

THE DENTAL ADVISORTM

"Improving Patient Care Through Research & Education"



Photography by Gloria G. Poy, R.N., D.A., Hartland, Michigan

Pediatric Dentistry

The treatment of pediatric patients can be a significant part of a general dentist's practice. Whether the dentist is treating young toddlers or adolescents, there are times when these patients may benefit from new materials and techniques that make the treatment easier and more child-friendly. Despite an overall decline of childhood cavities, dental caries remains the single most common chronic disease of childhood. It is estimated that 25% of the adolescent population suffers 80% of the caries. *Healthy People Update 2000* reported dental caries is five to eight times more common than asthma, the disease usually cited by physicians and other healthcare professionals as the most common chronic disease of childhood.

This issue of THE DENTAL ADVISOR discusses pit and fissure caries, pit and fissure sealants, micro-dentistry, flowable composites, compomers, glass ionomers, isolation, and local anesthesia for pediatric patients.

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Excellent	+++++
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THE DENTAL ADVISOR

2006

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Pediatric Dentistry

Pit and Fissure Caries

There are several treatment options available for pits and fissures of young permanent molars. The accuracy of assessing the extent of decay of the pits and fissures determines the treatment that the dentist will render.

Diagnosis of pit and fissure caries is most commonly performed using visual/tactile detection with an explorer in conjunction with radiographic images. With the newer digital radiographic equipment, such as *ScanX/Air Techniques*, images are clearer and larger. Radiographic images are able to be magnified to detect incipient decay interproximally. The *DIAGNOdent pen/KaVo* uses laser fluorescence to detect sub-surface carious lesions that cannot be detected by traditional means alone.

DIAGNOdent pen (KaVo)

Treatment Options for Pits and Fissures

- Observation by the dentist – if there are no deep grooves and no decay.
- Placement of a sealant – if deep grooves are present and there is no sign of decay.
- The use of micro-dentistry – if isolated areas of shallow caries or decalcification are detected.
- A traditional restoration placement with glass ionomer, resin-modified glass ionomer, compomer, composite or amalgam – if the caries are extensive or includes any interproximal surface.

THE DENTAL ADVISOR Recommends:

96%



3M ESPE Clinpro Sealant
(3M ESPE)

94%



Helioseal Clear Chroma
(Ivoclar Vivadent)

94%



Helioseal F
(Ivoclar Vivadent)

93%



Conseal F
(SDI)

Pit and Fissure Sealants

Sealants are recommended for teeth with deep or stained grooves with no decay present. The sealant flows into the grooves to prevent debris and bacteria from becoming lodged, reducing the risk of caries development. There are a variety of pit and fissure sealants available for treatment planning for the pediatric population. Sealants are available in colors to blend with the tooth or contrast with the tooth

for easy visibility: clear, enamel-colored, opaque, white, pink, or red. There are also some sealants (*Helioseal Clear Chroma*) that incorporate a photo-chromatic component into the resin. These sealants are clear until activated with an LED or halogen light. When illuminated at recall examinations, the sealant changes color for a few minutes to allow the practitioner to note the location of the sealant material. Recently, the use of a bonding agent in conjunction with sealant placement has been favored for improving the

durability and adhesion of the sealants. Sealants are placed on unprepared enamel surfaces of the tooth. The current advocated procedure is to etch the tooth with phosphoric acid, rinse and dry the tooth, place a 5th-generation bonding agent (*Prime & Bond NT/DENTSPLY Caulk*), then place the sealant, and light cure for the recommended time. Bonding materials with a self-etching primer or the one-bottle systems referred to as 6th- and 7th-generation agents are, therefore, not appropriate when placing sealants.

Recent studies have shown that incorporating a layer of bonding agent between the etched enamel and sealant material increases the longevity of sealants and reduces microleakage.

GC Fuji TRIAGE is a glass ionomer sealant available in pink or white. It requires no etching and is appropriate for use in moist areas such as partially erupted molars. *EMBRACE WetBond Pit and Fissure Sealant* is another sealant designed for moist application.

