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CEN/TS 17497

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English Version

Pulp, paper and paperboard - Determination of bisphenol A in extracts from paper and paperboard

Cellulose, papier et carton - Détermination des bisphénol A dans des extraits de papier et carton

Zellstoff, Papier und Karton - Bestimmung von Bisphenol A in Papier- und Kartonextrakten

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EUROPEAN COMMITTEE FOR STANDARDIZATION
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CEN-CENELEC Management Centre: Rue de la Science 23, B-1040 Brussels

Ref. No. CEN/TS 17497:2020 E

Contents

Page

European foreword

This document (CEN/TS 17497:2020) has been prepared by Technical Committee CEN/TC 172 “Pulp, paper and board”, the secretariat of which is held by DIN.

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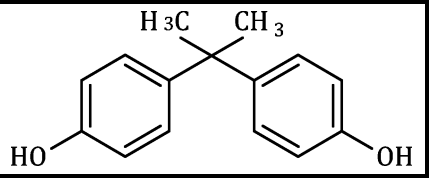
1 Scope

This document specifies an analytical test method for the determination of bisphenol A in solvent extracts of paper and board materials and articles intended to come into contact with foodstuffs using a high performance liquid chromatograph coupled to a fluorescence detector (HPLC-FLD).

This method can be applied to determine bisphenol A (see Table 1) in concentrations ranging from 0,025 mg/l to 2 mg/l in the solvent extracts, corresponding to 0,05 mg/kg to 4 mg/kg paper and board. The measurement range can easily be extended up to 40 mg/kg by adjusting the concentration factor of the solvent extract.

Table 1 — Bisphenol A

Name	Abbreviation	Formula	CAS N°	Structure
Bisphenol A	BPA	$C_{15}H_{16}O_2$	80–05–7	

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements 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 186, *Paper and board - Sampling to determine average quality (ISO 186)*

EN ISO 536, *Paper and board - Determination of grammage (ISO 536)*

EN ISO 638, *Paper, board and pulps - Determination of dry matter content - Oven-drying method (ISO 638)*

3 Terms and definitions

No terms and definitions are listed in this document.

ISO and IEC maintain terminological databases for use in standardization at the following addresses:

— IEC Electropedia: available at http://www.electropedia.org/

— ISO Online browsing platform: available at https://www.iso.org/obp

4 Principle

To assess the content of bisphenol A in paper and board materials, solvent extracts of these are prepared and bisphenol A is determined in the concentrated extracts by HPLC-FLD.

Also, liquid chromatography-mass spectrometry (LC-MS) can be used as an alternative method.