

ICS 03.180
CCS Y51

JY

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

JY/T 0438-2011

**Glass Cylinders for Teaching
(English Translation)**

Issued on: July 11, 2013

Implemented on: July 11, 2013

Issued by: Ministry of Education of the People's Republic of China

Table of Contents

Foreword
1 Scope
2 Normative references
3 Classification and naming
3.1 Product Classification
3.2 Model designation
4 Requirements
4.1 Materials
4.2 Dimensions
4.3 Appearance
6 Iron filings ≤ 1 ≤ 2 ≤ 1 ≤ 2
7 Necking depth ≤ 4 -necking depth ≤ 5 -
8 Shoulder collapse depth ≤ 3 -Shoulder collapse depth ≤ 4 -

Foreword

This standard was drafted in accordance with the rules given in GB/T 1.1-2009.

Please note that some elements of this standard may involve patents. The issuer of this standard should not be held responsible for identifying these patents.

This standard was proposed by the National Technical Committee for Standardization of Teaching Instruments (SAC/TC125).

This standard is under the jurisdiction of the National Technical Committee for Standardization of Teaching Instruments (SAC/TC125).

This standard was drafted. Sichuan Longchang Glass Instrument Factory, Zhejiang Educational Technology Center, Sichuan Ziyang Glass Instrument Factory, Sichuan Scientific industry teaching equipment limited liability company.

1 Scope

This standard specifies the classification and nomenclature of gas cylinders, technical requirements, test methods, inspection rules, packaging, transportation, storage, etc. content.

This standard applies to teaching gas cylinders.

2 Normative references

The following documents are essential for the application of this document. For dated references, only the dated version applies to this document.

For undated references, the latest version (including all amendments) applies to this document.

GB 191-2008 packaging storage and transportation pictogram GB/T 2828.1-2003 Counting sampling acceptance procedure Part 1. Sampling plan for batch inspection for retrieval by acceptance quality limit (AQL) JY 0001-2003 General quality requirements for teaching instruments and equipment products JY 0002 Inspection rules for teaching instruments and equipment products JY 0026-1991 teaching instrument and teaching equipment product model naming method JY/T 0423-2011 General quality requirements and test methods of teaching glass instruments

3.1 Product Classification

According to the capacity, it is divided into three specifications. 125mL, 250 mL, and 500 mL.

3.2 Model designation

The model name of the product is in accordance with JY 0026-1991.

The gas cylinder model is named.

L - JQP - Y - 125

Product specifications (capacity), unit. mL Product feature code, cylindrical Product name Pinyin prefix, gas cylinder Product model classification code, glass instrument Model example.

L-JQP-Y-125. Cylindrical gas cylinder with a capacity of 125mL.

4.1 Materials

It should be made of transparent soda lime glass without obvious yellow-green.

4.2 Dimensions

The specifications, external dimensions and tolerances of various specifications of gas cylinders shall conform to Table 1, and the symbols are shown in Figure 1.

Table 1 Dimensions and tolerances in millimeters

Site code 125mL 250mL 500mL Bottle height H 110 ± 4 130 ± 4 160 ± 5 Bottle mouth inner diameter d 35 ± 1 45 ± 2 56 ± 2 Bottleneck height h 25 ± 2 25 ± 2 32 ± 2 Bottle diameter D 54 ± 2 68 ± 2 83 ± 2 Body wall thickness S 1 ≥ 1.2 ≥ 1.3 ≥ 1.3 Bottle bottom thickness S 2 ≥ 1.8 ≥ 2.0 ≥ 2.0 Square cover side length a 65 ± 5 65 ± 5 85 ± 5 Square cover thickness S 2 ~ 3 $2 \sim 3$ $2 \sim 3$

Figure 1 Cylinder

4.3 Appearance

4.3.1

The appearance defects allowed are shown in Table 2.

Table 2 Permitted appearance defects

Serial number	defect	125mL	250-500 (mL)	Maximum diameter mm	Quantity	Maximum diameter mm	Quantity				
1	bubble	Circle	≤ 4	≤ 2	≤ 5	≤ 2	Ellipse	≤ 8	≤ 2	≤ 10	≤ 2
2	nodules	≤ 2	≤ 2	≤ 2.5	≤ 2						

3 Stones ≤ 1.5 1 ≤ 1.5 1

4 Watermark ≤ 3 ≤ 2 ≤ 4 ≤ 2

5 Allowed total number of bubbles, nodules, stones, water spots ≤ 8

8 Shoulder collapse depth ≤ 3 -Shoulder collapse depth ≤ 4 -

9 4 single stripes, 6 not concentrated, not concentrated Note. "-" means not required.

4.3.2 The appearance defects that should not exist shall be in accordance with JY/T 0423-2011 Section 5.1.1.

4.3.3 The uniformity of wall thickness shall comply with JY/T 0423-2011 Section 4.1.1.2.

4.3.4 The frosted surface shall cover the end surface of the bottle mouth and the cover plate evenly, and the frosted surface shall not have light spots. The four corners of the cover should be chamfered, and the four sides should be polished.

There should be quick mouth.

4.4 Adhesiveness

The tightness between the cover plate and the bottle mouth should meet the following requirements. After the cover plate and the bottle mouth are fully wet and closed, the bottle body cover is kept on the bottle mouth for 30 seconds without falling off.

4.5 Chemical stability it should meet the water resistance HGB level 1, acid resistance H1 level, and alkali resistance A2 level.

4.6 Internal stress

The internal stress should not be greater than 180 nm/cm.

4.7 Environmental test the environmental test shall be in accordance with Chapter 8 of JY/T 0423-2011.

5 Test method

5.1 Dimensions are measured with a vernier caliper with a division value of 0.02mm and a steel ruler with a division value of 0.5mm, which shall meet the requirements of 4.2 of this standard.

begging. The length of the appearance defect shall be tested with a reading microscope and shall meet the corresponding requirements of this standard.

5.2 The wall thickness and uniformity shall be in accordance with JY/T 0423-2011 Section 4.1.2. The test shall meet the requirements of 4.2 and 4.3.3 of this standard.

5.3 Adhesion test. After the cover and the mouth of the bottle are fully wet and closed, the bottle body cover is kept on the mouth of the bottle for 30 seconds without falling off.

5.4 Water resistance, acid resistance, and alkali resistance Test according to JY/T 0423-2011 Section 6.5.2, shall meet the requirements of 4.5 of this standard.

5.5 The internal stress shall be in accordance with JY/T 0423-2011 Section 6.1.2 and shall comply with this standard 4.6.

5.6 The material test shall be in accordance with Section 7.2 of JY/T 0423-2011, which shall comply with 4.1 of this standard, and shall not have obvious yellow-green.

5.7 The remaining sensory tests shall meet the corresponding requirements of this standard.

5.8 The environmental test shall be in accordance with Chapter 8 of JY/T 0423-2011 and shall comply with 4.7 of this standard.

6 Inspection rules

6.1 Inspection classification the inspection of this product is divided into factory inspection, type test and quality supervision inspection.

6.2 Inspection items and inspection methods the inspection items and inspection methods of this product shall conform to Table 3.

Table 3 Inspection items, inspection methods and defect classification

6.3 Lot rules and sampling methods no. Inspection Content Defect Classification Factory Inspection Type Inspection

1 Geometry and fit