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**Leather — Chemical tests —
Determination of the preservative
(TCMTB, PCMC, OPP, OIT) content in
leather by liquid chromatography**

*Cuir — Essais chimiques — Dosage des agents de conservation
(TCMTB, PCMC, OPP, OIT) dans le cuir par chromatographie en phase
liquide*



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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.

International Standards are drafted in accordance with the rules given in the ISO/IEC Directives, Part 2.

The main task of technical committees is to prepare International Standards. 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.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights.

ISO 13365 was prepared by the European Committee for Standardization (CEN) Technical Committee CEN/TC 289, *Leather*, in collaboration with the Chemical Test 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). This method is technically similar to the method in IUC 29.

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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Leather — Chemical tests — Determination of the preservative (TCMTB, PCMC, OPP, OIT) content in leather by liquid chromatography

1 Scope

This International Standard specifies a test method for the determination of the content of the following preservative agents:

- 2-(thiocyanomethylthio)benzothiazole (TCMTB);
- 4-chloro-3-methylphenol (PCMC);
- 2-phenylphenol (OPP);
- 2-octylisothiazol-3(2H)-one (OIT);

in leather by liquid chromatography.

Preservative agents are necessary to protect leather from microbiological attack.

NOTE The preservative agents 4-chloro-3-methylphenol (PCMC) and 2-phenylphenol (OPP) can also be determined according to ISO 17070 and quantified by means of gas chromatography/mass spectroscopy (GC/MS).

2 Normative references

The following referenced documents are indispensable for the application 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 and mechanical and fastness tests — Sampling location*

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

ISO 4684, *Leather — Chemical tests — Determination of volatile matter*

3 Principle

The leather sample is extracted with a suitable solvent using ultrasonic waves. The filtered extract is analysed by high-performance liquid chromatography (HPLC) with ultraviolet (UV) detection.

4 Reagents

4.1 **TCMTB**, minimum 99,7 %.

4.2 **TCMTB stock solution**, 500 mg/l in acetonitrile.