



TISSUE MANAGEMENT



PROFOUND HEMOSTASIS AND FLUID CONTROL

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

ULTRADENT
PRODUCTS, INC.

PRODUCTS



VISCOSTAT® CLEAR

25% Aluminum Chloride

- For the esthetic zone, no staining
- Viscous—won't run, drip, or migrate to other teeth

Great for same-day placement of restoration



VISCOSTAT®

20% Ferric Sulfate

- Associated with routine use
- For rapid, profound hemostasis
- Viscous—won't run, drip, or migrate to other teeth

Excellent as an alternative to formocresol for vital pulpotomies



ASTRINGEDENT®

15.5% Ferric Sulfate

- Stops moderate bleeding in seconds
- Also eliminates sulcular fluid contamination for optimal bonding

The "Classic" hemostatic agent—Ultradent's first product.

Choose Astringedent X for difficult-to-stop bleeding.



ULTRAPAK® and ULTRAPAK® E

Knitted plain and epinephrine-impregnated cord

- Highly absorbent 100% cotton knitted cord for rapid retraction and displacement
- Will not tangle in burs or packers

Ultrapak's unique knitted design exerts gentle, continuous outward force, providing optimal tissue displacement.



DENTO-INFUSOR TIPS

For clean, dry preparations

- Essential to rapid, profound hemostasis and sulcular fluid control
- Padded brushes infuse hemostatic agents into bleeding capillaries and wipe coagulum away

Dento-Infusor tips offer direct precision and placement



FISCHER'S ULTRAPACK PACKERS

Thin Serrated Packing Instruments

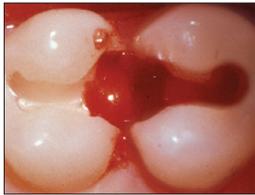
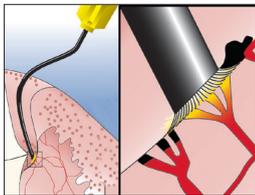
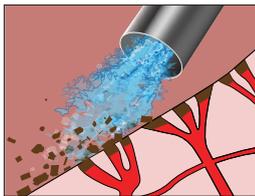
- Extra thin edges
- Serrated and non serrated
- Useful 45° angle
- Available in two sizes

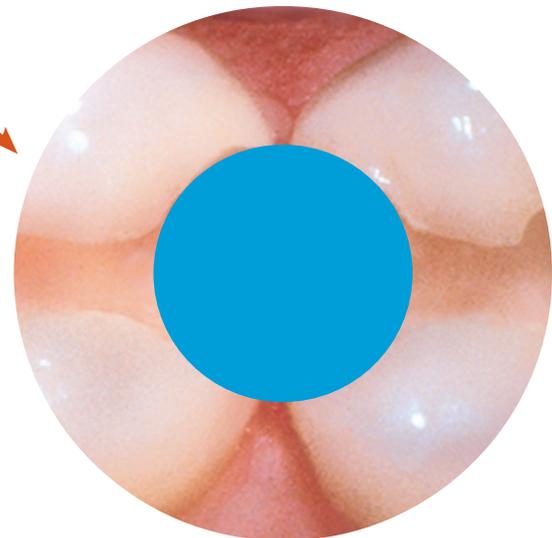


TECHNIQUE

1. Control the bleeding and sulcular fluid. Rubbing the sulcus promotes deep gel penetration. Ferric sulfate-based products ensure coagulation in seconds, so that the delicate sulcular capillaries are securely sealed by small coagulum plugs. The sulcus should be kept moist during the procedure. Finally, excess coagulum and gel are cleared away by a vigorous air/water spray. Correctly applied, this method produces sustained hemostasis without any bleeding caused by the air/water spray.

2. Retract the tissue. Ultrapak knitted cord provides excellent retraction and will maintain hemostasis and sulcular fluid control when soaked in hemostatic solution. Ultrapak's proprietary, knitted design easily packs into the sulcus, absorbs more fluid, and expands for adequate retraction better than any braided or twisted cord.

- 1  Bleeding subgingival tissues adjacent to preparation.
- 2  Using the MDI's padded brush end, burnish hemostatic agents firmly against sulcus until bleeding stops.
- 3  3. Apply firm air/water spray to remove residual coagulum and test tissue for quality, profound hemostasis. If bleeding continues, repeat step 2.
- 4  Soak Ultrapak knitted cord in hemostatic agent, pack, and leave in place for 1–3 minutes. This assists with tissue displacement.
- 5  Remove cord, apply a firm air/water spray, and dry. Preparation is ready for impression. Should bleeding resume, repeat step 2.



TEST YOUR BURNISHING SKILLS.
Are you using adequate pressure to achieve rapid, profound hemostasis?

