

What are the advantage to have MTA-Angelus?

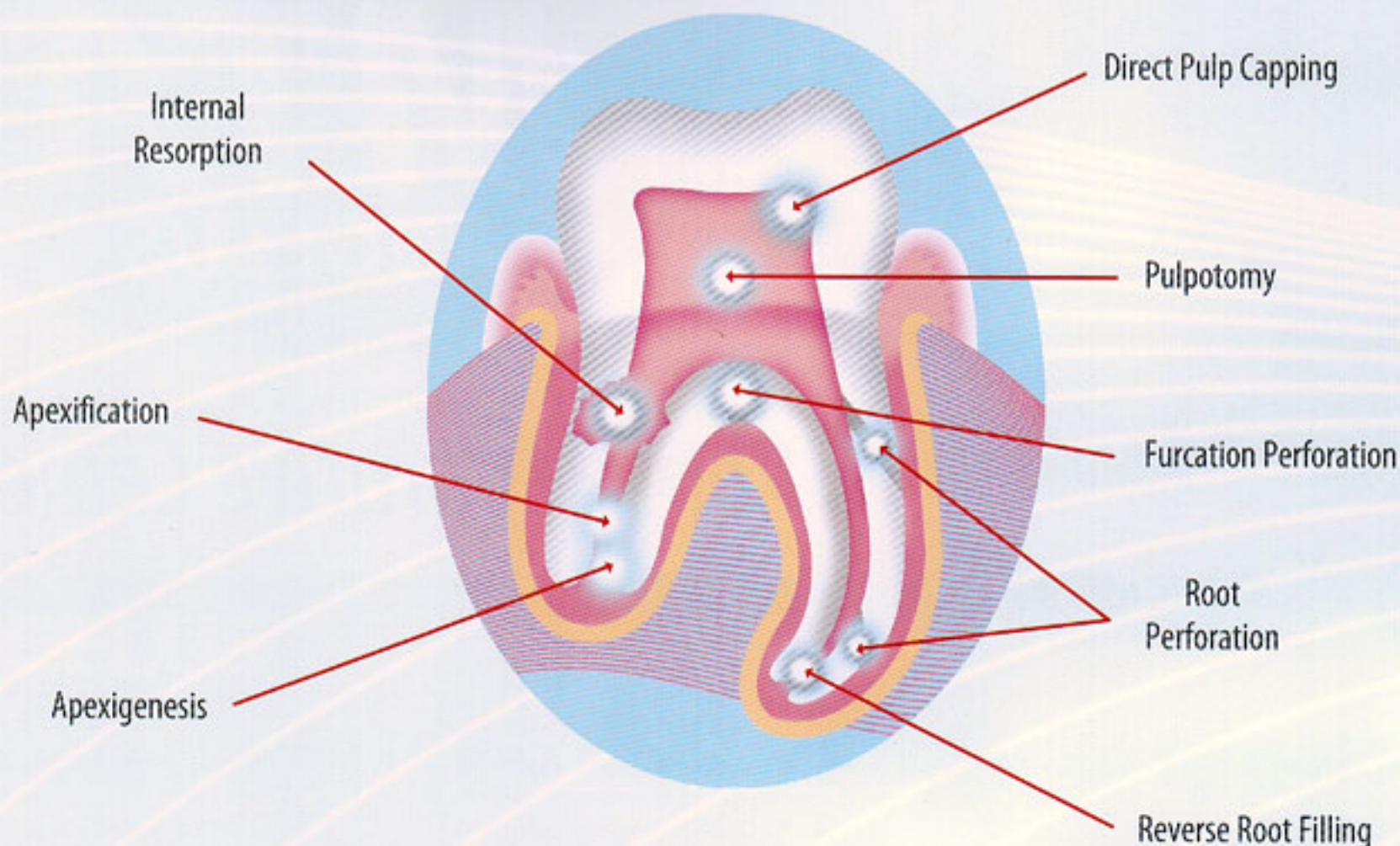
- ▶ It has been scientific proved that MTA-Angelus presents great advantages compared with amalgam and ZOE cements;
- ▶ Excellent marginal sealing, avoiding bacterial migration and penetration of tissue fluids in the root canal;
- ▶ Biological enclosing of root canal and furcation perforations
- ▶ through induction of periradicular cementum formation; Promotes the formation of a dentin bridge when used in pulp capping;
- ▶ Unlike other cements, which demand a completely dry field, MTA-Angelus is indicated even when moisture control is inadequate (e.g., surgery for root perforation, reverse root filling), without loss of its properties.



