

INTERNATIONAL
STANDARD

ISO
2418

IULTCS
IUP 2

Fourth edition
2023-02

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

*Cuir — Essais chimiques, physiques, mécaniques et essais de solidité
— Emplacement et préparation des spécimens pour les essais*



Reference numbers
ISO 2418:2023(E)
IULTCS/IUP 2:2023(E)

© ISO 2023

This document is a preview generated by ELS



COPYRIGHT PROTECTED DOCUMENT

© ISO 2023

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
Email: copyright@iso.org
Website: www.iso.org

Published in Switzerland

Contents

	Page
Foreword.....	iv
1 Scope.....	1
2 Normative references.....	1
3 Terms and definitions.....	1
4 Position of laboratory test specimens.....	2
4.1 General.....	2
4.1.1 Segmentation of leather.....	2
4.1.2 Selection of test specimens.....	2
4.1.3 Position of specimens for physical and mechanical testing.....	3
4.1.4 Position of specimens for chemical testing.....	3
4.1.5 Position of specimens for colour fastness testing.....	3
4.1.6 Location of test specimens where areas of tension exist.....	3
4.1.7 Location of test specimens in case of arbitration.....	3
4.2 Whole hides, skins and sides.....	3
4.3 Bends (butts).....	6
4.4 Shoulders.....	7
4.5 Bellies.....	8
5 Storage of laboratory leather pieces and specimens.....	8
6 Identification of official test specimens.....	9
6.1 Marking of the direction of the backbone.....	9
6.2 Identification marking.....	9
7 Design of press knives for cutting test pieces.....	9
8 Preparation of test pieces.....	9
Bibliography.....	10

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).

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).

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.

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 Physical Test Commission of the International Union of Leather Technologists and Chemists Societies (IUP 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).

The Chemical and Fastness Test Commissions were consulted in the preparation of this document. The locations of the test specimens are identical to those given in IUP 2 published in *J. Soc. Leather Trades Chemists*, **42**, pp. 382–385, 1958 and IUC 2 published in *J. Soc. Leather Trades Chemists*, **49**, pp. 6–8, 1965. IUP 2 was declared an official method in 1959 and IUC 2 in 1965. Updated versions were published in *J. Soc. Leather Tech. Chem.*, **82**, p. 194, 1998 and further revisions were published in *J. Soc. Leather Tech. Chem.*, **84**, p. 303, 2000 and reconfirmed as official methods in March 2001. This document differs slightly in the text and includes tolerances for measurements but the locations of the test specimens are identical.

This fourth edition cancels and replaces the third edition (ISO 2418:2017), which has been technically revised.

The main changes are as follows:

- title has been revised to more correctly explain the purpose of this document;
- entries [3.1](#) and [3.2](#) have been added and the text throughout the document has been revised to use the words “specimen” and “test piece” where appropriate instead of “sample” and “sampling”;

- [4.1](#) has been revised and reorganised; in addition, in [4.1.1](#) when the client identifies the part of the hide or skin supplied and the location of the backbone then the laboratory is not responsible for this identification;
- in [4.2](#) a new [Table 1](#) specifies the distance from the backbone depending on the size of the leather hide or skin;
- new [Clauses 7](#) and [8](#) have been added to specify the press knives used for cutting test pieces and the preparation of the test pieces.

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.

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

1 Scope

This document specifies the position of laboratory test specimens within a piece of leather and the method of labelling and marking the laboratory test specimens for future identification. In addition, this document specifies the design of press knives for cutting test pieces and the preparation of test pieces.

It is applicable to all types of leather derived from mammals, irrespective of the tanning used.

It is not applicable to leathers derived from birds, fish, reptiles or furs.

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 15115, *Leather — Vocabulary*

International Council of Tanners. *International Glossary of Leather Terms*. 2nd edition, 1975¹⁾

3 Terms and definitions

For the purposes of this document, the terms and definitions given in ISO 15115 and the *International Glossary of Leather Terms* and the following apply.

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/>

3.1 specimen

portion or a part of a leather hide or skin from which test pieces are cut

EXAMPLE The GJKH square in 4.2.

3.2 test piece

specific portion of a specimen cut in a suitable shape or dimensions for testing

EXAMPLE The dog-bone-shaped test piece for testing tensile strength (see ISO 3376).

1) Issued by the International Council of Tanners in 1975, with the Addenda of 1978.