

THE DENTAL ADVISORTM

"Improving Patient Care Through Research & Education"



Weddell Seal, Antarctica. Photography by John W. Farrah, DDS, Ph.D., Ann Arbor, Michigan

Alginates and Alginate Substitutes

Traditional alginate impression materials remain an economical mainstay for a variety of dental impression applications, including opposing arch casts, study models, preliminary complete denture impressions, interim partials, and partial denture frameworks.

This issue of THE DENTAL ADVISOR discusses the desirable features, advanced features, and compares 36 alginates and four alginate substitutes. Clinical tips for the clinician and dental assistant are also presented.

Vol. 24, No. 2
March

2007

**ALGINATES AND
ALGinate SUBSTITUTES** 2

EDITORS' EVALUATION

3M ESPE RelyX Fiber Post 14
(*Esthetic glass fiber post*)

CLINICAL EVALUATIONS

STAINBUSTER 8
(*Composite bur*)

SYNERGY D6 9
(*Universal composite*)

**Hygenic Framed
Non-Latex Flexi Dam** 10
(*Dental dam*)

GC Fuji Filling LC 10
(*Resin-modified glass ionomer*)

tempofill 2 12
(*Provisional inlay/onlay material*)

BisCem 13
(*Resin cement*)

SafeGauze 14
(*Sponges*)

EDITORS' CHOICE

3M ESPE RelyX Fiber Post 14
(*Esthetic glass fiber post*)

Cavitron Plus 16
(*Ultrasonic scaler*)

EDITORIAL

**Fluoride-releasing
Restorative Materials** 6

**THE DENTAL ADVISOR Education Center
Course Schedule** 12

Ratings

Excellent	+++++
Very Good	++++
Good	+++

Advanced Features

- Extended storage – allows a delay of up to 120 hours after initial setting of the impression for pouring the cast. Shipping of the unpoured impression to the dental laboratory without a reduction in accuracy is possible.
 - 48 hours – *Hydrogum Soft*
 - 72 hours – *TriPhasix, Xantalgin Crono*
 - 100 to 120 hours – *Alginmax, Hydrogum5, imprESSIX Color Change, Kromopan 100*
- Color indicators for end of mix and impression removal (*Alginmax, imprESSIX Color Change, Kromopan 100*).
- Antimicrobial components (quaternary ammonium compounds, chlorhexidine gluconate) – reduce bacterial load on the surface of the set impression (*COE Hydrophilic Gel, Jeltrate Plus*).
- Hypoallergenic alginates contain no flavoring and no pigments reducing the opportunity for an allergic reaction (*Identic Extra Fast Set Hypo-Allergenic*).

Tips for the Clinician

- Use alginate in a layer several times thicker than you would for an addition silicone or polyether impression.
- After insertion, stabilize the setting impression with only minimal static pressure – use a finger rest where possible.
- Remove alginate impressions with a quick motion to minimize distortion and maximize tear strength.
- Use disposable mixing bowls and autoclavable spatulas to eliminate the potential for cross-contamination.
- Avoid applying pressure or weight on the impression during pouring and setting of the gypsum model and during shipping of the impression.

Tips for the Dental Assistant

- Check the need to agitate the container to fluff the powder.
- Check for mixing, insertion, and setting times – under or over mixing will degrade mechanical properties.
- Select a stock tray to allow a thickness of 3 mm of alginate.
- Apply an adhesive to trays that have insufficient mechanical retention.
- If hand mixing, use a wide spatula and flexible bowl to allow a stropping mixing stroke, minimizing clumps and bubbles.
- Use cooler water (15° to 24° C) to extend the mixing time and retard setting.
- Disinfect the impression by immersion in a disinfecting solution for a short period (10 to 20 minutes).
- Allow alginate impressions to rebound for at least 10 minutes before pouring a gypsum model.
- If unable to pour quickly, store an alginate in 100% relative humidity or cover with damp paper toweling to minimize deformation caused by desiccation and syneresis.
- Avoid overly wet laboratory counters or towels to minimize deformation of alginates caused by absorption.
- Avoid deformation of set impressions from pressure on alginate flanges from improper handling (stacking multiple impressions in a container) or unseen separation of the impression from the underlying tray.
- Separate impressions from their set gypsum casts within hours to prevent etching of the cast by exudates leaching from the alginate gel.
- Use solvents marketed for removal of trace alginate and adhesive when cleaning a reusable tray.

Table 1 – Typical Properties of Alginates and Alginate Substitutes

	Flexibility, %	Elastic Recovery, %	Tear Energy, J/m²	Dimensional Change (120h), %
Alginates	13	97.1	170	-1.44
Alginate Substitutes	7	99.1	880	-.004

Alginate Trays

- Alginate-compatible dual-arch trays (*ALFA Triple Tray/ Premier Dental*) are available.

Automatic Alginate Mixing

- An automatic mixing system (*Alghamix/Zhermack; Alginator II/DUX Dental; TurboMax Alginate Auto Mixer/DENTSPLY Raintree Essix; VPM2/Whip Mix*) decreases the learning curve to obtain a uniform mix for staff, results in repeatable homogeneous mixes with fewer voids, yields impressions with consistent mechanical properties, and reduces spillage and waste.



TurboMax Alginate Auto Mixer (DENTSPLY Raintree Essix)

Alginate substitutes are packaged for automatic mixing, which is much cleaner and easier than the powder/water mixing of alginates. Mixing devices include auto-mix guns and motorized systems (*Kerr Volume Mixer/SDS/Kerr; MixStar/Zenith Dental/DMG; Pentamix 2/3M ESPE*). The mixing systems used with alginate substitutes are also more conducive to infection control procedures than the mixing equipment used with alginates.

Recommended Uses

- Preoperative provisional impressions.
- Impressions for diagnostic casts.
- Impressions for night guards and whitening trays.
- Duplicate impressions of existing diagnostic casts.
- Bite registrations or opposing arch impressions.

