

CCS N 64



**NATIONAL STANDARD OF THE
PEOPLE'S REPUBLIC OF CHINA**

GB/T 6582-2021

**Glass - Hydrolytic resistance of glass grains at 98
degree-Celsius - Method of test and classification**

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Foreword

This document is in accordance with the provisions of GB/T 1.1-2020 "Guidelines for Standardization Work Part 1. Structure and Drafting Rules of Standardization Documents" Drafting.

This document replaces GB/T 6582-1997 "Test Method and Classification of Particles for Water Resistance of Glass at 98 degrees C", and is in line with GB/T 6582-

Compared with.1997, in addition to structural adjustments and editorial changes, the main technical changes are as follows.

--- Change pure water to test water, and add test water preparation method (see 5.1, 4.1 in.1997 edition);

---The method of preparing methyl red indicator solution is changed, and methyl red is no longer used instead of methyl red sodium salt (see 5.4, 4.3 in.1997 edition);

---Added the requirement of absolute ethanol (see 5.6);

---The cooling water tank has been deleted (see 5.13 in the.1997 edition);

---Added plastic stopper single mark volumetric flask (see 6.4.1);

---The aging method of the new volumetric flask is changed, and the original standard only uses water to use hydrochloric acid and water for the pretreatment process (see 6.4.2, 5.4 of the.1997 edition);

---Added mortar and pestle style and size drawing (see 6.11);

---Change the requirements of the ball mill (see 6.14, 5.17 of the.1997 edition);

--- An ultrasonic cleaner has been added (see 6.16);

---Added an electric heating plate (see 6.20);

---Added the steps of ultrasonic cleaner and absolute ethanol to clean glass particles (see 7.5);

---Changed the expression of Table 1 in the structural calculation and Table 2 in the classification (see Chapter 9, Chapter 8 of the.1997 edition);

---Clarified the concentration of the standard solution (see Chapter 10, Chapter 9 of the.1997 edition).

This document uses the redrafting method to amend and adopt ISO 719.2020 "Test Method for Water Resistance of Glass Particles at 98 degrees C"

And classification.

Compared with ISO 719.2020, this document has more structural adjustments. Appendix A lists the chapters of this document and ISO 719.2020.

Article number comparison list.

Compared with ISO 719.2020, this document has technical differences. Appendix B gives a list of the corresponding technical differences and their reasons.

1 Scope

This document specifies the test method and classification of the water resistance of glass particles at 98°C.

This document applies to all types of glass.

2 Normative references

The contents of the following documents constitute the indispensable clauses of this document through normative references in the text. Among them, dated quotations

Only the version corresponding to that date is applicable to this document; for undated reference documents, the latest version (including all amendments) is applicable to

This document.

GB/T 622 Chemical reagent hydrochloric acid

GB/T 678 Chemical reagent ethanol (anhydrous ethanol)

GB/T 686 Chemical reagent acetone

GB/T 6682 Analytical laboratory water specifications and test methods

GB/T 12805 Laboratory glass burette (GB/T 12805-2011, ISO 385.2005, NEQ)

GB/T 12806 Laboratory glassware single mark volumetric flask (GB/T 12806-2011, ISO 1042.1998, NEQ)

GB/T 12808 Single-marked pipette for laboratory glassware

GB/T 15723 Laboratory glass instrument dryer

GB/T 15724 Laboratory glass beaker (GB/T 15724-2008, ISO 3819.1985, NEQ)

GB/T 22362 Laboratory Glass Apparatus Flask (GB/T 22362-2008, ISO 1773.1997, NEQ)

3 Terms and definitions

There are no terms and definitions that need to be defined in this document.

4 Principle

This test method is to test glass as a glass particle material. Put 2g glass with a diameter of 300 μ m~500 μ m

The particles are immersed in distilled or deionized water at 98°C for 60 minutes, and the content of alkaline substances in the extraction solution is analyzed to determine the glass

The degree of water erosion resistance is expressed by the volume of hydrochloric acid consumed per unit mass of alkaline oxide precipitated by the glass or converted into the mass of sodium oxide.

5.1 Test water

5.1.1 The test water can be purified water, and use distillation, ion exchange, reverse osmosis or other methods to prepare water suitable for drinking water.

The treatment method should meet the requirements of GB/T 6682, and should not contain heavy metals (especially copper). If necessary, the dithizone limit test method can be used to check