

**Pulp, paper and board intended to come into contact with foodstuffs - Determination of 7 specified polychlorinated biphenyls (PCB)**

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## EESTI STANDARDI EESSÕNA

## NATIONAL FOREWORD

Käesolev Eesti standard EVS-EN ISO 15318:2000 sisaldab Euroopa standardi EN ISO 15318:1999 ingliskeelset teksti.

Käesolev dokument on jõustatud 17.03.2000 ja selle kohta on avaldatud teade Eesti standardiorganisatsiooni ametlikus väljaandes.

Standard on kättesaadav Eesti standardiorganisatsioonist.

This Estonian standard EVS-EN ISO 15318:2000 consists of the English text of the European standard EN ISO 15318:1999.

This document is endorsed on 17.03.2000 with the notification being published in the official publication of the Estonian national standardisation organisation.

The standard is available from Estonian standardisation organisation.

### Käsitlusala:

This standard gives guidance on a test method which permits the determination of seven specified PCBs in pulp, paper and board.

### Scope:

This standard gives guidance on a test method which permits the determination of seven specified PCBs in pulp, paper and board.

**ICS** 67.250, 85.040, 85.060

**Võtmesõnad:**

**English version**

**Pulp, paper and board**

Determination of 7 specified polychlorinated biphenyls (PCB)  
(ISO 15318 : 1999)

Pâtes, papiers et cartons – Détermination de 7 polychlorobiphényles (PCB) spécifiés (ISO 15318 : 1999)

Zellstoff, Papier und Pappe – Bestimmung von 7 ausgewählten polychlorinierten Biphenylen (PCB) (ISO 15318 : 1999)

This European Standard was approved by CEN on 1999-06-25.

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.

The European Standards exist 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, the Czech Republic, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, the Netherlands, Norway, Portugal, Spain, Sweden, Switzerland, and the United Kingdom.

**CEN**

European Committee for Standardization  
Comité Européen de Normalisation  
Europäisches Komitee für Normung

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## Foreword

The text of EN ISO 15318:1999 has been prepared by Technical Committee CEN/TC 172 "Pulp, paper and board", the secretariat of which is held by DIN, in collaboration with Technical Committee ISO/TC 6 "Paper, board and pulps".

This European Standard supersedes ENV 1798:1995.

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 2000, and conflicting national standards shall be withdrawn at the latest by March 2000.

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, Iceland, Ireland, Italy, Luxembourg, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and the United Kingdom.

With regard to ENV 1798 : 1995-07 the following changes have been made:

- a) extension of the scope to "pulp";
- b) addition of detailed information on "precision";
- c) transformation from a European Prestandard (ENV) to a European Standard (EN);
- d) editorial updating.

## Introduction

CEN/TC 172 has decided to publish this test method as a European Standard (EN) because the validation of the test method on the level of the existing limit for PCB (2 ppm) was until now impossible due to the fact that there was no reference material with this level of PCB and all samples tested have a PCB content on the level of the detection limit (about 5 µg/kg of the congeners).

Prior to discontinuance of its use in 1971 a commercial PCB had been an ingredient in carbonless copy paper. The presence of these copy papers in waste paper can lead to contamination of recycled pulp, paper and board products with PCB.

The PCB contaminant has the same congener pattern as the PCB used earlier in carbonless copy papers and this identifies the source of PCB contamination.

In this method, seven specified PCB congeners (numbers 18, 28, 52, 101, 138, 153 and 180) are determined individually. Because the source of the PCB contamination can be identified from the congener pattern, the total PCB content of the paper may be estimated from these seven congeners.

For routine analyses, the spiking procedure of 5.10.5 and 7.4.4 may be omitted, provided that the result obtained from the analysis is less than 50 % of any present limit. This will require modification of clause 8 to take account of these changes. The use of this modification shall be stated in the test report. In the event of any dispute the full method shall be used.

### **Warning:**

The use of this European Standard may involve hazardous materials, operations and equipment. It does not address all the safety problems associated with its use. It is the responsibility of the user of this European Standard to establish appropriate safety and health practices and determine the applicability of safety regulations prior to use.

## 1 Scope

This European Standard gives guidance on a test method which permits the determination of seven specified PCBs in pulp, paper and board. Annex A gives a procedure for estimating the total content of PCB from the congener content.

## 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 Standard only when incorporated in it by amendment or revision. For undated references the latest edition of the publication referred to applies.

EN ISO 186

Paper and board - Sampling to determine average quality (ISO 186 : 1994)

EN 27213

Pulps – Sampling for testing (ISO 7213 : 1981)

## 3 Principle

The test material is extracted with boiling ethanolic or methanolic potassium hydroxide solution. An aliquot of the extract is mixed with water and subjected to liquid-solid partitioning on a disposable C<sub>18</sub> solid phase extraction cartridge followed by elution with hexane or ISO-octane.