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

JY/T 0453-2011

**Glass instrument weighing bottle for teaching
(English Translation)**

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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

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1 Scope

This standard specifies the classification and naming of weighing bottles, technical requirements, test methods, inspection rules, packaging, transportation, storage and other contents.

This standard applies to teaching weighing bottles.

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 inspection procedures. Part 1. Sampling plan for batch inspection according to 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 outer diameter and height of the weighing bottle, it is divided into high type and low type.

High type. ϕ 25mm x 40mm, ϕ 30mm x 50mm, ϕ 30mm x 60mm, ϕ 35mm x 70mm.

Low type. ϕ 25mm x 25mm, ϕ 50mm x 30mm, ϕ 60mm x 30mm, ϕ 70mm x 35mm.

3.2 Model designation

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

The model name of the weighing bottle is.

L - CLP - G/D - 25 x 40 Product specifications (outer diameter x height), unit. mm Product feature code, high type, low type Product name Pinyin prefix, weighing bottle Product model classification code, glass instrument Model example.

L-CLP-G-25 x 40. ϕ 25mm x 40mm high weighing bottle with external dimensions

4.1 Materials

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

4.2 Dimensions

The external dimensions and tolerances of various specifications of weighing bottles should conform to Table 1, and the dimensions are shown in Figures 1 and 2.

Table 1 Dimensions and tolerances in millimeters

Part

name

High type low type

25 x 40 30 x 50 30 x 60 35 x 70 40 x 25 50 x 30 60 x 30 70 x 35

1 Bottle diameter D 25 ± 1 30 ± 1 30 ± 1 35 ± 1 40 ± 1 50 ± 1.5 60 ± 1.5 70 ± 1.5

2 Bottle height h 34 ± 3 50 ± 3 60 ± 3 70 ± 3 25 ± 3 30 ± 3 30 ± 3 35 ± 3

3 Bore diameter d 24 ± 0.5 29 ± 0.5 29 ± 0.5 34 ± 0.5 39 ± 0.5 49 ± 0.5 59 ± 0.5 69 ± 0.5

4 Bottle wall thickness S < 0.75 < 0.75 < 0.75 < 1 < 0.75 < 1 < 1 < 1 Fig. 1 High-type weighing bottle Fig. 2 Low-type weighing bottle

4.3 Appearance

4.3.1

The appearance defects allowed are shown in Table 2.

Table 2 Permitted appearance defects

Serial number	defect	High type	low type
1	Maximum diameter mm	25mm x 40mm ~ 30mm x 50mm	30mm x 60mm ~ 35mm x 70mm
2	Quantity	1	1
3	Maximum diameter mm	25mm x 25mm ~ 50mm x 30mm	60mm x 30mm ~ 70mm x 35mm
4	Quantity	1	1
5	Maximum diameter mm	1	1
6	Quantity	1	1
7	Bottle cap	1	1
8	Bottle body	1	1
9	nodules and stones	1	1
10	Allowed total	≤5	≤5
11	gas lines, lines	≤5	≤5
12	length	≤0.4mm	≤0.4mm
13	single stripe	≤3	≤3
14	total allowable lines	≤4	≤4

5 Maximum spot diameter ≤3mm, ≤3

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 bottle mouth is finely ground, and the matte surface should be uniform and fine. The maximum diameter of light spots and coarse sand prints should be less than 3mm.

4.4 Wall thickness uniformity the uniformity of wall thickness shall comply with JY/T 0423-2011 Section 4.1.1.2.

4.5 Adhesiveness

Should meet level three.

4.6 Chemical stability should meet water resistance HGB level 1, acid resistance H1 level, alkali resistance A2 level.

4.7 Internal stress

The internal stress should comply with not more than 180nm/cm.

4.8 Thermal shock

The thermal shock resistance should not be lower than 150 ° C.

4.9 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 tested in accordance with JY/T 0423-2011 Section 6.4.2 and shall meet the requirements of 4.1 of this standard.

5.2

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

begging. The reading microscope for measuring the length in appearance defects shall meet the corresponding requirements of this standard.

5.3

The wall thickness and uniformity shall be tested in accordance with JY/T 0423-2011 Section 4.1.3 and shall meet the requirements of 4.2 and 4.4 of this standard.

5.4

Adhesion test The test according to JY/T 0423-2011 Section 4.3.2 shall meet the requirements of 4.5 of this standard.

5.5

Water resistance, acid resistance and alkali resistance According to JY/T 0423-2011 Section 6.5.5, it shall meet the requirements of 4.6 of this standard.