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Textiles — Method for the detection and determination of alkylphenol ethoxylates (APEO) —

Part 2: Method using NPLC

Textiles — Méthode de détection et de détermination des alkylphénols éthoxylés (APEO) —

Partie 2: Méthode utilisant la CLPN

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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.

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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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 Technical Committee ISO/TC 38, *Textiles*.

A list of all parts in the ISO 18254 series can be found on the ISO website.

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Introduction

This document specifies the normal phase liquid chromatography (NPLC) separation method for the quantitative and qualitative analysis of extractable alkylphenol ethoxylates (APEO) in textile and textile products. NPLC separation method enables alkylphenol ethoxylates to be analysed by high performance liquid chromatograph (HPLC) with Mass Spectrometer (MS), fluorescence detector (FD), charged aerosol detector (CAD) and evaporative light scattering detector (ELSD).

A study of the contribution percentage (mole fraction) of APEO congeners is presented in Annex D.

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Textiles — Method for the detection and determination of alkylphenol ethoxylates (APEO) —

Part 2:
Method using NPLC

WARNING — This document calls for the use of substances/procedures that may be injurious to the health/environment if appropriate conditions are not observed. It refers only to technical suitability and does not absolve the user from legal obligations relating to health and safety/ environment at any stage.

1 Scope

This document specifies the normal phase liquid chromatography (NPLC) separation method for the qualitative and quantitative analysis of extractable alkylphenol ethoxylates (APEO) in textiles and textile products.

This method provides several instrument options for the determination of alkylphenol ethoxylates (APEO) such as normal phase liquid chromatograph with mass spectrometer (NPLC/MS), normal phase liquid chromatograph with fluorescence detector (NPLC/FLD), normal phase liquid chromatograph with charged aerosol detector (NPLC/CAD) and normal phase liquid chromatograph with evaporative light scattering detector (NPLC/ELSD).

2 Normative references

There are no normative references in this document.

3 Terms and definitions

No terms and definitions are listed in this document.

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

— ISO Online browsing platform: available at https://www.iso.org/obp

— IEC Electropedia: available at http://www.electropedia.org/

4 Principle

The test specimen is cut into small pieces, transferred to a sample vial and treated with methanol in ultrasonic water bath. The extract is filtered and collected. Subsequently, the collected extract is analysed by NPLC/MS, NPLC/FLD, NPLC/CAD or NPLC/ELSD.

5 Reagents

Unless otherwise specified, analytical grade chemicals shall be used.

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