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

**Part 1:
Method using HPLC-MS**

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

Partie 1: Méthode utilisant la CLHP-SM

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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 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 18254-1 was prepared by the European Committee for Standardization (CEN) in collaboration with ISO Technical Committee ISO/TC 38, *Textiles*, and Technical Committee CEN/TC 248, *Textiles and textile products* in accordance with the Agreement on technical cooperation between ISO and CEN (Vienna Agreement).

ISO 18254 consists of the following parts under the general title *Textiles — Method for the detection and determination of alkylphenol ethoxylates (APEO)*:

— *Part 1: Method using HPLC-MS*

The following part is under preparation:

— *Part 2; Method using NPLC*

Introduction

Alkylphenol ethoxylates (APEOs) are high-value products commonly used in industrial and consumer detergents and cleaners, some plastics and many industrial applications. Their “down the drain” uses may result in their presence in wastewater streams and receiving water bodies. Human exposure to APEO can occur through diverse sources such as environmental, food, or skin contact. Considering their toxicity on several animal species, minimization of exposure to APEO is recognized as important to the preservation of human health.

Nonylphenol ethoxylates belong to the non-ionic surfactant category and are of particular concern. The biodegradation of nonylphenol ethoxylate releases the branched nonylphenol, which is difficult to biodegrade. Nonylphenol is a substance having endocrine disruptive properties that can have serious effects on aquatic and many other organisms. For this reason, the release of nonylphenol ethoxylate into the environment should be avoided.

Chemical products containing nonylphenol and/or nonylphenol ethoxylates in concentrations equal to or greater than 0,1 % are restricted within the EU for specific uses, among others, the processing of leather and textiles, industrial, and institutional cleaning.

This restriction is part of the entry 46 of Annex XVII of the REACH regulation EU 1907/2006, which repealed the former Directive 2003/53/EC.

The current restriction is due to be widened to apply to textile products that can be washed in water. A limit value of 0,01 % (100 ppm) is expected.

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