

Detail	Ca(OH) <sup>2</sup>	MTA
Chemical Composition	Ca(OH) <sup>2</sup>	<ol style="list-style-type: none"> <li>1. Tricalcium Silicate</li> <li>2. Tricalcium Aluminate</li> <li>3. Silica Oxide</li> <li>4. Bisthmus Oxide</li> </ol>
Presentation	<ol style="list-style-type: none"> <li>1. Powder &amp; liquid (Saline or distilled water)</li> <li>2. Two tube paste system</li> <li>3. Injectable paste</li> <li>4. Cones</li> <li>5. Ca(OH)<sub>2</sub> containing sealers</li> </ol>	Powder & distilled water
Mode of Action	<p>pH 11-12</p> <p>Induction of calcific barrier by:</p> <ol style="list-style-type: none"> <li>1. Activation of alkaline phosphatase enzyme</li> <li>2. Activation of Ca dependant ATP associated with hard tissue formation</li> <li>3. Anti-bacterial</li> <li>4. Anti-inflammatory</li> </ol>	<p>pH 12.5</p> <p>Induction of osteoid or cementoid tissue</p>
Methods of Placement	<ol style="list-style-type: none"> <li>1. Injection</li> <li>2. Lentulo spiral</li> <li>3. Hand file, paper point or Gutta-percha</li> <li>4. Ca(OH)<sub>2</sub> points</li> </ol>	Specially designed carrier Micro Apical Placement system (MAP system)
Histological Effects	<p>Three histologic zones:</p> <ol style="list-style-type: none"> <li>1. Narrow layer of coagulation necrosis</li> <li>2. Basophilic inflamed tissue</li> <li>3. Calcific barrier</li> <li>4. Normal pulp tissue</li> </ol>	Normal pulp tissue
Complications	<ol style="list-style-type: none"> <li>1. Persistent chronic inflammation</li> <li>2. Pulp necrosis</li> <li>3. Internal resorption</li> <li>4. Dystrophic calcification</li> </ol>	None
Clinical uses	<ol style="list-style-type: none"> <li>1. Pulp capping agent</li> <li>2. Pulpotomy</li> <li>3. Apexification</li> <li>4. Intracanal medicament</li> </ol>	<ol style="list-style-type: none"> <li>1. Pulp capping agent</li> <li>2. Pulpotomy</li> <li>3. Apexification</li> <li>4. Perforation repair</li> <li>5. Root end filling material</li> <li>6. Regenerative endodontics</li> </ol>