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Responsible committee: GEL/111 Electrotechnical environment committee

Interested committees:

Title: BS IEC 62321-13 Determination of certain substances in electrotechnical products

Part 13: Bisphenol A in plastics by liquid chromatography-diode array detection (LC-DAD), liquid chromatography-mass spectrometry (LCMS) and liquid chromatography-tandem mass spectrometry (LC-MS/MS)

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- iii) requires additional national guidance or information

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Introduction

This draft standard is based on national and international discussions. Your comments on this draft are invited and will assist in the preparation of the consequent standard.

For international standards, comments will be reviewed by the relevant UK national committee before sending the consensus UK vote and comments to the international committee, which will then decide appropriate action. If the international standard is approved, it is usual for the text to be published as a British Standard.

For national standards, comments will be reviewed by the relevant UK national committee and the resulting standards published as a British Standard.

UK Vote

Please indicate whether you consider the UK should submit a negative (with supporting technical reasons) or positive vote on this draft. Please indicate if you are aware of any reason why this draft standard should not be published as a British Standard.

Submission of Comments

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Template for comments and secretariat observations

Date: xx/xx/20xx	Document: ISO/DIS xxxx
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1	2	(3)	4	5	(6)	7
MB	Clause No./ Subclause No./Annex (e.g. 3.1)	Paragraph/Figure/ Table/Note	Type of comment	Commend (justification for change) by the MB	Proposed change by the MB	Secretariat observations on each comment submitted
	3.1	Definition 1	ed	Definition is ambiguous and needs clarifying.	Amend to read '...so that the mains connector to which no connection...'	
	6.4	Paragraph 2	te	The use of the UV photometer as an alternative cannot be supported as serious problems have been encountered in its use in the UK.	Delete reference to UV photometer.	



111/685/CD

COMMITTEE DRAFT (CD)

PROJECT NUMBER:

IEC 62321-13 ED1

DATE OF CIRCULATION:

2022-12-02

CLOSING DATE FOR COMMENTS:

2023-02-24

SUPERSEDES DOCUMENTS:

111/563/NP, 111/581/RVN

IEC TC 111 : ENVIRONMENTAL STANDARDIZATION FOR ELECTRICAL AND ELECTRONIC PRODUCTS AND SYSTEMS

SECRETARIAT:

Italy

SECRETARY:

Mr Alfonso Sturchio

OF INTEREST TO THE FOLLOWING COMMITTEES:

PROPOSED HORIZONTAL STANDARD:



Other TC/SCs are requested to indicate their interest, if any, in this CD to the secretary.

FUNCTIONS CONCERNED:

☐ EMC

☒ ENVIRONMENT

☐ QUALITY ASSURANCE

☐ SAFETY

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Recipients of this document are invited to submit, with their comments, notification of

- any relevant patent rights of which they are aware and to provide supporting documentation,
- any local regulations or technical reasons that may exist and should be considered should this proposal proceed, recognizing that failure to address such requirements could result in the need for new or existing "in some countries" clauses. See AC/22/2007.

TITLE:

Determination of certain substances in electrotechnical products – Part 13: Bisphenol A in plastics by liquid chromatography-diode array detection (LC-DAD), liquid chromatography-mass spectrometry (LC-MS) and liquid chromatography-tandem mass spectrometry (LC-MS/MS)

NOTE FROM TC/SC OFFICERS:

The CD is prepared by IEC TC111 WG3, which was approved by TC111 WG3 34th meeting held on June 7 and 8, 2022

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DETERMINATION OF CERTAIN SUBSTANCES IN ELECTROTECHNICAL PRODUCTS –

Part 13: Bisphenol A in plastics by liquid chromatography-diode array detector (LC-DAD), liquid chromatography-mass spectrometry (LC-MS) and liquid chromatography-tandem mass spectrometry (LC/MS-MS)

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The text of this International Standard is based on the following documents:

Draft	Report on voting
XX/XX/CD	XX/XX/RVD

Full information on the voting for its approval can be found in the report on voting indicated in the above table.

The language used for the development of this International Standard is English.

90 This document was drafted in accordance with ISO/IEC Directives, Part 2, and developed in accordance
91 with ISO/IEC Directives, Part 1 and ISO/IEC Directives, IEC Supplement, available at
92 www.iec.ch/members_experts/refdocs. The main document types developed by IEC are described in
93 greater detail at www.iec.ch/standardsdev/publications.

94 The committee has decided that the contents of this document will remain unchanged until the stability
95 date indicated on the IEC website under "<http://webstore.iec.ch>" in the data related to the specific
96 document. At this date, the document will be

- 97 • reconfirmed,
- 98 • withdrawn,
- 99 • replaced by a revised edition, or
- 100 • amended.

INTRODUCTION

101

102 The widespread use of electrotechnical products has drawn increased attention to their impact on the
103 environment. In many countries this has resulted in the adaptation of regulations affecting wastes,
104 substances and energy use of electrotechnical products.

105 The use of certain substances (e.g. lead (Pb), cadmium (Cd), mercury (Hg) and polybrominated diphenyl
106 ethers (PBDEs)), phthalates in electrical products is a source of concern in current and proposed
107 regional legislation.

108 The purpose of the IEC 62321 series is therefore to provide test methods that will allow the
109 electrotechnical industry to determine the levels of certain substances of concern in electrotechnical
110 products on a consistent global basis.

111 This first edition of IEC 62321-13 introduces a new subject covering Bisphenol A in the IEC 62321 series.

112 **WARNING — Persons using this International Standard should be familiar with normal laboratory**
113 **practice. This standard does not purport to address all of the safety problems, if any, associated**
114 **with its use. It is the responsibility of the user to establish appropriate safety and health practices**
115 **and to ensure compliance with any national regulatory conditions.**

DETERMINATION OF CERTAIN SUBSTANCES IN ELECTROTECHNICAL PRODUCTS –

Part 13: Bisphenol A in plastics by liquid chromatography-diode array detector (LC-DAD), liquid chromatography-mass spectrometry (LC-MS) and liquid chromatography-tandem mass spectrometry (LC/MS-MS)

1 Scope

This International standard specifies three techniques for the determination of free Bisphenol A (BPA) in plastics of electrotechnical products.

The liquid chromatography – diode array detector (LC-DAD) and liquid chromatography mass spectrometry (LC-MS) and liquid chromatography tandem mass spectrometry (LC-MS/MS). These test methods are described in the normative part of this standard. These test methods have been evaluated for use with PC, PC/ABS, PP matrices containing free BPA between 1 mg/kg to 1 000 mg/kg as shown in the Pre-IIS 13 results in Annex C. The use of these methods for BPA concentration ranges or plastics, other than those specified in Annex C has not been evaluated.

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.

IEC 62321-1 – *Determination of certain substances in electrotechnical products – Part 1: Introduction and overview*

IEC 62321-2 – *Determination of certain substances in electrotechnical products – Part 2: Disassembly, disjunction and mechanical sample preparation*

ISO 3696:1987 – *Water for analytical laboratory use – Specification and test*

3 Definitions

3.1 Terms and definitions

For the purposes of this document, the terms and definitions provided in IEC 62321-1 and the following terms and definitions apply.

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 <http://www.iso.org/obp>

3.1.1 Free Bisphenol A

Refers to chemically unbound BPA, as present in material.

3.2 Abbreviations

For the purpose of this document, the following abbreviations apply.

ABS Acrylonitrile-butadiene-styrene