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

YY/T 0631-2008

Dental materials - Determination of colour stability

牙科材料 色稳定性的测定

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Foreword

This standard is identical with ISO 7491.2000 "Determination of color stability of dental materials." Color stability are important properties of dental materials One of the standard test methods can be referenced in other standards. This standard is based on ISO 7491.2000 re-drafted. This standard and ISO 7491.2000 and the main difference between the following reasons.

--- Delete "normative references" in the "ISO 3696. 1987". And in this standard as "distilled or deionized water" alternative In. "ISO 3696 1987" cited "Class 2 water." Because it is technically feasible.

3.1.1 light source "illumination on the specimen is 150000lx, the entire surface of the sample at any time should not be partial illumination $\pm 10\%$ from the mean. "Changed to" illuminance on the sample amounted 150000lx ± 15000 lx "improve operability.

3.2.3 color compared to the international standards set forth in south/north direction diffuse daylight. In the northern hemisphere of the selection criteria of the International Standard Registration northbound diffuse daylight. And ISO 7491.2000 technical differences have been incorporated into the text, and they involved clauses in the margin of a single vertical line Identity. This standard was proposed by the State Drug Administration. This standard by the National Standardization Technical Committee of Dental Materials and Devices and equipment. This standard by the State Drug Administration of Peking University Medical Device Quality Supervision and Testing Center is responsible for drafting. The main drafters of this standard. Lin Hong, Yuan Shen Po, Zhang Yan, Zheng Rui, Zheng Gang. YY/T 0631-2008/ISO 7491.2000 Determination of color stability of dental materials

1 Scope

YY/T 0631 is the method for determining the colour stability of dental materials. A restoration that matches the neighbouring tooth on the day it is placed and yellows within a year has failed in the way patients notice most, and the causes, light exposure, water sorption and staining from food and drink, act slowly enough that only an accelerated

method reveals them before the product is on the market. The standard defines the exposure conditions and the colour measurement used to quantify the change. It is cited normatively by the Chinese standards for crown and veneering materials and for artificial teeth. For a manufacturer of composites, ceramics, denture materials or cements serving the Chinese market, this is the method behind a colour stability claim.

This standard specifies the method for determination of dental materials in color stability after irradiation of light soaking.

2 Normative references

The following documents contain provisions which, through reference in this standard and become the standard terms. For dated references, subsequent Amendments (not including errata content) or revisions do not apply to this standard. However, according to research encourages the parties to the agreement Study whether the latest versions of these documents. For undated reference documents, the latest versions apply to this standard.

GB/T 16422.2 Plastics - Methods of exposure to laboratory light sources Part 2. Xenon arc lamp (GB/T 16422.2-1999, idt

ISO 4892-2:1994) CIE Publication

3.1.3 Test chamber

3.1.3.1 circulating water bath Distilled or deionized water, maintained at a temperature (37 ± 5) °C, the water in the sample (10 ± 5) mm, the specimen is placed in parallel with the test chamber bottom.

3.1.3.2 sample holder From an opaque material, preferably metal, can be used to hold the test pieces of 50mm diameter. Figure 1 is a suitable sample holder. Step 3.2

3.2.1 Sample Preparation Each dental materials prepared by standard sample size, sample preparation methods and conditions as well as control samples for both provisions. These standards should be present Standard used in combination.

3.2.2 irradiation test Half of the sample holder according to FIG. 1, or tin, or wrapped in aluminum foil. For dental samples, tin or aluminum foil parallel to the long axis of the tooth wrapped Anterior Chambers half. Fitted with UV filter (3.1.2), the sample was placed in a water bath, with a xenon lamp (3.1.1) applied to the sample (24 ± 1) h. Note that to avoid trial Shaded block loading. YY/T 0631-2008/ ISO 7491.2000

15.2 Colorimetry Test Method 3

3.1.1 light source Medium pressure xenon lamp, the color temperature between 5000K to 10000K. According to

GB/T 16422.2 measuring illuminance on the sample should reach $150000\text{lx} \pm 15000\text{lx}$. Xenon lamp can also be used with other equivalent light source. Xenon lamps and UV filter (3.1.2) after use 1500h, due to aging of its emission intensity vary, should be replaced. use Suitable light meter measuring illumination, and a corresponding control of the adjustment.

3.1.2 UV filter Optical glass (borosilicate glass), the light transmittance of 300nm or less should be less than 1% of the 370nm light of the above Transmission should be greater than 90%.