

Surface active agents - Determination of the active matter content of alkylamidopropylbetaines

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EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

<p>Käesolev Eesti standard EVS-EN 15109:2007 sisaldab Euroopa standardi EN 15109:2006 ingliskeelset teksti.</p> <p>Käesolev dokument on jõustatud 29.01.2007 ja selle kohta on avaldatud teade Eesti standardiorganisatsiooni ametlikus väljaandes.</p> <p>Standard on kättesaadav Eesti standardiorganisatsioonist.</p>	<p>This Estonian standard EVS-EN 15109:2007 consists of the English text of the European standard EN 15109:2006.</p> <p>This document is endorsed on 29.01.2007 with the notification being published in the official publication of the Estonian national standardisation organisation.</p> <p>The standard is available from Estonian standardisation organisation.</p>
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<p>Käsitlusala: This European Standard specifies a method for the determination of the active matter content of alkylamidobetaines in commercial surface active agents.</p>	<p>Scope: This European Standard specifies a method for the determination of the active matter content of alkylamidobetaines in commercial surface active agents.</p>
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ICS 71.100.40

Võtmesõnad:

ICS 71.100.40

English Version

**Surface active agents - Determination of the active matter
content of alkylamidopropylbetaines**

Agents de surface - Détermination de la teneur en matières
actives des alkylamidopropylbétaines

Grenzflächenaktive Stoffe - Bestimmung des Aktivgehaltes
von Alkylamidopropylbetainen

This European Standard was approved by CEN on 6 October 2006.

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, 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.



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Foreword

This document (EN 15109:2006) 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 May 2007, and conflicting national standards shall be withdrawn at the latest by May 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 determination of the active matter content of alkylamidobetaines in commercial surface active agents.

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 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*

3 Principle

The test sample to be analysed is alkalinized by addition of sodium hydroxide. In this way all substances present are converted into a defined form, namely:

- the betaine into its intermolecular salt form;
- the amidoamine into the free amidoamine;
- the acids (e.g. hydrochloric acid, fatty acids, chloroacetic acids and glycolic acid) into their sodium salt forms.

During the titration with perchloric acid in the non-aqueous medium:

- the betaine is changed into the protonated form;
- the amidoamine is changed into the amidoamine perchlorate;
- the excess sodium hydroxide and sodium salts of the different acids are transformed into weakly dissociated sodium perchlorate.

By using a solvent mixture which enables a good differentiation of varying $pK(b)$ values, it is possible to differentiate the betaine from these accompanying substances.

Salts of chloroacetic acids, glycolic acid, fatty acid and amidoamine do not interfere. Short chain betaines are titrated together with long chain betaines.

4 Reagents

4.1 General

WARNING — Your attention is drawn to the regulations covering the handling of hazardous substances. Technical, organisational and personal protection measures should be observed.

During the analysis, unless otherwise specified, use only reagents of recognized analytical grade and have been checked in advance as to not interfere with the analytical results and water complying with grade 1 as defined in EN ISO 3696.

4.2 1,4-dioxane, minimum purity 99 % (CAS number: 123-91-1).