

Tissue Management



ViscoStat

ViscoStat Wintermint

ViscoStat Clear

Astringedent

Astringedent X

Astringedent Spot Remover

Ultrapak

Ultrapak E

Fischer's Ultrapak Packers

Ultradent Slide Packers





Hemostasis and Fluid Control

Tissue Management is the key to quality direct and indirect restorations.

Ultradent's Tissue Management System continues to set the standard for superior control and predictability. For over 25 years dentists have trusted the immediate hemostatic power and clean field provided by ViscoStat, Dento-Infusor tips, and Ultrapak cord.

Unparalleled tissue management starts with rapid, profound hemostasis. To control bleeding and sulcular fluid, no one offers a more complete line of solutions.



Reduce cross-contamination and the need for sterilizing by loading unit dose directly from the patented IndiSpense syringe.

Predictable Control!



Contra lateral molars removed for maxillofacial surgery. Crowns fabricated by same technician. Different dentists made impressions.



(Courtesy of Dr. Cornelis Panseger)

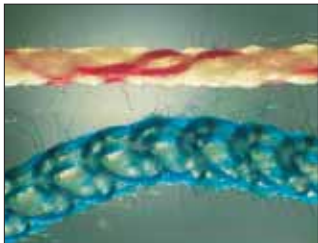
The ViscoStat patented formulas protect tissues even with low pH. Note: ViscoStat will not remove dentinal smear layer, resulting in less tooth sensitivity even after 10 minutes of exposure.

Ultrapak® Knitted Cord



THE ONE WITH THE STRIPE!®
See page 54–55.

Complete, successful tissue management requires absorbent Ultrapak Knitted Cord for effective gingival displacement. Twisted and braided cords can't offer ease of packability and tissue displacement like Ultrapak. It's made of 100% cotton, knitted to form an interlocking chain of thousands of tiny loops, making it easy to pack below the gingival margin.



Knitted Ultrapak cord (lower) is more absorbent and stays in place better than any twisted or braided cord.



Ultrapak compresses upon packing, then expands for tissue displacement.



For preparation packing, Ultrapak cord does not entangle in diamond bur. Bright colors facilitate easy location and removal.



Ultrapak, soaked with ViscoStat, controls fluid for near gingival and sub-gingival preparations.

Dento-Infusor® Tips are essential for profound hemostasis



#1034-I - 500pk - pg 131

Metal Dento-Infusor® tips:
The disposable 19-gauge metal tip has a plastic hub and padded end; it is designed to infuse bleeding tissues with hemostatic solutions.



#1440 - 500pk - pg 129

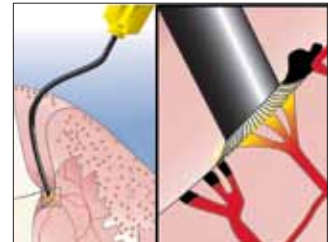
Blue Mini® DI tips:
Most dentists prefer the versatility and thinness of the Metal Dento-Infusor tip; however, many clinicians prefer the plastic tips for sulcular fluid control with ViscoStat or ViscoStat Clear.

Using the correct tip is essential to achieving profound, dependable hemostasis and sulcular fluid control.

Hemostatic agents are only as good as their delivery, and Dento-Infusor tips infuse hemostatic agents into bleeding capillaries. The padded brush end rubs the agent into capillaries and wipes coagulum away. The result is a clean, dry preparation ready for impressions.



The unique shape and brush end of Ultradent Dento-Infusor tips are optimal for delivering hemostatic agents into cut tissue.



The tip infuses the hemostatic agent into capillaries, forming a cork-like "plug," then wipes coagulum away.



Bleeding must be controlled before starting any direct bonding procedure.



Profound hemostasis achieved, preparation is ready for restoration or rubber dam placement.

ViscoStat® and ViscoStat® Wintermint

20% FERRIC SULFATE



Metal Dento-Infusor tips
#1034-I - 500pk - pg 131



Blue Mini DI tips
#1440 - 500pk - pg 129

- Causes profound hemostasis
- Stops bleeding in seconds, saving chair time
- Provides unsurpassed kindness to hard and soft tissues
- Eliminates sulcular fluid contamination for optimal bonding
- Decreases costly impression remakes

ViscoStat and ViscoStat Wintermint hemostatics are 20% ferric sulfate equivalent solutions with inert binding agents in a viscous, aqueous vehicle. Both have a pH of ~1.0 and contain patented, fumed silica to limit the acidic activity, making them kind to hard and soft tissue.

