

Nederlandse norm

NEN-EN 17212

(en)

Diervoeders: Methoden voor analyse en monsterneming - Bepaling van melamine- en cyaanzuurgehalte met behulp van een vloeistofchromatografische methode met massaspectrometrische detectie (LC-MS/MS)

Animal Feeding stuffs: Methods of sampling and analysis - Determination of melamine and cyanuric acid content by liquid chromatographic method with mass spectrometric detection (LC-MS/MS)

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EUROPEAN STANDARD

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English Version

Animal Feeding stuffs - Methods of sampling and analysis - Determination of melamine and cyanuric acid content by liquid chromatographic method with mass spectrometric detection (LC-MS/MS)

Aliments des animaux - Méthodes d'échantillonnage et d'analyse - Détermination des teneurs en mélanine et en acide cyanurique par chromatographie liquide couplée à la spectrométrie de masse (LC-MS/MS)

Futtermittel - Probenahme- und Untersuchungsverfahren - Bestimmung des Gehaltes von Melamin und Cyanursäure mittels flüssigkeitschromatographischem Verfahren mit massenspektrometrischem Nachweis (LC-MS/MS)

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Orbocel
Preview

European foreword

This document (EN 17212:2019) 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of an identical text or by endorsement, at the latest by March 2020, and conflicting national standards shall be withdrawn at the latest by March 2020.

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Preview

Introduction

This document was developed in response to the demand for a reliable method to detect and quantify melamine and cyanuric acid in feeding stuffs. Both substances were illegally mixed into feed.

WARNING — The method described in this standard implies the use of reagents that pose a hazard to health. The standard does not claim to address all associated safety problems. It is the responsibility of the user of this standard to take appropriate measures for the health and safety protection of the personnel prior to use of the standard and to ensure that regulatory and legal requirements are complied with.

Forbiede
Preview

1 Scope

This document specifies a high-performance liquid chromatographic (HPLC) mass spectrometric (MS) method for screening and quantification of melamine and cyanuric acid in the concentration range between 1 mg/kg and 100 mg/kg feed.

The method is validated in an international collaborative trial for melamine in complete feed, complementary feed, feed material, milk replacer and pet food including canned pet food in the range between 1 mg/kg and 80 mg/kg with particular regard to the maximum level of 2,5 mg/kg as established by the European Commission.

Laboratory experiences have shown that the method is also applicable for cyanuric acid in the same concentration range in complete feed ($n = 7$), complementary feed ($n = 6$), feed material ($n = 7$, resp. 9), milk replacer ($n = 7$) and pet food ($n = 7$) including canned pet food.

Since the LC-MS/MS sensitivity for cyanuric acid is lower than for melamine, it has to be ensured that the LC-MS/MS system is in excellent working order. The method is applicable to feeding stuffs but not tested for pre-mixtures and feed additives.

Quantification of concentrations above 100 mg/kg is possible, but the method has to be validated by the operator.

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.

EN ISO 6497, *Animal feeding stuffs - Sampling (ISO 6497)*

EN ISO 6498:2012, *Animal feeding stuffs - Guidelines for sample preparation (ISO 6498:2012)*

EN ISO/IEC 17043:2010, *Conformity assessment — General requirements for proficiency testing (ISO/IEC 17043:2010)*

ISO 3534-2:2006, *Statistics — Vocabulary and symbols — Part 2: Applied statistics*

ISO 16577:2016, *Molecular biomarker analysis — Terms and definitions*

ISO 24276:2006, *Foodstuffs — Methods of analysis for the detection of genetically modified organisms and derived products — General requirements and definitions*

ISO/IEC GUIDE 99:2007, *International vocabulary of metrology — Basic and general concepts and associated terms (VIM)*

3 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

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>

3.1

calibration

complete set of operations which estimates under specified conditions the calibration function from observations of the response variable obtained on reference states

[SOURCE: ISO 3534-2:2006, 3.5.13]

3.2

calibration function

functional relationship between the expected value of the response variable and the value of the net state variable

[SOURCE: ISO 3534-2:2006, 3.5.12]

3.3

canned pet food

feed product for pets which has been processed, packaged, sealed and sterilized for preservation in cans or similar containers

[SOURCE: EN ISO 6498:2010, 2.3.15]

3.4

collaborative trial

interlaboratory comparisons

organization, performance and evaluation of measurements or tests on the same or similar items by two or more laboratories in accordance with predetermined conditions

Note 1 to entry: Interlaboratory comparisons are widely used for a number of purposes and their use is increasing internationally. Typical purposes for interlaboratory comparisons include the evaluation of the performance characteristics of a method – often described as collaborative trials [SOURCE: EN ISO/IEC 17043:2010, Introduction].

[SOURCE: EN ISO/IEC 17043:2010, 3.4]

3.5

complementary feed

compound feed which has a high content of certain substances but which, by reason of its composition, is sufficient for a daily ration only if used in combination with other feed

[SOURCE: Regulation (EC) No 767/2009 (Article 3, 1j)] [1]

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