

**Pindaktiivsed ained. Pesemisvahendid  
(detergendid). Katioonaktiivse aine  
sisalduse määramine. Osa 1: Kõrge  
molekulmassiga katioonaktiivne aine**

Surface active agents - Detergents - Determination  
of cationic-active matter content - Part 1: High-  
molecular-mass cationic-active matter

## EESTI STANDARDI EESSÕNA

## NATIONAL FOREWORD

Käesolev Eesti standard EVS-EN ISO 2871-1:2000 sisaldab Euroopa standardi EN ISO 2871-1:1994 ingliskeelset teksti.

Käesolev dokument on jõustatud 11.01.2000 ja selle kohta on avaldatud teade Eesti standardiorganisatsiooni ametlikus väljaandes.

Standard on kättesaadav Eesti standardiorganisatsioonist.

This Estonian standard EVS-EN ISO 2871-1:2000 consists of the English text of the European standard EN ISO 2871-1:1994.

This document is endorsed on 11.01.2000 with the notification being published in the official publication of the Estonian national standardisation organisation.

The standard is available from Estonian standardisation organisation.

### Käsitlusala:

ISO 2871 käesolev osa esitab meetodi kõrge molekulmassiga katioonaktiivse aine massiprotsendi määramiseks.

### Scope:

**ICS** 71.100.40

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

UDC 661.185:543.24

Descriptors: Detergent, testing, surface-active agent.

**English version**

Surface active agents

**Detergents**

Determination of cationic-active matter content

Part 1: High-molecular mass cationic-active matter  
(ISO 2871-1:1988)

Agents de surface; détergents; détermination de la teneur en matière active cationique. Partie 1: Matière active cationique à haute masse moléculaire (ISO 2871-1:1988)

Tenside; Waschmittel; Bestimmung der kationaktiven Substanz. Teil 1: Hochmolekulare kationaktive Substanz (ISO 2871-1:1988)

This European Standard was approved by CEN on 1994-08-22 and is identical to the ISO Standard as referred to.

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.

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

**CEN**

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

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

## Foreword

International Standard

ISO 2871-1:1988 Surface active agents; detergents; determination of cationic-active matter content; high-molecular mass cationic-active matter

which was prepared by ISO/TC 91 'Surface active agents' of the International Organization for Standardization, has been adopted by Technical Committee CEN/TC 276 'Surface active agents' as a European Standard.

This European Standard shall be given the status of a national standard, either by publication of an identical text or by endorsement, and conflicting national standards withdrawn, by February 1995 at the latest.

In accordance with 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 and United Kingdom.

## Endorsement notice

The text of the International Standard ISO 2871-1:1988 was approved by CEN as a European Standard without any modification.

## 1 Scope

This part of ISO 2871 specifies a method for the determination of high-molecular-mass cationic-active materials such as

- a) quaternary ammonium compounds in which two of the alkyl groups each contain 10 or more carbon atoms, e.g. distearyl dimethyl-ammonium chlorides, or
- b) salts of imidazoline or 3-methylimidazoline in which long-chain acylaminoethyl and alkyl groups are substituted in the 1- and 2-positions, respectively.

The method is applicable to solids or to aqueous solutions of the active material. The relative molecular mass of the cationic-active matter shall be known or previously determined if its content is expressed as a percentage by mass.

The method is not applicable if anionic surface-active agents are present.

NOTE — Low relative molecular mass sulfonates of toluene and xylene present as hydrotropes do not interfere when present in concentrations up to and including 15 % (*m/m*) with respect to the active material. At higher levels, their influence should be evaluated in each particular case.

Non-ionic surface active agents, soap, urea and the salts of (ethylenedinitrilo)tetraacetic acid do not interfere.

Typical inorganic components of detergent formulations, such as sodium chloride, sulfate, borate, tripolyphosphate, perborate, silicate, etc., do not interfere, but bleaching agents other than perborate shall be destroyed before the analysis, and the sample shall be completely soluble in water.

This part of ISO 2871 should be read in conjunction with ISO 2271.

## 2 Normative references

The following standards contain provisions which, through reference in this text, constitute provisions of this part of ISO 2871. At the time of publication, the editions indicated were valid. All standards are subject to revision, and parties to agreements based on this part of ISO 2871 are encouraged to

investigate the possibility of applying the most recent editions of the standards listed below. Members of IEC and ISO maintain registers of currently valid International Standards.

ISO 385-1 : 1984, *Laboratory glassware — Burettes — Part 1: General requirements*.

ISO 607 : 1980, *Surface active agents and detergents — Methods of sample division*.

ISO 1042 : 1983, *Laboratory glassware — One-mark volumetric flasks*.

ISO 2271 : 1972, *Surface active agents — Detergents — Determination of anionic-active matter (Direct two-phase titration procedure)*.

## 3 Principle

Titration of an aliquot portion of a standard solution of sodium lauryl sulfate with a solution of the test sample, according to the direct two-phase titration procedure described in ISO 2271.

## 4 Reagents

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

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

**4.2 Propan-2-ol**.

**4.3 Sodium lauryl sulfate**, standard volumetric solution,  $c(\text{C}_{12}\text{H}_{25}\text{NaO}_4\text{S}) = 0,004 \text{ mol/l}$ .

See 5.5 of ISO 2271 : 1972.

**4.4 Mixed indicator**, solution.

See 5.8 of ISO 2271 : 1972.