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**ICS 71.100.40**

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**SURFACE ACTIVE AGENTS - SODIUM**

**DODECYL SULFATE - ANALYTICAL METHOD**

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**EUROPEAN STANDARD**  
**NORME EUROPÉENNE**  
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**EN 14670**

June 2005

ICS 71.100.40

English version

**Surface active agents - Sodium dodecyl sulfate - Analytical method**

Agents de surface - Dodécylsulfate de sodium - Méthode  
d'analyse

Grenzflächenaktive Stoffe - Natriumdodecyulsulfat -  
Analysenverfahren

This European Standard was approved by CEN on 19 May 2005.

CEN members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this European Standard the status of a national standard without any alteration. Up-to-date lists and bibliographical references concerning such national standards may be obtained on application to the Central Secretariat or to any CEN member.

This European Standard exists in three official versions (English, French, German). A version in any other language made by translation under the responsibility of a CEN member into its own language and notified to the Central Secretariat has the same status as the official versions.

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## **Foreword**

This European Standard (EN 14670:2005) 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of an identical text or by endorsement, at the latest by December 2005, and conflicting national standards shall be withdrawn at the latest by December 2005.

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, Slovakia, Slovenia, Spain, Sweden, Switzerland and United Kingdom.

## EN 14670:2005 (E)

### 1 Scope

This European Standard specifies a method for the determination of the active content and molar mass of sodium dodecyl sulphate used as original titre for the titre determination of standard solutions for surface active agents titration.

**NOTE** These are used in the mixed indicator two-phase titration (e. g. ISO 2271) and in the potentiometric titration using a surface active agent sensitive electrode (e.g. EN 14480).

### 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.

EN 13267, *Surface active agents – Determination of water content – Karl Fischer method*.

EN ISO 3696, *Water for analytical laboratory use – Specification and test methods (ISO 3696:1987)*.

ISO 607, *Surface active agents and detergents – Methods of sample division*.

ISO 894, *Surface active agents – Technical sodium primary alkylsulphates – Methods of analysis*.

ISO 6844, *Surface active agents – Determination of mineral sulfate content – Titrimetric method*.

### 3 Principle

The water content, the sodium sulphate content and the extractable matter content by light petroleum of the test sample are determined according to the methods respectively described in EN ISO 3696, ISO 894 and ISO 9844 and the active content is calculated by subtracting the water content, the sodium sulphate content and the content of extractable matter by light petroleum from 100 %. For calculating the average molar mass of the sodium dodecyl sulphate the fatty alcohols C<sub>10</sub> to C<sub>14</sub> released after acidic hydrolysis are isolated and the C-chain distribution is determined by gas chromatography.

### 4 Reagents

During the analysis, unless otherwise specified, use only reagents of recognized analytical grade which have been checked in advance as not interfering with the analytical results and water complying with grade 3 as defined in EN ISO 3696 and in particular use.

- a) for the determination of the water content, the reagents specified in EN 13267;
- b) for the determination of the sodium sulphate content, the reagents specified in ISO 6844 (or prEN 14880);
- c) for the determination of extractable matter content by light petroleum, the reagents specified in ISO 894.



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