

**Pindaktiivsed ained. Pesemisvahendid (detergendid).
Happe mõjul hüdrolüüsuva ja mittehüdrolüüsuva
anioonaktiivse aine määramine**

Surface active agents - Detergents - Determination of
anionic-active matter hydrolyzable and non-hydrolyzable
under acid conditions

EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

<p>Käesolev Eesti standard EVS-EN ISO 2870:2000 sisaldab Euroopa standardi EN ISO 2870:1994 ingliskeelset teksti.</p> <p>Standard on kinnitatud Eesti Standardikeskuse 11.01.2000 käskkirjaga ja jõustub sellekohase teate avaldamisel EVS Teatajas.</p> <p>Euroopa standardimisorganisatsioonide poolt rahvuslikele liikmetele Euroopa standardi teksti kättesaadavaks tegemise kuupäev on .</p> <p>Standard on kättesaadav Eesti standardiorganisatsioonist.</p>	<p>This Estonian standard EVS-EN ISO 2870:2000 consists of the English text of the European standard EN ISO 2870:1994.</p> <p>This standard is ratified with the order of Estonian Centre for Standardisation dated 11.01.2000 and is endorsed with the notification published in the official bulletin of the Estonian national standardisation organisation.</p> <p>Date of Availability of the European standard text .</p> <p>The standard is available from Estonian standardisation organisation.</p>
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ICS 71.100.40

Võtmesõnad: anioonaktiivne aine, keemiline analüüs, koostise määramine, mahtanalüüs, pesemisvahendid (detergendid), pindaktiivsed ained,

Ingliskeelsed võtmesõnad: anionic-active matter, chemical analysis, detergents, determination of content, surfactants, volumetric analysis,

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EUROPEAN STANDARD

EN ISO 2870

NORME EUROPÉENNE

EUROPÄISCHE NORM

August 1994

UDC 661.185:543

Descriptors: surfactants, detergents, chemical analysis, determination of content, anionic-active matter, volumetric analysis

English version

**Surface active agents - Detergents -
Determination of anionic-active matter
hydrolyzable and non-hydrolyzable under acid
conditions (ISO 2870:1986)**

Agents de surface - Détergents - Détermination
de la matière active anionique hydrolysable et
non hydrolysable en milieu acide
(ISO 2870:1986)

Tenside - Waschmittel - Bestimmung von sauer
hydrolysierbaren und nicht-hydrolysierbaren
anionaktiven Anteilen (ISO 2870:1986)

This European Standard was approved by CEN on 1994-08-22. 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.

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CEN

European Committee for Standardization
Comité Européen de Normalisation
Europäisches Komitee für Normung

Central Secretariat: rue de Stassart, 36 B-1050 Brussels

Foreword

This European Standard has been taken over by the Technical Committee CEN/TC 276 "Surface active agents" from the work of ISO/TC 91 "Surface active agents" of the International Organization for Standardization (ISO).

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 February 1995, and conflicting national standards shall be withdrawn at the latest by February 1995.

According to the CEN/CENELEC Internal Regulations, the following countries are bound to implement this European Standard: Austria, Belgium, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland, United Kingdom.

Endorsement notice

The text of the International Standard ISO 2870:1986 was approved by CEN as a European Standard without any modification.

International Standard



2870

INTERNATIONAL ORGANIZATION FOR STANDARDIZATION • МЕЖДУНАРОДНАЯ ОРГАНИЗАЦИЯ ПО СТАНДАРТИЗАЦИИ • ORGANISATION INTERNATIONALE DE NORMALISATION

Surface active agents — Detergents — Determination of anionic-active matter hydrolyzable and non-hydrolyzable under acid conditions

Agents de surface — Détergents — Détermination de la matière active anionique hydrolysable et non hydrolysable en milieu acide

Second edition — 1986-05-01

UDC 661.185 : 543

Ref. No. ISO 2870-1986 (E)

Descriptors : surfactants, detergents, chemical analysis, determination of content, anionic-active matter, volumetric analysis.

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.

Draft International Standards adopted by the technical committees are circulated to the member bodies for approval before their acceptance as International Standards by the ISO Council. They are approved in accordance with ISO procedures requiring at least 75 % approval by the member bodies voting.

International Standard ISO 2870 was prepared by Technical Committee ISO/TC 91, *Surface active agents*.

This second edition cancels and replaces the first edition (ISO 2870-1973), of which it constitutes a minor revision.

Users should note that all International Standards undergo revision from time to time and that any reference made herein to any other International Standard implies its latest edition, unless otherwise stated.

Surface active agents — Detergents — Determination of anionic-active matter hydrolyzable and non-hydrolyzable under acid conditions

1 Scope and field of application

This International Standard specifies a method for the determination, in detergents, of anionic-active matter hydrolyzable and non-hydrolyzable under acid conditions.

This active matter includes alkyl sulfates and hydroxysulfates and alkylphenol and fatty alcohol ethoxysulfates.

The mean relative molecular mass of the two types of active matter must be known or previously determined, if their content is expressed as a percentage by mass. If the detergent contains perborate, this must be destroyed before the hydrolysis.

2 References

ISO 607, *Surface active agents — Detergents — Methods of sample division*.

ISO 2271, *Surface active agents — Detergents — Determination of anionic-active matter (direct two-phase titration procedure)*.

3 Principle

Titration of an aliquot portion of a sample solution with benzethonium chloride solution according to the direct two-phase titration procedure specified in ISO 2271.

Hydrolysis, by refluxing under acid conditions, of a second aliquot portion of the sample solution after destruction, if necessary, of any perborate in the sample by the addition of sodium sulfite.

Titration of unhydrolyzed anionic-active matter with benzethonium chloride solution as before.

Calculation of the contents of hydrolyzable and non-hydrolyzable anionic-active matter from the results obtained.

4 Reagents

During the analysis, use only reagents of recognized analytical grade and only distilled water or water of equivalent purity.

In addition to the reagents mentioned in ISO 2271 and given below as a reminder:

4.1 Chloroform, ρ_{20} 1,48 g/ml, distilling between 59,5 and 61,5 °C.

4.2 Sulfuric acid, 245 g/l solution.

4.3 Sulfuric acid, 49 g/l solution.

4.4 Sodium hydroxide, standard volumetric solution, $c(\text{NaOH}) = 1,0 \text{ mol/l}$.

4.5 Sodium lauryl sulfate, standard volumetric solution, $c[\text{C}_3(\text{CH}_2)_{11}\text{OSO}_3\text{Na}] = 0,004 \text{ mol/l}$.

4.6 Benzethonium chloride, standard volumetric solution, $c(\text{C}_{27}\text{H}_{42}\text{ClNO}_2 \cdot \text{H}_2\text{O}) = 0,004 \text{ mol/l}$.

4.7 Phenolphthalein, 10 g/l ethanolic solution.

4.8 Mixed indicator solution.

the following reagents are necessary:

4.9 Sulfuric acid, 490 g/l solution.

4.10 Sodium hydroxide, 400 g/l solution.

4.11 Sodium hydroxide, 40 g/l solution.

4.12 Sodium sulfite, 20 g/l solution.