

Leather - Chemical determination of the preservative (TCMTB, PCMC, OPP, OIT) content in leather by liquid chromatography - Part 1: Acetonitrile extraction method (ISO 13365-1:2020)

## EESTI STANDARDI EESSÕNA

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See Eesti standard EVS-EN ISO 13365-1:2020 sisaldab Euroopa standardi EN ISO 13365-1:2020 ingliskeelset teksti.	This Estonian standard EVS-EN ISO 13365-1:2020 consists of the English text of the European standard EN ISO 13365-1:2020.
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.
Euroopa standardimisorganisatsioonid on teinud Euroopa standardi rahvuslikele liikmetele kättesaadavaks 09.09.2020.	Date of Availability of the European standard is 09.09.2020.
Standard on kättesaadav Eesti Standardikeskusest.	The standard is available from the Estonian Centre for Standardisation.

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EUROPEAN STANDARD

EN ISO 13365-1

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English Version

Leather - Chemical determination of the preservative  
(TCMTB, PCMC, OPP, OIT) content in leather by liquid  
chromatography - Part 1: Acetonitrile extraction method  
(ISO 13365-1:2020)

Cuir - Dosage chimique des agents de conservation  
(TCMTB, PCMC, OPP, OIT) dans le cuir par  
chromatographie en phase liquide - Partie 1:  
Extraction à l'acétonitrile (ISO 13365-1:2020)

Leder - Chemische Prüfungen - Bestimmung von  
Konservierungsmitteln (TCMTB, CMK, OPP, OIT) in  
Leder mittels Flüssigchromatographie - Teil 1:  
Gesamtanteil (ISO 13365-1:2020)

This European Standard was approved by CEN on 2 July 2020.

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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

## European foreword

This document (EN ISO 13365-1:2020) has been prepared by Technical Committee 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of an identical text or by endorsement, at the latest by March 2021, and conflicting national standards shall be withdrawn at the latest by March 2021.

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.

This document supersedes EN ISO 13365:2011.

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, Turkey and the United Kingdom.

## Endorsement notice

The text of ISO 13365-1:2020 has been approved by CEN as EN ISO 13365-1:2020 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 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](http://www.iso.org/directives)).

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Any trade name used in this document is information given for the convenience of users and does not constitute an endorsement.

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](http://www.iso.org/iso/foreword.html).

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*, the secretariat of which is held by UNI, in accordance with the agreement on technical cooperation between ISO and CEN (Vienna Agreement).

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 first edition of ISO 13365-1, together with ISO 13365-2, cancels and replaces ISO 13365:2011, which has been technically revised and split into two parts. The main changes in ISO 13365-1 from ISO 13365:2011 are as follows:

- the title has been changed to indicate the method of extraction;
- the use of HPLC with mass spectrometric (MS) detection has been included;
- [Clause 5](#) (former Clause 4) has been technically modified. In addition, the calibration information (previously in 6.4) is now included in [Clause 5](#);
- the chromatographic conditions (previously in 6.3) are now included in a new [Annex A](#). [Annex A](#) also includes additional conditions for use with MS detection.

A list of all parts in the ISO 13365 series can be found on the ISO website.

Any feedback or questions on this document should be directed to the user's national standards body. A complete listing of these bodies can be found at [www.iso.org/members.html](http://www.iso.org/members.html).

# Leather — Chemical determination of the preservative (TCMTB, PCMC, OPP, OIT) content in leather by liquid chromatography —

## Part 1: Acetonitrile extraction method

### 1 Scope

This document specifies a test method by acetonitrile solvent extraction for the determination of the total content (solvent extractible) of the following preservative agents in leather by liquid chromatography:

- 2-(thiocyanomethylthio)-benzothiazole (TCMTB);
- 4-chloro-3-methylphenol (PCMC);
- 2-phenylphenol (OPP);
- 2-octylisothiazol-3(2H)-one (OIT);

This method can also be used to determine breakdown products of these preservative agents, which protect leather from microbiological attack.

### 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 and mechanical and fastness tests — Sampling location*

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

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

ISO 4684, *Leather — Chemical tests — Determination of volatile matter*

### 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

Extraction of the leather sample is performed with a suitable solvent using ultrasonic waves. The filtered extract is analysed by high-performance liquid chromatography (HPLC) with ultraviolet (UV) or mass spectrometry (MS) detection.