Description

MTA-Angelus is an endodontic cement composed of several mineral oxides. It is constituted by thin hydrophilic particles. When mixed to water it initially forms a gel which soon achieves a rigid set. It is specially indicated in cases of root canal lateral and furcation perforations, internal resorption, reverse root filling, pulp capping, and pulpotomy in teeth with incomplete root development.

- ▶ 7 Applications
- ▶ High Radiopacity
- ▶ Biocompatible
- ▶ Hydrophilic
- ▶ Setting Time of 15 minutes
- ▶ White and Gray Colors
- ▶ Calcium Hydroxide Release

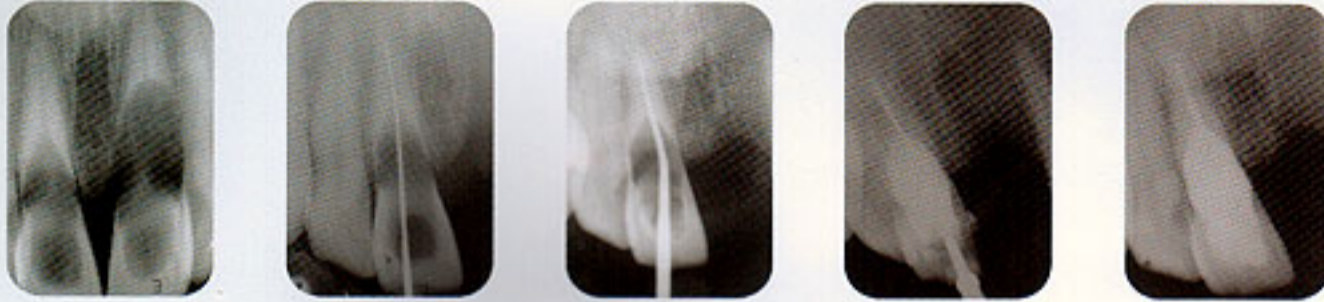


Composition: SiO_2 , K_2O , Al_2O_3 , Na_2O , Fe_2O_3 , SO_2 , CaO , Bi_2O_3 , MgO and insoluble residues of CaO , K_2SO_4 , Na_2SO_4 and crystalline silica.

Setting reaction: In contact with water it forms a gel that solidifies in 10 to 15 minutes.

Setting time: Initial: 10 minutes; final: 15 minutes. It is not necessary to wait for the final set to continue treatment procedures.

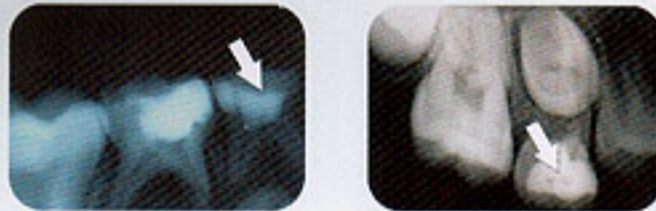
Internal Resorption



Radiopacity: Superior than those of dentine and bone; nearly matches that of gutta-percha. Favors radiographic observation.

Hydrogen ion concentration (pH): Highly alkaline (pH 12); prevents bacterial growth and maintains a long lasting bactericidal potential.

Pulpotomy

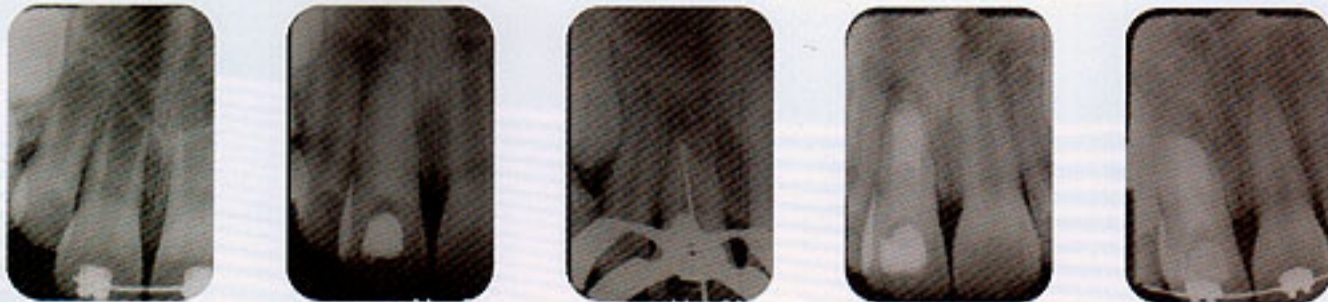


Compressive Strength: 44.2 MPa after 28 days; very acceptable, considering that sites of application do not receive direct occlusal load.

