

**Loomasööt. Deoksünivalenooli määramine söötades.  
HPLC meetod koos UV detektoriga ja puhastamisega  
immunoafiinsuskolonnis**

**Animal feeding stuffs - Determination of Deoxynivalenol  
in animal feed - HPLC method with UV detection and  
immunoaffinity column clean-up**

## EESTI STANDARDI EESSÕNA

## NATIONAL FOREWORD

See Eesti standard EVS-EN 15791:2009 sisaldab Euroopa standardi EN 15791:2009 ingliskeelset teksti.	This Estonian standard EVS-EN 15791:2009 consists of the English text of the European standard EN 15791:2009.
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 02.09.2009.	Date of Availability of the European standard is 02.09.2009.
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ICS 65.120

English Version

## Foodstuffs - Determination of Deoxynivalenol in animal feed - HPLC method with immunoaffinity column clean-up

Produits alimentaires - Dosage du désoxynivaléol dans les  
aliments pour animaux - Méthode de chromatographie  
liquide haute performance avec détection UV et purification  
sur colonne d'immuno-affinité

Futtermittel - Bestimmung von Deoxynivalenol in  
Futtermitteln - HPLC-Verfahren mit Reinigung an einer  
Immunoaffinitätssäule

This European Standard was approved by CEN on 1 August 2009.

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## Foreword

This document (EN 15791:2009) 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of an identical text or by endorsement, at the latest by March 2010, and conflicting national standards shall be withdrawn at the latest by March 2010.

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## 1 Scope

This Standard is applicable to the determination of deoxynivalenol (DON) in animal compound feed at concentrations of 150 µg/kg up to at least 4 000 µg/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 3696, *Water for analytical laboratory use - Specification and test methods (ISO 3696:1987)*

## 3 Principle

Deoxynivalenol (DON) is extracted from the commodity using water. The aqueous extract is then cleaned up with an immunoaffinity column to remove impurities from the sample. Subsequently DON is quantitatively determined by HPLC with UV detection.

## 4 Reagents

During the analysis, unless otherwise stated, use only reagents of recognised analytical grade and only double-distilled water or water of grade 1 as defined in EN ISO 3696. Solvents shall be of quality for HPLC analysis.

### 4.1 Acetonitrile

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

### 4.2 Deoxynivalenol (DON), with a minimum purity of 97 %

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

### 4.3 Methanol

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

### 4.4 Glacial acetic acid

**WARNING — Glacial acetic acid is hazardous and handling shall be carried out inside a fume cupboard. Appropriate safety equipment (lab coat, goggles, gloves) shall be worn.**

### 4.5 Mobile Phase

Mix 15 parts per volume of methanol (4.3) with 84,9 parts per volume of water and 0,1 parts of glacial acetic acid (4.4). The exact amount of methanol used and whether acetic acid will have to be used depends on the HPLC column chosen for analysis and must be adjusted if necessary. Degas this solution before use.