August 13, 2021

Maruchi
Jang Sung Wook
CEO
2-208, Medical Industry Complex Bldg., 42-10,
Taejanggongdan-gil
Wonju-si, Gangwon-do 26311
South Korea

Re: K212229
Trade/Device Name: White Endoseal MTA
Regulation Number: 21 CFR 872.3820
Regulation Name: Root Canal Filling Resin
Regulatory Class: Class II
Product Code: KIF
Dated: July 7, 2021
Received: July 16, 2021

Dear Jang Sung Wook:

We have reviewed your Section 510(k) premarket notification of intent to market the device referenced above and have determined the device is substantially equivalent (for the indications for use stated in the enclosure) to legally marketed predicate devices marketed in interstate commerce prior to May 28, 1976, the enactment date of the Medical Device Amendments, or to devices that have been reclassified in accordance with the provisions of the Federal Food, Drug, and Cosmetic Act (Act) that do not require approval of a premarket approval application (PMA). You may, therefore, market the device, subject to the general controls provisions of the Act. Although this letter refers to your product as a device, please be aware that some cleared products may instead be combination products. The 510(k) Premarket Notification Database located at https://www.accessdata.fda.gov/scripts/cdrh/cfdocs/cfpmn/pmn.cfm identifies combination product submissions. The general controls provisions of the Act include requirements for annual registration, listing of devices, good manufacturing practice, labeling, and prohibitions against misbranding and adulteration. Please note: CDRH does not evaluate information related to contract liability warranties. We remind you, however, that device labeling must be truthful and not misleading.

If your device is classified (see above) into either class II (Special Controls) or class III (PMA), it may be subject to additional controls. Existing major regulations affecting your device can be found in the Code of Federal Regulations, Title 21, Parts 800 to 898. In addition, FDA may publish further announcements concerning your device in the Federal Register.

Please be advised that FDA's issuance of a substantial equivalence determination does not mean that FDA has made a determination that your device complies with other requirements of the Act or any Federal statutes and regulations administered by other Federal agencies. You must comply with all the Act's

requirements, including, but not limited to: registration and listing (21 CFR Part 807); labeling (21 CFR Part 801); medical device reporting (reporting of medical device-related adverse events) (21 CFR 803) for devices or postmarketing safety reporting (21 CFR 4, Subpart B) for combination products (see https://www.fda.gov/combination-products/guidance-regulatory-information/postmarketing-safety-reporting-combination-products); good manufacturing practice requirements as set forth in the quality systems (QS) regulation (21 CFR Part 820) for devices or current good manufacturing practices (21 CFR 4, Subpart A) for combination products; and, if applicable, the electronic product radiation control provisions (Sections 531-542 of the Act); 21 CFR 1000-1050.

Also, please note the regulation entitled, "Misbranding by reference to premarket notification" (21 CFR Part 807.97). For questions regarding the reporting of adverse events under the MDR regulation (21 CFR Part 803), please go to https://www.fda.gov/medical-devices/medical-device-safety/medical-device-reporting-mdr-how-report-medical-device-problems.

For comprehensive regulatory information about medical devices and radiation-emitting products, including information about labeling regulations, please see Device Advice (https://www.fda.gov/medical-devices/device-advice-comprehensive-regulatory-assistance) and CDRH Learn (https://www.fda.gov/training-and-continuing-education/cdrh-learn). Additionally, you may contact the Division of Industry and Consumer Education (DICE) to ask a question about a specific regulatory topic. See the DICE website (https://www.fda.gov/medical-devices/device-advice-comprehensive-regulatory-assistance/contact-us-division-industry-and-consumer-education-dice) for more information or contact DICE by email (DICE@fda.hhs.gov) or phone (1-800-638-2041 or 301-796-7100).

Sincerely,

Michael E. Adjodha, M.ChE.
Assistant Director
DHT1B: Division of Dental and ENT Devices
OHT1: Office of Ophthalmic, Anesthesia,
Respiratory, ENT and Dental Devices
Office of Product Evaluation and Quality
Center for Devices and Radiological Health

Enclosure

4. INDICATION FOR USE STATEMENT

DEPARTMENT OF HEALTH AND HUMAN SERVICES
Food and Drug Administration

Indications for Use

Form Approved: OMB No. 0910-0120
Expiration Date: 06/30/2023
See PRA Statement below.

510(k) Number *(if known)*

K212229

Device Name

White ENDOSEAL MTA

Indications for Use *(Describe)*

Permanent root canal obturation

Type of Use *(Select one or both, as applicable)*

☒ Prescription Use (Part 21 CFR 801 Subpart D) ☐ Over-The-Counter Use (21 CFR 801 Subpart C)

CONTINUE ON A SEPARATE PAGE IF NEEDED.

This section applies only to requirements of the Paperwork Reduction Act of 1995.

