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

YY/T 0517-2026

Replacing YY/T 0517-2009

Dentistry - Posts

牙科学 根管桩

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Foreword

This document conforms to GB/T 1.1-2020 "Standardization Work Guidelines Part

1. Structure and Drafting Rules of Standardization Documents". Drafting is scheduled. This document replaces YY/T 0517-2009 "Prefabricated Dental Posts". Compared with YY/T 0517-2009, the only changes are structural adjustments and rewriting. Aside from the logical changes, the main technical changes are as follows: --Terminology and definitions have been changed (see Chapter 3, Chapter 3 of the 2009 edition); --The appearance has been changed (see 5.2, 2009 version 5.2). --Increased X-ray blocking (see 5.7); --Sampling has been changed (see 6.1,

6.5.2 in the 2009 edition). --The internal porosity has been changed (see 6.5,

6.4 in the 2009 edition). --Increased X-ray blocking (see 6.8); --The packaging and labeling have been removed (see Chapter 7 of the 2009 edition). Please note that some content in this document may involve patents. The issuing organization of this document assumes no responsibility for identifying patents. This document was proposed by the National Medical Products Administration. This document is under the jurisdiction of the National Technical Committee on Standardization of Dental Materials and Instruments (SAC/TC 99). This document was drafted by: Center for Dental Medical Device Testing, Peking University School of Stomatology, Peking University School of Stomatology, and Beijing Eurasia Kangxin Materials Technology Co., Ltd. The main drafters of this document are: Deng Xuliang, Wei Yan, Zhang Xuehui, Xu Mingming, Bai Yunyang, Bai Wei, Yang Xiaoping, and Cai Qing. The release history of this document and the document it replaces is as follows: --First released in 2009 as YY/T 0517-2009; --This is the first revision.

In clinical treatment, the role of a root canal post is to provide retention for the post and core and the crown. During use, the root canal post is inserted into the tooth that has already undergone root canal treatment. Within the root canal, a post and core are firmly attached to the canal wall using cement, forming the basis for the retention of the crown. Root canal posts can also alter the stress on the tooth root. The force distribution pattern reduces the possibility of tooth root fracture. Dental posts used in clinical treatment include

prefabricated posts and custom-made posts. Prefabricated posts include non-metallic posts. Root canal posts (such as glass fiber root canal posts, carbon fiber root canal posts, ceramic root canal posts, etc.) and metal root canal posts (alloy root canal posts, pure titanium root canals) Piles, etc. This document does not include specific qualitative and quantitative testing methods to demonstrate the absence of unacceptable biohazards, but recommends using these methods when assessing potential biological hazards. When dealing with hazards, refer to GB/T 16886.1 and YY/T 0268. Dental root canal post

1 Scope

YY/T 0517 is the product standard for the pre-formed dental post, the pin cemented into a root canal to retain a crown on a tooth that has lost its own structure. It specifies the requirements for pre-formed dental posts and describes the corresponding test methods, and it applies to posts used for fixed restorations. Posts fail in two ways that matter, by fracturing themselves or by splitting the root, so their dimensional and mechanical characteristics are the whole of the standard. It is one of the shorter documents in the Chinese dental series at around four thousand words. For a manufacturer or a distributor of fibre, metal or ceramic post systems selling into China, this is the specification the registration test report has to follow.

This document specifies the requirements for prefabricated dental post and describes the corresponding testing methods. This document applies to prefabricated dental posts for fixed restorations.

2 Normative references

The contents of the following documents, through normative references within the text, constitute essential provisions of this document. Dated citations are listed below. For references to documents, only the version corresponding to that date applies to this document; for undated references, the latest version (including all amendments) applies. This document.

GB 17168 Metallic materials for fixed and removable dental restorations

YY/T 1646-2019 Test Method for X-ray Radiometric Properties of Dental Materials

3 Terms and Definitions

The following terms and definitions apply to this document.

3.1 dental prefabricated post In clinical treatment, prefabricated products are inserted into the root canal to provide retention for posts and cores and crowns/bridges. They are firmly bonded to the canal wall using adhesive materials. The fixed connection serves as the basis for the retention of the pile core and the cap bridge.

4. Classification Based on material, root canal posts are classified as follows:

- a) Metal root canal posts. Root canal posts made of metal materials (gold alloys, nickel-chromium alloys, titanium alloys, etc.);
- b) Ceramic root canal posts. Root canal posts made of ceramic materials (zirconia, alumina, etc.);
- c) Fiber post. A root canal post made by adding reinforcing fibers (carbon fiber, glass fiber, etc.) to a resin matrix.

5 Requirements

5.1 Chemical composition The chemical composition and limits of harmful elements in metal root canal posts shall comply with the requirements of GB 17168.

5.2 Appearance Visually inspected, the surfaces of metal and ceramic root canal posts should be free of scratches, cracks, sharp edges, burrs, and threaded areas should not have rolled edges. Macroscopic defects caused by machining. The surface of fiber-reinforced root canal posts should be free of burrs, cracks, scratches, powder, obviously exposed fibers, and obvious lack of resin impregnation. Defects such as fiber defects.