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

GB 18143-2011

Replacing GB 18143-2000

Ophthalmic instruments -- Trial frames

眼科仪器 试镜架

(English Translation)

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Foreword

4.2.6 ~ 4.2.9 of this standard are mandatory, the remaining technical content are recommended.

This revised standard adopts ISO 12867:1998 "ophthalmic instruments frames", and ISO 12867:1998 technical differences are as follows.

--- Deleted the Chapter 3 of the full aperture trial frame trial frame and narrow definition of the aperture;

--- The trial frame into IPD IPD adjustable trial frame and the fixed frame, put forward different requirements of IPD in Table 1;

--- Deleted the temple should be kept perpendicular to the provisions of refraction of the lens plane, increasing the adjustable temple length requirements;

--- Remove the parallel requirements frame geometric axis;

--- Remove the concentric provisions lens optical axis and the geometrical axis of the frame;

--- Increasing the requirements and test methods trial frame IPD value error;

--- Inspection rules given under the provisions of GB/T 2828.1 of;

--- According to GB/T 15464 increased the number of trial frame labeling, packaging, transportation and storage requirements.

This standard replaces GB 18143-2000 "ophthalmic instruments frame," this standard and GB 17342 "ophthalmic instruments refraction lens" complementary use.

This standard compared with GB 18143-2000 main changes are as follows.

- Deleted the Chapter 3 of the full aperture trial frame trial frame and narrow definition of the aperture;
- The trial frame into IPD IPD adjustable trial frame and the fixed frame, put forward different requirements of IPD in Table 1;
- Deleted the temple should be kept perpendicular to the provisions of refraction of the lens plane, increasing the adjustable temple length requirements;
- Remove the parallel requirements frame geometric axis;
- Remove the concentric provisions lens optical axis and the geometrical axis of the frame;
- Increasing the requirements and test methods trial frame IPD value error;
- Under the new release of GB/T 2828.1 gives a new inspection rules.

The standard proposed by China Machinery Industry Federation.

This standard by the National Standardization Technical Committee Optics and optical instruments - Optical glasses Technical Committee (SAC/TC103/SC3) Centralized.

This standard was drafted. China Institute of Metrology, Shandong Institute of Metrology.

1 Scope

This standard specifies the basic requirements and test methods for installing refraction lenses audition frame.

This standard applies to the headband, and a bracket-style glasses with temples and nose pads proscenium types of trial frames.

This standard does not apply to integrated refractometer.

2 Normative references

The following documents for the application of this document is essential. For dated references, only the dated version suitable for use herein Member. For undated references, the latest edition (including any amendments) applies to this document.

GB/T 15464 instrumentation packaging technology GB 17342 refraction lens (GB 17342-1998, eqvISO 9801.1997) GB/T 2828.1 Sampling procedures for inspection - Part 1. by acceptance quality limit (AQL) retrieval batch inspection sampling plan (GB/T 2828.1-2003, ISO 2859-1:1999, IDT)

3 Terms and Definitions

The following terms and definitions apply to this document.

Trial frame trialframes Frame composed by two linked, can make the necessary refraction lens positioned in front of the examinee.

Semi-eye trial frame half-eyetrialframes Refraction lens can be installed, and with only a portion of the frame trial frame.

Frame lensholder

Audition shelves can be installed several refraction lens, and positioning in front of the examinee's part.

Nose pads bridgepiece Audition shelves and measured by contacting nose portions play a supportive role.

Temple side

Audition rack ear hook to keep the part of the person under test trial frame in contact with the cheek.

4.1 General requirements

All kinds of trial frame used at room temperature, shall meet the requirements of 4.2 to 4.3, 5.1 to 5.5 according to the method of testing.

Trial frame glasses frame style temples and nose pads must have two basic components.

4.2.1 Frame

Each frame should refraction lens with three slots, each having a refraction lens space on the partition frame geometrical axis.

4.2.2.1 IPD adjustable frame

IPD within a certain range, the center distance between two consecutive frames adjustable to ensure refraction of the lens from the geometric center of the IPD and consistent.

4.2.2.2 Fixed IPD trial frame

From the center of the frame is fixed even number two. Typically it sets, to meet the different needs of IPD.

4.2.3 Refraction lens rotation

Optometry lenses in each frame to be capable of smooth rotation around the optical axis 180 ° (not including the progressive lens dedicated to the trial frame).

4.2.4 Temple

Temple length shall be adjusted to ensure correct positioning of the lenses optometry in front of the examinee.

4.2.5 Nose pads

Nose pads should ensure vertex distance refraction lens and the human eye is adjustable, and the geometric center of the lens optometry can go up according to the connection of the human eye pupil or decreased.

4.2.6 Axial scale

It shall be provided with cylinder axial and prism base on the scale trial frame of the frame with a scale of at least 180 °. Scale value should be counter-clockwise to increase its minimum scale should not exceed 5 °.

Engraved straight line should be uniform, no Duanzhe, no edges.

4.2.7 Frame alignment

After refraction lens mount frame, two refraction lens optical axis parallelism deviation should not exceed 2.5 °. Two frame plane contour mutual differences it should not be greater than 0.5mm.

4.2.8 Dimensions and Tolerances

Table 1 shows the range of IPD trial frame and the minimum aperture size.

Table 1 IPD range and minimum aperture

project

Ordinary trial frame half-eye trial frame IPD IPD adjustable fixed adjustable fixed type IPD
IPD formula IPD range 55mm ~ 75mm fixed integer 59mm ~ 67mm fixed integer Minimum
aperture 20mm Note. This table does not include the IPD range of children audition frame.

IPD deviation trial frame within a predetermined range of IPD provided not more than 1mm.
Refraction lens relative to the geometric center of the cross and axial displacement shall
not exceed 0.3mm.