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Pit and Fissure Sealants

Product	Company	Shades	Delivery	Fluoride Release	Type of Cure	Color Change	Cost	Rating
Composite								
3M ESPE Clinpro Sealant	3M ESPE	Pink ¹	Bottle: 6 ml; Syringe: 1.2 ml	Yes	LC	Yes	Bottle: \$61.90/ea; Syringe: \$19.70/ea	96%
Admira Seal	VOCO	White	Syringe: 1.8 g	Yes	LC	No	Syringe: \$32.95/ea	89%
Aegis Pit and Fissure Sealant	Bosworth	Opaque	Syringe: 1.2 ml	No ²	LC	No	Syringe: \$110.00/4	ce
Conseal	SDI	Clear, light gray	Bottle: 5.5 g; Syringe: 1 g	No	LC	No	Bottle: \$66.99/ea; Syringe: \$55.95/3	na
Conseal F	SDI	White	Bottle: 5.5 g; Syringe: 1 g; Unit Dose: 0.09 g	Yes	LC	No	Bottle: \$120.99/ea; Syringe: \$63.95/3	93%
Delton	DENTSPLY Professional	Clear, opaque	Applicator with Tube: 2.7 ml	No	LC	No	Applicator with Tube: \$95.99/2	na
Delton Direct Delivery System	DENTSPLY Professional	Clear, opaque	Unit Dose: 0.08 ml	No	LC	No	Unit Dose: \$101.99/50	na
Delton FS+	DENTSPLY Professional	Opaque	Syringe: 1.9 g	Yes	LC	No	Syringe: \$95.95/4	91%
Delton Plus	DENTSPLY Professional	Opaque	Unit Dose: 0.08 ml	Yes	LC	No	Unit Dose: \$103.95/50	84%
Delton Seal-N-Glo Illuminating Pit & Fissure Sealant	DENTSPLY Professional	Opaque	Syringe: 1.7 g	Yes	LC	Yes ³	Syringe: \$34.95/ea	na
EMBRACE WetBond Pit and Fissure Sealant	Pulpdent	Natural, off-white	Syringe: 1.2 ml, 3 ml; Unit Dose: 0.2 ml	Yes	LC	No	Syringe: \$33.00/3 ml; Syringe: \$65.50/4 x 1.2 ml; Unit Dose: \$132.50/50	91%
FluroShield VLC Pit & Fissure Sealant	DENTSPLY Caulk	Opaque white, tooth	Tube: 5 g	Yes	LC	No	Tube: \$127.95/2	na
Fortify	Bisco	Opaque	Bottle: 5 ml	No	LC	No	Bottle: \$29.00/ea	na
Fortify Plus	Bisco	Opaque	Syringe: 1.5 g	No	LC	No	Syringe: \$33.00/2	na
Guardian Seal	SDS/Kerr	Opaque	Syringe: 1 g	Yes	LC	No	Syringe: \$88.00/4	na
Helioseal	Ivoclar Vivadent	Opaque	Bottle: 8 g	No	LC	No	Bottle: \$97.30/ea	na
Helioseal Clear	Ivoclar Vivadent	Clear	Syringe: 1.25 g	No	LC	No	Syringe: \$14.70/ea	92%
Helioseal Clear Chroma	Ivoclar Vivadent	Clear ⁴	Syringe: 1.25 g	No	LC	Yes	Syringe: \$16.10/ea	94%
Helioseal F	Ivoclar Vivadent	Opaque	Syringe: 1.25 g; Unit Dose: 0.25 g	Yes	LC	No	Syringe: \$13.85/ea; Unit Dose: \$97.80/50	94%
OptiGuard	SDS/Kerr	Clear	Bottle: 5 ml	Yes	LC	No	Bottle: \$52.95/ea	91%
Seal-Rite Pit & Fissure Sealant ⁵	Pulpdent	Off-white	Syringe: 1.2 ml, 3 ml	Yes	LC	No	Syringe: \$25.60/3 ml; Syringe: \$46.00/4 x 1.2 ml	75%
TEETHMATE F-1	Kuraray America	Natural, opaque, red	Syringe: 2.5 ml	Yes	LC	Yes	Syringe: \$59.99/ea	90%
Ultraseal XT Plus	Ultradent	A1, A2, clear, opaque white	Syringe: 1.2 ml	No	LC	No	Syringe: \$13.25/ea	na
Virtuoso Sealant	Den-Mat	Clear, opaque	Syringe: 1 ml	Yes	LC	No	Syringe: \$65.00/4	na
Glass Ionomer								
GC Fuji TRIAGE	GC America	Pink, white	Unit Dose: 0.45 g	Yes	SC ⁶	No	Unit Dose: \$157.50/50	88%
riva protect	SDI	Pink, white	Unit Dose: 0.18 ml	Yes	SC	No	Unit Dose: \$120.99/50	na
Resin-modified Glass Ionomer								
EcuSeal	Zenith Dental/DMG	Opaque	Unit Dose: 0.1 ml	Yes	LC	No	Unit Dose: \$116.00/50	81%

Other Featured Products



Virtuoso Sealant
(Den-Mat)



riva protect
(SDI)

¹Pink when applied, turns tooth-colored when light cured
²Contains Amorphous Calcium Phosphate (ACP)
³Fluoresces with UV light
⁴With reversible color change
⁵Also available in a low viscosity
⁶Using a light curing unit on the pink shade will decrease the setting time

LC = light-cured, SC = self-cured
ce = currently evaluating
na = not available

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Micro-dentistry

Micro-dentistry describes a restorative procedure in which a minimally invasive preparation is made to remove small, isolated areas of caries or decalcification. Local anesthesia is usually not necessary.

Clinical Hints

- Conservative technique – only tooth structure that prevents access to the caries is removed along with the carious lesion.
- Lesions are small – usually are located in pits and fissures, do not undermine the occlusal surface and are not usually the result of an intrinsic defect in the tooth structure.
- Use magnification (*Orascope*) – enhanced vision is necessary to distinguish the demarcation between sound and carious tooth structure.
- Use caries detection dye (*Sable Seek*/*Ultradent*) to identify the extent of the lesion.

- Make small preparations with rounded internal line angles.
- Use air-abrasion unit (*KCP HydroJet*/*American Medical Technologies*; *PrepStart*/*Danville Materials*; *RONDOflex plus*/*KaVo*) for preparation.

- Use small burs (*FISSUROTOMY Diagnostic & Finisbing Bur Kit*/*S.S. White*) for preparation.



FISSUROTOMY Diagnostic & Finisbing Bur Kit
(S.S. White)



KCP HydroJet
(American Medical Technologies)



PrepStart
(Danville Materials)

Flowable composites, compomers, glass ionomers, and resin-modified glass ionomers produce restorations that are esthetic and nearly invisible. Flowable composites and glass ionomers are delivered by syringe and adapt readily to the prepared tooth structure, requiring minimal use of instrumentation. When placing a flowable composite, the area is first treated with a total- or self-etching bonding agent and then the flowable composite is placed.

The benefits of using glass ionomers and resin-modified glass ionomers are that they have long-term fluoride release, do not require the use of a bonding agent, and often have excellent radiopacity. Self- or light-cured materials are available. Additionally, there are compomers available in child-pleasing colors (*Twinky Star*) for the restoration of primary teeth.

Isolation

Rubber dam isolation is extremely helpful when treating pediatric patients. Use a traditional clamp and dam material (*Flexi-Dam*/*Coltène/Whaledent*; *SafeTouch Dental Dam*/*MEDICOM*) to isolate a singe tooth or *OptraGate Junior*/*Ivoclar Vivadent*, which provides lip and cheek retraction but is not able to isolate a single tooth. Both techniques allow the practitioner to isolate the area that is going to be treated so that moisture is easier to control. The *OptraGate Junior* works especially well for isolation and retraction when treating anterior decay.