Solubility: MTA-Angelus does not present significant solubility when in contact with moisture, providing excellent marginal seal.

Sealing Potential and Prevention of Bacterial Leakage: MTA-Angelus sealing capacity was tested in vitro (dye penetration through a dentine-MTA cement interface). The low levels of dye penetration indicate that MTA-Angelus presents an effective sealing potential. Considering the larger dimensions of bacteria in comparison to those of dye molecules, bacterial infiltration is highly reduced, guaranteeing excellent marginal closing.

Apexification



Set 2001

Mar 2002

Mar 2003

Mar 2003

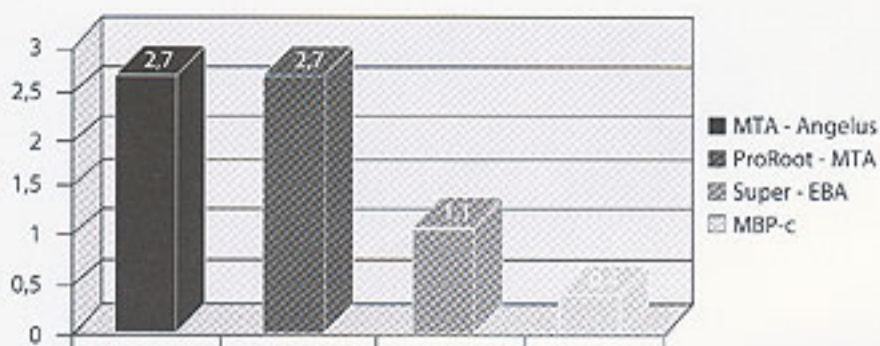
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Retention: MTA-Angelus has adequate adhesion to dentine. This quality provides appropriate resistance to dislocation forces.

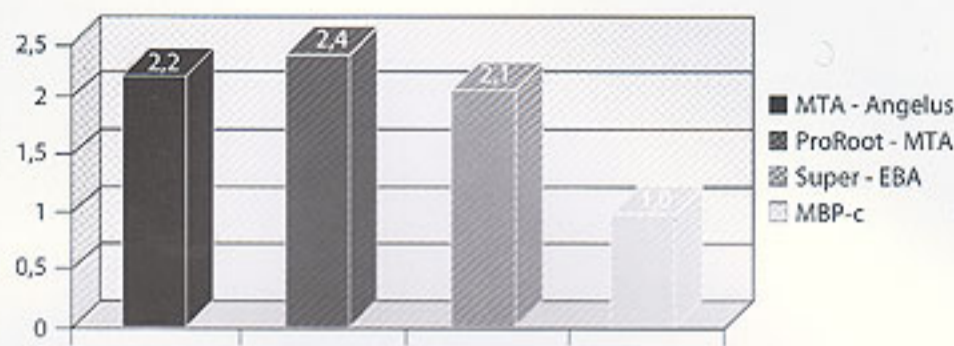
MTA's sealing capability in Lateral and Furcation Perforations

Ulisses Xavier da Silva Neto; Ivaldo Gomes de Moraes.

The Mineral Trioxide Aggregate (MTA) presents excellent clinic/biologic results. The observed marginal leakage on its representatives (MTA-Angelus y ProRoot-MTA) is not sufficient to condemn the usage of this material. Its setting characteristic is special; it needs moisture, what promotes material expansion, improving sealing results. Rhodamine B is an excellent dyer and could have been infiltrated in the first hours after immersion of specimens, before expected material expansion.



