
INTERNATIONAL STANDARD



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Leather — Raw hides of cattle and horses — Preservation by stack salting

Cuir — Peaux brutes de bovidés et d'équidés — Conservation par salage en pile

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FOREWORD

ISO (the International Organization for Standardization) is a worldwide federation of national standards institutes (ISO Member Bodies). The work of developing International Standards is carried out through ISO Technical Committees. Every Member Body interested in a subject for which a Technical Committee has been set up 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.

Draft International Standards adopted by the Technical Committees are circulated to the Member Bodies for approval before their acceptance as International Standards by the ISO Council.

International Standard ISO 2821 was drawn up by Technical Committee ISO/TC 120, *Leather*, and circulated to the Member Bodies in April 1972.

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It has been approved by the Member Bodies of the following countries :

Australia	Iran	ISO 2821:1974
Chile	Ireland	Spain
Czechoslovakia	Israel	Thailand
Egypt, Arab Rep. of	Italy	Turkey
France	New Zealand	U.S.A.
Hungary	Poland	U.S.S.R.
India	Romania	

The Member Body of the following country expressed disapproval of the document on technical grounds :

United Kingdom

Leather — Raw hides of cattle and horses — Preservation by stack salting

0 INTRODUCTION

This International Standard was drawn up for the purpose of improving the quality of hide and skins intended for the manufacture of leather and, subsequently, the production of leather goods,

1) by drawing attention to the various defects which hide and skins risk acquiring during the operations which they undergo to ensure their preservation and during the period preceding delivery to the user industries;

2) by indicating the procedure to be followed to prevent development of these defects.

It deals with the method of preservation most frequently used : stack salting.

1 SCOPE

This International Standard analyses the various preserving process defects likely to affect the raw hides of cattle and horses, and defines the rules for the preservation of these hides by stack salting.

2 FIELD OF APPLICATION

This International Standard applies to all raw hide and skins of cattle and horses but not to buffalo hides.

3 REFERENCES

ISO 2820, *Leather — Raw hides of cattle and horses — Method of trim.*

ISO 2822, *Leather — Defects in fresh or wet salted raw cattle hides — Vocabulary.*

4 NATURE AND ORIGIN OF PRESERVING PROCESS DEFECTS AND PRECAUTIONS TO TAKE TO AVOID THEM

Preserving process defects of stack salted skins can be divided into two categories according to origin, i.e. :

defects of microbial origin, such as red heat, purple spots, heating (hair slip), runflesh;

defects of chemical origin, such as pitting on the flesh, pitting on the grain, spots.

To combat the appearance of the first, it is advisable to use antiseptic products, among which naphthalene may be mentioned; to avoid development of the second, it is advisable to use, for example, sodium carbonate¹⁾.

5 PRESERVATION OF HIDES OR SKINS BY STACK SALTING

5.1 Method

The preservation of hides or skins by the stack salting method consists of sufficiently dehydrating the hides or skins, trimmed in accordance with ISO 2820, in order to prevent the development of bacteria causing putrefaction, and storing them in appropriate premises by piling them one on top of the other.

This dehydration is carried out by means of a homogeneous mixture of salt (sodium chloride) and chemical products.

1) To prevent any chemical reactions harmful to the skin, it is advisable to eliminate one of the reagents present by converting the ions causing deterioration into an insoluble form. By adding sodium carbonate to the salt, insoluble calcium carbonate is formed and the iron salts contained in the hides and skins themselves become carbonates, also insoluble.

5.2 Rules of application

To obtain the best state of preservation of the hides or skins, i.e. to prevent any appearance of the defects mentioned in clause 4, the following rules shall be observed :

5.2.1 Before salting, wash all the hides or skins carefully in water at a suitable temperature and for a suitable time¹⁾ and clean them, if necessary, by any process which will not risk causing them to deteriorate.

5.2.2 After cooling, cleaning and draining of the hides or skins, salt them as quickly as possible and no later than 5 h after the animal has been flayed, taking the ambient temperature into account.

5.2.3 Before use, thoroughly mix the salt with antiseptic products of known efficiency.

Examples of mixtures :

100 kg of salt + 2 kg of naphthalene + 2 to 3 kg of sodium carbonate (according to the type of salt);

100 kg of salt + 1 kg of naphthalene + 1 kg of boric acid.

5.2.4 Do not use any recovered salt whatsoever, including that originating from the brushing of the hides or skins.

5.2.5 For large hides or skins, use a salt the crystals of which will pass through a screen with a mesh of between 1,25 and 3,15 mm.

In the case of calfskins, it is preferable to use a salt the crystals of which will pass through a screen with a mesh of between 0,4 and 1 mm.

The salt used shall be of a good technical quality, preferably containing not less than 98 % (*m/m*) of sodium chloride (NaCl), calculated on the dry basis. It shall not contain any impurity which could be detrimental to the preserving process.

5.2.6 Use a quantity of salt at least equal to 40 % of the mass of the hides or skins in order to obtain maximum dehydration.

5.2.7 Distribute the salt evenly over the surface of each hide or skin.

5.2.8 Stack the hides or skins, spreading them out.

(It is preferable to salt the hides or skins stacking them with flesh side upwards. For light skins, however, it is possible to stack them with flesh side to flesh side.)

5.2.9 Limit to 1,5 m the height of the spread-out skin stacks.²⁾

Make up these stacks in such a way that the salting brine resulting from the dehydration can be easily drained off.

5.2.10 Leave the salted hides or skins stacked for at least 15 days.

5.2.11 At the time of packing for despatch, place the flesh side of the hide or skin used as wrapping to the outside.

5.2.12 It is recommended that the preserving process and the subsequent storage of the salted hides or skins be carried out in cold rooms (temperature of approximately + 10 °C), dimly lit, slightly ventilated³⁾ and in which the relative humidity is higher the longer the duration of storage.

1) This is ordinary washing.

2) In certain countries, with a high ambient temperature, this limit will have to be lowered.

3) In particular, these rooms shall be protected against draughts.