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Flowable Composites

Product	Company	Shades	Delivery	Fluoride Release	Radiopaque	Cost	Rating
3M ESPE Filtek Supreme Plus Flowable Restorative	3M ESPE	12 shades	Syringe: 2 g	No	Yes	Syringe: \$55.99/ea	96%
4 Seasons Flow	Ivoclar Vivadent	8 shades	Syringe: 2 g	Yes	Yes	Syringe: \$26.80/ea	91%
Admira Flow	VOCO	6 shades	Syringe: 1.8 g; Unit Dose: 0.25 g	No	Yes	Syringe: \$49.95/2; Unit Dose: \$89.95/25	93%
ÆLITEFLO	Bisco	13 shades	Syringe: 1.5 g	No	Yes	Syringe: \$19.00/ea	92%
ÆLITEFLO LV	Bisco	2 shades	Syringe: 1.5 g	No	Yes	Syringe: \$19.00/ea	na
ALPHA-FLOW	Dental Technologies	11 shades	Syringe: 1.5 g	Yes	Yes	Syringe: \$7.95/ea	86%
AXCEL FLOW	Tri Dental Innovators	19 shades	Syringe: 1.5 g	Yes	Yes	Syringe: \$29.99/3	86%
ESTELITE FLOW QUICK	Tokuyama Dental Corp./Tokuyama America Inc.	17 shades	Syringe: 1.8 g	No	Yes	Syringe: \$26.00/ea	93%
Esthet.X Flow liquid micro hybrid	DENTSPLY Caulk	10 shades	Syringe: 1.3 g	Yes	Yes	Syringe: \$41.99/2	92%
Flow-It ALC	Pentron Clinical Technologies	26 shades	Syringe: 1.5 g	Yes	Yes	Syringe: \$10.35/ea	92%
GRADIA DIRECT Flo	GC America	7 shades	Syringe: 1.5 g	Yes	Yes	Syringe: \$37.00/2	na
GRADIA DIRECT LoFlo	GC America	7 shades	Syringe: 1.3 g	Yes	Yes	Syringe: \$37.00/2	95%
GrandiO Flow	VOCO	12 shades	Syringe: 1.8 g	No	Yes	Syringe: \$58.95/2	93%
Heliomolar Flow	Ivoclar Vivadent	7 shades	Syringe: 1.6 g	Yes	Yes	Syringe: \$26.80/ea	94%
Matrixx Flowable	Discus Dental	17 shades	Syringe: 1 g	Yes	Yes	Syringe: \$6.95 - \$14.00 ¹	na
Palfique Estelite LV	Tokuyama Dental Corp./Tokuyama America Inc.	3-4 ² shades	Syringe: 3 g	No	Yes	Syringe: \$31.50/ea	96%
PermaFlo	Ultradent	11 shades	Syringe: 1.2 ml	Yes	Yes	Syringe: \$16.00/ea	91%
Premise Flowable	SDS/Kerr	9 shades	Syringe: 1.7 g	No	Yes	Syringe: \$82.99/4	na
Renamel Flowable Microfill	Cosmedent	27 shades	Syringe: 3 g	No	Yes	Syringe: \$43.50/ea	na
Renamel Flowable Universal	Cosmedent	16 shades	Syringe: 3 g	No	Yes	Syringe: \$43.50/ea	na
ResinX	Temrex	8 shades	Syringe: 1.2 g	No	Yes	Syringe: \$12.95/ea	87%
Revolution Formula 2	SDS/Kerr	21 shades	Syringe: 1 g	Yes	Yes	Syringe: \$59.99/4	na
SYNERGY Flow	Coltène/Whaledent	5 shades	Syringe: 2.3 g	Yes	Yes	Syringe: \$38.15/ea	na
Tetric Flow	Ivoclar Vivadent	12 shades	Syringe: 2 g; Unit Dose: 0.25 g	Yes	Yes	Syringe: \$26.80/ea; Unit Dose: \$76.10/20	98%
Venus Flow	Heraeus Kulzer	14 shades	Syringe: 1.8 g	No	Yes	Syringe: \$25.99/ea	ce
VersaFlo	Centrix	9 shades	Syringe: 2 g; Unit Dose: 0.2 g	No	Yes	Syringe: \$9.95/ea; Unit Dose: \$41.55/16	94%
Virtuoso Flowable	Den-Mat	19 shades	Syringe: 1 g	Yes	Yes	Syringe: \$65.00/4	na
Wave ³	SDI	14 shades	Syringe: 1 g; Unit Dose: 0.25 g	Yes	Yes	Syringe: \$10.95/ea; Unit Dose: \$53.99/20	92%

Other Featured Products

Flow-It ALC
(Pentron Clinical Technologies)

Virtuoso Flowable
(Den-Mat)

THE DENTAL ADVISOR Recommends:

Tetric Flow (98%), *3M ESPE Filtek Supreme Plus Flowable Restorative* (96%), *Palfique Estelite LV* (96%), *GRADIA DIRECT LoFlo* (95%), *Heliomolar Flow* (94%), *VersaFlo* (94%), *Admira Flow* (93%), *ESTELITE FLOW QUICK* (93%), *GrandiO Flow* (93%)

Tetric Flow
(Ivoclar Vivadent)

Palfique Estelite LV
(Tokuyama Dental Corp./Tokuyama America Inc.)

3M ESPE Filtek Supreme Plus Flowable Restorative
(3M ESPE)

GRADIA DIRECT LoFlo
GC America

ESTELITE FLOW QUICK
(Tokuyama Dental Corp./Tokuyama America Inc.)

GrandiO Flow
(VOCO)

¹Cost per syringe is based on quantity purchased
²Available in three viscosities – High Flow (A1, A2, A3), Medium Flow (A1, A2, A3, A3.5), Low Flow (A1, A2, A3)
³Available in three viscosities – High, Medium, and Low

ce = currently evaluating
na = not available

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Advantages of Rubber Dam Isolation

- Improves access, visualization and moisture control.
- Reduces the risk of the aspiration of foreign objects.
- Protects the soft tissue from abrasion.
- Helps with behavior management.
- Helps show the child’s parent the tooth, decay, and/or restoration.
- Promotes nasal breathing by a child during nitrous oxide/oxygen administration.

Local Anesthesia

The use of local anesthetic for pediatric patients is critical for successful treatment. With the newer anesthetics (*Septocaine/Septodont*), a mandibular block is no longer required to provide profound anesthesia during restorative, pulpal, or surgical treatment of teeth. Simple infiltration gives profound anesthesia and enhances the pediatric patient’s comfort.

