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**Glass — Hydrolytic resistance of glass  
grains at 98 °C — Method of test and  
classification**

*Verre — Résistance hydrolytique du verre en grains à 98 °C —  
Méthode d'essai et classification*



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# Contents

Page

Foreword.....	iv
<b>1</b> <b>Scope</b> .....	<b>1</b>
<b>2</b> <b>Normative references</b> .....	<b>1</b>
<b>3</b> <b>Terms and definitions</b> .....	<b>1</b>
<b>4</b> <b>Principle</b> .....	<b>2</b>
<b>5</b> <b>Reagents</b> .....	<b>2</b>
<b>6</b> <b>Apparatus</b> .....	<b>2</b>
<b>7</b> <b>Preparation of sample</b> .....	<b>5</b>
7.1    Crushing.....	5
7.2    Manual preparation.....	5
7.3    Mechanical preparation.....	5
7.4    Cleaning.....	5
<b>8</b> <b>Procedure</b> .....	<b>6</b>
<b>9</b> <b>Expression of results</b> .....	<b>6</b>
9.1    Calculation.....	6
9.2    Classification.....	6
9.3    Designation.....	6
<b>10</b> <b>Test report</b> .....	<b>7</b>
<b>Bibliography</b> .....	<b>8</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.

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 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 76, *Transfusion, infusion and injection, and blood processing equipment for medical and pharmaceutical use*.

This third edition cancels and replaces the second edition (ISO 719:1985), which has been technically revised.

The main changes compared to the previous edition are as follows:

- a more precise definition of the field of application by means of glass types was added;
- wherever possible a harmonization with the identical paragraphs in the European Pharmacopoeia, chapter 3.2.1, and the USP, chapter 660, was established to simplify the application in the laboratories globally. This concerns, e.g. sample size, mesh size;
- the usage of acetone was restricted to always fresh, new acetone, since re-usage might lead to deviating test results;
- the maximum temperature and its tolerance field was simplified and oriented on the technical conditions of a water basin.

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).

# Glass — Hydrolytic resistance of glass grains at 98 °C — Method of test and classification

## 1 Scope

This document specifies

- a) a method for determining the hydrolytic resistance of glass grains at 98 °C. The resistance is measured and expressed by the volume of acid required for titration of the alkali extracted from the unit mass of glass, and can also be expressed by the amount of sodium oxide equivalent to this volume of acid, and
- b) a classification of glass according to the hydrolytic resistance determined by the method of this document.

This document is intended for use on the less resistant types of glass, such as soda-lime glass.

NOTE 1 For the more resistant glasses, e.g. borosilicate glass, the method specified in ISO 720 is more suited.

NOTE 2 It is emphasized that there is no exact correlation between the classification laid down in this document and that laid down in ISO 720, and it is, therefore, essential to identify which classification is being used.

## 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 385, *Laboratory glassware — Burettes*

ISO 565, *Test sieves — Metal wire cloth, perforated metal plate and electroformed sheet — Nominal sizes of openings*

ISO 648, *Laboratory glassware — Single-volume pipettes*

ISO 720, *Glass — Hydrolytic resistance of glass grains at 121 °C — Method of test and classification*

ISO 1042, *Laboratory glassware — One-mark volumetric flasks*

ISO 1773, *Laboratory glassware — Narrow-necked boiling flasks*

ISO 3819, *Laboratory glassware — Beakers*

ISO 13130, *Laboratory glassware — Desiccators*

## 3 Terms and definitions

No terms and definitions are listed in this document.

ISO and IEC maintain terminological databases for use in standardization at the following addresses:

- ISO Online browsing platform: available at <https://www.iso.org/obp>
- IEC Electropedia: available at <http://www.electropedia.org/>