

Loomasööt. Fumonisiin B1 ja B2 summa määramine segasöödas imuunafiinsuskolonnis ja RP-HPLC puhastamisega koos fluorestsentsi avastamisega eel- või pärast kolonnderivatsiooni

Animal feeding stuffs - Determination of the Sum of Fumonisin B1 & B2 in compound animal feed with immunoaffinity clean-up and RP-HPLC with fluorescence detection after pre- or postcolumn derivatisation

EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

See Eesti standard EVS-EN 16006:2011 sisaldab Euroopa standardi EN 16006:2011 ingliskeelset teksti.	This Estonian standard EVS-EN 16006:2011 consists of the English text of the European standard EN 16006:2011.
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 03.08.2011.	Date of Availability of the European standard is 03.08.2011.
Standard on kättesaadav Eesti Standardikeskusest.	The standard is available from the Estonian Centre for Standardisation.

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English Version

Animal feeding stuffs - Determination of the Sum of Fumonisin B1 & B2 in compound animal feed with immunoaffinity clean-up and RP-HPLC with fluorescence detection after pre- or post-column derivatisation

Aliments pour animaux - Dosage de la somme des fumonisines B1 et B2 dans les aliments pour animaux avec purification par immuno-affinité et RP-HPLC avec détection par fluorescence après dérivation pré- ou post-colonne

Futtermittel - Bestimmung der Summe der Fumonisine B1 und B2 in Mischfutter durch Reinigung an einer Immunoaffinitätssäule und RP-HPLC mit Fluoreszenzdetektion nach Vor- oder Nachsäulenderivatisierung

This European Standard was approved by CEN on 25 June 2011.

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Foreword

This document (EN 16006:2011) 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of an identical text or by endorsement, at the latest by February 2012, and conflicting national standards shall be withdrawn at the latest by February 2012.

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

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

WARNING — Fumonisin is toxic. Gloves and safety glasses should be worn at all times and all standard and sample preparation stages should be carried out in a fume cupboard.

According to the CEN/CENELEC Internal Regulations, the national standards organizations 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, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland and the United Kingdom.

1 Scope

This European Standard is applicable to the determination of Fumonisin B₁ & B₂ (FB₁ & FB₂) in compound animal feed at levels starting from 3 mg/kg up to 16 mg/kg.

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.

EN ISO 835, *Laboratory glassware — Graduated pipettes (ISO 835:2007)*

EN ISO 1042, *Laboratory glassware — One-mark volumetric flasks (ISO 1042:1998)*

EN ISO 3696, *Water for analytical laboratory use — Specification and test methods (ISO 3696:1987)*

3 Principle

FB₁ and FB₂ are extracted from the test material with a solution of 50% methanol in phosphate-buffered saline (PBS). The extract is then diluted with PBS and cleaned up using immunoaffinity columns (IAC). FB₁ and FB₂ are eluted from the IAC using methanol and then water. After volume adjustment, the eluate is directly injected into the HPLC and FB₁ and FB₂ are detected by their fluorescence after either pre- or post column derivatisation.

4 Reagents and materials

During the analysis, unless otherwise stated, use only reagents of recognized analytical grade. Solvents shall be of HPLC or better quality and only double-distilled water or water of at least grade 2 as defined in EN ISO 3696 shall be used.

4.1 Double distilled or deionised water (EN ISO 3696)

4.2 Methanol, CH₃OH

WARNING — Methanol is hazardous and handling should be carried out inside a fume cupboard. Appropriate safety equipment (lab coat, goggles, gloves) should be worn.

4.3 Acetonitrile, CH₃CN

WARNING — Acetonitrile is hazardous and handling should be carried out inside a fume cupboard. Appropriate safety equipment (lab coat, goggles, gloves) should be worn.