Uses

These hemostatic solutions are suited for a variety of dental and oral surgery procedures to arrest surface capillary bleeding. Such procedures include fixed prosthodontics, restorative-operative, periodontal treatment, etc. ViscoStat is also recommended for retrofillings, canine impactions, gingivectomies, and as a “fixative” for pulpotomies. ViscoStat can also be used to prevent leakage caused by sulcular fluid contamination during direct bonding procedures. Soak an Ultrapak cord in hemostatic and isolate the tissues, following with a firm air/water spray.

#649 - ViscoStat TM IndiSpense Kit

- 1 - 30ml IndiSpense syringe
- 1 - each #00, 0, 1 & 2 cord
- 1 - Fischer's Ultrapak Packer
- 1 - Ultrapak cord organizer
- 20 - Metal Dento-Infusor tips
- 20 - 1.2ml empty syringes



Shelf Life: 48 months.

#6401 - ViscoStat Wintermint TM Kit

- 1 - 30ml IndiSpense syringe
- 1 - each #00, 0, 1 & 2 cord
- 1 - Fischer's Ultrapak Packer
- 1 - Ultrapak cord organizer
- 20 - Metal Dento-Infusor tips
- 20 - 1.2ml empty syringes



Shelf Life: 24 months.

#646 - ViscoStat TM Basic IndiSpense Kit

- 1 - 30ml IndiSpense syringe
- 1 - each #0 & 1 cord
- 1 - Ultrapak cord organizer
- 40 - Metal Dento-Infusor tips
- 20 - 1.2ml empty syringes



Shelf Life: 48 months.

#6402 - ViscoStat Wintermint TM Basic Kit

- 1 - 30ml IndiSpense syringe
- 1 - each #0 & 1 cord
- 1 - Ultrapak cord organizer
- 40 - Metal Dento-Infusor tips
- 20 - 1.2ml empty syringes



Shelf Life: 24 months.

1 www.realityesthetics.com

#647 - ViscoStat Dento-Infusor IndiSpense Kit

1 - 30ml IndiSpense syringe
20 - Metal Dento-Infusor tips
20 - 1.2ml empty syringes



Shelf Life: 48 months.

#6403 - ViscoStat Wintermint Dento-Infusor IndiSpense Kit

1 - 30ml IndiSpense syringe
20 - Metal Dento-Infusor tips
20 - 1.2ml empty syringes



Shelf Life: 24 months.

#3093 - ViscoStat Dento-Infusor Kit

4 - 1.2ml syringes
20 - Metal Dento-Infusor tips



Shelf Life: 48 months.

#6404 - ViscoStat Wintermint Dento-Infusor Kit

4 - 1.2ml syringes
20 - Metal Dento-Infusor tips



Shelf Life: 24 months.

#3070 - ViscoStat Econo Refill

20 - 1.2ml syringes



Shelf Life: 48 months.

#6405 - ViscoStat Wintermint Econo Refill

20 - 1.2ml syringes



Shelf Life: 24 months.

#645 - ViscoStat IndiSpense Syringe

1 - 30ml syringe



Shelf Life: 48 months.

#643 - ViscoStat Wintermint IndiSpense Syringe

1 - 30ml syringe



Shelf Life: 24 months.

"I can't live without ViscoStat because it takes seconds to save an hour and stops the bleeding when nothing else will. Now I don't have to re-prepare for impressions."
DR. JEFFREY STRATFORD-JONES – VENTURA, CA

"It is convenient, dependable, and effective in bothersome clinical bleeding situations. It is the product of choice when others fail to do the job."
DR. DANIEL SWEET – CLOVIS, CA

"ViscoStat has allowed me to take clean, dry, accurate impressions even in some of the most hemorrhagic situations. Thank you! I appreciate it, my lab man appreciates it, and my patients appreciate it. The mint flavor is a great improvement also."
DR. MONTE PERSON – FRESNO, CA

"ViscoStat can stop bleeding in the cervical area of a crown prep like nothing else I have ever seen! It is a miracle solution! I wish I knew how many thousands of hours it has saved me over the years. Thank you, Ultradent!"

DR. SCOTT J. HADLEY – HAXTUN, CO

"Controlling bleeding is almost an everyday procedure. To improve fine impressions of crown margins I rely on ViscoStat to control bleeding, leaving a dry open field for impression material."

