



SLOVENSKI STANDARD
SIST EN ISO 17375:2006

01-september-2006

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

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

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

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EUROPEAN STANDARD
NORME EUROPÉENNE
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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.

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

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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of an identical text or by endorsement, at the latest by December 2006, and conflicting national standards shall be withdrawn at the latest by December 2006.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, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland and United Kingdom.

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

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INTERNATIONAL
STANDARD

ISO
17375

First edition
2006-06-01

**Animal feeding stuffs — Determination
of aflatoxin B₁**

Aliments des animaux — Dosage de l'aflatoxine B₁

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ISO 17375:2006(E)**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*.

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Animal feeding stuffs — Determination of aflatoxin B₁

1 Scope

This International Standard specifies a method for the determination of aflatoxin B₁ 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 µg/kg for aflatoxin B₁ 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*
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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 B₁. The aflatoxin B₁ 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^{[2],[3]} 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.