Loomasööt. Dekokvinaadi määramine kõrgefektiivse vedelikkromatograafiaga (HPLC) ja fluorestsentsi avastamisega

Animal feeding stuffs - Determination of decoquinate by HPLC with fluorescence detection

EESTI STANDARDIKESKUS
ESTONIAN CENTRE FOR STANDARDISATION

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NATIONAL FOREWORD

See Eesti standard EVS-EN 16162:2012 sisaldab Euroopa standardi EN 16162:2012 ingliskeelset teksti.	This Estonian standard EVS-EN 16162:2012 consists of the English text of the European standard EN 16162:2012.
Standard on jõustunud sellekohase teate avaldamisega EVS Teatajas.	This standard has been endorsed with a notification published in the official bulletin of the Estonian Centre for Standardisation.
Euroopa standardimisorganisatsioonid on teinud Euroopa standardi rahvuslikele liikmetele kättesaadavaks 21.03.2012.	Date of Availability of the European standard is 21.03.2012.
Standard on kättesaadav Eesti Standardikeskusest.	The standard is available from the Estonian Centre for Standardisation.

Tagasisidet standardi sisu kohta on võimalik edastada, kasutades EVS-i veebilehel asuvat tagasiside vormi või saates e-kirja meiliaadressile standardiosakond@evs.ee.

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English Version

Animal feeding stuffs - Determination of decoquinate by HPLC with fluorescence detection

Aliments des animaux - Détermination du décoquinate par Chromatographie Liquide Haute Performance avec détection fluorimétrique

Futtermittel - Bestimmung von Decoquinat mit Hochleistungs-Flüssigchromatographie (HPLC) und Fluoreszenzdetektion

This European Standard was approved by CEN on 4 February 2012.

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COMITÉ EUROPÉEN DE NORMALISATION
EUROPÄISCHES KOMITEE FÜR NORMUNG

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Foreword

This document (EN 16162:2012) 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of an identical text or by endorsement, at the latest by September 2012, and conflicting national standards shall be withdrawn at the latest by September 2012.

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Introduction

This European Standard has been developed to quantify decoquinate in feeding stuffs to enable the European Commission to control the content of animal feed products. However, this method can also be used to evaluate the cross contamination from medicated feed to feedstuff.

1 Scope

This European Standard specifies a method for the determination of decoquinate. This high-performance liquid chromatographic (HPLC) method with a fluorescence detection is applicable to the quantification of decoquinate content in complete and complementary compound feeds, medicated feeds, semi-liquid feeds, premixtures and feed additives.

The method was fully validated from LOQ to 60 000 mg/kg on different matrices during an international collaborative study [11], especially on complete compound feeds for poultry, at trace contamination level of 3 mg/kg and at European authorized level of 20 mg/kg to 40 mg/kg [12].

The limit of detection is between 0,1 mg/kg and 0,3 mg/kg and the limit of quantification is around 0,5 mg/kg. These limits were validated during the collaborative study [11], from results on the blank feed. Lower limits of detection or quantification could be reached but a single laboratory validation is then requested.

2 Normative references

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

prEN ISO 6498, *Animal feeding stuffs — Guidelines for sample preparation (ISO/DIS 6498)*

3 Principle

Decoquinate is extracted from samples with a solution of 1 % calcium chloride in methanol using mechanical shaking or stirring for 60 min. After centrifugation or filtration, an aliquot is, if necessary, diluted with the extraction solvent and analysed by reversed phase HPLC with fluorescence detection. Positive trace level samples should be confirmed by HPLC analysis using an alternate excitation wavelength.

4 Reagents

Use only reagents of recognized analytical grade, unless otherwise specified, and distilled or demineralised water or water of equivalent purity.

WARNING — This method requires the handling of hazardous substances. It is recommended to use various regulations for potentially hazardous chemicals. Organisational, technical and personal safety has to be observed.

4.1 Methanol, HPLC grade.

4.2 Methanol, technical grade.

4.3 Calcium chloride anhydrous or Calcium chloride dihydrate, each > 99 % purity.

4.4 HPLC dilution solution.

Dissolve a mass of calcium salt (4.3) equivalent to 10 g of calcium chloride anhydrous in methanol (4.1). Mix well and make up to 1 000 ml.

4.5 Extraction solvent.