DR. BERTRAM CHODOROV – MELBOURNE, FL

"Without a doubt I would be lost without ViscoStat! It quickly stops sulcular bleeding, allowing me to place the Ultrapak 000 cord and get an excellent impression on the first try. It is also great to use when bonding composites near gingival tissues. ViscoStat is a vital part of my crown prep and composite armamentarium."

DR. JULIE ANN ROUTHIER – SAVANNAH, GA

ViscoStat® Clear
25% ALUMINUM CHLORIDE



Metal Dento-Infusor tips
#1034-I - 500pk - pg 131



Blue Mini DI tips
#1440 - 500pk - pg 129



- Stops minor bleeding in the esthetic zone
- Leaves no residue or stain and rinses easily
- Places easily
- Comes as a viscous yet spreadable gel

ViscoStat Clear is a 25% aluminum chloride gel in a viscous, aqueous vehicle. It has a pH of ~1.0. Its patented tissue-kind silica formula temporarily eliminates minor bleeding, causing the collagen in the capillary ends to swell, thereby closing them off. No coagulum is formed, nor does hemostatic residue adhere to the preparation, which is especially critical in the "esthetic zone." ViscoStat Clear will not stain the hard or soft tissues.

Uses

ViscoStat Clear is used for hemostasis of the gingival margin during dental procedures including but not limited to the following: dental impressions, temporary and permanent restoration seating, cavity restorations, and rubber dam placement.



1. Subgingival preparation and bleeding sulcus. Rub hemostatic firmly against bleeding tissues.



2. Press Ultrapak cord into gel in sulcus around tooth preparation. Leave 4-5 minutes.



3. Remove cord. Firm air/water spray. Air dry. Rub gel into the sulcus again. Leave one minute.



4. Perform the final rinse and dry and make the impression. Repeat above steps if needed.

#6409 - ViscoStat Clear Dento-Infusor Kit

- 4 - 1.2ml syringes
- 20 - Metal Dento-Infusor tips



Shelf Life: 18 months.

#6407 - ViscoStat Clear Dento-Infusor IndiSpense Kit

- 1 - 30ml IndiSpense syringe
- 20 - Metal Dento-Infusor tips
- 20 - 1.2ml empty syringes



Shelf Life: 18 months.

#6410 - ViscoStat Clear Econo Refill

- 20 - 1.2ml syringes



Shelf Life: 18 months.

#6408 - ViscoStat Clear IndiSpense Syringe

- 1 - 30ml syringe



Shelf Life: 18 months.

1 www.realityesthetics.com

Astringedent®

15.5% FERRIC SULFATE



- Known as the “Classic” hemostatic agent
- Stops bleeding in seconds
- Eliminates sulcular fluid contamination for optimal bonding
- Decreases costly impression remakes

An aqueous, 15.5% ferric sulfate hemostatic solution with a pH of ~1.0.

Uses

“Highly recommended as effective and easy to use for control of bleeding, tissue management and pulpotomies. Rating +++++.” Astringedent is well-suited for a variety of dental and oral surgery procedures to arrest surface capillary bleeding. Such procedures include fixed prosthodontics, restorative-operative, periodontal treatment, etc. Astringedent is also recommended for retrofillings, canine impactions, gingivectomies, and as a “fixative” for pulpotomies. Astringedent can be used to prevent leakage caused by sulcular fluid contamination during direct bonding procedures. Soak an Ultrapak cord in hemostatic and isolate the tissues, followed by a firm air/water spray.

Listed as a “CAN'T LIVE WITHOUT” product by a prominent independent research institute.²

#686 - Astringedent 30ml IndiSpense Syringe

#111 - Astringedent 30ml Bottle



Shelf Life: 48 months.

As a rule, use the Metal Dento-Infusor tip instead of the plastic Blue Mini Dento-Infusor tip with Viscostat and Astringedent. Viscostat is a more viscous solution, so flow through the plastic infusor is minimal. You may want to try the plastic Dento-Infusor tips when you are dealing with newly healed epithelium, however, as the softer tip end is slightly less aggravating. See Tips and Syringes, pages 116–120, to reorder individual tips and syringes.

¹ www.realityesthetics.com ² “Can't Live Without” Clinical Research Associates Newsletter, Volume 21, Issue 7, July, 1997.

