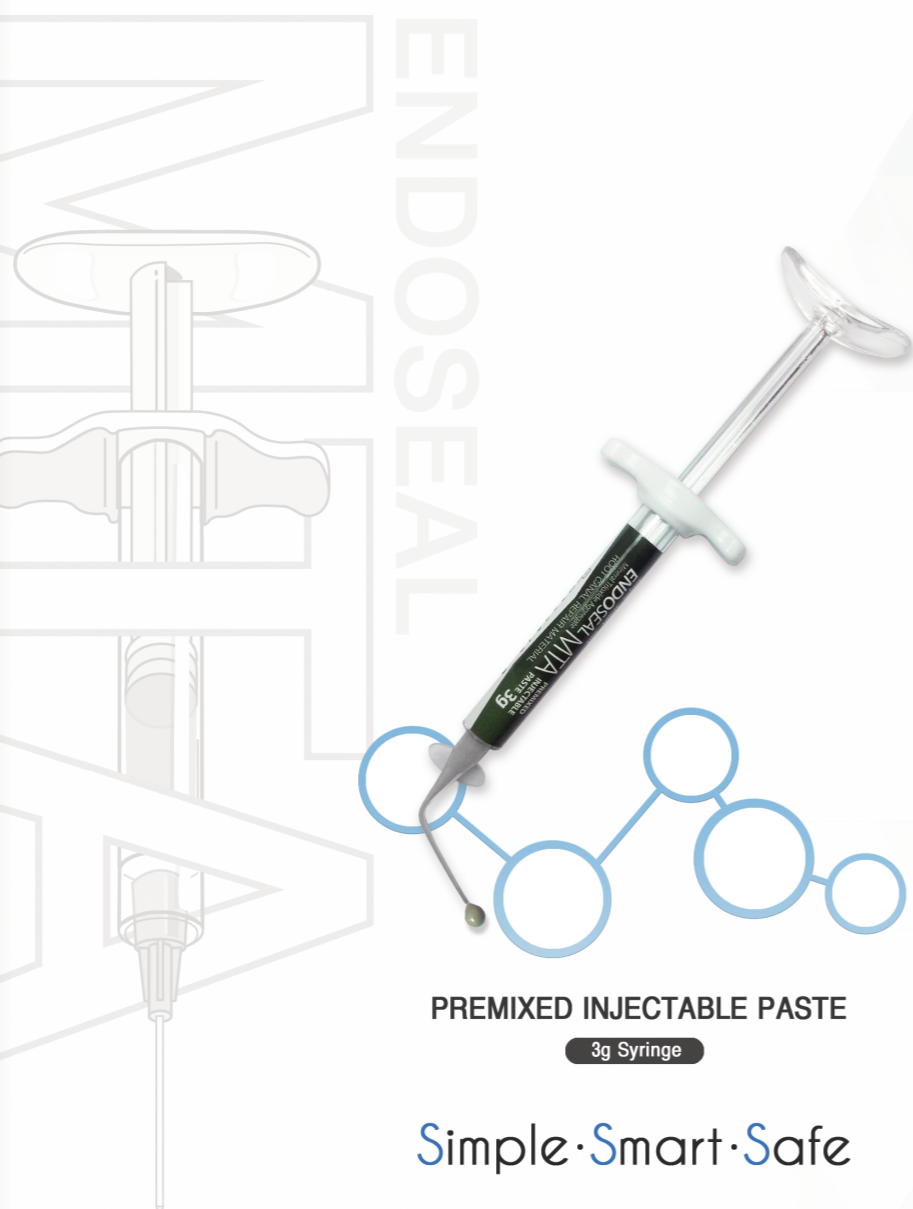


Root canal sealer that has never existed before

An MTA-Based

ENDOSEAL

Hydraulic
Condensation
Technique



PREMIXED INJECTABLE PASTE

3g Syringe

Simple · Smart · Safe

Simple

Simple and Safe root canal filling

Smart

Root canal filling that is highly antibacterial and induces hard-tissue formation

Safe

Canal filling induces minimal post-op discomfort even when overfilled, and provides hermetic apical sealing. Easy re-treatment.

