

This is a preview of "ISO 15512:2008". [Click here to purchase the full version from the ANSI store.](#)

Second edition  
2008-05-15

---

---

## Plastics — Determination of water content

*Plastiques — Dosage de l'eau*



Reference number  
ISO 15512:2008(E)

© ISO 2008

This is a preview of "ISO 15512:2008". [Click here to purchase the full version from the ANSI store.](#)

**PDF disclaimer**

This PDF file may contain embedded typefaces. In accordance with Adobe's licensing policy, this file may be printed or viewed but shall not be edited unless the typefaces which are embedded are licensed to and installed on the computer performing the editing. In downloading this file, parties accept therein the responsibility of not infringing Adobe's licensing policy. The ISO Central Secretariat accepts no liability in this area.

Adobe is a trademark of Adobe Systems Incorporated.

Details of the software products used to create this PDF file can be found in the General Info relative to the file; the PDF-creation parameters were optimized for printing. Every care has been taken to ensure that the file is suitable for use by ISO member bodies. In the unlikely event that a problem relating to it is found, please inform the Central Secretariat at the address given below.



**COPYRIGHT PROTECTED DOCUMENT**

© ISO 2008

All rights reserved. Unless otherwise specified, no part of this publication may be reproduced or utilized in any form or by any means, electronic or mechanical, including photocopying and microfilm, without permission in writing from either ISO at the address below or ISO's member body in the country of the requester.

ISO copyright office  
Case postale 56 • CH-1211 Geneva 20  
Tel. + 41 22 749 01 11  
Fax + 41 22 749 09 47  
E-mail [copyright@iso.org](mailto:copyright@iso.org)  
Web [www.iso.org](http://www.iso.org)

Published in Switzerland

This is a preview of "ISO 15512:2008". Click here to purchase the full version from the ANSI store.

<b>Contents</b>	<b>Page</b>
Foreword.....	iv
Introduction .....	v
<b>1 Scope .....</b>	<b>1</b>
<b>2 Normative references .....</b>	<b>1</b>
<b>3 Method A — Extraction with anhydrous methanol .....</b>	<b>2</b>
3.1 Principle .....	2
3.2 Reagents .....	2
3.3 Apparatus .....	2
3.4 Preparation of test sample .....	2
3.5 Procedure .....	3
3.6 Expression of results .....	3
3.7 Precision .....	4
<b>4 Method B — Water vaporization.....</b>	<b>4</b>
4.1 Principle .....	4
4.2 Reagents .....	4
4.3 Apparatus .....	5
4.4 Preparation of sample .....	6
4.5 Procedure .....	6
4.6 Expression of results .....	8
4.7 Precision .....	8
<b>5 Method C — Manometric method.....</b>	<b>8</b>
5.1 Principle .....	8
5.2 Reagent.....	8
5.3 Apparatus .....	9
5.4 Preparation of sample .....	9
5.5 Procedure .....	11
5.6 Expression of results .....	13
5.7 Precision .....	13
<b>6 Test report .....</b>	<b>13</b>
<b>Annex A (informative) Selection of the optimum heating temperature for the water content determination .....</b>	<b>14</b>
<b>Bibliography .....</b>	<b>16</b>

## 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.

International Standards are drafted in accordance with the rules given in the ISO/IEC Directives, Part 2.

The main task of technical committees is to prepare International Standards. Draft International Standards adopted by the technical committees are circulated to the member bodies for voting. Publication as an International Standard requires approval by at least 75 % of the member bodies casting a vote.

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.

ISO 15512 was prepared by Technical Committee ISO/TC 61, *Plastics*, Subcommittee SC 5, *Physical-chemical properties*.

This second edition cancels and replaces the first edition (ISO 15512:1999), which has been technically revised.

This is a preview of "ISO 15512:2008". [Click here to purchase the full version from the ANSI store.](#)

## Introduction

The inter-laboratory comparability of water content determinations is often low. Major causes for this are the sample packaging, sample handling and differences between equipment and settings. In order to be able to compare data between two laboratories, special care needs to be taken with sample packaging and sample handling. Samples should e.g. be packed in special glass containers or water barrier sealed bags. Sample handling should preferably be carried out in a dry nitrogen or air environment. To improve the repeatability and reproducibility, the procedure specified in this International Standard should be followed strictly.

The temperature settings for the vaporization method described in this International Standard are not specified in the standard. For the manometric method, a temperature of 200 °C is often used. However, for some condensation materials this might be too high and could e.g. cause generation of water due to a condensation reaction.

The heating temperature should be optimized concerning the material to be tested, the equipment in use and the practical circumstances. If the temperature is too low, the total amount of water in the material to be tested will not be evaporated completely, whereas too high temperatures cause water generation due to effects like degradation and condensation reactions.

In this International Standard, a procedure is included for optimization of the heating temperature in order to choose the correct temperature for the water content determination and to improve the inter-laboratory comparability.