Irish Standard
I.S. EN ISO 22744-1:2020

Textiles and textile products - Determination of organotin compounds - Part 1: Derivatisation method using gas chromatography (ISO 22744-1:2020)

I.S. EN ISO 22744-1:2020

Incorporating amendments/corrigenda/National Annexes issued since publication:

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National Foreword

I.S. EN ISO 22744-1:2020 is the adopted Irish version of the European Document EN ISO 22744-1:2020, Textiles and textile products - Determination of organotin compounds - Part 1: Derivatisation method using gas chromatography (ISO 22744-1:2020)

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EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

EN ISO 22744-1

June 2020

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English Version

Textiles and textile products - Determination of organotin compounds - Part 1: Derivatisation method using gas chromatography (ISO 22744-1:2020)

Textiles et produits textiles - Détermination des composés organostanniques - Partie 1: Méthode de dérivation utilisant la chromatographie en phase (ISO 22744-1:2020)

Textilien und textile Erzeugnisse - Bestimmung von zinnorganischen Verbindungen - Teil 1: Derivatisierung für das gaschromatische Verfahren (ISO 22744-1:2020)

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Contents

Page

European foreword

This document (EN ISO 22744-1:2020) has been prepared by Technical Committee ISO/TC 38 "Textiles" in collaboration with Technical Committee CEN/TC 248 “Textiles and textile products” the secretariat of which is held by BSI.

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of an identical text or by endorsement, at the latest by December 2020, and conflicting national standards shall be withdrawn at the latest by December 2020.

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Endorsement notice

The text of ISO 22744-1:2020 has been approved by CEN as EN ISO 22744-1:2020 without any modification.

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INTERNATIONAL STANDARD

ISO 22744-1

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Textiles and textile products — Determination of organotin compounds —

Part 1: Derivatisation method using gas chromatography

Textiles et produits textiles — Détermination des composés organostanniques —

Partie 1: Méthode de dérivation utilisant la chromatographie en phase gazeuse

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Contents

Page

Foreword

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The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular, the different approval criteria needed for the different types of ISO documents should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2 (see www.iso.org/directives).

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This document was prepared by the European Committee for Standardization (CEN) Technical Committee CEN/TC 248, *Textiles and textile products*, in collaboration with ISO Technical Committee ISO/TC 38, *Textiles*, in accordance with the Agreement on technical cooperation between ISO and CEN (Vienna Agreement).

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Textiles and textile products — Determination of organotin compounds —

Part 1: Derivatisation method using gas chromatography

WARNING — The use of this document involves hazardous materials. It does not purport to address all of the safety or environmental problems associated with its use. It is the responsibility of users of this document to take appropriate measures to ensure the safety and health of personnel and the environment prior to application of the document.

1 Scope

This document specifies a test method for the qualification and quantification of organotin compounds. This test method is applicable to all types of materials of textile products.

NOTE CEN/TR 16741 defines which materials are applicable to this determination.

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.

ISO 3696, *Water for analytical laboratory use — Specification and test methods*

ISO 4787, *Laboratory glassware — Volumetric instruments — Methods for testing of capacity and for use*

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:

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

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

4 Principle

The organotin substances are extracted from the material of a textile product with a methanol-ethanol mixture using tropolone as a complexing agent.

The polar and high-boiling organotin is then converted to the corresponding volatile alkyl derivative, by reaction with sodium tetraethylborate, $NaB(Et)_4$. Finally, it is detected and quantified by using a gas chromatograph fitted with a mass selective detector (GC-MS).

Table 1 indicates the list of target compounds which can be analysed with this document.

This document is also applicable for further organotin substances provided that the method is validated with the additional compounds.