MARUCHI

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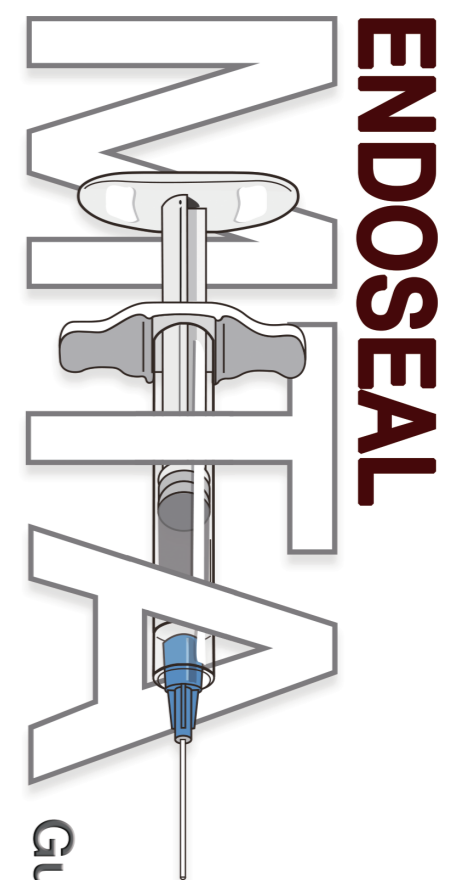
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Guidance Manual

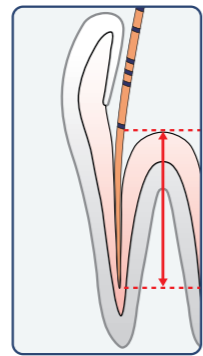
Hydraulic
Condensation
Technique

Hydraulic Condensation Guide Line

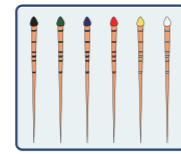
*Filling with Endoseal without gutta-percha will also ensure good outcomes.



STEP 1 Drying the root canal and choosing the master cone

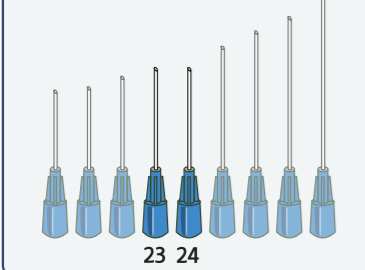


- Choose the master cone that can be inserted smoothly.
- The master cone is used to push Endoseal MTA accurately in over the working length.



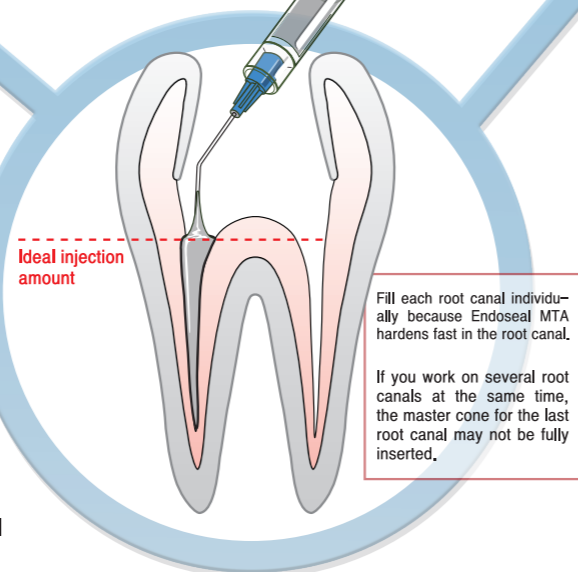
STEP 2 Preparing and injecting Endoseal MTA

Needle tip selection



- Prepare a plastic tip 23(or 24)-gauge needle tip.
- Insert the tip of Endoseal MTA to the middle of the root canal working length, and inject it into the root canal.
- Confirm that Endoseal MTA softly extrudes from the tip. Keep injecting until the sealer is slightly seen from the root canal orifice.

* For the filling with Endoseal MTA alone, using a plastic tip is more convenient.



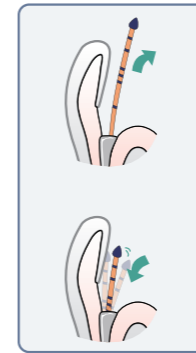
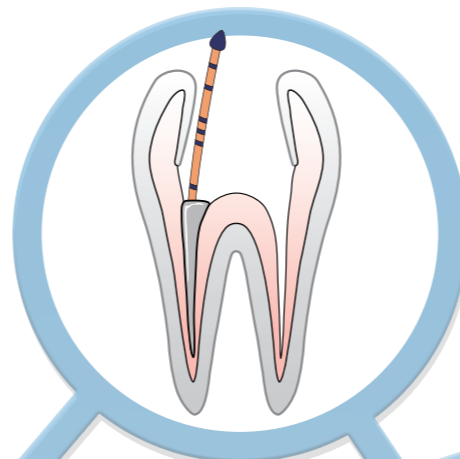
Ideal injection amount

Fill each root canal individually because Endoseal MTA hardens fast in the root canal.
If you work on several root canals at the same time, the master cone for the last root canal may not be fully inserted.