Advantages

- Delivery from dual-syringe or power mixer available.
- Dimensional stability vastly improved over alginate, allowing storage of impression for months.
- Ability to pour impressions multiple times.

continued on page 6

Extended Storage Alginates

Product	Company	Working Time*	Setting Time*	Color	Dust	Extended Storage	Elastic Recovery	Flexibility	Tear Energy	Dimensional Change	Refill Cost	Rating
Alginmax	Major USA	0:40	1:25	Mix: violet; Work: rose; Set: light-blue	Very low dust	120 hours	Low-medium	High	Low-medium	Very high**	\$10.50/450 g	na
Hydrogum5	Zhermack	1:05	1:50	One color: lilac	Dustless	120 hours	Medium	Medium-high	Low	Very low**	\$10.50/453 g	92%
imprESSIX Color Change	DENTSPLY Raintree Essix	1:00	2:30	Mix: violet; Work: dark pink; Set: white	Low dust	120 hours	NA	NA	NA	NA	\$14.95/500 g	na
Kromopan 100	Kromopan USA	1:15	1:45	Mix: purple; Work: pink; Set: white	Very low dust	100 hours	Medium-high	Very high	Low	Medium***	\$13.95/454 g	95%

EDITORS' NOTES: Only products evaluated by THE DENTAL ADVISOR will have a rating listed. Some table information provided by manufacturers. Costs are listed for comparison only and are not used to calculate the ratings.

*From start of mix.
**Measured at 120 hours.
***Measured at 100 hours.

Featured Products



Hydrogum5 (Zhermack)

Disadvantages

- Viscosity (consistency) different from traditional alginates.
- Flexibility on removal from undercuts is less than typical alginates.
- Cost per volume is substantially greater than traditional alginate.
- Higher tear energy – they do not tear as easily as they are removed from thin sulcular areas of the mouth.
- Higher elastic recovery – they recover more upon removal from the mouth, rather than undergoing viscoelastic deformation.
- Improved dimensional stability – pouring can be delayed and multiple pours are possible.
- No concerns about disinfection techniques. ■

Alginate substitutes have improved properties that can result in impressions that are more accurate than alginate impressions. *Table 1* (page 5) summarizes typical properties of alginates and alginate substitutes. When compared to traditional alginates, the alginate substitutes have:

Featured Products



Alginate Substitutes

Product	Company	Working Time*	Setting Time*	Color	Dispensing	Elastic Recovery	Flexibility	Tear Energy	Dimensional Change	Refill Cost	Rating
3M ESPE Position Penta Quick	3M ESPE	1:10	2:40	Light-blue	Mixing machine	Very high	Medium	Very high	Very low	MM = \$41.50/ea	94%
AlgiNot	SDS/Kerr	1:15	2:45	Beige	Cartridge, Mixing machine	High	Medium	Medium-high	Low	C = \$8.00/ea; MM = \$32.00/ea	na
Silgimix	Sultan Healthcare	1:15	2:10	Light-blue	Cartridge, Mixing machine	High	Medium	Medium-high	Very low	C = \$6.00/ea; MM = \$3.00/ea	92%
StatusBlue	Zenith Dental/DMG	1:15	3:00	Light-blue	Cartridge, Mixing machine	Very high	Medium	Medium-high	Low	C = \$14.50/ea; MM = \$88.00/ea	86% C 98% MM

*From start of mix.
C = cartridge, MM = mixing machine
na = not available
EDITORS' NOTES: Only products evaluated by THE DENTAL ADVISOR will have a rating listed. Some table information provided by manufacturers. Costs are listed for comparison only and are not used to calculate the ratings.

Fluoride-releasing Restorative Materials

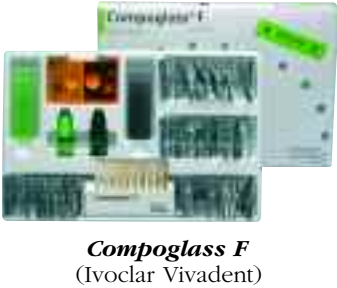
Q Are there differences in fluoride release among the various fluoride-releasing restorative materials?

A Over the past 30+ years, different restorative materials containing fluoride have been developed, including glass ionomers, hybrid ionomers (resin-modified glass ionomers), compomers, and fluoride-containing resin composites. These materials have unique properties.

- Traditional glass ionomers**
- Highest fluoride release and recharge
 - Low-strength chemical bond to dentin and enamel
 - Low flexural strength
 - Poor final esthetics
- Hybrid ionomers (resin-modified glass ionomers)**
- High fluoride release and recharge
 - Medium-strength chemical bond to dentin and enamel
 - Moderate flexural strength
 - Low postoperative sensitivity
 - Good final esthetics

- Compomers**
- Fluoride release and no recharge
 - Bond to dentin and enamel requires bonding agent
 - Moderate flexural strength
- Fluoride-containing resin composites**
- Limited fluoride release and no recharge
 - Bond to dentin and enamel requires bonding agent
 - Highest flexural strength
 - Best final esthetics ■

Product	Company	Type	Rating
3M ESPE F2000 Compomer Restorative	3M ESPE	Compomer	94%
3M ESPE Ketac-Molar Aplicap Glass Ionomer Restorative	3M ESPE	Glass ionomer	88%
3M ESPE Photac-Fil Quick Aplicap Reinforced Glass Ionomer Restorative	3M ESPE	Hybrid ionomer	94%
3M ESPE Vitremer Glass Ionomer Core Build-up/Restorative	3M ESPE	Hybrid ionomer	93%
Compoglass F	Ivoclar Vivadent	Compomer	95%
Dyract Flow	DENTSPLY Caulk	Compomer	92%
freedom	SDI	Compomer	86%
GC Fuji Filling LC	GC America	Hybrid ionomer	83%
GC Fuji II LC	GC America	Hybrid ionomer	90%
GC Fuji IX GP	GC America	Glass ionomer	85%
GC Fuji IX GP Fast	GC America	Glass ionomer	92%
Geristore Syringeable	Den-Mat	Compomer	94%
Twinky Star	VOCO	Compomer	93%



