE);

— Endosulfan (sum of α-/β-isomers and Endosulfan-sulphate);

— Endrin;

— Heptachlor (= sum of Heptachlor and β-Heptachlorepoxide);

— Hexachlorobenzene (HCB);

— Hexachlorocyclohexane isomers α-HCH (α-BHC), β-HCH (β-BHC), γ-HCH (γ-BHC or lindane);

— PCB 28, 52, 101, 138, 153 and 180 ("Indicator PCBs") and PCB 198, 209.

The method is not yet applicable to Chlorocamphene (Toxaphene), a complex mixture of polychlorinated camphenes. Chlorocamphene has a very distinctive chromatographic profile and is easily recognisable by GC/ECD. Positive identification of the toxaphene isomers can be performed by negative chemical ionisation mass spectrometry (NCI-MS), electron impact tandem mass spectrometry (EI-MSxMS) or electron impact high resolution mass spectrometry (EI-HRMS) [1], which is not within the scope of this method.

The limit of quantification for the mentioned organochlorine pesticides and PCBs is 5 ng/g in general. However, 10 ng/g applies for Heptachlor Aldrin, Endrin, Dieldrin, and Endosulfan (α-, β- and sulphate). Individual laboratories are responsible to ensure that the equipment they used will achieve these limits of quantifications.

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 6498, *Animal feeding stuffs – Preparation of test samples*