

|            |   |   |
|------------|---|---|
| <b>STN</b> | <b>Pšeničná múka<br/>Fyzikálne charakteristiky ciest<br/>Časť 2: Stanovenie reologických vlastností<br/>pomocou extenzografu<br/>(ISO 5530-2: 2025)</b> | <b>STN<br/>EN ISO 5530-2</b><br><br>56 0610 |
|------------|---|---|

Wheat flour - Physical characteristics of doughs - Part 2: Determination of rheological properties using an extensograph (ISO 5530-2:2025)

Táto norma obsahuje anglickú verziu európskej normy.  
This standard includes the English version of the European Standard.

Táto norma bola oznámená vo Vestníku ÚNMS SR č. 07/25

Obsahuje: EN ISO 5530-2:2025, ISO 5530-2:2025

Oznámením tejto normy sa ruší  
STN EN ISO 5530-2 (56 0610) z mája 2015

**140713**

---

Úrad pre normalizáciu, metrológiu a skúšobníctvo Slovenskej republiky, 2025  
Slovenská technická norma a technická normalizačná informácia je chránená zákonom č. 60/2018 Z. z. o technickej normalizácii v znení neskorších predpisov.

EUROPEAN STANDARD

EN ISO 5530-2

NORME EUROPÉENNE

EUROPÄISCHE NORM

January 2025

ICS 67.060

Supersedes EN ISO 5530-2:2014

English Version

## Wheat flour - Physical characteristics of doughs - Part 2: Determination of rheological properties using an extensograph (ISO 5530-2:2025)

Farines de blé tendre - Caractéristiques physiques des pâtes - Partie 2: Détermination des caractéristiques rhéologiques au moyen de l'extensographe (ISO 5530-2:2025)

Weizenmehl - Physikalische Eigenschaften von Teigen - Teil 2: Bestimmung der rheologischen Eigenschaften mittels Extensograph (ISO 5530-2:2025)

This European Standard was approved by CEN on 27 September 2021.

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 CEN-CENELEC Management Centre 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 CEN-CENELEC Management Centre has the same status as the official versions.

CEN members are the national standards bodies of Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Republic of North Macedonia, Romania, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Türkiye and United Kingdom.



EUROPEAN COMMITTEE FOR STANDARDIZATION  
COMITÉ EUROPÉEN DE NORMALISATION  
EUROPÄISCHES KOMITEE FÜR NORMUNG

**CEN-CENELEC Management Centre: Rue de la Science 23, B-1040 Brussels**

**EN ISO 5530-2:2025 (E)**

| <b>Contents</b>               | <b>Page</b> |
|-------------------------------|-------------|
| <b>European foreword.....</b> | <b>3</b>    |

## **European foreword**

This document (EN ISO 5530-2:2025) has been prepared by Technical Committee ISO/TC 34 "Food products" in collaboration with 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 July 2025, and conflicting national standards shall be withdrawn at the latest by July 2025.

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

This document supersedes EN ISO 5530-2:2014.

Any feedback and questions on this document should be directed to the users' national standards body/national committee. A complete listing of these bodies can be found on the CEN website.

According to the CEN-CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this European Standard: Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Republic of North Macedonia, Romania, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Türkiye and the United Kingdom.

## **Endorsement notice**

The text of ISO 5530-2:2025 has been approved by CEN as EN ISO 5530-2:2025 without any modification.



# International Standard

**ISO 5530-2**

## **Wheat flour — Physical characteristics of doughs —**

### **Part 2: Determination of rheological properties using an extensograph**

*Farines de blé tendre — Caractéristiques physiques des pâtes —*

*Partie 2: Détermination des caractéristiques rhéologiques au  
moyen de l'extensographe*

**Fourth edition  
2025-01**

## ISO 5530-2:2025(en)



### **COPYRIGHT PROTECTED DOCUMENT**

© ISO 2025

All rights reserved. Unless otherwise specified, or required in the context of its implementation, no part of this publication may be reproduced or utilized otherwise in any form or by any means, electronic or mechanical, including photocopying, or posting on the internet or an intranet, without prior written permission. Permission can be requested from either ISO at the address below or ISO's member body in the country of the requester.

