INTERNATIONAL STANDARD

ISO 2418

IULTCS/IUP 2

Third edition
2017-02

Leather — Chemical, physical and mechanical and fastness tests — Sampling location

Cuir — Essais chimiques, physiques, mécaniques et de solidité — Emplacement de l'échantillonnage

Reference numbers
ISO 2418:2017(E)
IULTCS/IUP 2:2017(E)

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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).

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 on 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.

ISO 2418 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*, the secretariat of which is held by UNI, 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 standard. The locations of the samples 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. The ISO Standard differs slightly in the text and includes tolerances for measurements but the locations of the samples are identical.

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 third edition cancels and replaces the second edition (ISO 2418:2002), which has been technically revised with the following changes:

— Clause 4 and the location of laboratory samples have been clarified;

— Figure 1 to Figure 5 have been re-drawn and re-labelled;

— 6.2 d) has also been added.

Leather — Chemical, physical and mechanical and fastness tests — Sampling location

1 Scope

This document specifies the location of a laboratory sample within a piece of leather and the method of labelling and marking the laboratory samples for future identification.

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

There are no normative references in this document.

3 Terms and definitions

For the purposes of this document, the terms and definitions given in the International Glossary of Leather Terms[1] apply.

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

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

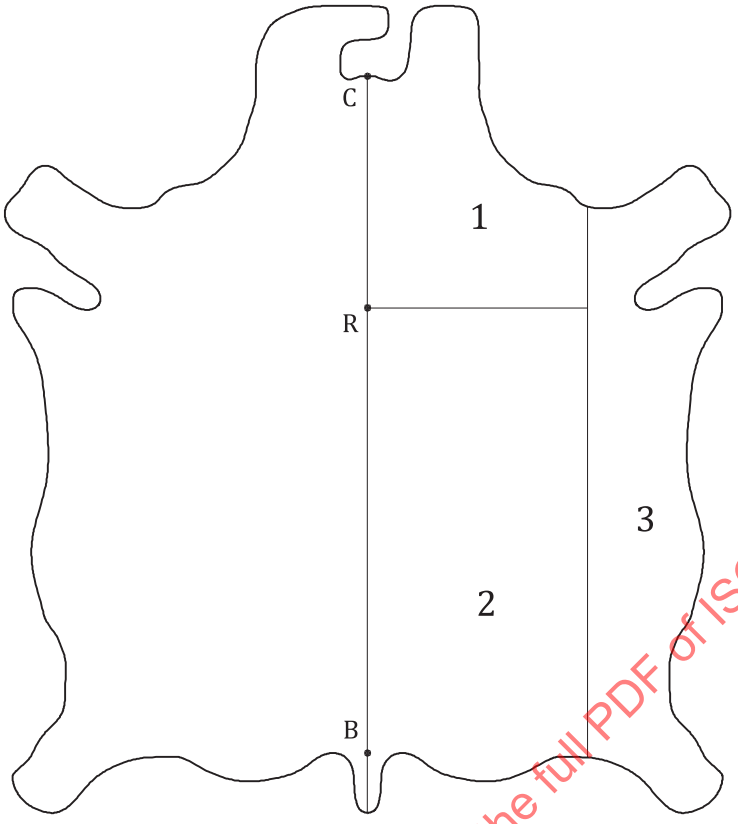
— ISO Online browsing platform: available at http://www.iso.org/obp

4 Location of laboratory samples

4.1 General

4.1.1 Segmentation of leather

For the purposes of this document, the following segmentation of leather is considered (see Figure 1): bend (or butt), shoulder and belly.



Key

1 shoulder
2 bend
3 belly
B root of the tail (if visible)
C top of the neck
BC backbone
R shoulder point where CR = BC/3

Figure 1 — Segmentation of a whole hide

4.1.2 Selection of samples

4.1.2.1 Areas selected for laboratory samples shall be free from all obvious defects such as scratches and flay cuts.

4.1.2.2 The sampling procedures described are designed to allow concurrent physical, colour fastness and chemical testing.

4.1.2.3 The results of analyses carried out on samples taken from different segments can vary significantly. For this reason, added to the impossibility to uniquely define segments size, sampling from whole hides and sides is to be preferred (see 4.2).

4.1.3 Sampling for physical and colour fastness testing

4.1.3.1 For physical and colour fastness testing, take leather samples from the non-shaded areas specified in Figure 2 to Figure 5 as appropriate.

4.1.3.2 In arbitration analysis, only leather samples taken from the appropriate area of whole hides, skin or sides (see 4.2) shall be used as the test sample.

4.1.4 Sampling for chemical testing

4.1.4.1 For chemical testing, take leather samples from the shaded area specified in Figure 2 to Figure 5 as appropriate.

4.1.4.2 If the minimum mass required for chemical testing is not attained, sample from the corresponding area on the other side of the backbone. If this is impossible, take additional material from the area immediately adjacent to the sampling position.

4.1.4.3 Uncontaminated trimmings from physical test pieces may be used for chemical testing except in arbitration analysis.

