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# Animal feeding stuffs - Determination of aflatoxin B1

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#### EESTI STANDARDI EESSÕNA

#### NATIONAL FOREWORD

<ul> <li>17375:2006 sisaldab Euroopa standardi EN ISO 17375:2006 ingliskeelset teksti.</li> <li>Käesolev dokument on jõustatud 30.08.2006 ja selle kohta on avaldatud teade Eesti standardiorganisatsiooni ametlikus väljaandes.</li> <li>Standard on kättesaadav Eesti</li> <li>17375:2006 consists of the English text of the European standard EN ISO 17375:2006.</li> <li>This document is endorsed on 30.08.2006 with the notification being published in the official publication of the Estonian national standardisation organisation.</li> <li>The standard is available from Estonian</li> </ul>		
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# **EUROPEAN STANDARD** NORME EUROPÉENNE **EUROPÄISCHE NORM**

# **EN ISO 17375**

June 2006

ICS 65,120

**English Version** 

#### Animal feeding stuffs - Determination of aflatoxin B1 (ISO 17375:2006)

Aliments des animaux - Dosage de l'aflatoxine B1 (ISO 17375:2006)

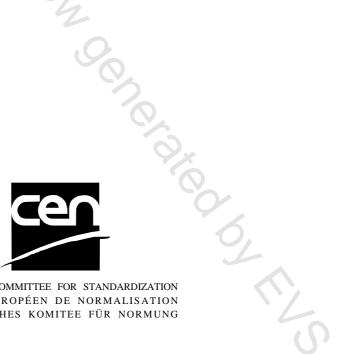
Futtermittel - Bestimmung von Aflatoxin B1 (ISO 17375:2006)

This European Standard was approved by CEN on 12 May 2006.

CEN members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this European Standard the status of a national standard without any alteration. Up-to-date lists and bibliographical references concerning such national standards may be obtained on application to the Central Secretariat or to any CEN member.

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 Central Secretariat has the same status as the official versions.

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EUROPEAN COMMITTEE FOR STANDARDIZATION COMITÉ EUROPÉEN DE NORMALISATION EUROPÄISCHES KOMITEE FÜR NORMUNG

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Ref. No. EN ISO 17375:2006: E

#### Foreword

This document (EN ISO 17375:2006) has been prepared by Technical Committee ISO/TC 34 "Agricultural food products" in collaboration with 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 December 2006, and conflicting national standards shall be withdrawn at the latest by December 2006.

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

# Endorsement notice

pprov. The text of ISO 17375:2006 has been approved by CEN as EN ISO 17375:2006 without any modifications.

# **INTERNATIONAL STANDARD**



First edition 2006-06-01

# Animal feeding stuffs — Determination of aflatoxin B<sub>1</sub>

, ments . Aliments des animaux — Dosage de l'aflatoxine B<sub>1</sub>



Reference number ISO 17375:2006(E)

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# Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

International Standards are drafted in accordance with the rules given in the ISO/IEC Directives, Part 2.

The main task of technical committees is to prepare International Standards. Draft International Standards adopted by the technical committees are circulated to the member bodies for voting. Publication as an International Standard requires approval by at least 75 % of the member bodies casting a vote.

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

ISO 17375 was prepared by Technical Committee ISO/TC 34, Food products, Subcommittee SC 10, Animal feeding stuffs.

## Animal feeding stuffs — Determination of aflatoxin B<sub>1</sub>

#### 1 Scope

This International Standard specifies a method for the determination of aflatoxin  $B_1$  in animal feeding stuffs using high-performance liquid chromatography with post-column derivatization.

It is applicable to animal feeding stuffs with a fat content of up to 50 %.

The limit of quantification of this method has been demonstrated to be better than 0,5  $\mu$ g/kg for aflatoxin B<sub>1</sub> for a signal-to-noise ratio of 6.

NOTE The method is based on that given in Reference [1].

#### 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 3696:1987, Water for analytical laboratory use — Specification and test methods

#### 3 Principle

A test portion is extracted with a solvent solution (acetone/water). The sample extract is filtered, diluted with water or phosphate-buffered saline to a specified solvent concentration. A test portion is applied on an immunoaffinity column (IAC) containing antibodies specific to aflatoxin  $B_1$ . The aflatoxin  $B_1$  is removed from the IAC with neat methanol, and then quantified by reverse-phase high-performance liquid chromatography (RP-HPLC) with post-column derivatization (PCD) involving bromination. The PCD is achieved with either electrochemically generated bromine or with pyridinium hydrobromide perbromide (PBPB) followed by fluorescence detection.

#### 4 Reagents

Use only reagents of recognized analytical grade, unless otherwise specified.

# WARNING — This method requires the use of toxic inflammable liquids such as acetone, methanol and acetonitrile. Avoid contact and keep away from heat, sparks or open flames.

NOTE Decontamination procedures for laboratory wastes <sup>[2],[3]</sup> have been developed and validated by the International Agency for Research on Cancer (WHO).

- 4.1 Water, complying with grade 3 in accordance with ISO 3696:1987.
- 4.2 Phosphate buffer saline (PBS), pH 7,4.