

ICS 03.180
CCS Y51

JY

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

JY/T 0436-2011

**Glass instrument drying tubes for teaching spherical and
U-shaped drying tubes
(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 Specifications	
7 Wall thickness S 1.3 ± 0.1 1.3 ± 0.1	
7.1 Signs	
7.2 Packaging, transportation and storage	

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 naming of drying pipes, technical requirements, test methods, inspection rules, packaging, transportation, storage, etc. content.

This standard applies to spherical and U-shaped drying tubes for teaching purposes.

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

Divided into three specifications. $\phi 13\text{mm} \times 100\text{mm}$, $\phi 15\text{mm} \times 150\text{mm}$, and $\phi 20\text{mm} \times 200\text{mm}$ according to the external dimensions.

There are five specifications of double ball, U-shaped, U-shaped support and U-shaped support plug.

3.2 Model designation

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

The model of the drying tube is named.

L - GZG - ZDQ/ZSQ/U/UZ/UZS - 13 x 100 Product specifications, unit. mm Product feature code, straight single ball/straight double ball/U-shaped/U-shaped with support/U-shaped with support plug Product name Pinyin prefix, drying tube Product model classification code, glass instrument Model example. L-GZG-U-13 x 100. U-shaped drying tube with external dimensions of $\phi 13\text{mm} \times 100\text{mm}$.

4.1 Materials

It should be made of colorless transparent borosilicate glass. The average linear thermal expansion coefficient is not more than $4.0 \times 10^{-6}\text{K}^{-1}$.

4.2 Specifications

The dimensions and tolerances of straight single and double-ball drying tubes should conform to Table 1. The symbols are shown in Figures 1 and 2. The dimensions of U-shaped drying tubes and tolerances should conform to Table 2. The symbols are shown

in Figures 3, 4, and 5.

Table 1. Specifications, dimensions and tolerances of straight single-ball and double-ball dryers in millimeters

No.	Part Name	Code	Straight Single Ball Dryer	Straight Double Ball Dryer
1	Full length	H	145 ± 13	145 ± 13
2	Upper tube diameter	D	17 ± 1	17 ± 1
3	Lower tube diameter	D	36 ± 1	6 ± 1
4	Lower tube length	l	45 ± 5	30 ± 5
5	Ball 1 Diameter	D	135 ± 3	35 ± 3
	Ball 2 diameter	D	25 ± 3	

7 Wall thickness S 1.3 ± 0.1 1.3 ± 0.1

Figure 1 Straight single-ball drying tube Figure 2 Straight double-ball drying tube

Table 2 U-shaped specifications, dimensions and tolerances in millimeters

Part

name

U-shaped U-shaped brace U-shaped brace plug 13 x 100 15 x 150 20 x 200 13 x 100 15 x 150 20 x 200 13 x 100 15 x 150 20 x 200

1 Full length H 100 ± 5 150 ± 8 200 ± 10 100 ± 5 150 ± 8 200 ± 10 100 ± 5 150 ± 8 200 ± 10

2 Tube diameter D 13 ± 1 15 ± 1.5 20 ± 2 13 ± 1 15 ± 1.5 20 ± 2 13 ± 1 15 ± 1.5 20 ± 2

3 Full width B 50 ± 5 60 ± 5 30 ± 5 50 ± 5 60 ± 5 80 ± 5 50 ± 5 60 ± 5 80 ± 5 4 pipe length L 25 ± 3 25 ± 3 30 ± 5 25 ± 3 25 ± 3 30 ± 5 5 branch pipe diameter D $1 \sim 5$ $5 \sim 6$ $5 \sim 6$ $6 \sim 7$ 6 branch height h 25 ± 3 25 ± 3 30 ± 5 8 ± 2 8 ± 2 14 ± 2

7 Wall thickness $S > 1.2 > 1.2 > 1.4 > 1.2 > 1.2 > 1.4 > 1.2 > 1.2 > 1.4$

Figure 3 U-shaped drying tube

Figure 4 U-shaped drying tube with support Figure 5 U-shaped drying tube with support plug

4.3 Appearance

4.3.1 Permitted appearance defects. the maximum diameter of the nodules should be no more than 2mm, and there should be no more than 3; the maximum stone diameter should be no more than 1mm, There should be no more than four; the total number of nodules and stones allowed should be no more than four.

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 ball of the straight drying tube shall be uniform in thickness, and the thickness ratio shall not be greater than 3. 2.

4.3.4 The two tubes of U-shaped drying tube shall be parallel, the error of parallelism shall not be greater than 5%, and the error of the height of the two nozzles of drying tube shall not be greater than 5mm.

4.3.5 U-shaped pipe with branch and dry pipe. The branch pipe is connected smoothly and firmly and should not be skewed.

4.3.6 The air groove of the piston core of the U-shaped brace drying pipe piston core shall not be lower than the inner hole of the branch pipe.

4.4 Adhesiveness

U-shaped brace plug drying tubes shall comply with Class I.

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 The average linear thermal expansion coefficient shall be in accordance with JY/T 0423-2011 Section 6.4.2. The test shall meet the requirements of 4.1 of this standard.

5.2 The external dimensions shall be measured by measuring instruments with accuracy that meets the requirements, and shall comply with the requirements of 4.2 of this standard. Readings for length in appearance defects Microscopic tests shall comply with the corresponding requirements of this standard.

5.3 Wall thickness and uniformity shall be in accordance with JY/T 0423-2011 Section 4.1.2, and shall comply with Article 4.2 and 4.3.3 of this standard.

5.4 Adhesion test According to JY/T 0423-2011 4.3.2.2 test, it should meet the requirements of 4.4 of this standard

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

5.6 The internal stress shall be in accordance with JY/T 0423-2011 Section 6.1.2 and shall