4.1.4.4 In arbitration analysis, only leather samples taken from the appropriate shaded area of whole hides, skin or sides (see 4.2) shall be used as the chemical test sample.

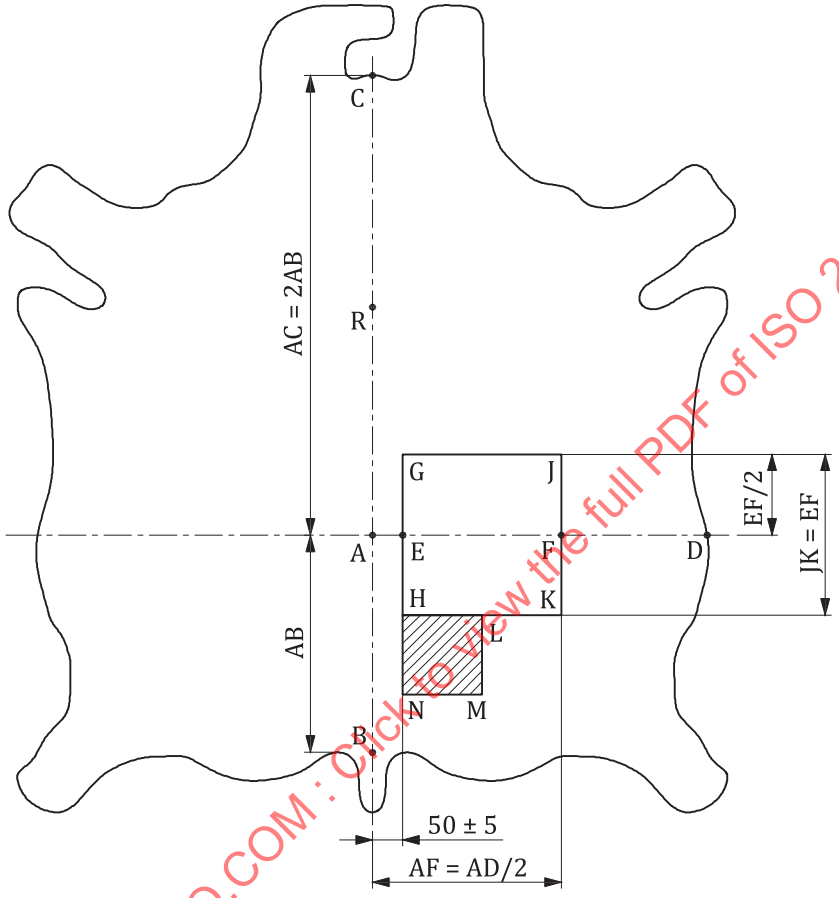
4.1.5 Sampling where areas of tension exist

If a hide is cut into half hides or segments and dried afterwards in a toggling drier or a drying process that creates tension in the leather at the edges, then the distance of the sampling areas from the edges of the leather shall be increased from 50 mm to at least 100 mm where possible.

4.2 Whole hides, skins and sides

Take the non-shaded square piece GJKH and/or the shaded square piece HLMN shown in Figure 2. In small skins, the distances EF and JK can be shorter than the length required for a single sample. When sampling small skins, modify the method of sampling using the minimum deviation from this procedure.

NOTE Sampling areas can be taken either on the right and/or left side of the hide.



Key

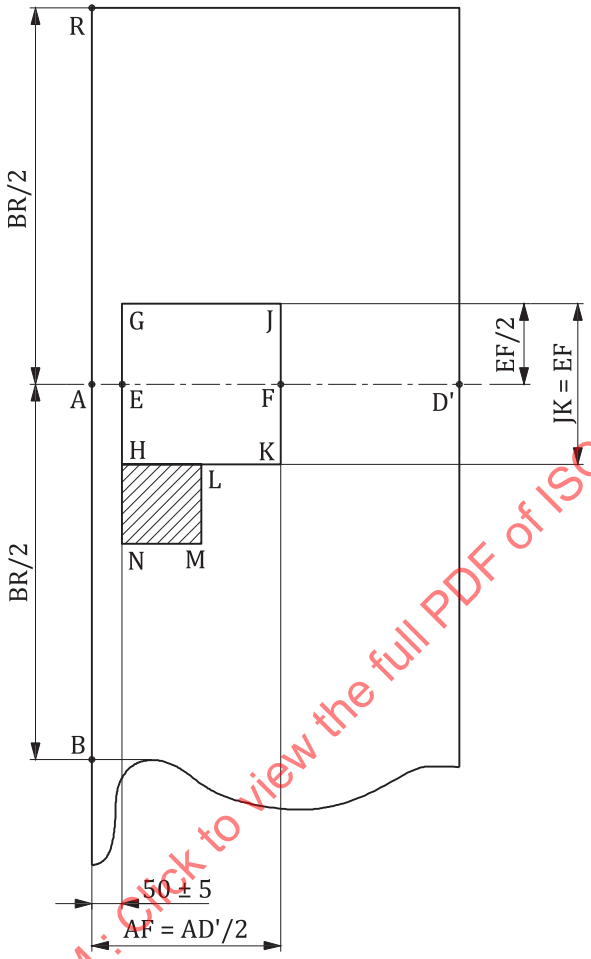
B root of the tail
C top of the neck
BC backbone
D at the edge of the hide
AD line perpendicular to BC
AB = BC/3, such that AC = 2AB
AE = (50 ± 5) mm (see also 4.1.5)
AF = FD
JK = EF
GE = EH
HL = NM = HN = ML = HK/2

NOTE Lines GH, JK, HN and LM are parallel to BC.

