Foodstuffs - Determination of ochratoxin A in wine and beer - HPLC method with clean-up on a immunoaffinity column

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EESTI STANDARDIKESKUS

EESTI STANDARDI EESSÕNA

Käesolev Eesti standard EVS-EN 14133:2003 sisaldab Euroopa standardi EN 14133:2003 + AC:2006 ingliskeelset teksti. Käesolev dokument on jõustatud 14.08.2003 ja selle kohta on avaldatud teade Eesti standardiorganisatsiooni ametlikus väljaandes. Standard on kättesaadav Eesti standardiorganisatsioonist.	This Estonian standard EVS-EN 14133:2003 consists of the English text of the European standard EN 14133:2003 + AC:2006. This document is endorsed on 14.08.2003 with the notification being published in the official publication of the Estonian national standardisation organisation. The standard is available from Estonian standardisation organisation.

NATIONAL FOREWORD

Käsitlusala: This European Standard specifies a method for the determination of ochratoxin A in wine and beer using immunoaffinity column clean up and high performance liquid chromatography (HPLC)	**Scope:** This European Standard specifies a method for the determination of ochratoxin A in wine and beer using immunoaffinity column clean up and high performance liquid chromatography (HPLC)

ICS 67.160.10

Võtmesõnad: c, chemical analysis and testin, cleaning effect, determination, determination of content, food inspection, food products, grain crops, high performance liquid chromatography, hplc, liquid chromatography, methods of analysis, mycotoxin, ochratoxin, toxin, wines

EUROPEAN STANDARD

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English version

Foodstuffs - Determination of ochratoxin A in wine and beer - HPLC method with immunoaffinity column clean-up

Produits alimentaires - Dosage de l'ochratoxine A présente dans le vin et la bière - Méthode par CLHP et par purification en colonne d'immunoafinité

Lebensmittel - Bestimmung von Ochratoxin A in Wein und Bier - HPLC-Verfahren mit Reinigung an einer Immunoaffinitätssäule

This European Standard was approved by CEN on 16 May 2003.

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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 Management Centre has the same status as the official versions.

CEN members are the national standards bodies of Austria, Belgium, Czech Republic, Denmark, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Luxembourg, Malta, Netherlands, Norway, Portugal, Slovakia, Spain, Sweden, Switzerland and United Kingdom.

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Foreword

This document (EN 14133:2003) has been prepared by Technical Committee CEN/TC 275 "Food analysis - Horizontal methods", the secretariat of which is held by DIN.

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 January 2004, and conflicting national standards shall be withdrawn at the latest by January 2004.

Annex A is informative.

WARNING — Ochratoxin A is a potent nephrotoxin and liver toxin and has been reported to have immunosuppressant properties. it is classified by the International Agency for Research on Cancer (IARC) as possibly carcinogenic to humans (Group 2B). Acetonitrile is hazardous. Toluene is highly flammable and harmful. Observe appropriate safety precautions for handling such compounds. 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. Operation outside the fume cupboard, such as measurement of standards by UV spectrometer, shall be performed with the standard in closed containers. Decontamination procedures for laboratory wastes have been reported by the International Agency for Research on Cancer (IARC), see [1].

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

1 Scope

This European Standard specifies a method for the determination of ochratoxin A content in wine and beer using immunoaffinity column clean up and high performance liquid chromatography (HPLC), see [2], [3].

This method has been validated in an interlaboratory study according to AOAC International Guidelines [4] for collaborative study procedures to validate characteristics of a method of analysis for the determination of ochratoxin A in wine and beer via the analysis of naturally contaminated and spiked samples of wine and beer at levels ranging from 0,1 ng/ml to 3 ng/ml.

2 Normative references

This European Standard incorporates by dated or undated reference, provisions from other publications. These normative references are cited at the appropriate places in the text and the publications are listed hereafter. For dated references, subsequent amendments to or revisions of any of these publications apply to this European Standard only when incorporated in it by amendment or revision. For undated references the latest edition of the publication referred to applies (including amendments).

EN ISO 3696:1995, *Water for analytical laboratory use — Specification and test methods (ISO 3696:1987).*

3 Principle

Wine and beer samples are diluted with a solution containing polyethylene glycol (PEG) and sodium hydrogen carbonate, filtered and cleaned up by immunoaffinity column. Ochratoxin A is eluted with methanol and quantified by reversed-phase HPLC with fluorescence detection.

NOTE The use of PEG is essential to increase ochratoxin A recoveries and to reduce the number and intensity of other chromatographic peaks.