

ICS 71.040.01

CCS N64



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

GB 21549-2008

**Laboratory glassware - Safe requirement of heat resisting
glassware**

实验室玻璃仪器 玻璃烧器的安全要求

Issued on: March 24, 2008

Implemented on: March 1, 2009

**Issued by: General Administration of Quality Supervision, Inspection and
Quarantine of the People's Republic of China;
Standardization Administration of China**

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Foreword

Chapter 4 of this standard are mandatory, others are recommended. Laboratory glassware burner, usually containing chemical reagents directly heated glass containers should have excellent chemical stability and Thermal shock resistance, in order to ensure stability and security components containing substance. The standard proposed by China National Light Industry Council. This standard by the National Standardization Technical Committee Instrument glass. This standard was drafted. Glass National Light Industry Product Quality Supervision and Inspection Center, Beijing Glass Instrument Factory. The main drafters of this standard. in Ao Jiang, Wu Wenling, Lee Mi-Young, Du Yuhai, He Ruiling. Safety requirements for laboratory glassware burn the

1 Scope

GB 21549-2008 is the Chinese national standard on laboratory glassware - safe requirement of heat resisting glassware, in the field of chemical technology. It carries no /T suffix, which in the Chinese system means compliance is mandatory: a product or a practice within its scope has to meet it to be lawfully made, sold or carried out in China. It was issued on 24 March 2008 by the General Administration of Quality Supervision, Inspection and Quarantine of the People's Republic of China; Standardization Administration of China, and has been in force since 1 March 2009. Classification: ICS 71.040.01, CCS N64. This page is published from the official record of the standard held by the Chinese standards administration: the identification, the dates, the classification and the issuing body are taken from there. The clause text, the tables and the numeric limits are in the document itself, which is delivered complete in English translation.

This standard specifies the laboratory glassware - glass burner safety technology requirements and inspection rules. This standard applies to all kinds of laboratory glassware burner products.

2 Normative references

The following documents contain provisions which, through reference in this standard and become the standard terms. For dated references, subsequent Amendments (not including errata content) or revisions do not apply to this standard, however, encourage the parties to the agreement are based on research Whether the latest versions of these documents. For undated reference documents, the latest versions apply to this standard.

GB/T 2828.1-2003 Sampling procedures for inspection - Part 1. Press to accept the quality limit (AQL) retrieval batch test sample Programme (ISO 2859-1.1999, IDT)

GB/T 4548 glass container surface water erosion performance test methods and classification (GB/T 4548-1995, eqv ISO 4802-1. 1988)

GB/T 4548.2 water resistance of the interior surface of glass products glass container was determined by flame spectrometry and classification (GB/T 4548.2-2003, idt ISO 4802-2. 1988)

GB/T 6579 laboratory glassware thermal shock and thermal shock strength test method (GB/T 6579-2007, ISO 718. 1990, IDT)

GB/T 6580 Glass - Resistance to boiling aqueous solution of mixed alkali erosion resistance test methods and classification (GB/T 6580-1997, eqv ISO 695.1991)

GB/T 6581 Glass - Resistance to attack by hydrochloric acid at 100 °C flame emission or atomic absorption spectrometric method (GB/T 6581- 2007, ISO 1726. 1985, MOD)

GB/T 6582 glass at 98 °C water resistance test methods and classification of particles (eqv ISO 719. 1985) Within the

GB/T 15726 glassware stress testing methods

GB/T 15728 glass resistant to attack by boiling hydrochloric acid solution weight Test method and classification

GB/T 16920 Determination of the average linear thermal expansion coefficient of the glass of (eqv

ISO 7991. 1987) QB/T 2298 Measuring wire linear thermal expansion coefficient Category 3

3.1 into a beaker beaker low profile, high-type beaker, conical beaker.

5 Sampling Sampling Sampling

6.2 factory inspection

6.2.1 Sampling Plan Using GB/T 2828.1-2003 normal secondary inspection sampling plan,

the test level, reception quality limit (AQL) Table 4. Table 4, test items, test level and reception quality limit Special test items test level acceptance quality limit Linear thermal expansion coefficient 98 °C water resistance particles The inner surface of the water resistance Acid resistance Alkali resistance Internal stress Thermal shock resistant temperature S-3 S-3 0.65 1.0 2.5

6.2.2 Batch rules Plant to shift production to a group; when delivered to the user, in order to deliver the same species at the same time, the number of products for the same specifications.

6.2.3 Test Implementation and test results By the manufacturer and the quality inspection departments to test the samples according to Table 3 of factory inspection items. It passed the test batches before leaving the factory, the Plant should be accompanied by a certificate. By unqualified batches, returned to full production department full inspection, excluding unqualified allowed to mention again Cross factory inspection.

6 Inspection rules

6.1 Inspection classification Product inspection into the factory inspection and type test, test items shown in Table 3. Table

3 Test Category Test project technical requirements, test methods factory inspection type test Linear thermal expansion coefficient (instrument method) 98 °C water resistance particles The inner surface of the water resistance Acid resistance Alkali resistance Linear thermal expansion coefficient (dual method) Internal stress Thermal shock resistant temperature See Chapters 4 and

6.3 Type inspection

6.3.1 Sampling Plan Using GB/T 2828.1-2003 normal inspection single sampling plan, the test level, reception quality limit (AQL) Table 4.

6.3.2 Test Implementation and test results By the manufacturer and the quality inspection departments sampling type inspection items in Table 3. Inspection type, which represents the product by the Factory inspection of the grant can be delivered in bulk consumers. Type test failed, should be discontinued analyze the causes and take effective measures until the type examination Test qualified rear resume production. Type test failed cycle products may not be manufactured, has manufactured products should be recovered.

6.3.3 When one of the following conditions, type inspection.

- a) new products or old products to the plant production trial to identify stereotypes; B) after the official production, such as structure, materials, technology has drastically changed, it may affect product performance;
- c) Normal production, should be conducted regularly, at least once a year;

- d) The factory test results and the last type tests in quite different;
- e) the national quality supervision bodies type inspection requirements.

6.4 determine the rules Where a type test or factory inspection of all of the inspection when qualified, the factory inspection determines the type or inspection; or where factory inspection type Inspection formula when there is a test failure, the factory inspection or sentence type test failed.