Clinical Hints

- Use a topical anesthetic (*Cetacaine/Cetylite*) before the injection. It has a quick onset and excellent effectiveness.
- Four percent articaine (*Septocaine*) dosages need to be closely monitored.
- Use of 4% articaine is not recommended for children under four years of age. ■

Compomers and Glass Ionomers

Product	Company	Shades	Delivery	Fluoride Release	Radiopaque	Type of Cure	Cost	Rating
Compomer								
3M ESPE F2000 Compomer Restorative	3M ESPE	12 shades	Syringe: 4 g; Unit Dose: 0.2 g	Yes	Yes	LC	Syringe: \$93.19/ea; Unit Dose: \$90.90/18	94%
Compoglass F	Ivoclar Vivadent	10 shades	Unit Dose: 0.25 g	Yes	Yes	LC	Unit Dose: \$71.60/20	95%
Compoglass Flow	Ivoclar Vivadent	4 shades	Unit Dose: 0.25 g	Yes	Yes	LC	Unit Dose: \$66.10/20	89%
Dyract eXtra	DENTSPLY Caulk	9 shades	Unit Dose: 0.25 g	Yes	Yes	LC	Unit Dose: \$99.50/20	na
Dyract flow	DENTSPLY Caulk	7 shades	Syringe: 1.3 g; Unit Dose: 0.25 g	Yes	Yes	LC	Syringe: \$22.65/ea; Unit Dose: \$79.50/16	92%
freedom	SDI	4 shades	Unit Dose: 0.25 g	Yes	Yes	LC	Unit Dose: \$56.95/20	86%
Geristore Syringeable	Den-Mat	4 shades	Dual Barrel Automix Syringe: 10 g	Yes	Yes	DC	Dual Barrel Automix Syringe: \$385.00/3	94%
Twinky Star	VOCO	7 shades	Unit Dose: 0.25 g	Yes	Yes	LC	Unit Dose: \$79.95/25	93%
Glass Ionomer								
3M ESPE Ketac-Fil Plus Aplicap Glass Ionomer Restorative	3M ESPE	8 shades	Unit Dose Aplicap: 0.11 ml	Yes	Yes	SC	Unit Dose: \$210.00/50	na
3M ESPE Ketac-Molar Aplicap Glass Ionomer Restorative	3M ESPE	5 shades	Unit Dose Aplicap: 0.11 ml	Yes	No	SC	Unit Dose: \$196.30/50	88%
3M ESPE Ketac-Molar Quick Glass Ionomer Restorative	3M ESPE	4 shades	Unit Dose Aplicap: 0.11 ml	Yes	No	SC	Unit Dose: \$196.30/50	91%
GC Fuji II	GC America	6 shades	Powder/liquid: 15 g, 8 ml; Unit Dose: 0.39 g	Yes	Yes	SC	Liquid: \$53.25/ea; Powder: \$118.25/ea; Unit Dose: \$254.50/50	na
GC Fuji IX GP	GC America	6 shades	Powder/liquid: 15 g, 6.4 ml; Unit Dose: 0.45 g	Yes	Yes	SC	Liquid: \$52.75/ea; Powder: \$87.50/ea; Unit Dose: \$190.50/50	85%
GC Fuji IX GP FAST	GC America	6 shades	Unit Dose: 0.45 g	Yes	Yes	SC	Unit Dose: \$190.50/50	92%
riva self cure (fast set and regular set)	SDI	7 shades	Powder/liquid: 15 g, 6.9 ml; Unit Dose: 0.15 ml	Yes	Yes	SC	Liquid: \$40.29/ea; Powder: \$70.50/ea; Unit Dose: \$138.99/50	na
Glass Ionomer with Silver								
3M ESPE Ketac-Silver Aplicap/Maxicap Reinforced Glass Ionomer Restorative	3M ESPE	1 shade	Powder/liquid: 25 g, 12 ml; Unit Dose Aplicap: 0.11 ml; Unit Dose Maxicap: 0.45 ml	Yes	Yes	SC	Liquid: \$38.70/ea; Powder: \$309.30/ea; Unit Dose Aplicap: \$230.70/50; Unit Dose Maxicap: \$599.10/50	91%
riva silver	SDI	1 shade	Powder/liquid: 32 g, 8.9 ml; Unit Dose: 0.18 ml	Yes	Yes	LC	Liquid: \$30.29/ea; Powder: \$65.00/ea; Unit Dose: \$142.99/50	na
Resin-modified Glass Ionomer								
3M ESPE Photac-Fil Quick Aplicap Glass Ionomer Restorative	3M ESPE	8 shades	Unit Dose Aplicap: 0.11 ml	Yes	Yes	DC, LC	Unit Dose: \$214.70/50	94%
3M ESPE Vitremer Glass Ionomer Core Buildup/Restorative	3M ESPE	8 shades	Powder/liquid: 9 g, 2.5 ml	Yes	Yes	DC, LC	Liquid: \$112.10/ea; Powder: \$112.10/ea	93%
GC Fuji Filling LC	GC America	6 shades	Cartridge: 8 g	Yes	Yes	LC	Cartridge: \$93.50/ea	83%
GC Fuji II LC	GC America	11 shades	Powder/liquid: 15 g, 6.8 ml; Unit Dose: 0.1 g	Yes	Yes	LC	Liquid: \$85.25/ea; Powder: \$91.00/ea; Unit Dose: \$189.75/50	90%
riva light cure	SDI	11 shades	Powder/liquid: 15 g, 7.2 ml; Unit Dose: 0.13 ml	Yes	Yes	LC	Liquid: \$40.29/ea; Powder: \$65.00/ea; Unit Dose: \$133.50/50	na

THE DENTAL ADVISOR Recommends:

Compomers: *Compoglass F (95%), 3M ESPE F2000 Compomer Restorative (94%), Geristore Syringeable (94%), Twinky Star (93%), Dyract Flow (92%)*

Glass Ionomers: *GC Fuji IX GP FAST (92%), 3M ESPE Ketac-Molar Quick Glass Ionomer Restorative (91%)*

Glass Ionomers with Silver: *3M ESPE Ketac-Silver Aplicap/Maxicap Reinforced Glass Ionomer Restorative (91%)*

Resin-modified Glass Ionomers: *3M ESPE Photac-Fil Quick Aplicap Glass Ionomer Restorative (94%), 3M ESPE Vitremer Glass Ionomer Core Buildup/Restorative (93%)*



Compoglass F
(Ivoclar Vivadent)



Geristore Syringeable
(Den-Mat)



GC Fuji IX GP FAST
(GC America)

DC = dual-cured, LC = light-cured, SC = self-cured
na = not available

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www.tokuyama-us.com

Description

Estelite Sigma is a universal composite for direct restoration of anterior and posterior teeth. The composite is filled 71% by volume with sub-micron spherical particles. It is available in 11 Vita shades plus cervical, incisal, bleach white and four opaque shades in either 3.8-g syringes or single-dose tips. All shades are radiopaque. The introductory kit contains six, 3.8-g syringes or 40, 0.2-g pre-loaded tips and a *One-Up Bond F Plus* mini kit. **Estelite Sigma** received a 100% clinical rating at one year.

