



NSAI
Standards

Irish Standard
I.S. EN 16215:2020

Animal feeding stuffs: Methods of sampling and analysis - Determination of dioxins and dioxin-like PCBs by GC/HRMS and of indicator PCBs by GC/HRMS

I.S. EN 16215:2020

Incorporating amendments/corrigenda/National Annexes issued since publication:

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NOTE: The date of any NSAI previous adoption may not match the date of its original CEN/CENELEC document.

This document is based on:

EN 16215:2020

Published:

2020-01-08

This document was published under the authority of the NSAI and comes into effect on:

2020-01-26

ICS number:

65.120

NOTE: If blank see CEN/CENELEC cover page

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National Foreword

I.S. EN 16215:2020 is the adopted Irish version of the European Document EN 16215:2020, Animal feeding stuffs: Methods of sampling and analysis - Determination of dioxins and dioxin-like PCBs by GC/HRMS and of indicator PCBs by GC/HRMS

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EUROPEAN STANDARD

EN 16215

NORME EUROPÉENNE

EUROPÄISCHE NORM

January 2020

ICS 65.120

Supersedes EN 16215:2012

English Version

**Animal feeding stuffs: Methods of sampling and analysis -
Determination of dioxins and dioxin-like PCBs by
GC/HRMS and of indicator PCBs by GC/HRMS**

Aliments des animaux : Méthodes d'échantillonnage et
d'analyse - Dosage des dioxines, des PCB de type
dioxine et des PCB indicateurs par GC/HRMS

Futtermittel - Probenahme- und
Untersuchungsverfahren - Bestimmung von Dioxinen
und dioxin-ähnlichen PCBs mittels GC/HRMS und von
Indikator-PCBs mittels GC/HRMS

This European Standard was approved by CEN on 11 November 2019.

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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 CEN-CENELEC Management Centre has the same status as the official versions.

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EN 16215:2020 (E)

European foreword

This document (EN 16215:2020) has been prepared by Technical Committee CEN/TC 327 “Animal feeding stuffs: Methods of sampling and analysis”, 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 July 2020, and conflicting national standards shall be withdrawn at the latest by July 2020.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CEN shall not be held responsible for identifying any or all such patent rights.

This document supersedes EN 16215:2012.

In comparison with the previous edition, the following technical modifications have been made:

- incorrect technical details have been corrected,
- references have been updated,
- inconsistencies were removed, and
- editorial adaptations have been made.

According to the CEN-CENELEC Internal Regulations, the national standards organisations of the following countries are bound to implement this European Standard: Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Republic of North Macedonia, Romania, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and the United Kingdom.

Introduction

The previous version of this document was developed in response to Directive 2002/32/EC of the European Parliament and of the Council of 7 May 2002 on undesirable substances in animal feed. The document provides analytical laboratories active in the field of feed analysis with guidance for the analysis of dioxins and PCBs and meets criteria as set in Commission Regulation (EC) No 152/2009 of 27 January 2009 laying down the methods of sampling and analysis for the official control of feed.

In this updated version, obvious mistakes were corrected.

WARNING — The use of this document can involve hazardous materials, operations and equipment. This standard does not purport to address all the safety problems associated with its use. It is the responsibility of the user of this European Standard to establish appropriate safety and health practices and determine the applicability of regulatory limitations prior to use.

EN 16215:2020 (E)

1 Scope

This document is applicable to the determination of polychlorinated dibenzo-p-dioxins (PCDDs), polychlorinated dibenzofurans (PCDFs), (together termed 'dioxins' (PCDD/Fs)) and dioxin-like PCBs and non-dioxin-like PCBs (dl-PCBs and ndl-PCBs) in animal feeding stuffs. Collaborative studies have been carried out. The method is suitable for the determination of dioxins, dl-PCBs and ndl-PCBs at the appropriate MRL in compound feed and ingredients e.g. oil, mineral clay. The method is applicable to samples containing trace level amounts of one or more dioxins, dioxin-like PCBs and non-dioxin-like PCBs. The limit of quantification (LOQ) is

- 0,05 pg/g (OCDD/ $F = 0,1$ pg/g) for the relevant individual congeners of dioxins/furans,
- 0,05 pg/g for non-ortho PCBs,
- 10 pg/g for mono-ortho PCBs, and
- 100 pg/g for non-dioxin-like-PCBs.

For determination of dioxins and dioxin-like PCBs, the procedure can be used as confirmatory method as defined by Commission Regulation (EC) No 152/2009 for dioxins and dl-PCB in feed [1]. Confirmatory methods as described in this standard are high-resolution gas chromatography/high resolution mass spectrometry (HRGC/HRMS) methods. If only the analysis of non-dioxin-like PCBs is required, a GC-LRMS method can be used (e.g. EN 15741 [2]) provided that appropriate analytical performance criteria are met in the relevant range for the matrix of interest.

This document is split into four modules. Each module describes a part of the whole procedure (see Figure 1 and Figure 2) to be followed:

- a) Module A: Description of standards which might be used;
- b) Module B: Description of extraction procedures;
- c) Module C: Description of clean-up procedures;
- d) Module D: GC/HRMS determination.

Each module describes a part of the whole method as well as, when applicable, alternatives which should be equivalent. Each module has to be regarded as an example. Combining modules and/or alternatives gives a highly flexible, "performance based" procedure. It is permitted to modify the method if all performance criteria laid down in Commission Regulation (EC) No 152/2009 [1] are met.

Any deviation of the described method, combination of modules needs to be recorded as part of the QA/QC procedures of accredited laboratories and should be available on request.

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