

**Modifitseeritud tärklis. Oksüdeerunud
tärklise karboksüülrühmasisalduse
määramine**

Modified starch - Determination of carboxyl group
content of oxidized starch

EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

<p>Käesolev Eesti standard EVS-EN ISO 11214:2000 sisaldab Euroopa standardi EN ISO 11214:1996 ingliskeelset teksti.</p> <p>Käesolev dokument on jõustatud 18.08.2000 ja selle kohta on avaldatud teade Eesti standardiorganisatsiooni ametlikus väljaandes.</p> <p>Standard on kättesaadav Eesti standardiorganisatsioonist.</p>	<p>This Estonian standard EVS-EN ISO 11214:2000 consists of the English text of the European standard EN ISO 11214:1996.</p> <p>This document is endorsed on 18.08.2000 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: See rahvusvaheline standard määrab kindlaks meetodi oksüdeerunud tärklise karboksüülrühmasisalduse määramiseks. Meetod on sobiv kuni 1%-lise (massiprotsent) karboksüülrühmasisalduse määramiseks.</p>	<p>Scope:</p>
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ICS 67.180.20

Võtmesõnad: keemiline analüüs, mahtanalüüs, sisalduse määramine, süsivesinikud, tärklised

ICS 67.180.20

Descriptors: Starch, testing, carboxyl content.

English version

Modified starch

Determination of carboxyl group content of oxidized starch
(ISO 11 214:1996)

Amidon modifié; dosage des groupes
carboxyles dans l'amidon oxydé
(ISO 11 214:1996)

Modifizierte Stärke; Bestimmung des
Carboxylgruppengehaltes von oxidiert
Stärke (ISO 11 214:1996)

This European Standard was approved by CEN on 1996-06-29 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 11214:1996 Modified starch; determination of carboxyl group content of oxidized starch, which was prepared by ISO/TC 93 'Starch (including derivatives and by-products)' of the International Organization for Standardization, has been adopted by CEN/CS 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 January 1997 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 11214:1996 was approved by CEN as a European Standard without any modification.

NOTE: Normative references to international publications are listed in Annex ZA (normative).

1 Scope

This International Standard specifies a method for the determination of the carboxyl group content of oxidized starch.

The method is suitable for determining carboxyl group contents up to 1 % (*m/m*).

2 Normative references

The following standards contain provisions which, through reference in this text, constitute provisions of this International Standard. At the time of publication, the editions indicated were valid. All standards are subject to revision, and parties to agreements based on this International Standard are encouraged to investigate the possibility of applying the most recent editions of the standards indicated below. Members of IEC and ISO maintain registers of currently valid International Standards.

ISO 1666:—¹⁾, *Starch — Determination of moisture content — Oven-drying method*.

ISO 3696:1987, *Water for analytical laboratory use — Specification and test methods*.

ISO 3946:1982, *Starches and derived products — Determination of total phosphorus content — Spectrophotometric method*.

3 Principle

The carboxyl groups are converted into the acid form

1) To be published. (Revision of ISO 1666:1973)

by adding a mineral acid to a homogenized test portion of the oxidized starch.

The cations and the excess acid are eliminated by washing with water.

The washed sample is gelatinized and titrated with sodium hydroxide standard solution.

For oxidized potato starch, the result is corrected for the phosphate group content.

4 Reagents and materials

Use only reagents of recognized analytical grade, unless otherwise specified, and water complying with grade 2 in accordance with ISO 3696. The water used shall be free of carbon dioxide.

4.1 Hydrochloric acid, 0,1 mol/l solution.

4.2 Sodium hydroxide, standard volumetric solution, $c(\text{NaOH}) = 0,1 \text{ mol/l}$, free of carbon dioxide.

4.3 Phenolphthalein in ethanol, 1 g/l solution, 90 % (V/V).

4.4 Silver nitrate, 10 g/l solution.

5 Apparatus

Usual laboratory apparatus and in particular the following.

5.1 Beakers, of capacity 100 ml and 600 ml.

5.2 Magnetic stirrer.