1-YEAR CLINICAL PERFORMANCE



Consultants' Comments

- ▶ "Composite maintained a smooth, glossy appearance."
- ▶ "I like the fact that even the incisal shade is radiopaque."
- ▶ "Variety of shades contributes to excellent esthetics."

- Suggested Retail Cost**
- \$238.00/syringe introductory kit
 - \$173.00/pre-loaded tips introductory kit
 - \$67.50/pre-loaded tips refill
 - \$50.00/syringe refill
- Clinical Evaluation Protocol**
- Sixty-one restorations in 30 patients were evaluated for clinical performance at one year.
 - Twenty-two anterior and 39 posterior restorations were evaluated (Figure 1).
 - Restorations were evaluated on a 1-5 rating scale: 1 = poor, 2 = fair, 3 = good, 4 = very good, 5 = excellent (Figure 2).

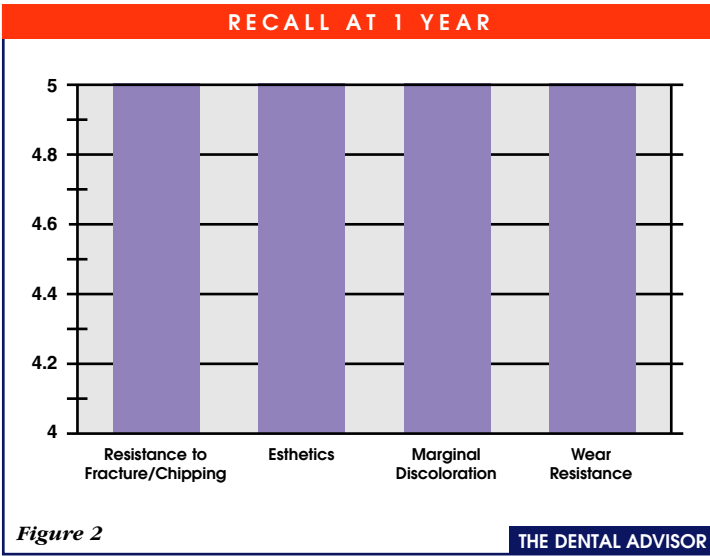
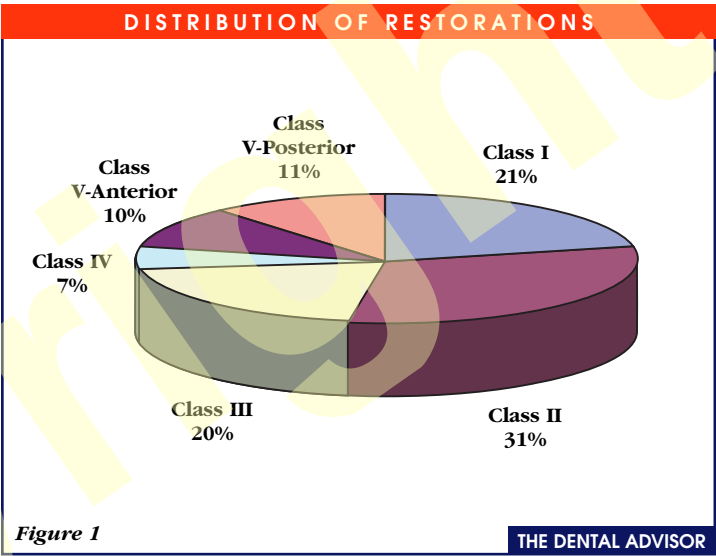
Clinical Observations

Resistance to Fracture/Chipping
Restorations recalled showed no chips or fractures at one-year. Generally, if a restoration chips early on, failures of marginal ridges of Class II restorations and incisal edges of Class IV restorations are observed. **Estelite Sigma** showed no such defects.

Esthetics
Estelite Sigma restorations exhibit excellent blending with the tooth. The variety of shades available is sufficient to satisfy most clinical situations. Opaque, standard and incisal shades may be layered; however, the majority of restorations evaluated were placed using a single shade. The composite polished to a smooth surface at placement and maintained a smooth, glossy texture at one-year recall.

Marginal Discoloration
No marginal discoloration or microleakage was noted on any of the **Estelite Sigma** restorations.

Wear Resistance
All **Estelite Sigma** restorations were rated excellent for wear resistance. Consultants evaluated the surfaces of the restorations visually for signs of wear. Occlusal anatomy and continuity with the tooth surface were well maintained. No wear facets on the composite surfaces were observed. ■





The Anatomy of the Dental Malpractice Suit

by Keith P. Felty, JD

Q How does a dentist defend allegations of dental malpractice?

A Just like a dentist must learn basic human anatomy, a lawyer defending a dentist must learn the basic foundation of every case – “reasonable” treatment. “Reasonable” treatment is whether the dentist was “reasonable” in providing dental treatment. This concept begins with the very first contact the patient has with office staff and continues to the last visit to the office. It is this legal concept that is the genesis of development of a defense strategy.

Judgment of the dentist’s conduct is provided by jurors, who are dental patients themselves. Jurors use “standard of care” to determine if “reasonable” treatment was provided to the patient. A good defense strategy is built on asking jurors a simple question, “Is the care that was provided the kind of care you would want at a dentist’s office?” If a jury answers yes to that question, it will answer no to the question of negligence. ■

For more information on upcoming courses on this and other risk management topics presented by Mr. Felty, please refer to THE DENTAL ADVISOR Education Center course listing on the back page, or visit online at www.dentaladvisor.com/lectures/classes.html.