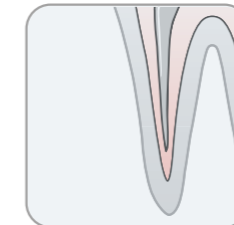
CAUTION

The caps of Endoseal MTA are single-use only. Never reuse it.
Do not remove the needle tip after use. Be sure to place the tip cover, and replace the needle tip with a new one when you use it next time.

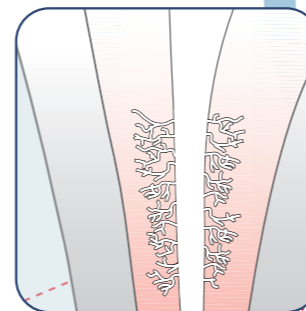
STEP 3 Adjusting the working length using the master cone



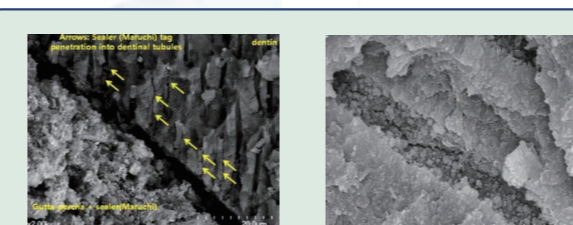
- Insert the master cone that has been prepared.
- Pump it lightly two or three times.
- Do not pump it when a radiolucent lesion is observed or when there is no apical seat.



STEP 4 Cutting off the master cone

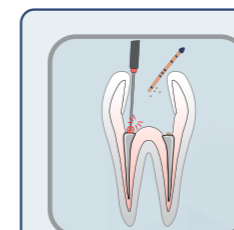


- Add the accessory cone when the root canal is wide.
- Cut off the master cone in a proper way at the orifice of the root canal.
- If the resin-core work is to be done on the same day, seal the orifice of the root canal with a Gutta-percha cone to prevent Endoseal MTA from being washed out of the root canal.



After filling, the Endoseal MTA forms hydroxyapatite in the dentinal tubules and causes minimal post-op discomfort, with its high biocompatibility.

STEP 5 Finishing procedure



- For the post-preparation on the same day, remove the master cone as desired with system-B, compact the top part of the master cone, and proceed with the conventional method.



- In the case of two-visit treatment, use the conventional method after two days.
- Wash with water or ethyl alcohol to remove Endoseal MTA from the pulp chamber.
- Endoseal MTA in the pulp chamber makes bacterial tight-seal.

Directions for storage and precautions

- Endoseal MTA starts to harden when it is exposed to moisture in the air and in the root canal. If you leave the tip in place, the front part of the tip will harden, which will result in sealing. The plastic or needle tip, however, does not guarantee complete long-term sealing.

Therefore, after unpacking and using the product for the first time, regular reuse at least once a week is recommended to avoid the gelation of the front end of the product. If the product has not been used for a long time, remove the inserted tip, squeeze a little, and insert a new tip.

- Pulling back the plunger will cause the moisture in the air to come inside the syringe, which will cause the product to harden. Thus, never pull back the plunger.

- Overfill may occur if a plastic or needle tip is stuck in the canal. Inject the product with the tip loose in the root canal.

- Use the product without the master cone for primary and permanent teeth under orthodontic treatment.

- Recap the needle tip after use for storage.

- Before reuse, check if the product can be smoothly squeezed out at the tip like a waterdrop, and then insert it in the root canal.

- Completely dry the root canal before obturation.

Moisture in the root canal will greatly accelerate the gelation of the product.

*Filling with Endoseal without gutta-percha will also ensure good outcomes.

Academic data

Dynamic intratubular biomineralization following root canal obturation with pozzolan-based mineral trioxide aggregate sealer cement

scanning vol.9999, 1-7(2015) Yeon-Jee Yoo

Comparison of Bacterial Leakage Resistance of Various Root Canal Filling Materials and Methods

Confocal Laser-Scanning Microscope Study