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Leather — Organic fluorine —

Part 1: Determination of the non-volatile compound content by extraction method using liquid chromatography/ tandem mass spectrometry detector (LC-MS/MS)

Cuir — Fluor organique —

Partie 1: Détermination de la teneur en composés non volatils par une méthode d'extraction utilisant la chromatographie en phase liquide couplée à un détecteur par spectrométrie de masse en tandem (LC-MS/MS)

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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 documents 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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Any trade name used in this document is information given for the convenience of users and does not constitute an endorsement.

For an explanation of the voluntary nature of standards, the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the World Trade Organization (WTO) principles in the Technical Barriers to Trade (TBT) see www.iso.org/iso/foreword.html.

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*, 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.

A list of all parts in the ISO 23702 series can be found on the ISO website.

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.

Introduction

The group of per- and poly-fluorinated compounds (PFC) consists of more than 800 substances. The most well-known are perfluorooctanioc sulfonic acid (PFOS) and perfluorooctanooic acid (PFOA).

Perfluorooctanoic sulfonic acid (PFOS) is classified as persistent, bio-accumulative and toxic (PBT). PFOS and its salts are restricted and regulated in many countries regarding its marketing and use (see References [3] and [4]).

Perfluorooctanoic acid (PFOA) and its salts are suspected of having a similar risk profile to PFOS.

A number of long chain per- and poly-fluorinated compounds have been included in the EU Candidate List of Substances of Very High Concern (SVHC), which is available at https://echa.europa.eu/candidate-list-table.

The regulatory thresholds for restricted per- and poly-fluorinated compounds limit the use to a level below which they cannot be meaningfully used. The thresholds need to take into consideration the possible presence of unavoidable impurities and unintentional trace contaminants.

The long chain, fully fluorinated anions are non-volatile. They are heat stable and resistant to breaking down in the environment. The per- and poly-fluorinated compounds have been widely used in many industries, including in oil-, soil- and water-repellent finishes for textiles, leather products, paper, furniture and carpets.