Figure 2 — Sampling location for whole hides, skins and sides

4.3 Bends (butts)

Take the non-shaded square piece GJKH and/or the shaded square piece HLMN shown in Figure 3.



Key

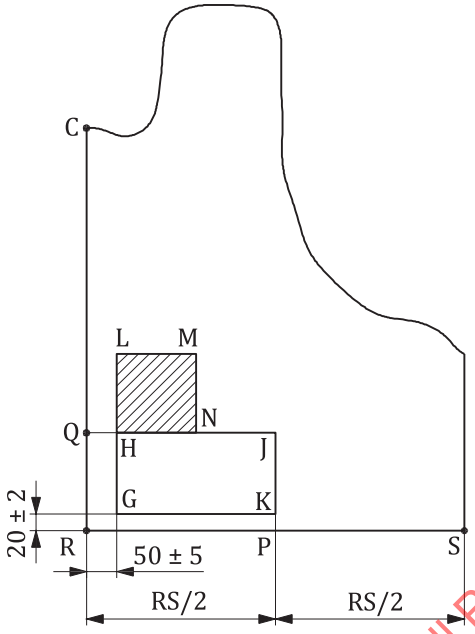
B root of the tail
R shoulder point (see Figure 1)
BR lies along the backbone
D′ at the edge of the bend (butt)
AD′ line perpendicular to BR
AB = BR/2, such that AB = AR
AE = (50 ± 5) mm (see also 4.1.5)
AF = FD′
JK = EF
GE = EH
HL = NM = HN = ML = HK/2

NOTE Lines GH, JK, HN and LM are parallel to BR.

Figure 3 — Representation of a bend showing sampling location for bends (or butts)

4.4 Shoulders

Take the non-shaded rectangular piece GHJK and/or the shaded square piece HLMN shown in Figure 4.



Key

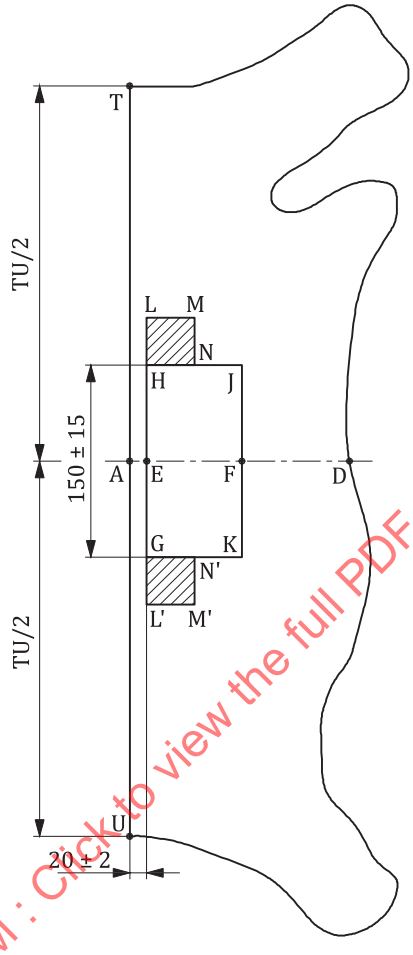
C top of the neck
R shoulder point (see Figure 1)
CR lies along the backbone
S at the edge of the shoulder
KP = (20 ± 2) mm (see also 4.1.5)
HQ = (50 ± 5) mm (see also 4.1.5)
RP = PS
GH = JK = HL = LM = MN = GK/2

NOTE Lines RS, HJ, GK and LM are perpendicular to CR. Lines GL, KJ and NM are parallel to CR.

Figure 4 — Representation of a shoulder showing sampling location for shoulders

4.5 Bellies

Take the non-shaded rectangular piece GHJK and/or the shaded square pieces HLMN and GL′M′N′ shown in Figure 5.



Key

T neck end of the belly
U tail end of the belly
D at the edge of the hide
AD line perpendicular to TU
TA = AU
GE = EH = EF = GK = HJ
LH = NH = GN' = GL' = GH/4
GH = (150 ± 15) mm
AE = (20 ± 2) mm (see also 4.1.5)

Figure 5 — Representation of a belly showing sampling location for bellies

5 Storage of laboratory samples

Store laboratory samples in such a way as to avoid contamination and the effects of localized heating.