

Surface active agents — Determination of content of high boiling solvents in liquid detergents by GLC

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National foreword

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A list of organizations represented on CII/34 can be obtained on request to its secretary.

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Surface active agents - Determination of content of high boiling solvents in liquid detergents by GLC

Agents de surface - Détermination de la teneur en solvants à point d'ébullition élevé dans les détergents liquides par chromatographie en phase gazeuse

Grenzflächenaktive Stoffe - Bestimmung des Gehaltes an hochsiedenden Lösemitteln in flüssigen Reinigungsmitteln durch GLC

This European Standard was approved by CEN on 28 August 2006.

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Foreword

This document (EN 14981:2006) has been prepared by Technical Committee CEN/TC 276 "Surface active agents", the secretariat of which is held by AFNOR.

This European Standard shall be given the status of a national standard, either by publication of an identical text or by endorsement, at the latest by April 2007, and conflicting national standards shall be withdrawn at the latest by April 2007.

According to the CEN/CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this European Standard: Austria, Belgium, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland and United Kingdom.

1 Scope

This European Standard specifies a method for the identifying and quantifying of high boiling point solvents in finished liquid detergents and raw materials.

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 607, *Surface active agents and detergents - Methods of sample division*

3 Term and Definition

For the purposes of this European Standard, the following term and definition applies.

high boiling solvent

solvent, mainly a glycol and glycol ether product, with a boiling point significantly higher than water (100° C)

4 Principle

The organic solvents are determined by gas chromatography. The sample is dissolved in ethanol and injected into a polar phase capillary column and the unknown solvent is identified by its retention time. After qualitative determination, the solvent is quantified using (-) Carvone (2-Methyl-5-(1-methylethenyl)-2-cyclohexene-1-one) as internal standard.

5 Reagents

During the analysis, unless otherwise specified, use only reagents of recognized analytical grade that have been checked in advance so as not to interfere with the analytical results.

WARNING Some reagents used throughout this procedure are toxic. Care should be taken not to inhale the vapours. Contact with the skin should also be avoided. Safety glasses and gloves should be worn when handling the reagents. Waste solvent disposal should be carried out in accordance with safety and environmental regulations.

5.1 Ethanol (CAS number: 64-17-5).

5.2 (-) Carvone (2-Methyl-5-(1-methylethenyl)-2-cyclohexene-1-one), minimum purity 99,5 %
(CAS number : 6485-40-1)

5.3 Solvents to be determined (see example in Annex A)

WARNING Some solvents may exist as different isomers.

5.4 Carrier gas for gas chromatography

5.5 Auxiliary gas for gas chromatography