Keith Felty is a principle in Van Belkum & Felty, P.C. in Plymouth, MI. He regularly defends dental professionals in litigation and provides other legal services for the dental profession. Mr. Felty may be contacted at 502 Forest Ave., Plymouth, MI 48170, 734.459.0300 or via email at kfelty@feltypc.com.

What’s New?

Zenith Dental/DMG (800.662.6383 • www.zenithdental.com) has introduced **Soleil**, a light-cured composite for provisional inlays. **Soleil** is placed directly into the preparation, shaped with an instrument and light cured for 20 to 40 seconds depending on the depth. The surface may be polished using a polishing cup or disc. **Soleil** requires no cementation and will not stick to instruments. This flexible material can be removed in one piece with a probe or scaler. Available in a universal shade, **Soleil** is packaged in two, 2.5-g syringes and does not require refrigeration. Look for the results of a clinical evaluation in an upcoming issue of THE DENTAL ADVISOR. ■



Xeno IV Dual Cure + + + + +

DENTSPLY Caulk
800.532.2855 • 302.422.4511
www.dentsply.com

Description

Xeno IV Dual Cure is a 7th-generation one-step, self-etching, self-priming dental adhesive. Inclusion of the dual-cure activator allows bonding of indirect composite restorations, core materials, and cements to enamel and dentin. After mixing the adhesive and dual-cure activator, two 15-second applications should be scrubbed into the tooth. **Xeno IV Dual Cure** requires a 10-second light cure by standard techniques. The kit contains one 4.5-ml bottle each of bonding agent and dual-cure activator, 100 applicators, a mixing well, and a laminated instruction card. Twenty-four consultants used **Xeno IV Dual Cure** in over 600 cases including direct anterior and posterior restorations, core placement, and restoration cementation. This product received a 96% clinical rating.

Suggested Retail Cost
• \$240.00/kit

Product Features

Consultants reported that **Xeno IV Dual Cure** was easily incorporated into office routines. Packaging is uncomplicated, the laminated instruction card is straightforward, and dispensing and application are easy. The bonding agent wets

Bond Strength of Xeno IV Dual Cure/FluoroCore 2 to Human Teeth, MPa		
	Light-cured	Self-cured
Ground enamel	25	18
Superficial dentin	18	21
Deep dentin*	20	23

*Editors' Note: The in-vitro bond strength of Xeno IV Dual Cure/FluoroCore 2 to deep dentin is very high compared with other bonding agents and core materials tested.

both dentin and enamel surfaces well, leaving a shiny surface that assures that coverage is achieved. Neither odor during application nor post-operative sensitivity was a problem. Eighty-eight percent of

consultants rated **Xeno IV Dual Cure** as equivalent to or better than their current dual-cure bonding agent, 74% would switch to **Xeno IV Dual Cure**, and 83% would recommend it to colleagues.



Consultants' Comments

- ▶ **"Works well with standard restorative procedures."**
- ▶ **"The dual-cure feature is great for post cementation."**
- ▶ **"Dispensing from the bottle is easy."**
- ▶ **"Very easy to use – just follow the simple directions."**
- ▶ **"The literature suggests etching uncut enamel."**

Clinical Tips

- **Xeno IV Dual Cure** should be refrigerated between uses.
- Take the solution out of the refrigerator at the beginning of the appointment.
- To avoid evaporation, wait to dispense until ready to use. ■

Viral Inhibitor + + + + +

Beta Technologies, Inc.
800.680.7248
www.hsvfree.com

Description

Viral Inhibitor is a hand-held device that uses a small electric signal to treat cutaneous viral eruptions, in particular herpes labialis [herpes simplex virus type 1 (HSV-1)]. It also reportedly targets shingles, genital herpes (HSV-2), molluscum, and some warts, moles, and other growths of viral origin. The device has a hard plastic housing, approximately 8 x 2.5 x 2 cm in size. The built-in battery is not replaceable or rechargeable. The device is disposable to prevent viral contamination.

Removal of the protective cap exposes two non-metallic electrodes that, when positioned to straddle the affected tissue and activated, apply a signal across the viral-laden region. The signal passes from one probe through the affected area to the other probe for 10 seconds and then instantaneously switches direction for another 10 seconds. For each treatment, the **Viral Inhibitor** is applied half an hour to an hour apart to maximize the disruptive effect of the signal on the virus. Changing colored lights indicate that the device is working

Consultants' Comments

- ▶ **"It is easy to use."**
- ▶ **"The lights are difficult to see during use."**
- ▶ **"I would like the option of a rechargeable battery."**
- ▶ **"Supply disposable covers for the probes to prevent transfer of the virus."**



Patients' Comments

- ▶ **"Viral Inhibitor lessened the severity and length of time of the blisters."**
- ▶ **"Not having to use ointment on my face is nice."**
- ▶ **"Difficult to really dry all the spots around my lips before use."**
- ▶ **"It did not relieve all my pain."**

properly. The product is recommended for use at the prodromal stage of lesion development. The number of applications, up to eight times per day, varies with the stage at which treatment is started. The tissue must be clean and dry before treatment and the device should not be used by more than one patient. **Viral Inhibitor** was evaluated for use on HSV-1 lesions by nine clinical consultants and 29 patients. Patients ranged in age from 10 to 50 years old, representing a broad experience of outbreaks regarding intensity and patterns of recurrence (2 to 12 eruptions per year). This product received an 86% clinical rating.

Suggested Retail Cost
• \$179.95 each

Product Features

Consultants reported that patients were pleased and enthusiastic that another means of addressing their cold sores was available. Written instructions

for **Viral Inhibitor** are specific to cold sores; however, the website offers more information and diagrams regarding other uses and applications. The size of the product is small, convenient to carry, and overall is very easy to use. The majority of patients reported that they were not able to feel the signal during application. The degree of treatment success varied within the patient group. The correlation of successful treatment with how closely patients followed instructions was difficult to judge given the subjectivity of treatment start, compliance with treatment directions, and the severity of cases. Patients described a successful treatment as a halt in the usual sequence of eruption, prevention of open blisters, and reduction in the healing time. Ninety-six percent of patients rated **Viral Inhibitor** as better than or equal to other treatments they had tried, 68% would purchase the product, and 88% would recommend it. ■

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

ELITE Implant + + + +

Zhermack, Inc.
877.819.6206 • 732.389.8540
www.zhermack.com

Description

ELITE Implant is a radiopaque, addition silicone impression material indicated for implant impressions. It is provided in sterile packaging for use in a surgical field, as well as for implant impressions in non-surgical situations. The radiopacity of the impression material allows for rapid radiographic identification of any fragments of material accidentally left inside the oral cavity during impression making. **ELITE Implant** is available in three viscosities: heavy, medium, and light. The heavy- and medium-viscosity consistencies are available in a sterile 50-ml disposable cartridge with one sterile mixing tip and one sterile intraoral tip. The light-viscosity consistency is available in a sterile 5-ml disposable cartridge with one sterile mixing tip and one sterile intraoral tip. Each viscosity has a working time of 1:30 and a setting time of 3:30. Twenty consultants evaluated **ELITE Implant** in over 65 implant impressions. This product received an 86% clinical rating.

