

# IULTCS/IUC 4

Third edition  
2018-06

---

---

## **Leather — Chemical tests — Determination of matter soluble in dichloromethane and free fatty acid content**

*Cuir — Essais chimiques — Dosage des matières solubles dans le  
dichlorométhane et des acides gras libres*



Reference numbers  
ISO 4048:2018(E)  
IULTCS/IUC 4:2018(E)

This is a preview of "ISO 4048:2018". Click here to purchase the full version from the ANSI store.



**COPYRIGHT PROTECTED DOCUMENT**

© ISO 2018

All rights reserved. Unless otherwise specified, or required in the context of its implementation, no part of this publication may be reproduced or utilized otherwise in any form or by any means, electronic or mechanical, including photocopying, or posting on the internet or an intranet, without prior written permission. Permission can be requested from either ISO at the address below or ISO's member body in the country of the requester.

ISO copyright office  
CP 401 • Ch. de Blandonnet 8  
CH-1214 Vernier, Geneva  
Phone: +41 22 749 01 11  
Fax: +41 22 749 09 47  
Email: [copyright@iso.org](mailto:copyright@iso.org)  
Website: [www.iso.org](http://www.iso.org)

Published in Switzerland

This is a preview of "ISO 4048:2018". Click here to purchase the full version from the ANSI store.

## Contents

Page

<b>Foreword</b> .....	<b>iv</b>
<b>1 Scope</b> .....	<b>1</b>
<b>2 Normative references</b> .....	<b>1</b>
<b>3 Terms and definitions</b> .....	<b>1</b>
<b>4 Principle</b> .....	<b>2</b>
<b>5 Reagents</b> .....	<b>2</b>
<b>6 Apparatus</b> .....	<b>2</b>
<b>7 Sampling and preparation of the samples</b> .....	<b>3</b>
<b>8 Procedure</b> .....	<b>3</b>
8.1 General.....	3
8.2 Extraction using the Soxhlet apparatus.....	3
8.3 Extraction using a pressurized extraction system.....	4
8.4 Determination of free fatty acid content.....	4
<b>9 Expression of results</b> .....	<b>4</b>
9.1 Calculation of the matter extractable in dichloromethane.....	4
9.2 Calculation of the free fatty acid content.....	5
<b>10 Test report</b> .....	<b>5</b>
<b>Annex A (informative) Comparison of five leather samples</b> .....	<b>6</b>
<b>Annex B (informative) Repeatability and reproducibility</b> .....	<b>7</b>
<b>Bibliography</b> .....	<b>8</b>

## 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)).

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights. Details of any patent rights identified during the development of the document will be in the Introduction and/or on the ISO list of patent declarations received (see [www.iso.org/patents](http://www.iso.org/patents)).

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 the following URL: [www.iso.org/iso/foreword.html](http://www.iso.org/iso/foreword.html)

This document was prepared by the Chemical Tests 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 co-operation between ISO and CEN (Vienna Agreement).

It is based on IUC 4 published in *J. Soc. Leather Tech. Chem.*, **49**, p. 10, 1965, and declared an official method of the IULTCS in 1965.

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 the testing of leather. ISO recognizes IULTCS as an international standardizing body for the preparation of test methods for leather.

This third edition cancels and replaces the second edition (ISO 4048:2008), which has been technically revised as follows:

- [5.1](#) text for dichloromethane has been simplified;
- [Clause 7](#) has been revised to allow analysis of a single sample, for example when too little sample is available;
- [8.1](#) has been revised to allow a smaller sample for determining only dichloromethane soluble substances;
- [8.2.1](#) and [8.3](#) have been revised to define a drying time of at least 6 h, and the last paragraph of [8.3](#) has been deleted;
- previous [subclauses 9.1](#) and [9.2](#) have been moved to a new informative [Annex B](#);
- [Clause 9](#) has been separated into [9.1](#) and [9.2](#) and modified to allow for presenting results for a single sample;

This is a preview of "ISO 4048:2018". Click [here](#) to purchase the full version from the ANSI store.

- [Clause 10 d\)](#) has been revised to allow for the changes in [Clause 9](#).