

---

---

**Paper, board, pulps and cellulosic  
nanomaterials — Determination of  
dry matter content by oven-drying  
method —**

**Part 1:  
Materials in solid form**

*Papiers, cartons, pâtes et nanomatériaux cellulosiques —  
Détermination de la teneur en matières sèches par séchage à  
l'étuve —*

*Partie 1: Matériaux sous forme solide*

ISO 638-1:2021

<https://standards.iteh.ai/catalog/standards/iso/0058d994-4db0-4c4c-860c-40cdf4e69b34/iso-638-1-2021>



iTeh Standards  
(<https://standards.iteh.ai>)  
Document Preview

ISO 638-1:2021

<https://standards.iteh.ai/catalog/standards/iso/0058d994-4db0-4c4c-860c-40cdf4e69b34/iso-638-1-2021>



**COPYRIGHT PROTECTED DOCUMENT**

© ISO 2021

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

# Contents

	Page
Foreword.....	iv
Introduction.....	v
1 Scope.....	1
2 Normative references.....	1
3 Terms and definitions.....	1
4 Principle.....	2
5 Apparatus.....	3
6 Sampling.....	3
7 Preparation of test pieces.....	3
7.1 General.....	3
7.2 Paper and board for recycling.....	3
7.3 Paper, board, pulp and cellulosic nanomaterial in solid form.....	3
8 Procedure.....	4
9 Calculation and expression of results.....	5
10 Precision.....	5
11 Test report.....	5
Annex A (informative) Calculation of the moisture content.....	6
Annex B (informative) Precision.....	7
Bibliography.....	10

ISO 638-1:2021

<https://standards.itech.ai/catalog/standards/iso/0058d994-4db0-4c4c-860c-40cdf4e69b34/iso-638-1-2021>

## 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 documents 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)).

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights. Details of any patent rights identified during the development of the document will be in the Introduction and/or on the ISO list of patent declarations received (see [www.iso.org/patents](http://www.iso.org/patents)).

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

For an explanation on 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 the following URL: [www.iso.org/iso/foreword.html](http://www.iso.org/iso/foreword.html).

This document was prepared by Technical Committee ISO/TC 6, *Paper, board and pulps*.

This first edition of ISO 638-1, together with ISO 638-2, cancels and replaces ISO 638:2008, which has been technically revised. The main changes compared to the previous edition are as follows:

- inclusion of cellulosic nanomaterials and paper and board for recycling in the scope;
- splitting of the standard in two parts;
- technical revision of the procedure;
- editorial revision of the document;
- update of precision clause.

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).

## Introduction

Determination of dry matter content and moisture content are carried out for different purposes.

This document is used when the dry matter content is needed to calculate the results for chemical analysis or physical testing, or to determine the moisture content of paper, board, and pulp and cellulosic nanomaterials in solid form, which all may be produced from virgin and/or recycled materials. An example of this is where the results of a chemical analysis for cadmium or manganese are required on the basis of the oven-dry mass of the sample.

ISO 638-2<sup>[1]</sup> is dedicated to the determination of the dry matter content or water content of cellulosic nanomaterials in the form of suspensions.

ISO 287<sup>[2]</sup> should be used for the purpose of determining the average moisture content and the variation in moisture content (maximum and minimum values) of a lot of paper and board. In the converting of paper and board, moisture content is important as it can have an effect on processes such as printing and copying. Moisture content can have an effect on curl and dimensional stability.

ISO 4119<sup>[3]</sup> should be used in laboratory procedures or is referred to in other International Standards in which the concentration of an aqueous pulp suspension requires determination.

iTeh Standards  
(<https://standards.iteh.ai>)  
Document Preview

[ISO 638-1:2021](https://standards.iteh.ai/catalog/standards/iso/0058d994-4db0-4c4c-860c-40cdf4e69b34/iso-638-1-2021)

<https://standards.iteh.ai/catalog/standards/iso/0058d994-4db0-4c4c-860c-40cdf4e69b34/iso-638-1-2021>

