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Leather — Chemical determination of chromium(VI) content in leather — Thermal pre-ageing of leather and determination of hexavalent chromium

*Cuir — Détermination chimique de la teneur en chrome(VI) du cuir
— Vieillissement thermique du cuir et détermination de la teneur en
chrome hexavalent*



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Foreword

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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, and the European Committee for Standardization (CEN) Technical Committee CEN/TC 309, *Footwear*, the secretariat of which is held by AENOR, 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

More than 80 % of leather is tanned using chromium(III) salts. The industry recommends manufacturing procedures to avoid oxidative conditions that could allow the formation of traces of hexavalent chromium [chromium(VI)] in the leather.

It is difficult to reproduce the natural ageing process. Therefore, in order to predict the tendency for trace levels of hexavalent chromium to develop in chromium(III) tanned leather, a number of pre-ageing tests have been proposed, some of which are being used in commercial leather specifications.

Following an inter-laboratory trial (see [Annex A](#)), thermal pre-ageing was selected as a suitable pre-ageing test procedure. The method is presented in this document.

Information on the development of hexavalent chromium during the natural ageing of chromium(III) tanned leather is given in [Annex B](#).