Astringedent® X

12.7% IRON SOLUTION

For Difficult Bleeding

An aqueous, 12.7% iron solution, Astringedent X contains equivalent ferric sulfate and ferric subsulfate with a pH of ~1.0. Not as tissue-kind as our other hemostatic agents, it is still less acidic than competitive iron subsulfate solutions. Note: Diluted Astringedent X does not equal ViscoStat or Astringedent.

Uses

Use Astringedent X when a stronger, more potent hemostatic is required, and when the attainment of quality hemostasis may be more challenging, i.e., in cases of difficult-to-stop, problem bleeding.



Astringedent X and the Dento-Infusor tip facilitate profound hemostasis, even with challenging cases.

#690 - Astringedent X 30ml IndiSpense Syringe

#112 - Astringedent X 30ml Bottle



Shelf Life: 48 months.

Astringedent® Spot Remover

CLEANING SOLUTION

USES

Astringedent Spot Remover is designed to remove Viscostat, Astringedent, and Astringedent X stains that will not come out of clothing with soap and water. It is also ideal for removing perspiration stains from garments. Not for intraoral use.

#2160 - Astringedent Spot Remover 30ml



Ultrapak®
PLAIN KNITTED CORD
and Ultrapak® E
EPINEPHRINE KNITTED CORD



THE ONE WITH
THE STRIPE!®

- Provides rapid retraction/displacement
- Is easy to control and place
- Will not tangle in burs or packers

Ultrapak cord is made of 100% cotton, knitted into thousands of tiny loops to form long, interlocking chains. This unique knitted design exerts a gentle, continuous outward force following placement, as the knitted loops seek to open. Optimal tissue displacement occurs in 1–3 minutes. Ultrapak E is impregnated with racemic epinephrine hydrochloride.

Uses

Ultrapak cord is used for rapid tissue displacement prior to impression-making and can also be used to deliver ferric sulfate solutions subgingivally, for sulcular fluid control. Ultrapak is designed to enhance ViscoStat, Astringedent, and Dento-Infusor tissue management techniques. Conventional techniques using alum, aluminum chloride, etc. are also enhanced when using Ultrapak plain knitted cords, which carry significantly greater quantities of hemostatic solution than conventional cords.

"Ultrapak is excellent at displacing the gingival tissue, allowing proper hemostasis, and is easy to place and remove. It works very well for all retraction purposes. The different sizes are good for all situations."

DR. Y CLEMENT SHEK – SAN FRANCISCO, CA

"In dentistry, time is money. Ultrapak's woven design makes packing the cord quick and easy, plus the tooth can be prepped or touched up without snagging the cord. This increases patient comfort in shortening the appointment with far less repeat impressions."

DR. THOMAS J. FRANKFURTH – TAMPA, FL

"Ultrapak cord has taken the stress out of cord packing. This was the most frustrating part of my day when I was using other products. Add the amazing Astringedent and... LIFE IS GOOD!"

DR. LISA MARSHALL – XENIA, OH

Pre-Preparation Packing Technique

To ensure cord retention during preparation, use a cord large enough to firmly compress into sulcus.



PREPACK — Open proximal contacts and place Ultrapak knitted cord soaked in hemostatic solution. Because Ultrapak compresses upon packing, use a cord size that appears too large. The thin Ultrapak Packer quickly slips cord into position. The knitted cord's unique design (interlocking loops) facilitates easy packing and locks it into place.



PREPARATION — Extend margin subgingivally by cutting partway into knitted cord, which won't entangle in the diamond bur. Remove remnant of cord with calcium hydroxide applicator (tiny ball end). Bleeding is minimal. A small portion of uncut tooth above the gingival attachment is preserved to record in the impression.



HEMOSTASIS AND IMPRESSION — Rub the Dento-Infusor tip against bleeding tissue as solution is slowly expressed. Rinse with a firm air/water spray to clean and check for complete hemostasis. If bleeding is noted, repeat these steps. If additional retraction is required, repack with appropriate size cord. Air dry and make impression.

Each bottle contains 8ft/244cm of cord.

#130 - Ultrapak Kit

- 1 - each #00, 0, 1, and 2 Cord
- 1 - Ultrapak organizer



#137 - Ultrapak Cord #000 Refill

- Substitute for black silk suture as lower cord in the "two-cord" technique
- Anterior teeth
- Double packing



#136 - Ultrapak Cord #00 Refill

#197 - Ultrapak Cord #00 Refill - Epinephrine

- Preparing and cementing veneers
- Restorative procedures dealing with thin, friable tissues

**ULTRAPAK E
NOT AVAILABLE IN
ALL COUNTRIES**

Ultrapak E Shelf Life: 24 months.



