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Leather — Chemical determination of *N*-methyl-2-pyrrolidone (NMP) in leather

Cuir — Détermination de la teneur en N*-méthyl-2-pyrrolidone (NMP) dans le cuir*

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Foreword

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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 19070 was prepared by the Chemical Testing 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*, the secretariat of which is held by UNI, in accordance with the Agreement on technical cooperation between ISO and CEN (Vienna Agreement).

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.

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Introduction

Under the REACH regulation in the European Union (EU Regulation 1907/2006), *N*-methyl-2-pyrrolidone has been included in the candidate list of substances of very high concern (SVHC) and its use is restricted.

Accordingly, a new method is given for the determination of *N*-methyl-2-pyrrolidone in leather.

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Leather — Chemical determination of *N*-methyl-2-pyrrolidone (NMP) in leather

1 Scope

This International Standard specifies a method to determine the amount of *N*-methyl-2-pyrrolidone (NMP) in leather and leather components.

This method may also be used for the determination of *N*-ethyl-2-pyrrolidone (NEP) in leather.

2 Normative references

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. 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 and mechanical and fastness tests — Sampling location*

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

3 Principle

The test sample is extracted using acetone at 50 °C in an ultrasonic bath for 1 h. An aliquot is then analysed using a gas chromatograph with a mass selective detector (GC-MS).

4 Reagents

All reagents shall be analytical grade.

4.1 **Acetone**, CAS[1)] No. 67-64-1.

4.2 ***N*-methyl-2-pyrrolidone**, at least 99,5 %, CAS No. 872-50-4.

5 Apparatus

Usual laboratory equipment and, in particular, the following.

5.1 **Analytical balance**, capable of reading to 0,000 1 g.

5.2 **Sealable jar**, approximately 20 ml, with lid (suitable for carrying out an acetone extraction at 50 °C).

5.3 **Ultrasonic bath** (temperature controlled).

5.4 **Micro-pipettes**, 50 µl and 100 µl.

5.5 **Pipettes**, 0,5 ml to 5 ml capacity.

5.6 **Volumetric flasks**, 100 ml.

1) CAS = Chemical Abstracts Service

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