Graphic 1: Chart representing the score average of marginal leakage allowed by tested cements. (with Paris gypsum matrix)



Graphic 2: Chart representing the score average of marginal leakage allowed by tested cements. (without Paris gypsum matrix)

Pulpotomy

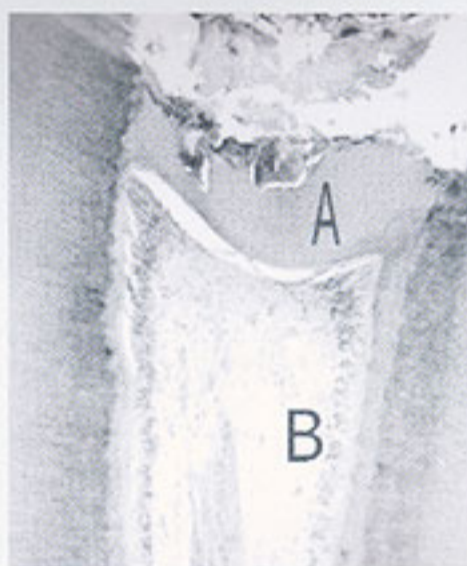


Figure 1 - MTA Angelus (120 days), H.E. 25 X. Note the presence of a mineralized barrier (A) sealing the pulp exposures. The conjunctive pulp tissue presents characteristics of normaly (B)

Endodontics

Intermedium



Metallic Ruler for Gutta Percha points calibrating and Intermedial points preparation.
 • Presentation: Package with 01 unity
 • Possible to be sterilized in stove and autoclave

Silicone Stop



Silicone cursor.
 • Presentation: Package with 100 units
 • Possible to be sterilized in stove and autoclave

Ostby Arc



Arc for absolute isolation.
 • Presentation: Package with 01 unity
 • Sterilized in autoclave

Endométric



Sendodontic files support.
 • Presentation: Package with 30 units
 • Possible to be sterilized in stove and autoclave

Endodontic Ruler



Plastic ruler for files measuring.
 • Presentation: Package with 01 unity
 • Possible to be sterilized in stove and autoclave

Endometric Refill



Refill for files support.
 • Presentation: Package with 50 units

ANGELUS®

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Get more about: MTA - Mineral Trioxide Aggregate

How is MTA application?

- The place to apply MTA does not need to be completely dry, since MTA-Angelus is a material with hydrophilic properties
- The way of applying can be either via canal (when site to be repaired can be accessed) or via retro-surgery (when access to site of reparation is not possible)
- The instruments widely used for MTA application is the surgery amalgam carrier. Some manufactures have launched MTA porters for specific uses.
- After MTA application is recommended to moisten the material with a sterile cotton ball.

What is the difference between MTA-Angelus (gray) and MTA-White?

- The difference is the reduction of one MTA-Angelus element, Iron Oxide (Fe_2O_3), which is responsible for the gray color in the material. This reduction does not interfere in any of MTA-White properties.

Does MTA can be used in root fillings?

- MTA is a repairing cement. Its fluidity is not ideal to be used as an endodontic filling cement.

To apply MTA-Angelus is necessary to treat previously with calcium hydroxide?

- In sites with previous lesion and consequent inflammation, it's necessary to apply calcium hydroxide prior to MTA treatment, to control acute signs and symptoms.
- MTA, like any other endodontic sealer must be used just after control of acute infections and inflammations.

What happened if MTA is extruded (excess of MTA)?

- Since MTA-Angelus is a product which presents excellent biologic behavior, in most cases the extrusion will be resorbed by organism, offering no risk or damage to tissues.

Can MTA be used in furcation lesion?

- Yes, if this lesion has no periodontal origin and there is no signal of communication with external sites, MTA-Angelus can be used to stimulate bone grow in the region.

Can MTA be used in cases of cervical perforation or cervical resorption?

- Yes, just in cases lesions have no contact with gum. MTA-Angelus does not need to be in direct contact with bone to deploy its repairing properties.

What is the concentration of heavy metal in MTA-Angelus composition?

- MTA-Angelus and MTA-White go through strict inspections to control heavy metals, mainly Arsenic, Lead and Chrome. This quality procedure guarantee that those materials quantities are acceptable to human body, avoiding any poisoning risk the patient

MTA-ANGELUS - TECHNICAL PROFILE

AVERAGE PARTICLES SIZE: 3,907 μ

MECHANICAL STRENGTH: 44,2 MPa

SOLUBILITY: BETWEEN 0.1 AND 1% (PRACTICALLY INSOLUBLE)