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Leather — Chemical tests — Determination of tan content in synthetic tanning agents

*Cuir — Essais chimiques — Détermination de la teneur en tanin dans
les agents de tannage synthétiques*



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ISO copyright office
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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Contents

Page

Foreword	iv
Introduction	v
1 Scope	1
2 Normative references	1
3 Terms and definitions	1
4 Principle	1
5 Reagents	1
6 Apparatus	1
7 Procedure	2
7.1 Preparation of the synthetic tanning agent solution for analysis.....	2
7.2 Determination of the total residual dry content (duplicate determination).....	2
7.3 Determination of the non-tanning agent content (i.e. non-adsorbable fraction).....	3
8 Calculation and expression of results	3
9 Test report	3
Annex A (informative) Interlaboratory trial results for the determination of the tan content	4
Annex B (informative) Sources of chemicals	5
Bibliography	6

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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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 WTO principles in the Technical Barriers to Trade (TBT) see the following URL: Foreword - Supplementary information

ISO 17489 was prepared by the European Committee for Standardization (CEN) Technical Committee CEN/TC 289, *Leather*, in collaboration with the Chemical Tests Commission of the International Union of Leather Technologists and Chemists Societies (IUC Commission, IULTCS), in accordance with the Agreement on technical cooperation between ISO and CEN (Vienna Agreement).

IULTCS, originally formed in 1897, is a worldwide 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.

Introduction

The ISO Standard, ISO 14088, is the traditional method for analysing the tanning component in a tanning agent. It uses chromium (III) tanned hide powder and determines the proportion of tanning agent that is adsorbed onto the hide powder. The non-adsorbable fraction, consisting largely of inorganic salts, remains in the tanning solution. By determining the dry content of the initial tanning solution and the non-adsorbable fraction, one calculates the adsorbable fraction – this is the tanning component in the tanning agent.

In this manner, the traditional hide powder method is used to determine the tanning strength of tanning agents. However, for reproducible test results this method requires considerable expertise from the operator in the preparation and packing of hide powder filter cartridges. In addition, the time for the filtration can be very long and the method is not suitable when results are needed in a short period of time, such as during the production quality control when manufacturing synthetic tanning agents.

The co-polymers of vinylimidazole and vinylpyrrolidone are used for removing polyphenolic compounds and metals from wine. This polymer-based powder offers a simple and practical alternative to hide powder for the routine testing of synthetic tanning agents, such as in a manufacturing facility. Interlaboratory trials (given in [Table A.1](#)) show the reproducibility and precision of repeat testing is better for the polymer-based powder.

The two procedures, ISO 14088 and ISO 17489, use different adsorbing substrates; consequently, the value for the adsorbable fraction will be different and the results obtained can only be compared when made with the same adsorbing substrate.