



**International
Standard**

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**IULTCS
IUC 40**

**Leather — Chemical analysis —
Determination of glutaraldehyde
content**

*Cuir — Analyse chimique — Détermination de la teneur en
glutaraldéhyde*

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Contents

Page

Foreword	iv
1 Scope	1
2 Normative references	1
3 Terms and definitions	1
4 Principle	1
5 Reagents	1
6 Apparatus	2
7 Preparation of test specimens	3
8 Procedure	3
8.1 Sample processing	3
8.1.1 Extraction	3
8.1.2 Reaction with DNPH	3
8.2 Determination by LC	3
9 Expression of results	4
9.1 General	4
9.2 Calculation of the glutaraldehyde content	4
9.3 Precision of the test method	4
10 Test report	4
Annex A (informative) Liquid chromatography conditions	5
Annex B (informative) Precision: reliability of the method	6

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Foreword

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The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular, the different approval criteria needed for the different types of ISO document should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2 (see www.iso.org/directives).

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IULTCS, originally formed in 1897, is a world-wide 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.

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

Any feedback or questions on this document should be directed to the user's national standards body. A complete listing of these bodies can be found at www.iso.org/members.html.

Leather — Chemical analysis — Determination of glutaraldehyde content

1 Scope

This document specifies a method for the determination of free and released glutaraldehyde in leathers, using liquid chromatography (LC).

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements 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, *Leather — Chemical, physical, mechanical and fastness tests — Position and preparation of specimens for testing*

ISO 3696, *Water for analytical laboratory use — Specification and test methods*

ISO 4044, *Leather — Chemical tests — Preparation of chemical test samples*

ISO 4787, *Laboratory glass and plastic ware — Volumetric instruments — Methods for testing of capacity and for use*

3 Terms and definitions

No terms and definitions are listed in this document.

ISO and IEC maintain terminology databases for use in standardization at the following addresses:

- ISO Online browsing platform: available at <https://www.iso.org/obp>
- IEC Electropedia: available at <https://www.electropedia.org/>

4 Principle

Glutaraldehyde is separated and quantified as a derivative from other aldehydes and ketones by liquid chromatography. Glutaraldehyde and hydrolysed glutaraldehyde are detected using this method.

The sample is extracted with a detergent solution at 40 °C. The extract is mixed with 2,4-dinitrophenylhydrazine, whereby aldehydes and ketones react to give the respective hydrazones. These are separated by means of a reversed-phase LC method, detected at (355 ± 5) nm and quantified.

5 Reagents

Use only reagents of recognised analytical grade, unless otherwise stated.

5.1 Water, grade 3 according to ISO 3696.