STAINBUSTER® + + + ½

abrasive technology
800.964.8324 • 740.548.4100
www.abrasive-tech.com

Description

STAINBUSTER is a new and unique composite bur designed to remove cements, stains, and colored coatings gently from the surface of the enamel. According to the manufacturer, the bur does not abrade tooth enamel or ceramic and only lightly grinds cement, dentin, and composite. **STAINBUSTER** is comprised of resin composite reinforced by zircon-rich fiberglass. The fiber sections cover the entire working surface of the bur and split into small fragments when they act on a hard surface. As the resin matrix is used up, new sections of fibers are exposed, resulting in self-sharpening and continuous abrasion. **STAINBUSTER** is available in eight shapes/sizes. Consultants evaluated the blister package of six assorted shapes:

- 2501 – Pointed taper, 25 mm
- 2502 – Football, 25 mm
- 2504 – Beveled cylinder, 25 mm
- 4002 – Flame-large head, 25 mm
- 2505 – Long football, 28 mm
- 2506 – Football, 28 mm

The latch-type burs are used at chairside with a contra-angle handpiece at 5,000-10,000 rpm with slight pressure and with or without water spray. The burs can be sterilized at 135°C. Twenty-seven consultants evaluated **STAINBUSTER** in 226 procedures. The product received an 84% clinical rating.

Suggested Retail Cost
• \$44.95/six assorted burs



Consultants' Comments

- ▶ *"It does not damage enamel or ceramic."*
- ▶ *"It does not heat the tooth."*
- ▶ *"Great for removing excess orthodontic resin cement."*
- ▶ *"Takes too long to do the job."*

Product Features

The six shapes of **STAINBUSTER** evaluated were useful for a variety of general, periodontal, and orthodontic procedures. Thin layers of excess composite and orthodontic cement can be removed slowly without marring the underlying enamel. The long shanks and continuous solid core of abrasive enhance access to various tooth surfaces. Only the pointed tapered bur is thin enough to use subgingivally. **STAINBUSTER** was reported by hygienists to be effective in removal of extrinsic stains. Removal of stains at the margins of composite restorations was reported with varying degrees of success, depending on the depth of the stain. Thirty-seven percent of consultants reported **STAINBUSTER** to be equal to or better than the product they are currently using. Fifteen percent would switch to **STAINBUSTER** and 50% would recommend it to a colleague.

Clinical Tips

- Use **STAINBUSTER** at low speed with light pressure. High speed and strong pressure are less effective and lead to faster wear of the bur.
- Water spray enhances visibility and control.
- For bulk composite removal, begin with a diamond bur and finish with **STAINBUSTER**. ■

Correction

In the January/February 2007 issue of THE DENTAL ADVISOR, the incorrect photo was used for the product **Smartlite iQ**, (DENTSPLY Caulk) shown on pages 9 and 45. The correct photo is displayed to the right.



Correction

The company listed for the product **GC Fuji LINING LC PASTE PAK** was incorrectly labeled in the January/February 2007 issue of THE DENTAL ADVISOR. The manufacturer of this product is GC America.



SYNERGY D6 + + + + ½

2007
Preferred Product

Coltène/Whaledent, Inc.
800.221.3046 • 330.916.8800
www.coltenewhaledent.com

Description

SYNERGY D6 is a sculptable, radiopaque, highly-filled nano-hybrid composite for restoration of anterior and posterior teeth. The average filler particle size is 0.6 µm with a range of particle sizes from 0.02 to 2.5 µm. The filler content is 80% by weight and 65% by volume. The concept of the six dentin duo shades (**D6** designation) is to simplify shade selection. They are created by combining Vita shades with similar color (hue), intensity (chroma) and lightness/ darkness (value). The composite system consists of six dentin duo shades: White Bleach, A1/B1, A2/B2, A3/D3, A3.5/B3, C2/C3, and two enamel shades – Universal and White Opalescent. The composite can be cured with halogen or LED light-curing units. **SYNERGY D6** is packaged in kits containing eight, 4-g syringes or 80, 0.25-g unit-dose tips, *One Coat Self-Etching Bond*, and accessories. **SYNERGY D6** is recommended for use with *One Coat Self-Etching Bond* but is compatible with other comparable adhesives. Twenty-five consultants evaluated **SYNERGY D6** in over 500 clinical applications. This product received a 91% clinical rating.



Consultants' Comments

- ▶ *"SYNERGY D6 worked beautifully in all applications."*
- ▶ *"Beautiful restorations at six months."*
- ▶ *"Minimal instrumentation or finishing is needed to obtain consistently excellent finishes."*
- ▶ *"Placement is easier from the unit-dose tips than from the syringes."*
- ▶ *"There was slight stickiness to instruments during manipulation."*
- ▶ *"The syringe material seemed a little stiff."*

Suggested Retail Cost
• \$328.06/kit

Product Features

SYNERGY D6 is available in syringes and unit-dose tips; however, the overwhelming preference of the consultants is for the unit-dose tips. The material has a workable viscosity for easy placement and shaping with no slumping. It is not sensitive to ambient light, allowing more working time. The duo shades reduce the number of different shades required and simplify shade selection for the restoration. For example, a dentin duo shade of A3/D3 blends with teeth whose shade falls within the color spectrum of A3 and D3. There is no noticeable shade shift after curing, and the cured composite blends well with the tooth. The translucency of the enamel shades contributes to the life-like esthetics of the final polish. A tighter lid or individual containers to prevent spilling unit-dose capsules would improve the packaging. Sixty percent of the consultants rated **SYNERGY D6** equal to or better their current product, while 68% would recommend it to a colleague. ■

