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IULTCS/ IUP 1 and IUP 3

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Leather — Physical and mechanical tests — Sample preparation and conditioning

Cuir — Essais physiques et mécaniques — Préparation et conditionnement des échantillons

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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.

International Standards are drafted in accordance with the rules given in the ISO/IEC Directives, Part 2.

The main task of technical committees is to prepare International Standards. Draft International Standards adopted by the technical committees are circulated to the member bodies for voting. Publication as an International Standard requires approval by at least 75 % of the member bodies casting a vote.

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.

ISO 2419 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 Standardisation (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 IUP 1 and IUP 3 originally published in *J. Soc. Leather Trades Chemists* **42**, p. 382, (1958) and **42**, p. 386, (1958) respectively and declared official methods of the IULTCS in 1959. Updated versions were published in *J. Soc. Leather Tech. Chem.* **82**, p. 199, (1998) and further revisions published in *J. Soc. Leather Tech Chem.* **84**, p. 241. (2000) and reconfirmed as official methods in March 2001. A further revision of IUP 3 was published in *J. Soc. Leather Tech. Chem.* **83**, p. 337, (2002) which was confirmed as an official method in May 2003.

This third edition cancels and replaces the second edition (ISO 2419:2002), which has been technically revised.

IULTCS, originally formed in 1897, is a world-wide organisation 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 sampling and the testing of leather. ISO recognises IULTCS as an International Standardising Body for the preparation of test methods for leather.

Leather — Physical and mechanical tests — Sample preparation and conditioning

1 Scope

This International Standard specifies the preparation of leather test pieces for physical and mechanical testing together with two standard atmospheres for conditioning and testing. It is applicable to all types of dry leather.

2 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

2.1
atmosphere
ambient conditions defined by the parameters temperature and relative humidity

2.2
standard atmosphere
atmosphere maintained within prescribed tolerances, in which a test piece is kept for a given period of time before being subjected to testing

2.3
conditioning
operation designed to bring a test piece into a specified condition in relation to temperature and relative humidity by keeping it for a given period of time in the standard atmosphere with free access of moving air to all surfaces

3 Standard atmospheres

The standard atmospheres and tolerances shall be as given in Table 1.

Table 1 — Standard atmospheres and tolerances

Designation	Temperature °C	Relative humidity %
23/50	23 ± 2	50 ± 5
An alternative, but not equivalent, set of conditions may be used.		
20/65	20 ± 2	65 ± 5

4 Design of press knives

The design of press knives is shown in Figure 1. The internal surfaces shall be perpendicular to the plane which contains the cutting edge. The angle formed between the internal and external surfaces of the press knife at the cutting edge shall be 20° ± 1°, and the wedge of this angle shall be of a depth (d) exceeding the thickness of the leather.

NOTE Hardened, knife grade steel is suitable for press knives.

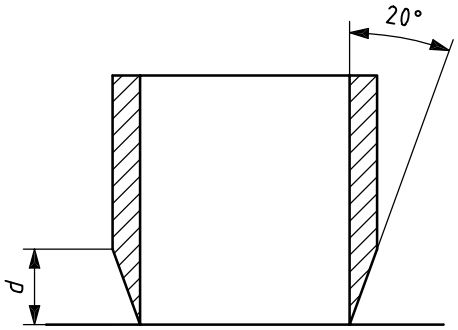

Figure 1 — Design of press knives

5 Preparation of test pieces

Prepare test pieces by applying the press knife to the grain surface (or simulated grain surface) if present. If no grain or simulated grain is present, apply the press knife to either surface. If preferred, leather may be conditioned (see Clause 6) before test pieces are prepared.

6 Conditioning

Condition the test piece by keeping it in one of the standard atmospheres specified in Table 1. Support the test piece to allow free access of air to all surfaces, keeping the air in motion around the test piece (see 2.3). Condition the test pieces for a minimum of 24 h prior to testing.

7 Testing

Carry out the testing in the same standard atmosphere as that in which the test piece was conditioned unless otherwise specified in the individual test method.

8 Test report

The test report shall include the following:

a) reference to this International Standard; i.e. ISO 2419:2006;

b) if the alternative atmosphere is used for conditioning and testing, as given in this International Standard, i.e. 20 °C/65 % relative humidity;

c) any deviations from the method specified in this International Standard;

d) full details for identification of the sample and any deviations from ISO 2418 with respect to sampling.

Bibliography

[1] ISO 2418, *Leather — Chemical, physical and mechanical and fastness tests — Sampling location*

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