Suggested Retail Cost

- \$35.50/kit (heavy- or medium-body)
- \$19.50/kit (light-body)

Product Features

The ease of extrusion of **ELITE Implant** allows precise placement of the material during the impression making. In particular, the medium-body and light-body viscosities flow well around implant analogs; however, the heavy-body material displaces some of the lighter-viscosity materials and when set can make removal of the impression difficult.



Consultants' Comments

- ▶ *"Perfect fit for my implant crown."*
- ▶ *"Great to use for an immediate implant impression on the day of surgery."*
- ▶ *"Did not notice much difference between this and regular material for impressions."*
- ▶ *"Light-body material is too viscous to flow well around impression coping."*
- ▶ *"Too much material left in container after one use."*

ELITE Implant has an adequate working time while setting in a reasonable time frame, resulting in final restorations that have a good fit. The sterile packaging and radiopacity of this material are only useful in clinical situations involving an open surgical flap and therefore have limited benefit. A large amount of material tends to be left in the cartridge after one use, and the remaining material is no longer sterile. Most consultants believe **ELITE Implant** is useful for implant impressions in a surgical field. Seventy percent of consultants rated **ELITE Implant** equal to their current implant impression material. Sixty-five percent would recommend **ELITE Implant**, while 25% would switch. ■

PROFILE

Ron Yapp, M.S. – Director of Research

Ron Yapp received a B.S. degree in Mechanical Engineering in 1968 and an M.S. degree in Dental Materials Science in 1972 from the University of Michigan. He utilized his background in biomaterials biocompatibility to design and develop several bone-growth-supported orthopedic joint replacement implants for several different manufacturers. Mr. Yapp was the Director of the Spine Product R & D Program at Johnson and Johnson Medical for several years before founding BioQuest Medical in Phoenix, AZ. He managed BioQuest Medical, a company dedicated to new product design and development of instruments for orthopedic and neurosurgical applications, for 12 years before joining the staff of Dental Consultants, Inc as Director of Research. Mr. Yapp and his wife Sandy, husky-dog Koda, and two quarter horses, Millie and Diamond, are enjoying their return to Michigan. ■



Silgimix + + + + 1/2

Sultan Healthcare Inc.
800.637.8582 • 201.871.1232
www.sultanhealthcare.com

Description

Silgimix is an addition silicone alginate replacement material indicated for impressions for study models, orthodontic models, opposing models, partial and complete dentures, and temporary crown matrices. **Silgimix** has a working time of 1:15 and a setting time of 2:10 from the start of mixing. It is light-blue in color and has a mint scent. **Silgimix** is compatible with all dental gypsum materials. Impression pouring can be delayed up to 14 days without loss of accuracy. **Silgimix** is available in an eight pack of 50-ml auto-mix cartridges or a 380-ml cartridge for all impression material mixing machines with 10 mixing tips and one bayonet ring. Twenty-three consultants evaluated **Silgimix** taking 231 impressions. This product received a 92% clinical rating.

Suggested Retail Cost

- \$59.00/380-ml kit (1, 380-ml cartridge, 10 mixing tips, 1 bayonet ring)
- \$145.00/380-ml bulk kit (4, 380-ml cartridges, 1 bayonet ring)
- \$60.00/50-ml 8 pack (8, 50-ml cartridges)
- \$360.00/50-ml bulk kit (60, 50-ml cartridges)



Consultants' Comments

- ▶ *"I love this product – I will be switching to it."*
- ▶ *"Great for denture impressions."*
- ▶ *"One, 50-ml cartridge produces 1 to 2 full-arch impressions."*
- ▶ *"Captures occlusal anatomy very well."*
- ▶ *"Material does not always flow into embrasures and cervical contours."*

Product Features

The packaging is compact and clearly labeled. The availability of bulk packs for both types of delivery is convenient. Instructions are well-written and easy to read, having bold headings for each section. Because **Silgimix** does not require mixing in a bowl, there is less setup and cleanup. **Silgimix** produces a homogenous mix. The working and setting times are more consistent than alginates that involve variations of water temperature and powder-to-liquid ratio. The mint scent was well received by patients and consultants. Impressions are easy to remove from the mouth and exhibit very good detail. The quality of the poured models is very good. The recommended 30-minute wait to pour stone into **Silgimix** must be observed to prevent porosity in the poured models. The 14-day stability of the impression material allows the impressions to be poured multiple times or sent to a laboratory. Seventy-five percent of consultants found that **Silgimix** was equivalent to or better than their current product. Seventy-nine percent of the consultants would purchase and 85% would recommend **Silgimix** to a colleague.

Clinical Tips

- Wait 30 minutes before pouring gypsum materials. Hydrogen gas released during the polymerization must be allowed to dissipate before pouring.
- Not intended for crown and bridge final impressions. ■

CLINICAL CONSULTANTS

P. Campo, NY
M. Chaben, MI
D. Chacko, TN
S. Cheff, TX
R. Cherry, FL
P. Chiaravalli, MI
T. Chuang, NJ
A. Colarusso, NY
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

White Towel Services Refreshment Towel System + + + + ½

White Towel Services, Inc.
866.938.8693 • 801.908.7110
www.whitetowelservices.com

Description

White Towel Services Refreshment Towel System includes a maintenance-free warmer and individually packaged, disposable refreshment towels. The warmer plugs into a standard electrical outlet and heats the towels to 165° F (74° C) within 45-60 minutes, cycling heat to keep towels warm and ready for use. The warmer is available in two sizes: *HC-12 Hot Cabi* (18" x 12" x 12") and *HC-6 Mini Cabi* (12" x 12" x 10"). The *Mini Cabi* warmer is available in white, pink, blue, green, and yellow colors. The pre-moistened, white towels are available in two materials: 100% cotton (10" or 12" squares) or synthetic (10" x 8" hypoallergenic polyester). The cotton towels come unscented as well as in three scents: peach/mango, lavender, and lemon. Synthetic towels are available in both lemon and unscented varieties. Nine consultants evaluated the *HC-6 Mini Cabi Towel Warmer* with cotton towels in all varieties of scents. This product received a 94% rating.