SENIOR CLINICAL
CONSULTANTS

E. Alpert, CT
R. Anthony, OH
K. Baker, TX
R. Ciccone, MI
P. Esmond, NY
M. Evans, TN
R. Fisher, OH
G. Franco, NY
P. Grandsire, NY
K. Hamlett, TX
G. Hart, OH
R. Kaprielian, NJ
E. Katkow, MD
L. Katkow, MD
C. Kehr, MI
E. Maitland, NJ
E. Mosso, PA
G. Mosso, PA
D. Peterson, MD
V. Plaisted, NY
W. Powell, TX
G. Poy, MI
G. Sayre, TX
K. Schwartz, FL
B. Shumaker, NJ
B. Sims, NY
A.M. Thompson, NY
R. Trushkowsky, NY
L. Wee, MI

CLINICAL CONSULTANTS

A. Abate, MI
M. Aksu, MI
A. Albright, NY
A. Alexander, PA
J. Allen, MI
J. Amara, CT
S. Anderson, MI
R.M. Arnett, MI
R. Averbach, CO
M. Bannan, MI
D. Barnes, MD
F. Berman, PA
M. Beyramian, MI
L. Bishop, MI
J. Bostic, OH
D. Bowen, MI
R. Bozell, MI
M. Braverman, NY
L. Brimhall, MT
M. Briskin, NY
C. Brown, LA
L. Brown, MI
W. Brownscombe, MI
H. Buckwald, NJ
J. Bush, PA
H. Cadorette, MI
Z. Campbell, MI
P. Campo, NY
M. Chaben, MI
D. Chacko, TN
S. Cheff, TX
R. Cherry, FL
P. Chiaravalli, MI
T. Chuang, NJ
A. Colarusso, NY

Hygenic® Framed Non-Latex Flexi Dam® + + + + ½

Coltène/Whaledent
800.221.3046 • 330.916.8800
www.coltenewhaledent.com

Description

Hygenic Framed Non-Latex Flexi Dam is a pre-framed dental dam for use with any rubber dam clamp. Produced with a non-latex, odorless material, this dam is designed for maximum patient comfort and for patients with sensitivity to latex and is indicated for endodontic and

operative procedures. The dam is an opaque purple material that is lightly textured. A flat, flexible plastic frame is bonded to the perimeter of the dam. The package contains 20 framed 100-mm X 105-mm dams and a template to aid in hole placement. Twenty-six consultants evaluated **Framed Flexi Dam** in over 330 clinical cases. This product received a 91% clinical rating.

Suggested Retail Cost
• \$46.64/20 dams

Consultants' Comments

- ▶ *“Love the integrated frame!”*
- ▶ *“Easy to bend out of the way when taking a radiograph.”*
- ▶ *“Very easy to place – stretches without tearing.”*
- ▶ *“A smaller frame would be nice in some situations, especially with children.”*
- ▶ *“Not as much soft tissue retraction as with a rigid frame, especially in the 2nd molar area.”*



Patients' Comments

- ▶ *“More comfortable than a dam with a metal frame.”*
- ▶ *“No odor or bad taste compared to other (latex) dams.”*

Product Features

Framed Flexi Dam is easy to place because the frame holds the dam material taught. Patients commented that the flexible plastic frame material was more comfortable than a hard plastic or metal frame. Consultants reported that because of the flexibility of the framed dam, they were less concerned about abrasion of a patient's skin or trauma to their eyes than with a rigid frame. This flexibility is extremely valuable during endodontic procedures as it allows placement of an x-ray film or sensor without removal of the frame or dam. In quadrant cases, the flexible frame material offers less lip and cheek retraction compared to a traditional frame. There were some requests that the dam come in more than one size, as it was difficult to trim it without destroying the built-in frame. Some consultants also requested a translucent dam for use during endodontic procedures. Eighty-four percent of the consultants rated **Framed Flexi Dam** equivalent to or better

than the dam material they were currently using. Eighty-one percent would switch to **Framed Flexi Dam** and recommend it to a colleague.

Clinical Tips

- Apply a water-soluble lubricant to the inside of the dam to help it slip on easier.
- Standard hole punches may not reach past the integrated frame. Use an elongated hole punch available from the manufacturer.
- It is recommended that when punching the hole, use one size smaller than you would with latex dental dam. ■

GC Fuji Filling LC + + + ½

GC America Inc.
800.323.7063 • 708.597.0900
www.gcamerica.com

Description

GC Fuji Filling LC is a resin-modified glass ionomer restorative material indicated for Class III and V restorations, restoration of primary teeth, and as a base under posterior composite restorations. The material releases fluoride, is radiopaque, and light cures in 20 seconds. **GC Fuji Filling LC** is dispensed from the **GC Paste Pak Dispenser**, which provides equal dispensing of the catalyst and the base pastes. **GC No Rinse Self Conditioner** is specifically designed for use with this material. The conditioner is applied to the tooth then air-dried. **GC Fuji Filling LC** has a mixing time of 10 seconds, working time of 3.5 minutes, and light cures in 20 seconds for 2-mm layers. It is available in shades A1, A2, A3, A3.5, CV, and Blue. The starter pack contains one **GC Fuji Filling LC** cartridge (8 g), one a **Paste Pak Dispenser**, 3.2-ml bottle of **Self Conditioner** and one a spatula. Twenty-seven consultants evaluated **GC Fuji Filling LC** in over 300 clinical cases. This product received an 83% clinical rating.

