

Paper and board - Paper and board intended to come into contact with foodstuffs - Determination of cadmium and lead in an aqueous extract

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EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

<p>Käesolev Eesti standard EVS-EN 12498:2005 sisaldab Euroopa standardi EN 12498:2005 ingliskeelset teksti.</p> <p>Käesolev dokument on jõustatud 29.09.2005 ja selle kohta on avaldatud teade Eesti standardiorganisatsiooni ametlikus väljaandes.</p> <p>Standard on kättesaadav Eesti standardiorganisatsioonist.</p>	<p>This Estonian standard EVS-EN 12498:2005 consists of the English text of the European standard EN 12498:2005.</p> <p>This document is endorsed on 29.09.2005 with the notification being published in the official publication of the Estonian national standardisation organisation.</p> <p>The standard is available from Estonian standardisation organisation.</p>
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<p>Käsitlusala: This European Standard is one in a series of Standards for the determination of heavy metals in an aqueous extract of paper or board intended for contact with food. This European Standard specifies the test method for the determination of cadmium and lead in an aqueous extract.</p>	<p>Scope: This European Standard is one in a series of Standards for the determination of heavy metals in an aqueous extract of paper or board intended for contact with food. This European Standard specifies the test method for the determination of cadmium and lead in an aqueous extract.</p>
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ICS 67.250, 85.060

Võtmesõnad:

English Version

Paper and board - Paper and board intended to come into
contact with foodstuffs - Determination of cadmium and lead in
an aqueous extract

Papier et carton - Papiers et cartons destinés à entrer en
contact avec les denrées alimentaires - Détermination du
cadmium et du plomb dans un extrait aqueux

Papier und Pappe - Papier und Pappe für den Kontakt mit
Lebensmitteln - Bestimmung von Cadmium und Blei in
einem wässrigen Extrakt

This European Standard was approved by CEN on 27 June 2005.

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.

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



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Foreword

This European Standard (EN 12498:2005) has been prepared by Technical Committee CEN/TC 172 "Pulp, paper and board", 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 February 2006, and conflicting national standards shall be withdrawn at the latest by February 2006.

This European Standard supersedes ENV 12498:1997. With regard to ENV 12498:1997, the following changes have been made:

- a) introduction of the "Inductively coupled plasma emission spectroscopy (ICP)";
- b) deletion of the chromium determination;
- c) addition of the clause "Precision";
- d) editorial updating.

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, Slovakia, Slovenia, Spain, Sweden, Switzerland and United Kingdom.

1 Scope

This European Standard is one in a series of Standards for the determination of heavy metals in an aqueous extract of paper or board intended for contact with food. This European Standard specifies the test method for the determination of cadmium and lead in an aqueous extract.

It is applicable to paper and paperboard with extractable metal contents exceeding

- 0,1 mg per kg for cadmium;
- 0,6 mg per kg for lead.

NOTE 1 The above limits of determination are achieved by multiplying the actual limits existing today or proposed in Europe by 0,2.

NOTE 2 Metal content levels below those given can be measured by this European Standard if very sensitive equipment is available and if all other laboratory conditions fulfil the requirements for trace element analysis.

2 Normative references

The following referenced documents are indispensable for the application of this European Standard. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

EN 645, *Paper and board intended to come into contact with foodstuffs — Preparation of a cold water extract*

EN 647, *Paper and board intended to come into contact with foodstuffs — Preparation of a hot water extract*

3 Principle

An aliquot portion from the stabilized cold water (see EN 645) or stabilized hot water extract (see EN 647) (see Clause 6) is analysed by atomic absorption spectrometry (AAS) using a graphite tube furnace or inductively coupled plasma emission spectroscopy (ICP).

4 Reagents

4.1 General

All reagents and the water used shall be suitable for trace element analysis.

Store the solutions in high-density polyethylene/polypropylene bottles.

4.2 Nitric acid (HNO₃), 65 % (*d* = 1,42)

4.2.1 Nitric acid (4.2), diluted 1 : 1 (V/V) with water

4.2.2 Nitric acid (4.2), diluted to 1 % (V/V) with water

4.3 Hydrochloric acid (HCl), 36 % (*d* = 1,19)

4.4 Hydrochloric acid (HCl), 0,3 mol/l solution