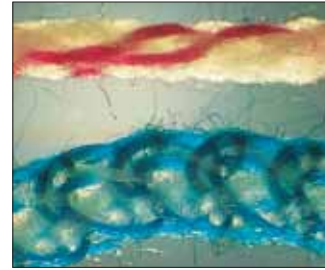
#131 - Ultrapak Cord #0 Refill

#198 - Ultrapak Cord #0 Refill - Epinephrine

- Lower anteriors
- When luting near gingival and subgingival veneers
- Class III, IV, and V restorations
- Second cord for "two-cord" technique

**ULTRAPAK E
NOT AVAILABLE IN
ALL COUNTRIES**

Ultrapak E Shelf Life: 24 months.



Microscopic compressible loops of Ultrapak knitted cord (lower) afford greater inter-thread space than braided cord (upper). Upon packing, loops compress and express hemostatic astringent to underlying tissues. As loops open, a gentle, continuous outward force is exerted. A knitted cord is like a chain; it bends and stays put when packed into place.

#132 - Ultrapak Cord #1 Refill

#199 - Ultrapak Cord #1 Refill - Epinephrine

- Non-impregnated #1 and #2 sizes are particularly effective for tissue control and/or displacement when soaked in coagulative hemostatic solution prior to and/or after crown preparations
- Use as a protective "pre-preparation" cord on anteriors

**ULTRAPAK E
NOT AVAILABLE IN
ALL COUNTRIES**

Ultrapak E Shelf Life: 24 months.



- Upper cord for "two-cord" technique
- Use as a protective "pre-preparation" cord on anteriors

#133 - Ultrapak Cord #2 Refill

#200 - Ultrapak Cord #2 Refill - Epinephrine

**ULTRAPAK E
NOT AVAILABLE IN
ALL COUNTRIES**

Ultrapak E Shelf Life: 24 months.



#134 - Ultrapak Cord #3 Refill

- Areas that have fairly thick gingival tissues where a significant amount of force is required
- Upper cord for use with the "two-cord" technique



Listed as a "CAN'T LIVE WITHOUT" product by a prominent independent research institute.¹

Note: Do not use Ultrapak E or other epinephrine preparations with ferric sulfate solutions, including ViscoStat and Astringent (X), as blue/black precipitate will occur.

¹ "Can't Live Without" Clinical Research Associates Newsletter, Volume 21, Issue 7, July, 1997.

Fischer's Ultrapak Packers

THIN SERRATED PACKING INSTRUMENTS

#170 and #171 (45° to handle)



#172 and #174 (90° and parallel to handle)

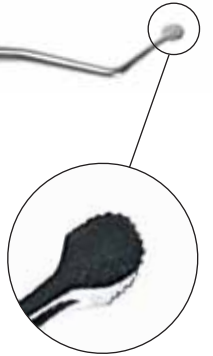


These specially designed packers ease the packing of Ultrapak knitted cord. Their thin edges and fine serrations sink into the cord, preventing it from slipping off and reducing the risk of cutting the gingival attachment.

45° TO HANDLE: Our most popular packers, with heads at 45° to the handle and three packing sides. Circular packing of the prep can be completed without the need to flip the instrument end to end. Use the small packer on lower anteriors and upper lateral incisors.

90° AND PARALLEL TO HANDLE: Same size and three-sided heads as the 45° to handle packer, except one of the heads is in line with the shank and the other is at a right angle to the shank.

"Ultrapak Packers help place the cords properly in a quick and efficient manner. Thanks to the inventors!"
DR. JOHN LUI – BELLEVUE, WA



- #171 - Small Packer - 45° to handle
- #170 - Regular Packer - 45° to handle
- #174 - Small Packer - 90° to handle
- #172 - Regular Packer - 90° to handle



Ultradent® Slide Packers

THIN, CIRCULAR, NON-SERRATED PACKING INSTRUMENTS



Uses

These thin, non-serrated slide packers are designed to place and compress cord with a sliding action as the clinician circles the prep. The thin head sinks into the cord and the smooth, circular head allows placement of cord in a sliding motion around the preparation, without lifting the instrument from the cord. The 45° angle minimizes the need to flip the instrument end to end.