Suggested Retail Cost
• \$174.00/starter pack
• \$99.25/refill kit

Product Features

GC Fuji Filling LC is appropriate for use in a moist environment or when fluoride release is desired. When used with the **Self Conditioner**, the material bonds to dentin, even in unprepared abrasion or abfraction lesions. The **Paste Pak Dispenser** allows for easy mixing and dispensing of **GC Fuji Filling LC** onto a mixing pad, and the pastes are easy to mix. **GC Fuji Filling LC** is similar to other resin-modified glass ionomers in that it can be sticky and can pull away from the tooth when placed with an instrument. If loaded into a CR syringe, the high-viscosity material is easier to place into deep cavity preparations. Consultants suggested that intra-oral tips be included in the package to aid in placement. The overall esthetic appearance of restorations is similar to other resin-modified glass ionomers but with slightly greater translucency. Fifty-five percent of the consultants rated **GC Fuji Filling LC** equivalent to or better than the material they were currently using, while 33% would recommend it, and 30% would switch to **GC Fuji Filling LC**.

Clinical Tips

- After mixing, load material into a CR syringe tip for placement into the preparation.
- Following endodontic treatment, use the blue-colored material to seal over gutta percha in the base of the pulp chamber. The color makes the material easy to see and remove, if necessary.
- When restoring unprepared cervical lesions, first use pumice to clean the tooth surface.
- The manufacturer does not recommend the use of any cavity or dentin conditioners other than **GC No Rinse Self Conditioner**. ■

Consultants' Comments

- ▶ *“The dispenser ensures the two parts are dispensed evenly.”*
- ▶ *“Because of the fluoride release, this is a good material for patients with high caries risk or salivary issues.”*
- ▶ *“The ability to use it in a moist environment makes it ideal for pediatric restorations.”*
- ▶ *“More translucent than other glass ionomer materials.”*
- ▶ *“I would like to see this material supplied in a syringe with auto-mix tips.”*

CLINICAL CONSULTANTS

- M. Conrad, PA
- M. Cooks, MI
- L. Covato, PA
- K. Dancy, GA
- M. Danner, IL
- S. Dillingham, NY
- J. Dingman, WI
- J. DiPonziano, NJ
- R. Donelli, NY
- R. Dost, VA
- J. Doueck, NY
- M. Dwoskin, MI
- M. Eannaccone, NY
- B. Eggart, AR
- R. Engle, IL
- K. Fairbanks, MI
- T. Faiver, MI
- R. Fay, TX
- N. Fehmi, MI
- M. Feinberg, NY
- L. Feldman, NJ
- J. Fine, NJ
- K. Fischer, IN
- S. Galster, ND
- D. Garber, CA
- R. Gardner, MI
- N. Garlisi, OH
- L. Gee, OK
- A. Giovanardi, MI
- B. Goldsmith, NY
- I. Goldstein, NJ
- K. Goodman, MI
- S. Graber, IL
- A. Gray, MI
- W. Gregory, MI
- D. Griggs, OH
- P. Gronet, GA
- J. Grover, MI
- B. Gursky, MI
- E. Gutman, NY
- D. Haas, Canada
- H. Hamerink, MI
- S. Harden, GA
- A. Herrero, MI
- B. Herrmann, CA
- R. Herwig, KS
- M. Hewko, OH
- J. Heys, MI
- S. Hoekman, MI
- S. Hondrum, GA
- J. Hoste, MI
- M. Hovel, WI
- S. Hutt, NJ
- P. Indianer, MI
- G. Isaacson, NJ
- S. Isaacson, NJ
- J. Jacobs, NY
- J. Jaghab, MI
- I.F. Jarjoura, MI
- N. Johnson, MN
- T. Jowett, KS
- D. Juliani, MI
- C. Kamin, OH
- J. Kaminski, MI
- T. Kaminsky, PA
- D. Kaplan, NY
- M. Kastner, OH

EDUCATION CENTER

For more information or to register, please contact the Education Manager, Cara Voss at 734.665.2020, ext. 102, email cara@dentaladvisor.com, or visit www.dentaladvisor.com.

Joel Harris, CEO of Intellectual Dental Marketing My Practice, My Business: Advanced Case Presentation Tactics & Marketing Effectively

Fri., Mar. 30, 2007, 8:30 a.m. – 12:00 p.m. (light breakfast provided)

Mastering the art of selling and correct case presentation is one of the most important skills every dentist needs. With this powerful seminar you will be able to standardize your teams case presentations with six easy steps, improve communication to better educate your patients, maximize internal and external marketing investments, and maximize profit and insurance reimbursements with premium crown and bridge products. (3 CE Credits)

Course Fee: \$49 (invite one staff member at no extra charge!)

Sponsored by: DTI Ward Dental

Call Easy to register: 810.632.6688 or 800.833.3865

John M. Powers, PhD

Master's Series

Dental Materials for the 21st Century: Resin Cements

Wed., April 11, 2007, 6 p.m. – 8 p.m. (light dinner provided)

New resin cements will be reviewed with an emphasis on self-adhesive resin cements. Properties that affect clinical performance will be discussed. (1 CE Credit)

Course Fee: \$50

Sponsored by: DENTSPLY Caulk, Kerr, and Nellmar Laboratory

Rade D. Paravina, DDS, MS, PhD

MASTERING COLOR MATCHING:

A Novel Approach to Advanced Esthetics

Fri., Apr. 27, 2007, 8:30 a.m. – 5:00 p.m. (breakfast and lunch provided)

Sat., Apr. 28, 2007, 8:30 a.m. – 5:00 p.m. (breakfast and lunch provided)

This course will emphasize principles and fundamentals essential to a successful master plan for color matching in both office and dental lab. Step-by-step instruction will be provided. Tips and strategies for accurate and clear color communication will be presented. You will learn how to avoid the most common problems associated with the reproduction of color and appearance. Examples and practical suggestions will be provided, including the latest advances in an innovative color communication approach. The material is appropriate for both dentists and dental technicians. Beginners will benefit from learning how to get a good start in esthetic dentistry; more experienced participants will benefit from the opportunity to reconsider and adjust their approach and strategies in color matching, communication, and reproduction. (7 CE Credits)

Course Fee: FREE (20 person capacity per class)

Sponsored by: VITA Zahnfabrik

To register call 800.828.3839 x226 or go online at www.vident.com

Darren Marsh, DDS

Master's Series

Endodontic Systems for the General Dentist

Wed., May 9, 2007, 6 p.m. – 8 p.m. (light dinner provided)

Rotary instrumentation techniques and carrier based obturation systems will be reviewed with an emphasis on the properties that affect clinical performance. (1 CE Credit)

Course Fee: \$50



BisCem + + + +

Bisco, Inc.