ISO copyright office  
CP 401 • Ch. de Blandonnet 8  
CH-1214 Vernier, Geneva  
Phone: +41 22 749 01 11  
Email: [copyright@iso.org](mailto:copyright@iso.org)  
Website: [www.iso.org](http://www.iso.org)

Published in Switzerland

**ISO 5530-2:2025(en)****Contents**

Page

|  |           |
|--|-----------|
| <b>Foreword</b> .....  | <b>iv</b> |
| <b>1 Scope</b> .....   | <b>1</b>  |
| <b>2 Normative references</b> .....                                    | <b>1</b>  |
| <b>3 Terms and definitions</b> .....                                   | <b>1</b>  |
| <b>4 Principle</b> .....   | <b>2</b>  |
| <b>5 Reagents</b> .....  | <b>3</b>  |
| <b>6 Apparatus</b> .....   | <b>3</b>  |
| <b>7 Sampling</b> .....  | <b>4</b>  |
| <b>8 Procedure</b> .....   | <b>4</b>  |
| 8.1 Determination of the moisture content of the flour.....            | 4         |
| 8.2 Preparation of apparatus.....                                      | 4         |
| 8.3 Test portion.....  | 5         |
| 8.4 Preparation of the dough.....                                      | 5         |
| 8.5 Determination.....   | 6         |
| <b>9 Expression of results</b> .....                                   | <b>6</b>  |
| 9.1 General.....   | 6         |
| 9.2 Water absorption.....  | 6         |
| 9.3 Resistance to stretching.....                                      | 6         |
| 9.3.1 Maximum resistance.....  | 6         |
| 9.3.2 Resistance at constant deformation.....                          | 7         |
| 9.4 Extensibility, <i>E</i> .....                                      | 7         |
| 9.5 Energy.....  | 8         |
| 9.6 Ratio ( <i>R/E</i> ).....  | 8         |
| <b>10 Precision</b> .....  | <b>8</b>  |
| 10.1 Interlaboratory tests.....  | 8         |
| 10.2 Repeatability.....  | 8         |
| 10.3 Reproducibility.....  | 8         |
| 10.4 Comparison of two groups of measurements in two laboratories..... | 9         |
| <b>11 Test report</b> .....  | <b>9</b>  |
| <b>Annex A (informative) Description of the extensograph</b> .....     | <b>10</b> |
| <b>Annex B (informative) Results of interlaboratory test</b> .....     | <b>15</b> |
| <b>Annex C (informative) Fidelity data</b> .....                       | <b>52</b> |
| <b>Bibliography</b> .....  | <b>54</b> |

**ISO 5530-2:2025(en)****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. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular, the different approval criteria needed for the different types of ISO document should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2 (see [www.iso.org/directives](http://www.iso.org/directives)).

ISO draws attention to the possibility that the implementation of this document may involve the use of (a) patent(s). ISO takes no position concerning the evidence, validity or applicability of any claimed patent rights in respect thereof. As of the date of publication of this document, ISO had not received notice of (a) patent(s) which may be required to implement this document. However, implementers are cautioned that this may not represent the latest information, which may be obtained from the patent database available at [www.iso.org/patents](http://www.iso.org/patents). ISO shall not be held responsible for identifying any or all such patent rights.

Any trade name used in this document is information given for the convenience of users and does not constitute an endorsement.

For an explanation of the voluntary nature of standards, the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the World Trade Organization (WTO) principles in the Technical Barriers to Trade (TBT), see [www.iso.org/iso/foreword.html](http://www.iso.org/iso/foreword.html).

This document was prepared by Technical Committee ISO/TC 34, *Food products*, Subcommittee SC 4, *Cereals and pulses*, in collaboration with the European Committee for Standardization (CEN) Technical Committee CEN/TC 338, *Cereal and cereal products*, in accordance with the Agreement on technical cooperation between ISO and CEN (Vienna Agreement).

This fourth edition cancels and replaces the third edition (ISO 5530-2:2012), which has been technically revised.

The main changes are as follows:

- a wheat flour interlaboratory test was performed in 2016 to evaluate the repeatability and reproducibility of the test method specified in this document, and the results have been added as [Annex B](#);
- more detailed procedure for electronic devices has been added.

A list of all parts in the ISO 5530 series can be found on the ISO website.

Any feedback or questions on this document should be directed to the user's national standards body. A complete listing of these bodies can be found at [www.iso.org/members.html](http://www.iso.org/members.html).



# Wheat flour — Physical characteristics of doughs —

## Part 2:

# Determination of rheological properties using an extensograph

## 1 Scope

This document specifies a method using an extensograph for the determination of the rheological properties of wheat flour doughs in an extension test. The recorded load–extension curve is used to assess the general quality of flour and its response to improving agents.

The method is applicable to experimental and commercial flours from wheat (*Triticum aestivum* L.).

NOTE 1 This document is related to ICC 114<sup>[5]</sup> and AACC Method 54-10<sup>[6]</sup>.

NOTE 2 For dough preparation, a farinograph is used (see [6.2](#))

## 2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements 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.

ISO 712-1, *Cereals and cereal products — Determination of moisture content — Part 1: Reference method*

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

ISO 5530-1, *Wheat flour — Physical characteristics of doughs — Part 1: Determination of water absorption and rheological properties using a farinograph*

**koniec náhľadu – text ďalej pokračuje v platenej verzii STN**