

This is a preview of "ISO 13885-1:2008". [Click here to purchase the full version from the ANSI store.](#)

Second edition  
2008-08-01

---

---

## **Binders for paints and varnishes — Gel permeation chromatography (GPC) —**

### **Part 1: Tetrahydrofuran (THF) as eluent**

*Liants pour peintures et vernis — Chromatographie par perméation de gel (GPC) —*

*Partie 1: Utilisation de tétrahydrofurane (THF) comme éluant*



Reference number  
ISO 13885-1:2008(E)

© ISO 2008

This is a preview of "ISO 13885-1:2008". [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 13885-1:2008". Click here to purchase the full version from the ANSI store.

## Contents

Page

Foreword.....	iv
<b>1 Scope .....</b>	<b>1</b>
<b>2 Normative references .....</b>	<b>1</b>
<b>3 Terms and definitions.....</b>	<b>2</b>
<b>4 Principle.....</b>	<b>2</b>
<b>5 Apparatus .....</b>	<b>2</b>
5.1 General.....	2
5.2 Eluent supply .....	2
5.3 Pump .....	2
5.4 Injection system .....	3
5.5 Columns.....	3
5.6 Column temperature control .....	4
5.7 Detector .....	4
5.8 Data acquisition .....	5
<b>6 Eluent .....</b>	<b>5</b>
<b>7 Calibration of the apparatus .....</b>	<b>5</b>
7.1 General.....	5
7.2 Specification for the calibration standard.....	5
7.3 Preparation of the calibration solutions for injection .....	6
7.4 Conditions for calibration runs .....	7
7.5 Measurement of retention volume/time.....	7
7.6 Plotting the calibration curve .....	7
<b>8 Sampling.....</b>	<b>7</b>
<b>9 Preparation for the test .....</b>	<b>8</b>
9.1 Preparation of the injection solution .....	8
9.2 Preparation of the apparatus.....	8
<b>10 Conditions of analysis.....</b>	<b>8</b>
<b>11 Data acquisition and evaluation .....</b>	<b>9</b>
11.1 General.....	9
11.2 Calculation of the net chromatogram from the raw data.....	9
11.3 Calculation of the average values.....	10
11.4 Calculation of the distribution curves .....	11
<b>12 Precision.....</b>	<b>12</b>
12.1 General.....	12
12.2 Repeatability.....	12
12.3 Reproducibility.....	12
<b>13 Test report .....</b>	<b>13</b>
13.1 General.....	13
13.2 General data on the equipment and settings.....	13
13.3 Special data on the sample.....	14
<b>Annex A (normative) Calculation of experimental parameters for different column sizes .....</b>	<b>17</b>
<b>Annex B (informative) Example of a data sheet for a polymer standard.....</b>	<b>18</b>
<b>Annex C (informative) Further information.....</b>	<b>19</b>
<b>Bibliography .....</b>	<b>23</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 13885-1 was prepared by Technical Committee ISO/TC 35, *Paints and varnishes*, Subcommittee SC 10, *Test methods for binders for paints and varnishes*.

This second edition cancels and replaces the first edition (ISO 13885-1:1998), which has been technically revised. In particular, the method has been brought into line with the current state of the art, especially as far as the software used is concerned, and the procedure for the manual evaluation of the results has been deleted.

ISO 13885 consists of the following parts, under the general title *Binders for paints and varnishes — Gel permeation chromatography (GPC)*:

— *Part 1: Tetrahydrofuran (THF) as eluent*