800.247.3368 • 847.534.6000

www.bisco.com

Description

BisCem is a dual-cured resin cement for luting crowns, bridges, inlays, onlays, and posts. The cement is self-etching and self-adhesive – no tooth surface preparation is required. **BisCem** may be dispensed directly into the restoration or the tooth preparation. At room temperature, the minimal working time is one minute, including mixing. The maximum setting time is six minutes, although a brief “tack” curing (2-3 seconds) of restoration margins will allow early cleanup and expedite the final set. This fluoride-releasing, radiopaque cement is available in both translucent and opaque shades.

BisCem is packaged in an 8-g dual-barrel syringe with 15 mixing tips. Twenty-eight consultants used **BisCem** in cementing over 450 restorations. This product received a 90% clinical rating.

Suggested Retail Cost

- \$65.00/kit

Product Features

Consultants found the mixing and dispensing of **BisCem** uncomplicated. Syringes and mixing tips are well made, fit together readily, and allow customized quantities of cement. The mixing tips are



Consultants' Comments

- ▶ “This cement is quick and easy – no preparatory steps.”
- ▶ “I’d like to have a greater variety of shades.”
- ▶ “Cement sets very hard.”

not flexible enough to gain access to all intraoral locations; thus, dispensing directly into a restoration or onto a pad is the method of choice. The uniformity of the mix is excellent and the viscosity allows passive seating of the restoration. The opaque shade is very dense and the translucent shade very clear. **BisCem** is odorless. After initial light cure of restoration margins, immediate cleanup of excess cement is necessary. If allowed to fully cure, excess cement is very difficult to remove. Some consultants found the setting time was too slow. Consultants reported no postoperative sensitivity or problems with retention during the evaluation period. Fifty-six percent of evaluators would switch to **BisCem** and 87% would recommend it to colleagues.

Clinical Tips

- Have the assistant hold the restoration in place and cleanup immediately.
- Floss before the cement sets.
- After the initial cleanup, light cure the margins well to enhance the self-cured feature. ■

tempofill® 2 + + + +

DETAX GmbH & Co. KG

+49.0.7243.510.0

www.detax.de

Description

tempofill 2 is a light-cured, filled methacrylic resin for the fabrication of provisional inlays and onlays. It is also indicated for sealing implant screws and endodontic access openings. It is designed for direct placement without cement. The viscous material has the handling characteristics of a composite yet remains elastic after curing, which allows easy removal in one piece. Place material, contour, light cure with a halogen lamp for 20 to 40 seconds (depending on layer thickness and light source), finish, and polish. The **Introkitt** contains two, 3-g syringes



Consultants' Comments

- ▶ “I like that it is light-cured and doesn't require cementation.”
- ▶ “A great material for temporarily closing endodontic accesses.”
- ▶ “I would prefer a unit-dose form.”
- ▶ “A quicker curing time would be nice.”

each of **tempofill 2 inlay** and **tempofill 2 onlay** in a light opaque shade; one, 7-ml bottle of **smartprotect** desensitizer; 20 **smartbrushes**; and a flowchart. Twenty-two consultants evaluated **tempofill 2** in approximately 250 clinical cases. This product received an 86% clinical rating.

Suggested Retail Cost

- \$31.70/Introkitt

Product Features

tempofill 2 allows for quick and easy fabrication of provisional fillings. The material stays where placed and can be manipulated directly in the mouth. The working time is flexible because the material is light cured, but it begins to set slowly with operator light after approximately one minute. Consultants noted stickiness to some instruments. Some consultants reported challenges with retaining the material in the preparation. Retention of the temporary is partially dependent on the retentive features and the wetness of the preparation. For shallow or tapered preparations, **tempofill 2** can be

placed in the tooth, cured, removed, and cemented. **tempofill 2** was used by many consultants for the temporary closing of endodontic accesses due to its ease of use and removal. Overall, consultants found **tempofill 2** to have a complete kit, very good cartridge volume, good viscosity, and acceptable esthetic appearance. Sixty-three percent of consultants rated **tempofill 2** to be the same or better than the material they were currently using while 50% would switch to **tempofill 2**.

Clinical Tips

- Remove **tempofill 2** by inserting an explorer into the bulk of the restoration and pulling it out.
- Increase light-curing time for deeper cure with larger inlays/onlays. ■

CLINICAL CONSULTANTS

S. Kelly, OH
D. Keren, NY
J. Kim, NY
B. Klym, MI
J. Kostohryz, TX
J. Kotapish, OH
J. Kotnour, WI
M. Kruscke, MI
F. Leal, VA
S. Lever, MD
I. Levine, NY
R. Lezell, MI
R. Lieder, MI
M. Livernois, SC
J. Lockwood, MI
M. Lodge, MI
M. Man, NY
B. Manne, FL
N. Mansour, MI
N. Markarian, CA
D. Marsh, MI
M. Mason, NY
R. Mason, NY
W. Mason, MI
J. Mayer, OH
C. McLaren, MI
J. McLaren, MI
J.R. Meagher, NY
J. Mikesell, IL
C. Miller, PA
S. Miller, NV
R. Mizrahi, NY
L. Montes, NY
D. Montgomery, CA
P. Moratto, MD
M. Morin, MI
S. Munro, WI
W. Nagy, TX
J. Nash, MI
A. Nazarian, MI
N. Nealis, IL
L. Neuberger, ND
C.J. Noe, MD
P. Nolan, MI
E. Odenweller, OH
R. Oshrain, NY
J. Paris, TX
D. Parris, GA
D. Parsons, NY
M. Patel, MI
T. Paumier, OH
L. Perratto, NY
S. Picazio, NJ
T. Pieper, WY
D. Pietz, NC
W. Piskowski, MI
D. Pitak, MI
S. Pomerance, MI
D. Powers, MI
L. Pozarny, NY
C. Price, TX
D. Qualliotine, NC
G. Raichelson, Canada
C. Ramsey, FL
S. Ratner, NY
R. Reichl, GA

