Leather - Determination of total content of certain bisphenols (ISO 11936:2023)

EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

See Eesti standard EVS-EN ISO 11936:2023 sisaldab Euroopa standardi EN ISO 11936:2023 ingliskeelset teksti.	This Estonian standard EVS-EN ISO 11936:2023 consists of the English text of the European standard EN ISO 11936:2023.
Standard on jõustunud sellekohase teate avaldamisega EVS Teatajas.	This standard has been endorsed with a notification published in the official bulletin of the Estonian Centre for Standardisation and Accreditation.
Euroopa standardimisorganisatsioonid on teinud Euroopa standardi rahvuslikele liikmetele kättesaadavaks 26.07.2023.	Date of Availability of the European standard is 26.07.2023.
Standard on kättesaadav Eesti Standardimis-ja Akrediteerimiskeskusest.	The standard is available from the Estonian Centre for Standardisation and Accreditation.

Tagasisidet standardi sisu kohta on võimalik edastada, kasutades EVS-i veebilehel asuvat tagasiside vormi või saates e-kirja meiliaadressile standardiosakond@evs.ee.

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English Version

Leather - Determination of total content of certain bisphenols (ISO 11936:2023)

Cuir - Détermination de la teneur totale en certains bisphénols (ISO 11936:2023)

Leder - Bestimmung des Gesamtgehalts von einzelnen Bisphenolen (ISO 11936:2023)

This European Standard was approved by CEN on 23 June 2023.

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EUROPEAN COMMITTEE FOR STANDARDIZATION
COMITÉ EUROPÉEN DE NORMALISATION
EUROPÄISCHES KOMITEE FÜR NORMUNG

CEN-CENELEC Management Centre: Rue de la Science 23, B-1040 Brussels

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European foreword

This document (EN ISO 11936:2023) has been prepared by Technical Committee ISO/IULTCS "International Union of Leather Technologists and Chemists Societies" in collaboration with Technical Committee CEN/TC 289 “Leather” the secretariat of which is held by UNI.

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of an identical text or by endorsement, at the latest by January 2024, and conflicting national standards shall be withdrawn at the latest by January 2024.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CEN shall not be held responsible for identifying any or all such patent rights.

Any feedback and questions on this document should be directed to the users’ national standards body/national committee. A complete listing of these bodies can be found on the CEN website.

According to the CEN-CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this European Standard: Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Republic of North Macedonia, Romania, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Türkiye and the United Kingdom.

Endorsement notice

The text of ISO 11936:2023 has been approved by CEN as EN ISO 11936:2023 without any modification.

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Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

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 document 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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For an explanation of the voluntary nature of standards, the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the World Trade Organization (WTO) principles in the Technical Barriers to Trade (TBT), see www.iso.org/iso/foreword.html.

IULTCS, originally formed in 1897, is a world-wide organization of professional leather societies to further the advancement of leather science and technology. IULTCS has three Commissions, which are responsible for establishing international methods for the sampling and testing of leather. ISO recognizes IULTCS as an international standardizing body for the preparation of test methods for leather.

This document was prepared by the Chemical Test Commission of the International Union of Leather Technologists and Chemists Societies (IUC Commission, IULTCS), in collaboration with the European Committee for Standardization (CEN) Technical Committee CEN/TC 289, *Leather*, in accordance with the Agreement on technical cooperation between ISO and CEN (Vienna Agreement).

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Introduction

This document includes a procedure for analysing certain bisphenols using liquid chromatography (LC) equipment. With this analytical method, bisphenol A, bisphenol B, bisphenol F and bisphenol S can be determined.

In the leather industry, bisphenol F can be an impurity in synthetic tanning agents. Bisphenol S is a monomer that is used to manufacture synthetic tanning agents, which can lead to residues in the final product.

Bisphenol A is an endocrine disruptor for environmental organisms. Bisphenol A is a synthetic organic chemical primarily used as a monomer in the manufacture of high-performance plastics, other polymers, such as resins, and in the colour developer for thermoprint paper. Bisphenol B is similar to bisphenol A and is used in the manufacture of plastics and resins.

Leather — Determination of total content of certain bisphenols

1 Scope

This document specifies a method for determining the total content (solvent extractible) of the following bisphenols in leather:

— bisphenol A;

— bisphenol B;

— bisphenol F;

— bisphenol S.

This method requires the use of liquid chromatography (LC) with either a single quadrupole mass spectrometer (MS), a triple quadrupole mass spectrometer (MS/MS), an ultraviolet (UV) detector, a diode array detector (DAD) or a fluorescence detector (FLD) to identify and quantify the bisphenols.

NOTE This method can also be used for other bisphenols if they are validated by the laboratory.

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 2418, *Leather — Chemical, physical, mechanical and fastness tests — Position and preparation of specimens for testing*

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

ISO 4044, *Leather — Chemical tests — Preparation of chemical test samples*

3 Terms and definitions

No terms and definitions are listed in this document.

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

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

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

4 Principle

The leather sample is extracted in methanol using an ultrasonic bath. Subsequently, an aliquot of the solution can be directly analysed, without further cleaning of the sample, using LC-MS, LC-MS/MS or LC with a UV detector (LC-UV), DAD (LC-DAD) or FLD (LC-FLD).

5 Apparatus

The usual laboratory apparatus and, in particular, the following shall be used: