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NATIONAL METROLOGY TECHNICAL SPECIFICATION OF THE PEOPLE'S REPUBLIC OF CHINA

JJF 1781-2019

Program of Pattern Evaluation of Applanation Tonometers

接触式压平眼压计型式评价大纲

(English Translation)

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Appendix A Appraisal Record Format for Flattened Tonometer Type (10)

Introduction

This type evaluation outline is based on JJF 1015-2014 "General Specification for Type Evaluation of Measuring Instruments", JJF 1016-2014 "Guidelines for the Compilation of the Outline of Type Appraisal of Measuring Instruments" was prepared.

The technical indicators of this type evaluation outline refer to JJG1141-2017 "Contact Flattening Tonometer", GB/T 14710-2009 "Environmental requirements and test methods for medical appliances" and ISO 8612.:2009 "Ophthalmic instruments "Tonometer" and other technical documents.

This type evaluation outline is released for the first time.

Outline of Type Evaluation of Contact Squeezing Tonometer

1 Scope

This type of evaluation outline is applicable to the range of optical-mechanical structure and measuring head force (hereinafter referred to as force) to Including (0 ~ 49) mN contact applanation tonometer (hereinafter referred to as applanation tonometer) type evaluation

2 Reference documents the following documents are cited in this type evaluation outline.

JJG1141-2017 contact flattening tonometer GB/T 14710-2009 Environmental requirements and test methods for medical appliances ISO 8612.:2009 Ophthalmic instruments tonometer (Ophthalmicinstruments-Tonometers) for dated reference documents, only the dated version is applicable to this type of evaluation outline; those that are not dated the latest version (including all amendments) of the cited documents is applicable to this type evaluation outline.

3 Terms and definitions 3.1 intraocular pressure; IOP the pressure in the eyeball, referred to as intraocular pressure. The unit is kilopascal (kPa).

[ISO 8612.:2009, definition 3.1]

4 Overview

The flattened tonometer is a special instrument used to measure the intraocular pressure in the ophthalmology diagnosis.

The working principle of the flattened tonometer is based on the Imbert-Fick principle. treating the eyeball as an ideal dry surface Elastic thin-walled sphere, the intraocular pressure p, the force F and the flattened area A of the cornea have the formula (1) relationship.

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$$p = F/A \quad (1)$$

When measuring, it is usually used in conjunction with a slit lamp, and the measuring head of a flattened tonometer is used to flatten the cornea and root of a certain area.

According to the required force to measure the intraocular pressure (see Figure 1).

Figure 1 Schematic diagram of flattening the tonometer

The flattened tonometer can be divided into two types of scale type and digital display type according to the display method, mainly by the measuring head, measuring arm,

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