3M ESPE
800.634.2249
www.3MESPE.com

Description

3M ESPE RelyX Fiber Post is a glass fiber-reinforced composite post. The translucent post allows transmission of light from a light-curing unit along the length of the post during cementation. The posts are available in three diameters and are color coded to match the reamers. A universal reamer is included to initiate the post space preparation. The kit includes *3M ESPE RelyX Unicem Universal Resin Cement* with a new *Aplicap Elongation Tip*. The tip is 20-mm long with a narrow diameter to allow delivery of the cement to the apical end of the post preparation. The introductory kit contains five posts of each diameter with one corresponding drill, *3M ESPE RelyX Unicem* cement, and accessories. Seventeen editors used **3M ESPE RelyX Fiber Post** in restoring 108 endodontically treated teeth. This product received a 95% clinical rating.

Suggested Retail Cost

- \$239.00/introductory kit
- \$309.00/introductory kit PLUS *RelyX Unicem Cement* Trial Kit

Editors' Observations

Manufacturer's Instructions

The written instructions and diagrams are clear and facilitate the post-placement procedure.

Packaging/Ease of Use

The introductory kit is neatly organized in an easy-to-use, compartmentalized plastic box. The posts are individually wrapped in foil packs to reduce cross contamination.

Usefulness of Elongation Tips

The *3M ESPE RelyX Unicem* capsules, along with the *Aplicap Elongation Tips*, facilitate cementation of the post and reduce the number of steps for the procedure.

Effectiveness of Drills

The reamers are effective for post space preparation, but some vibration during use was reported.

Post Size Selection

The three available sizes are adequate for most clinical situations, but additional diameters would make the system more versatile.

Post Design

The tapered design of the posts matches the anatomical shape of root canals. The head of the post is a continuation of the post without a change in shape. Some editors would have preferred less taper at the head portion of the post. A change in shape for the head of the post would improve retention of the core material.

Ease of Adjusting Post Length

The post can be adjusted to length by cutting it with disks or diamonds. Cutting the post to the proper length can be done easily after the post is cemented and the core build-up is completed.

Full Seating During Cementation

The posts seat completely with minimal pressure. As the cement sets quickly, it is important to work efficiently and quickly to seat the post.

Adaptation/Retention of Core Material

Composite core material adapts well to the tapered smooth head of the post. Retention of the core is from adhesion to the post and available tooth structure.

Radiopacity

The posts have low levels of radiopacity and are difficult to see on a radiograph. The lack of radiopacity of the posts is the primary negative feature of the system and makes it difficult to determine the fit of the cemented post to the prepared canal.

Fit of Post to Canal

The fit of the posts to the canals is difficult to determine because of the lack of radiopacity of the posts. In general, when the radiographs are inspected carefully, it appears that the posts adapt well to the canals.

Effectiveness of Light Transmission

After light transmission, posts were well retained in the canal indicating that the cement had set.

Ease of Applying Cement and Cementation of the Post

The delivery of the cement into the canal is simplified by the *Aplicap Elongation Tips* that attach to the *3M ESPE RelyX Unicem* capsule. The entire cementation procedure can be quickly accomplished because no tooth conditioning is required.

Ease of Removal

No posts were removed during the evaluation period. ■

Editors' Note: If using standard *3M ESPE RelyX Unicem* capsules (not provided in the post kit) make sure the *Aplicap Elongation Tip* snaps onto the capsule. Before one year ago, *3M ESPE RelyX Unicem* capsules were not designed to accommodate the *Aplicap Elongation Tip*.



Editors' Comments

- ▶ **"This is an all inclusive system – no special treatment of the tooth is required before placement."**
- ▶ **"Posts trim neatly – they do not shred."**
- ▶ **"The Aplicap Elongation Tips and inclusion of 3M ESPE RelyX Unicem in the kit are great."**
- ▶ **"The light-transmitting feature of the post speeds up the cementation process."**
- ▶ **"The cement is more radiopaque than the post."**
- ▶ **"A smaller diameter post would be useful for narrow canals such as lower incisors."**
- ▶ **"The head of the post could be larger."**

Editors' Choice Award

An Editors' Choice award is given to products recognized by our editors as being one of the most unique or significant products in an issue.

MEDICOM, Inc.
800.361.2862 • 514.636.6262
www.medicom.com

Description

SafeGauze are non-sterile, non-woven, four-ply, rayon/polyester sponges available in two sizes, 2" x 2" and 4" x 4". No chemical whiteners are used in this product.

Sterilization may be accomplished by steam, ethylene oxide gas, chemical vapors, gamma irradiation, or electron beam.



Consultants' Comments

- ▶ **"Great for soft tissue exams – they do not leave lint."**
- ▶ **"These sponges stay in place and have good absorbency."**
- ▶ **"These sponges are a good substitute for cotton rolls; they adapt well and don't stick to tissue."**
- ▶ **"They don't stick together; they separate easily."**
- ▶ **"Nice texture. No taste or odor."**
- ▶ **"I like how soft they are."**

The 2" x 2" size, packaged with 200 sponges per paper sleeve, was evaluated. **SafeGauze** was evaluated by 28 clinical consultants during more than 2,500 surgical,

restorative, and periodontal/dental hygiene procedures. The product received a 96% clinical rating.