DO NOT SEND YOUR COMPLETED FORM TO THE PRA STAFF EMAIL ADDRESS BELOW.

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"An agency may not conduct or sponsor, and a person is not required to respond to, a collection of information unless it displays a currently valid OMB number."

5. 510(k) SUMMARY - K212229

510(k) Summary

Date: July 07, 2021

1. SUBMITTER

MARUCHI

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2. DEVICE

·Trade Name: White ENDOSEAL MTA

·Common Name: Root Filling Material

·Classification Name: Resin, Root canal filling

·Regulation Number 872.3820

·Class: 2

·Classification Product Code: KIF

3. CLEARED DEVICE (PREDICATE DEVICE)

K202015, White ENDOSEAL MTA, MARUCHI

4. DEVICE DESCRIPTION

White ENDOSEAL MTA is a root canal sealer conforming to ISO 6876, in a pre-loaded syringe that does not require any pre-mixing and is set by absorbing moisture from the root canal environment.

The sealer can be used either alone or in combination with gutta-percha obturating cones, injected gutta-percha material or core-carriers, master cones.

5. INDICATIONS FOR USE

Permanent root canal obturation

6. PERFORMANCE TESTING (NON-CLINICAL)

The following test articles were tested based on the referenced standard. All the test results met the preset test criteria.

- Testing institution's method - Capacity, pH
- ISO 6876 – Package, Extraneous matter, Flow, Setting time, Film Thickness, Solubility, Radio-opacity
- ISO 10993-5 - Cytotoxicity (MTT)
- ISO 10993-10 - Guinea Pig Maximization Test for Skin sensitization (GPMT)
- ISO 10993-11 - Acute systemic toxicity
- ISO 10993-3 - Genotoxicity (Mammalian chromosome aberration test & Bacterial Reverse Mutation)

7. SUBSTANITAL EQUIVALENCE

	Modified device	**Cleared device (Predicate device)**	**Discuss/Justify the Differences**
510(k) Number	New	K202015	-
Trade Name	White ENDOSEAL MTA	White ENDOSEAL MTA	-
Manufacturer	MARUCHI	MARUCHI	-
Common Name	Root Filling Material	Root Filling Material	Equivalent
Classification Name	Resin, Root canal filling	Resin, Root canal filling	Equivalent
Device Class	2	2	Equivalent
Product Code	KIF	KIF	Equivalent
Device Description	White ENDOSEAL MTA is a root canal sealer conforming to ISO 6876, in a	This product is the root canal sealer conforming to ISO 6876. This is a pre-	Equivalent

	pre-loaded syringe that does not require any pre-mixing and is set by absorbing moisture from the root canal environment. The sealer can be used either alone or in combination with gutta-percha obturating cones, injected gutta-percha material or core-carriers, master cones.	loaded syringe type that does not require mixing and set by absorbing the moisture around the root canal.	
Indications for Use	Permanent root canal obturation	Permanent root canal obturation	Equivalent
Intended user	Dental professional	Dental professional	Equivalent
Standards	ISO 6876	ISO 6876	Equivalent
Physical properties	Setting time: 2 hours 27 minutes Flow: 26.31 mm Radiopacity: 7.5 mm Film thickness: 26 ㎛ Solubility: 0.11 %	Setting time: 29 min Flow: 22 mm Radiopacity: 7.7 mm Film thickness: 14 ㎛ Solubility: 0.3 %	Differences
Chemical Composition	-Zirconium dioxide -Dimethyl sulfoxide -Calcium silicate (Tricalcium silicate) -Water -Bentonite Clay -Polyvinyl alcohol -Polyvinyl pyrrolidone -Lithium Carbonate	-Zirconium dioxide -Dimethyl sulfoxide -Calcium silicate (Tricalcium silicate) -Water -Bentonite Clay -Polyvinyl alcohol -Polyvinyl pyrrolidone -Lithium Carbonate	Equivalent

Liquid Formula	Paste type	Paste type	Equivalent
Packaging	Pre-loaded syringe	Pre-loaded syringe	Equivalent
Sterile	Non-sterile	Non-sterile	Equivalent
Shelf Life	2 years	2 years	Equivalent

8. SUBSTANTIAL EQUIVALENCE DISCUSSION

The modified device is same to the cleared device in terms of description and indications for use. All of the technical characteristics are substantially equivalent to the corresponding characteristics of the cleared device. There might be slight differences in the weight of raw materials between the modified device and cleared device, however, the chemical composition is same and the data of non-clinical testing such as performance and biological testing provided in this submission proves substantial equivalence to the cleared device in safety and performance.

Therefore, the performance and biocompatibility testing performed demonstrates that any differences in their technological characteristics do not raise any new questions as to safety and effectiveness. Hence, it is concluded that it is substantially equivalent to the cleared devices.