INTERNATIONAL STANDARD

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Leather — Wet blue goat skins — Specification

Cuir — Peaux de caprins à l'état «bleu humide» — Spécifications

Reference number
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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.

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.

International Standard ISO 5431 was prepared by Technical Committee ISO/TC 120, *Leather*, Subcommittee SC 2, *Tanned leather*.

Annex A forms an integral part of this International Standard. Annex B is for information only.

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Leather — Wet blue goat skins — Specification

1 Scope

This International Standard specifies requirements, methods of sampling and methods of test for wet blue leather produced from goat skins tanned without hair and with the use of basic chromium sulfate as the primary tanning agent.

2 Normative references

The following standards contain provisions which, through reference in this text, constitute provisions of this International Standard. At the time of publication, the editions indicated were valid. All standards are subject to revision, and parties to agreements based on this International Standard are encouraged to investigate the possibility of applying the most recent editions of the standards indicated below. Members of IEC and ISO maintain registers of currently valid International Standards.

ISO 2418:1972, *Leather — Laboratory samples — Location and identification*.

ISO 3380:1975, *Leather — Determination of shrinkage temperature*.

ISO 4045:1975, *Leather — Determination of pH*.

3 Definitions

For the purposes of this International Standard, the following definitions apply.

3.1
cured
preserved temporarily from putrefaction until it can be tanned

NOTE Any method of curing, including wet or dry salting or drying, is included.

3.2
pigmentation
colouration produced by fungi growing on wet blue chrome leather

NOTE The colouration produced by fungi will normally be black, white, green or yellow but can also be pink or violet.

4 Requirements

4.1 Raw material

Wet blue goat skins shall be processed from cured or fresh goat skins.

4.2 Tanning

After pretanning operations, the skins shall be tanned with basic chromium sulfate as the primary tanning agent. The cut cross-section shall be such that the skin is completely penetrated by the bluish colour of the chromium sulfate when examined visually. Tanning shall be carried out at a pH of 3,0 or above.

4.3 Fungicidal additives

Fungicides shall be used to inhibit mould growth in the skins.

NOTE 1 The fungicides used to inhibit mould growth and pigmentation should be effective and should not cause a health hazard. The types of fungicide used and their dosage should preferably be agreed between the purchaser and the supplier.

NOTE 2 Fungicides should preferably be applied in quantities appropriate to ensure storage for up to 4 months at the temperature and humidity prevailing during storage or transportation. The effectiveness of the fungicidal treatment may be determined using one of the references given in annex B.

4.4 Presentation

Wet blue goat skins shall be well fleshed, and the grain side shall be free from hair, including short hair and fine hair. The size and grading shall be as agreed between the interested parties.

NOTE The skins should preferably have a tight grain and be free from creases, drum folds and stains caused by iron salts. At least 95 % of the number of pieces in a lot should be free from stains caused by chromium salts, and the aggregate of the stained area in any one piece should not exceed 10 % of the total area of the piece.

4.5 Shrinkage temperature

The shrinkage temperature shall not be less than 95 °C, when determined using the method specified in ISO 3380.

4.6 Chemical requirements

Wet blue goat skins shall comply with the requirements given in table 1.

Table 1 — Chemical requirements

Characteristic	Requirement
Moisture content, % (*m*/*m*)	As agreed between the interested parties
pH of water extract (minimum)	3,5

NOTE A minimum shrinkage temperature of 95 °C would normally require a minimum chromic oxide content of 3,0 % relative to the dry mass, as determined by the method given in IUC 8, *Determination of the chromic oxide content of leather*. Once the chromic oxide content has been determined in this way, it can be used to estimate how much more chromic oxide has to be added to achieve the desired level (i.e. the extent of further rechroming).

5 Sampling

5.1 Sampling for routine testing

The number and location of laboratory samples taken for routine testing shall be as agreed between the interested parties.

5.2 Sampling in cases of dispute

The number of samples shall be as given in table 2 and the location shall be as specified in ISO 2418.

Table 2 — Number of samples to be taken in cases of dispute

Number of skins	Number of samples
up to 100	3
101 to 300	4
301 to 500	5
501 to 700	6
701 and over	7

5.3 Preparation of samples

Prepare samples by wiping off excess water and by keeping wrapped in filter paper for 30 min without applying any extra pressure.

6 Methods of test

6.1 Visual tests

Examine the wet blue goat skins for uniformity of colour of the surface, penetration of chromium sulfate, absence of short hair and cleanness of the flesh side.

6.2 Shrinkage temperature

Determine the shrinkage temperature by the method specified in ISO 3380.

6.3 Moisture content

Determine the moisture content by the method specified in annex A.

6.4 pH of water extract

Determine the pH of a water extract by the method specified in ISO 4045.

6.5 Effectiveness of fungicide

The effectiveness of the fungicide used may be determined, if required, using one of the references given in annex B.

7 Packaging and marking

7.1 Packaging

Wet blue goat skins shall be packaged suitably as agreed between the interested parties so as to preserve their original wet condition.

7.2 Marking

The following particulars shall be marked on each package or on a label attached to the package:

a) the type of material (i.e. wet blue goat skin), and the trade name or brand name, if any;

b) the name and address of the manufacturer;

c) the month and year of tanning;

d) the number of skins;

e) any other details desired by the purchaser.

Annex A
(normative)

Determination of moisture content

A.1 Apparatus

A.1.1 Flat, shallow weighing vessels, with ground-glass stoppers, or **shallow, open dishes**.

NOTE Small weighing vessels with ground-glass stoppers allow more accurate work than open dishes.

A.1.2 Oven, fitted with a fan and a regulator, capable of maintaining the temperature at 102 °C ± 2 °C.

A.1.3 Suitable desiccator.

A.1.4 Analytical balance.

A.2 Sampling

A.2.1 Sample in accordance with clause 5 of this International Standard.

A.3 Procedure

A.3.1 Place a sample on a non-absorbent surface and chop manually into pieces not exceeding 5 mm square.

A.3.2 Accurately weigh about 3 g of the sample to the nearest 1 mg into a tared weighing vessel (A.1.1) and dry at 102 °C ± 2 °C for 5 h.

A.3.3 Cool the vessel and contents for 30 min in the desiccator and reweigh.

A.3.4 Repeat the drying, cooling and weighing, but with a drying time of only 1 h, until either the further loss in mass does not exceed 3 mg (i.e. 0,1 % of the original mass) or the total drying time equals 8 h.

A.3.5 Record the final mass of the weighing vessel and test portion, and calculate the mass of the dried test portion.

A.4 Expression of results

A.4.1 Calculation

Calculate the moisture content M, expressed as percentage by mass, using the following equation:

$$M = \frac{m_0 - m_1}{m_0} \times 100$$

where

m_0 is the mass, in g, of the test portion before drying;

m_1 is the mass, in g, of the test portion after drying.

A.4.2 Repeatability

The results of duplicate determinations carried out by the same operator in the same laboratory shall normally not differ by more than 0,5 % (m/m), calculated relative to the original mass of the test portion.

A.5 Test report

The test report shall include the following particulars:

a) a reference to this International Standard;

b) all details necessary for complete identification of the sample;

c) the mean value of the results obtained, rounded to the first decimal place;

d) details of any special circumstances which may have affected the results.