- #834 - Small Slide Packer
- #833 - Regular Slide Packer



Tissue Management for Impression Making

An "astringent" is a substance that eliminates permeability of epithelium to tissue fluid flow. The result is a dry field, an important tissue management solution for 21st century adhesive technology.



1. Subgingival preparation with bleeding.



2. ViscoStat is burnished firmly against the sulcus with Metal Dento-Infusor tip.



3. Firm air/water spray removes residual coagulum and tests tissue for quality, profound hemostasis.



4. Ultrapak knitted cord is soaked in ViscoStat, packed, and left for one to three minutes.



5. Cord is removed, followed by a firm air/water spray, and drying.



6. Predictable quality impressions are the result.

Tissue Management for Direct Bonding



1. Several Class V restorations were performed on these anterior teeth two months prior. Inadequate tissue management or inadequate removal of hemostatic and/or blood contaminants resulted in microleakage on the maxillary right central incisor.



2. With microleakage, blood pigments move into the space between preparation and restoration and stain the interface.



1. Deep Class V's—ViscoStat and Ultrapak cord are ideal for controlling fluids (blood and sulcular). Use a firm air/water spray to remove excess hemostatic solution.



2. Successful bonded restoration, two weeks post-op.



3. Isolate tissues with Ultrapak cord soaked in hemostatic solution. Firmly air/water spray/rinse excess hemostatic from the cord, tissues, and tooth surfaces to prevent contamination and resultant leakage.



4. Replaced Class V restoration three months post-op.

INDIRECT VENEER



1. Packing Ultrapak quickly displaces tissues and improves access for indirect veneer luting. (Note tissue management for bonded luting on next page.)

Tissue Management for Indirect Bonding (Luting)

Note: Perfect sulcular fluid control is mandatory if bonding and luting is adjacent to gingival sulcus.¹



1. Well-healed tissue two weeks post-op.



2. Sulcular fluids contaminate bonding materials/preparation when not controlled.



3. Seal epithelium by gently rubbing with ViscoStat and Blue Mini Dento-Infusor tip.



4. Hemostatic agent and residual temporary cement are scoured off with Consepsis Scrub, preparing the site for application of any dentin bonding agent, including self-etching systems.



5. Wash, dry, and tissue stays dry.



6. Preparation ready for final cementation.

¹ Bailey JH, Fischer DE. Procedural hemostasis and sulcular fluid control: a prerequisite in modern dentistry. *Prac periodontics aesthet Dent* 1995 May; 7 (4): 65-75. (Lit. #3)

Expanded Application for Vital Pulpotomy



1. Control Bleeding. Use Dento-Infusor tip with ViscoStat or Astringedent.^{1,2,3,4}



2. Apply a Sustained Antimicrobial.* Apply a thin layer of ZOE mixed to a putty.



3. Create a Eugenol Barrier.* Apply a thin layer of Ultra-Blend plus, because eugenol inhibits most resin polymerization.



4. Etch. Apply Ultra-Etch phosphoric acid or Peak SE.



5. Bond. Apply PQ1 dentin bonding agent or Peak LC Bond Resin.



6. Restore. Use flowable and/or paste composite as desired.

Remove all hemostatic and extraneous coagulum prior to placement of the thin layer of ZOE.

¹ Fei AI, Udin RD, Johnson R. A clinical study of ferric sulfate as a pulpotomy agent in primary teeth. *Pediatr Dent* 1991 Nov-Dec;13(6):327-332 (Lit. # 39) ² Fuks AB, Holan G, Davis JM, Eidelman E. Ferric sulfate versus dilute formocresol in pulpotomized primary molars: long-term follow-up. *Pediatr Dent* 1997 Jul;19(5):397-330. (Lit. #40) ³ Landau MJ, Johnsen DC. Pulpal responses to ferric sulfate in monkeys. (Abstract 822) 1988 *J Dent Res* 67:215 (Lit. # 44) ⁴ Fuks AB, Eidelman E, Cleaton-Jones P. Pulp response to ferric sulfate, diluted formocresol and IRM in pulpotomized primary baboon teeth. *ASDC J Dent Child* 1997 Jul-Aug;64(4):254-9 (Lit. # 56) U.S. Patent Nos: 5,269,684; 5,635,162; 5,785,955 and 7,198,623. Int'l Patents Granted and Pending.