Timeline:	0	1 minute	2 minutes	3 minutes	4 minutes	
Bleeding sulcus	Rub hemostatic agent firmly with Dento-Infusor tip	Clean sulcus with air/water spray	If necessary, repeat hemostatic application	Perform final cleaning/testing with firm air/water spray	Place soaked Ultrapak cord(s); leave 1 to 3 minutes	Remove Ultrapak cord(s); air/water spray; air dry

Clinical Applications

Impression Making



1. BLEEDING
Subgingival preparation with bleeding.



2. HEMOSTASIS
ViscoStat rubbed firmly against the sulcus with Metal Dento-Infusor tip.



3. CLEANING & TESTING
A firm air/water spray removes residual coagulum and tests tissue for quality, profound hemostasis.



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



5. MAKE IMPRESSION
Remove cord. Firm air/water spray and dry.



6. RESULTS
Predictable quality impressions.

Indirect Bonding



1. PROVISIONAL REMOVED
Notice well-healed tissue two weeks post-op.



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



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



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



5. WASH/DRY
Wash, dry. Tissue stays dry.



6. SEAT RESTORATION
Preparation ready for final cementation.

Anterior Restorations



1. BLEEDING
Subgingival preparation and bleeding sulcus.



2. HEMOSTASIS
Rub ViscoStat
Clear firmly against bleeding tissues.



3. DISPLACEMENT
Ultrapak Cord is pressed into gel in sulcus around tooth preparation. Leave 4-5 min.



4. CLEANING & TESTING
Remove cord. Firm air/water spray. Air dry. Rub gel into the sulcus again. Leave one minute.



5. MAKE IMPRESSION
Final rinse. Dry, and make impression. Repeat above steps, if needed.

Direct Bonding



1. **MICROLEAKAGE**
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. **STAINING**
With microleakage, blood pigments move into the space between preparation and restoration and stain the interface.



3. **ISOLATION**
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.

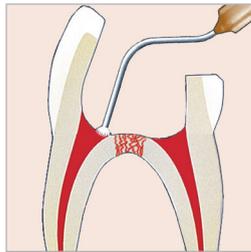


4. **RESTORATION**
Replaced Class V restoration three months post-op.

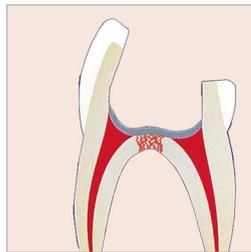
“The number one challenge for making quality impressions is to adequately control the bleeding and displace the tissues in order to be able to deliver the impression material to the sulcus, subgingivally, in a controlled, predictable way. This is imperative when performing adhesive dentistry.”

— Dr. Dan Fischer

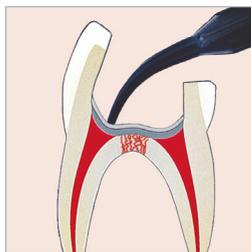
Expanded Application for Vital Pulpotomy for Primary Teeth



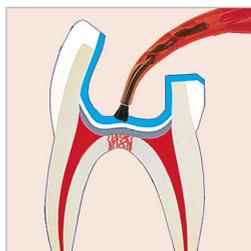
1. **HEMOSTASIS**
Control bleeding. Use Dento-Infusor tip with ViscoStat or Astringent. ^{1,2,3,4}



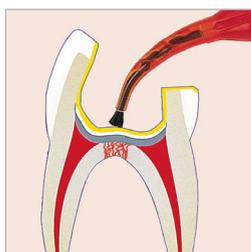
2. **ANTIMICROBIAL**
Apply a sustained antimicrobial.* Apply a thin layer of ZOE mixed to a putty.



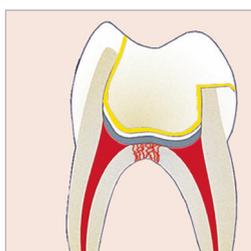
3. **EUGENOL BARRIER***
Apply a thin layer of Ultra-Blend plus, because eugenol inhibits most resin polymerization.



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



5. **BOND**
Apply Peak Universal Bond dentin bonding agent or Peak LC Bond Resin.



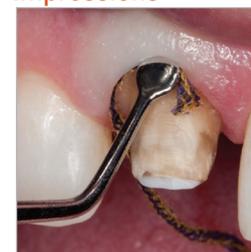
6. **RESTORE**
Use flowable and/or paste composite as desired.

Indirect Veneer



1. **RETRACTION Packing**
Ultrapak quickly displaces tissues and improves access for indirect veneer luting.

Complete Hemostasis for Digital Impressions



1. **HEMOSTASIS**
Complete hemostasis is essential, even while taking digital impressions, for the most accurate marginal fit of any restoration.



2. **CLEAR FIELD**
After hemostasis is achieved and tissue is retracted, preparation is ready for digital impression.

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)

*Apply ZOE and Ultra-Blend plus in minimal thickness to keep maximum dentin available for bonding.

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



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