

ICS 03.180
CCS Y51

JY

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

JY/T 0183-2011

Replacing JY 183-1984

Test ball
(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 Model designation	
3.1 Naming rules	
3.2 Nomenclature	
4 Requirements	
4.1 Working environmental conditions	
4.2 Appearance and structure requirements	
4.3 Insulation performance of the handle	
5 Test method	
5.1 Visual and structural inspection	
5.2 Insulation performance test	
6 Inspection rules	
6.1 Inspection classification	
6.2 Inspection items	
6.3 Sampling method	
6.4 Non-conformance determination	
6.5 Review rules	
6.6 Quality supervision inspection	
7 Signs, instructions for use, packaging, transportation and storage	
7.1 Signs and instructions	
7.2 Packaging, transportation and storage	

Foreword

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

This standard replaces JY 183-1985. In addition to editorial changes, the main technical requirements of this standard have changed as follows.

-The insulation performance requirements and test methods of the handle have been modified.

-Added inspection rules.

Please note that some content of this standard may involve patents, and the issuing authority of this standard is not 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).

1 Scope

This standard specifies the nomenclature, requirements, test methods, inspection rules, signs, instructions for use, packaging, transportation, and storage of electric test balls.

This standard applies to electric test ball for physics teaching in middle schools.

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.

JY 0001-2003 General quality requirements for teaching instruments and equipment products
JY 0002 Inspection rules for teaching instruments and equipment products
JY 0009-1990 Environmental requirements and test methods for electronic equipment for teaching
JY 0026-1991 teaching instrument and teaching equipment product model naming method

3.1 Naming rules

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

3.2 Nomenclature

The test ball is named.

D - YDQ - J - 10/160 Product main parameters (diameter/length of insulation rod, mm)
Product feature code, metal Product name Pinyin prefix, electroscope Product model classification code, special equipment for electromagnetics Model example.

D-YDQ-J-10/160 stands for electric test ball. The ball is made of metal. The diameter of the insulation rod is 10mm and the length is 160mm.

4.1 Working environmental conditions

4.1.1

Working temperature. -10 °C ~ 40 °C.

4.1.2

Relative humidity. not more than 80% RH (40 ° C).

4.2 Appearance and structure requirements

4.2.1

The test ball shall consist of a metal ball and an insulated handle connected to it.

4.2.2

The diameter of the metal ball should be $15\text{mm} \pm 1\text{mm}$. The surface of the small ball should be chrome-plated and polished, and there should be no peeling or rusting of the coating.

4.2.3

The diameter of the insulated handle shall be $10\text{mm} \pm 1\text{mm}$, and the length shall not be less than 160mm. The surface shall be smooth, free of scratches and burrs, and embedded at one end M4 bolt.

4.2.4

The rest shall comply with Chapters 6 and 7 of JY 0001-2003.

4.3 Insulation performance of the handle

Hold the electroscope and touch the electroscope, there should be no visible leakage phenomenon. According to the test method of 5.2, the opening angle of the foil within 20s should not have Visible change.

5.1 Visual and structural inspection

5.1.1

Visual inspection and sensory inspection of appearance and structure shall meet the relevant requirements of this standard.

5.1.2

The relevant dimensions of the product shall be measured with a vernier caliper with a division value of 0.02mm and a steel ruler with a division value of 1mm, which shall comply with 4.2.

Claim.

5.2 Insulation performance test

The test is performed under the conditions of an ambient relative humidity of 75% to 80%.

First, the ability of the electroscope to remain charged after being charged should be tested. Electrification (foil or pointer) the deflection of the device foil or pointer should not be less than 30°. The electroscope foil or pointer should have no visible drop within 30s. Then hold the test ball to make the test when the ball touches the electroscope, the angle of the foil or pointer of the electroscope decreases during contact, and then there should be no visible drop for 20s.

Under the conditions of the maximum relative humidity specified in this standard, the gold foil electroscope should be charged with an opening angle greater than 30°. Hold the electroscope in the middle of the insulated handle, the metal ball contacting the metal ball of the gold foil electroscope with a metal ball shall meet the requirements of 4.3.

6.1 Inspection classification

The inspection of this product shall be divided into factory inspection, type inspection and quality supervision inspection.

6.2 Inspection items

The inspection items and inspection methods of the electric inspection ball shall conform to Table 1.

Table 1 Inspection items and inspection methods of electric ball

Item No.	Inspection Item	Standard Provisions	Factory Inspection	Type Inspection
1	Appearance and structure	4.2 -		
2	Insulation performance	4.3 -		
3	Signs, instructions, packaging	7 -Note. "-" in the table means all inspection items, "-" means sampling inspection items, and "-" means no inspection items.		

6.3 Sampling method

6.3.1

The factory inspection shall be based on the natural batch of delivery, and the type inspection shall be based on the inventory array.

6.3.2

During the factory inspection, all the inspection items should be inspected first, and then samples should be taken from the qualified products for all inspection items, and the sampling inspection items should be inspected.