Suggested Retail Cost

- \$46.95/25 sleeves of 2" x 2" gauze

Product Features

Consultants found that **SafeGauze** required fewer sponges per procedure than their current sponges. The lack of lint and the quality of **SafeGauze** were highly rated features. Consultants reported that the sponges were very soft and did not adhere

to soft tissue, which was positively received by patients. **SafeGauze** does not typically catch on hand instruments, burs, or teeth. The sponges adapt easily to placement and stay where placed. Ninety-six percent of consultants rated **SafeGauze** equal to or better than their current sponges, 88% would switch, and 96% would recommend them to a colleague. ■

CLINICAL CONSULTANTS

G. Reskakis, NY
C. Rice, MA
A. Ridall, TX
J. Riggs, MI
M. Rogers, PA
W. Roper, TX
F. Ross, WI
K. Ross, MI
K. Rowan, MO
R. Sambuchi, MI
P. Sandvick, WI
D. Schimmel, PA
G. Schultz, PA
J. Sedlock, WI
M. Shapiro, MI
J. Shea, MO
J. Sinkwitts, MI
R. Smith, NY
S. Smith, FL
M. Sonne, MI
J. Spingarn, FL
S. Steedman, WA
R. Stevenson, MI
W. Stevenson, MI
K. Stoffers, MI
D. Stutman, NY
K. Swearingen, OH
M. Sylvester, CA
P. Symeonides, NY
J. Tabash, MO
H. Tetelman, OH
F. Tom, MA
R. Tonelli, WI
G. Trompeter, MI
C. Trubschenck, CA
P. Tu, CA
S. Ura, NH
J. Utess, MI
H. Vann, MS
J. Van Tiem, MI
W. Walcott, MI
L. Walsh, MI
M. Waranowicz, MI
M. Warshanna, MD
R. Wilkie, MI
S. Williams, MO
R.G. Willis, SC
K. Wilson, MI
R. Wolf, IN
F. Wood, PA
P. Yaman, MI
H. Yeung, CA
D. Young, MI
S. Young, NY
M. Zahn, MI
J. Zanetti, MI
P. Zanetti, MI
G. Zann, FL
S. Zimmer, MI

LABORATORY CONSULTANTS

Alpha Dental Studio, MI
Nellmar Laboratory, LLC, MI

DENTSPLY Professional
800.989.8826
www.cavitron.dentsply.com

Description

Cavitron Plus is a new addition to the *Cavitron* line of hygiene products. New features of this 30-kHz ultrasonic scaler include a 360° wireless footswitch, illuminated diagnostic display, rinse setting, and automated purge. The footswitch is battery-operated and is active within 10 feet of the base. The unit maintains the *SPS* (Sustained Performance System) technology of its predecessor. This feature automatically adjusts system power to maintain tip stroke regardless of clinical load. The power knob ranges from low-power "rinse mode" through the "blue zone" to high-power settings. The "blue zone" identifies a power range appropriate for sub-gingival scaling. A tap on the footswitch activates a "boost mode" that produces a 25% power boost at any setting. The unit connects to the dental unit's water line at 20 to 40 psi. As water travels through the unit, it is warmed before being delivered through the tip. The *Steri-Mate* handpiece swivels 330°, has a water flow adjustment, and is detachable for sterilization. **Cavitron Plus** accepts a variety of 30-kHz tips. Sixteen consultants along with their hygienists clinically evaluated **Cavitron Plus** over a three-month period in over 300 uses. This product received a 98% clinical rating.

Suggested Retail Cost

- \$2,497/unit



Consultants' Comments

- ▶ "Wireless footswitch is a fabulous advancement!"
- ▶ "Power knob is large and easy to turn."
- ▶ "I love the swivel handpiece."
- ▶ "Less vibration than other units."
- ▶ "Good for removing residual orthodontic cement."

Product Features

Cavitron Plus has a number of features that enhance its convenience and effectiveness. Dental hygienists and consultants were appreciative of the wireless footswitch. It could be moved around easily with no cords to clutter the operator, and there were no failures reported when placed within range of the base. The handpiece is lightweight and comfortable, and the 330° swivel reduces wrist strain. The location of the water control on the handpiece allows the operator to make adjustments without interrupting use. The water delivered through the tip is warmed in the unit, but hygienists noted that they would like warmer water for more patient comfort. Overall, the unit is quiet and has a low level of vibration. The various power levels, including the boost mode, are effective for a wide range of hygiene procedures. **Cavitron Plus** is effective for removal of heavy calculus and stain. One hundred percent of those who evaluated **Cavitron Plus** found it equal to or better than their current ultrasonic scaler, 100% would recommend **Cavitron Plus** and 80% would switch to it. ■

Editors' Choice Award

An Editors' Choice award is given to products recognized by our editors as being one of the most unique or significant products in an issue.

Upcoming Lecture Schedule

Shared Secrets:

Enhance Your Practice with Esthetic Dentistry's "Best Kept Secrets"

John W. Farah, D.D.S., Ph.D., Editor

7-Credit C.E. Course

April 18, 2007	Jersey Shore University Medical Center, University of Pennsylvania, School of Dental Medicine – Neptune, NJ	Dr. Paul J. Condello – 732.531.4422
Sept. 14, 2007	Northern California Dental Society – Red Bluff, CA	Dr. Michael Viale – 530.872.5233
Sept. 21, 2007	2007 College of Dental Surgeons – Saskatoon, Saskatchewan	Dr. D. Blaine Friesen – 306.244.5072

Invite Dr. Farah to be your next guest speaker!

For information on attending a lecture or scheduling Dr. Farah to speak to your dental group, please contact:
Ms. Cara Voss at 734.665.2020 x102 or 800.347.1330, cara@dentaladvisor.com

www.dentaladvisor.com