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**ISO
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**IULTCS/IUP
5**

Second edition
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Leather — Physical and mechanical tests — Determination of apparent density

*Cuir — Essais physiques et mécaniques — Détermination de la masse
volumique apparente*



Reference number
ISO 2420:2002(E)
IULTCS/IUP 5

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Case postale 56 • CH-1211 Geneva 20
Tel. + 41 22 749 01 11
Fax + 41 22 749 09 47
E-mail copyright@iso.org
Web www.iso.org

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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.

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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 2420 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). It based on IUP 5 originally published in *J. Soc. Leather Trades Chemists* **42**, p. 388, (1958) and declared an official method of the IULTCS in 1959. An updated version was published in *J. Soc. Leather Tech. Chem.* **82**, p. 227, (1998) and a further revision was published in *J. Soc. Leather Tech. Chem.* **84**, p. 313, (2000) and reconfirmed as an official method in March 2001. This latest revision now includes the number of test pieces to be taken.

This second edition cancels and replaces the first edition (ISO 2420:1972), which has been technically revised.

Leather — Physical and mechanical tests — Determination of apparent density

1 Scope

This International Standard specifies a method for determining the apparent density of leather. It is applicable to all heavy leather.

2 Normative references

The following referenced documents are indispensable for the application 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	<i>Leather - Chemical, physical and mechanical and fastness tests - Sampling location</i>
ISO 2419	<i>Leather - Physical and mechanical tests - Sample preparation and conditioning</i>
ISO 2589	<i>Leather - Physical and mechanical tests - Determination of thickness</i>

3 Principle

The volume of a circular test piece is calculated from the diameter and thickness, treating the test piece as a right angled circular cylinder. The apparent density is obtained by dividing the mass by the volume.

4 Apparatus

4.1 Press knife, the inner wall of which is a right angled circular cylinder approximately 70 mm in diameter, as specified in ISO 2419.

4.2 Thickness gauge, as specified in ISO 2589.

4.3 Balance, reading to 0,001 g.

4.4 Vernier callipers, reading to 0,1 mm.

5 Sampling and sample preparation

Sample in accordance with ISO 2418. From the sample, cut three test pieces by applying the press knife (4.1) to the grain surface and condition them in accordance with ISO 2419.

NOTE If there is a requirement for more than two hides or skins to be tested in one batch, then only one test piece need be taken from each hide or skin, provided that the overall total is not less than three test pieces.