Surface active agents - Determination of pH value of solutions or dispersions

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EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

Käesolev Eesti standard EVS-EN 1262:2004 sisaldab Euroopa standardi EN 1262:2003 ingliskeelset teksti. Käesolev dokument on jõustatud 20.02.2004 ja selle kohta on avaldatud teade Eesti standardiorganisatsiooni ametlikus väljaandes. Standard on kättesaadav Eesti standardiorganisatsioonist.	This Estonian standard EVS-EN 1262:2004 consists of the English text of the European standard EN 1262:2003. This document is endorsed on 20.02.2004 with the notification being published in the official publication of the Estonian national standardisation organisation. The standard is available from Estonian standardisation organisation.

Käsitlusala: This European Standard specifies a method for the determination of pH value of solutions or dispersions of surface active agents and gives a method for their preparation. The method is applicable to aqueous solutions containing anionic, cationic and non-ionic surface active agents, ampholytic surface active agents and products in solution containing surface active agents	**Scope:** This European Standard specifies a method for the determination of pH value of solutions or dispersions of surface active agents and gives a method for their preparation. The method is applicable to aqueous solutions containing anionic, cationic and non-ionic surface active agents, ampholytic surface active agents and products in solution containing surface active agents

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Surface active agents - Determination of pH value of solutions or dispersions

Agents de surface - Détermination de la valeur du pH des solutions ou des dispersions

Grenzflächenaktive Stoffe - Messung des pH-Wertes von Lösungen oder Dispersionen

This European Standard was approved by CEN on 8 September 2003.

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 Management Centre 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 Management Centre has the same status as the official versions.

CEN members are the national standards bodies of Austria, Belgium, Czech Republic, Denmark, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Luxembourg, Malta, Netherlands, Norway, Portugal, Slovakia, Spain, Sweden, Switzerland and United Kingdom.

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Foreword

This document (EN 1262:2003) 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 2004, and conflicting national standards shall be withdrawn at the latest by April 2004.

This document supersedes EN 1262:1996.

Significant technical differences between this edition and EN 1262:1996 are as follows:

a) addition of the specification of water and its preparation in 4.1;

b) modification of the accuracy of the pH-meter in 5.1;

c) introduction of the use of sodium chloride solution in 6.1 for solutions of low conductivity;

d) introduction of a possibility in 6.2.1 for solution A to replace a mass fraction of 10% active matter solution;

e) introduction of notes in 7.2 to indicate the possibility to avoid the absorption of CO_2 and to add few drops of diluted solution of sodium chloride for the measurement of the pH of non-ionic surface active agents.

Annex A is informative.

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

1 Scope

This European Standard specifies a method for the determination of pH value of solutions or dispersions of surface active agents and gives a method for their preparation.

The method is applicable to aqueous solutions containing anionic, cationic and non-ionic surface active agents, ampholytic surface active agents and products in solution containing surface active agents.

2 Terms and definitions

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

2.1
active matter
all of the surface active agents responsible for a specified activity in a formulation

3 Principle

The pH value of the sample solution is determined by potentiometric measurement using a specific electrode and commercial pH meter.

4 Reagents

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

4.1 Water, deionised water from which carbon dioxide has been removed and having a conductivity not exceeding 1 mS/m at 25 °C and a pH value between 6,0 and 7,0 or water of equivalent purity.

To remove carbon dioxide from the water it shall be boiled during not less than 10 min. Because water rapidly absorbs again CO_2, it shall be allowed to cool down in a flask that has a tube filled with soda lime in its neck.

The pH value of the water shall be measured by addition of a few drops of dilute sodium chloride (4.4) in order to increase the conductivity.

4.2 Standard buffer solutions, two solutions which bracket the expected pH value of the sample solution, for adjusting the pH meter.

4.3 Ethanol with a volume fraction of 96 %, to determine its suitability, ethanol is mixed with deionised water (4.1), in a ratio of 50 : 50 (*m/m*) ; the pH value shall be between 6,0 and 7,0, otherwise a more suitable ethanol grade shall be used.

4.4 Sodium chloride, w (NaCl) = 10 % (aqueous solution).

5 Apparatus

Ordinary laboratory apparatus and the following.

5.1 pH meter, with a reading resolution of 0,01 pH, or better, comprising a potentiometric unit, a reference electrode and an electrode which is sensitive to hydrogen ions.

NOTE Combined electrodes of glass and calomel or Ag/Ag+ are commercially available. They should be stored, cleaned and conditioned according to the manufacturer's instructions.