

Cereals and milled cereal products - Determination of the viscosity of flour - Method using an amylograph (ISO 7973:1992)

## EESTI STANDARDI EESSÕNA

## NATIONAL FOREWORD

|                                                                                                                     |                                                                                                                                    |
|---------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------|
| See Eesti standard EVS-EN ISO 7973:2015 sisaldab Euroopa standardi EN ISO 7973:2015 ingliskeelset teksti.           | This Estonian standard EVS-EN ISO 7973:2015 consists of the English text of the European standard EN ISO 7973:2015.                |
| Standard on jõustunud sellekohase teate avaldamisega EVS Teatajas                                                   | This standard has been endorsed with a notification published in the official bulletin of the Estonian Centre for Standardisation. |
| Euroopa standardimisorganisatsioonid on teinud Euroopa standardi rahvuslikele liikmetele kättesaadavaks 16.12.2015. | Date of Availability of the European standard is 16.12.2015.                                                                       |
| Standard on kättesaadav Eesti Standardikeskusest.                                                                   | The standard is available from the Estonian Centre for Standardisation.                                                            |

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ICS 67.060

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English Version

Cereals and milled cereal products - Determination of the  
viscosity of flour - Method using an amylograph (ISO  
7973:1992)

Céréales et produits de mouture des céréales -  
Détermination de la viscosité de la farine - Méthode  
utilisant un amylographe (ISO 7973:1992)

Getreide und gemahlene Getreideerzeugnisse -  
Bestimmung der Viskosität von Mehl - Amylograph-  
Verfahren (ISO 7973:1992)

This European Standard was approved by CEN on 30 November 2015.

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EUROPEAN COMMITTEE FOR STANDARDIZATION  
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EUROPÄISCHES KOMITEE FÜR NORMUNG

CEN-CENELEC Management Centre: Avenue Marnix 17, B-1000 Brussels

## European foreword

The text of ISO 7973:1992 has been prepared by Technical Committee ISO/TC 34 “Food products” of the International Organization for Standardization (ISO) and has been taken over as EN ISO 7973:2015 by Technical Committee CEN/TC 338 “Cereal and cereal products” 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 June 2016, and conflicting national standards shall be withdrawn at the latest by June 2016.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CEN [and/or CENELEC] shall not be held responsible for identifying any or all such patent rights.

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## Endorsement notice

The text of ISO 7973:1992 has been approved by CEN as EN ISO 7973:2015 without any modification.

# Cereals and milled cereal products — Determination of the viscosity of flour — Method using an amylograph

## 1 Scope

This International Standard specifies a method using an amylograph for determining the viscosity of a suspension of flour in water, in which the starch is gelatinized by heating, in order to assess the conditions of gelatinization of the flour and so judge whether there is any alpha-amylase activity.

This method is applicable to wheat and rye flour and also to wheat and rye grain.

### NOTES

1 This International Standard has been prepared on the basis of the Brabender-type amylograph.

2 This method applies strictly to an amylograph and not to a viscograph, since an amylograph possesses the following characteristics:

- it is possible to change the torque-measuring head;
- the heating coils are located around the bowl of the apparatus and at the bottom;
- there is no cooling rod for lowering the gel temperature.

## 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 712:1985, *Cereals and cereal products — Determination of moisture content (Routine reference method)*.

ISO 3093:1982, *Cereals — Determination of falling number*.

## 3 Definition

For the purposes of this International Standard, the following definition applies.

**3.1 amylograph viscosity:** Maximum viscosity reached by a suspension of flour and water which is gelatinized by heating under the conditions set out in this International Standard.

It is expressed as an arbitrary unit: amylograph unit (AU).

## 4 Principle

Preparation of a suspension of flour in water, followed by recording of the viscosity of the suspension which is heated at a constant rate from 30 °C to the temperature corresponding to the moment at which viscosity starts to decrease, having reached its maximum (approximately 95 °C).

The increase in viscosity due to gelatinization of the starch is dependent upon the increase in temperature, the mechanical action of stirring and the activity of alpha-amylase already present or added to the flour.

## 5 Reagent

**5.1 Distilled water**, or water of equivalent purity.

## 6 Apparatus

Usual laboratory equipment and, in particular, the following.