Suggested Retail Cost

- \$359.00/*HC-6 Mini Cabi Towel Warmer*
- \$99.00/case of 240, 10" cotton towels



Consultants' Comments

- ▶ "A nice touch to any office."
- ▶ "Patients loved them!"
- ▶ "Great to use after long procedures and impressions!"
- ▶ "Towels are too hot initially, then cool off too quickly."
- ▶ "Cotton towels have impressive quality but could be softer."

Equipment Features

White Towel Services Refreshment Towel System was well-received by both clinical staff and patients. The *Mini Cabi* was very easy to get started and keep clean. In accordance with manufacturer's instructions, towels were left in the warmer for up to eight hours. The manufacturer recommends heating the towels one time only for optimal freshness and moistness. Counter space required for the unit is minimal, especially for the *Mini Cabi*. The larger *Hot Cabi* would be appropriate for placement in a central location, while the *Mini Cabi* could be placed in each operator. The unit is attractive, heats quickly, and maintains the towels at the desired temperature. Scents offered are pleasant and mild, with many positive comments by patients. The initial temperature of the towels out of the warmer is very hot;

however, the towels cool off quickly and are very soothing to the touch. Patient acceptance of the towel service was exceptional. In contrast to rudimentary methods of post-impression and treatment cleanup, the **White Towel Services** received an "excellent" overall rating from patients. One hundred percent of consultants found **White Towel Services** to be equivalent to or better than their current system. Eighty-six percent of consultants indicated that they would both switch to and recommend **White Towel Services**. Ninety-three percent of patients said that they would enjoy the towel service as a regular experience while at the dental office. ■

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

Feb. 9, 2007	27th Annual Hawaiian Dental Forum – Maui, HI	Dr. David Crane – (715) 723-1662
Mar. 16, 2007	Broward County Dental Association – Ft. Lauderdale, FL	Dr. Larry Shapiro – (954) 753-0520
April 18, 2007	Extramural Continuing Education Dept of the Univ of Pennsylvania, School of Dental Medicine – Neptune, NJ	Dr. Charles A. Kosteva – (610) 865-6999

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 L. Voss at 734.665.2020 or 800.347.1330, cara@dentalladviser.com

www.dentaladvisor.com

NexTemp Temporary Cement + + + +

Premier Dental Products Co.
888.670.6100 • 610.239.6000
www.premusa.com

Description

NexTemp Temporary Cement is a non-eugenol, resin-based temporary cement containing fluoride, chlorhexidine, and potassium nitrate. It is recommended for the cementation of temporary crowns, bridges, inlays, and onlays. **NexTemp** will not inhibit permanent cementation with resin-based cements. The cement has a working time of 2:30 and a setting time of 5:00. The introductory kit contains one, 5-ml dual-barrel syringe and 10 mixing tips. Twenty-eight consultants evaluated **NexTemp** in the temporary cementation of over 225 provisional restorations. This product received an 86% clinical rating.

Suggested Retail Cost

- \$28.00/introductory kit

Product Features

NexTemp is neat and easy to dispense from the auto-mix tip. The moderately high viscosity of the cement requires firm pressure to ensure complete seating of the provisional crown. Consultants reported that the setting time of the cement was longer than preferred. The material is best removed at the end of the working time when it is in a gel state. If excess is removed too early, the material is sticky. If removal is delayed too long, it becomes extremely hard. No odor was evident from the material; however, patients reported a bitter taste. The cement has a neutral shade to blend under esthetic restorations. Consultants reported inconsistent retention. A few noted poor retention, while the majority reported that temporaries had high retention and were sometimes difficult to remove. Upon removal, the cement stayed in the provisional

restoration. Sixty percent of consultants rated **NexTemp** equal to or better than their current temporary cement. Fifty-seven percent would recommend **NexTemp** while 50% would switch.

Clinical Tips

- Do not use for multiple-unit provisional restorations due to hard set and high level of retention.
- Use hydrogen peroxide to remove black stain from the tooth. ■

Editor's Note: Common with many resin cements, black staining can occur on teeth. It is recommended that a surface disinfectant be used before cementation.



Consultants' Comments

- ▶ "Temporary crowns were very retentive and sometimes hard to remove."
- ▶ "Great for long-term temporization or for temporary cementation of permanent crowns."
- ▶ "Hard to clean up if you wait too long but easy if you remove excess at the gel state."
- ▶ "Cement tastes bitter."
- ▶ "Takes too long to set for a single-unit crown."

CLINICAL CONSULTANTS

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
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

ParaPost® ParaCore™ Automix 5ml + + + + ½

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

Description

ParaPost ParaCore Automix 5ml is a dual-cured, radiopaque composite core material supplied in a newly developed 5-ml, dual-barrel syringe. The auto-mix tip allows direct placement into the prepared tooth. When used with dual-cured dentin bonding agents, the material is suitable for root canal post cementation, which can be done simultaneously during the core build-up procedure. **ParaPost ParaCore Automix 5ml** should be used with the manufacturer's adhesive, a two-step primer/adhesive combination. *ParaBond Non-rinse Conditioner* is applied for 30 seconds and lightly blown with air. *ParaBond Adhesive A* and *B* are mixed together and applied. The introductory kit evaluated includes four, 5-ml syringes of white and dentin shaded *ParaCore Automix*; 20 auto-mix tips; 3-ml bottles of *ParaBond Non-rinse Conditioner*, *ParaBond Adhesive A* and *Adhesive B*; a re-usable mixing well; a brush holder; applicator brush tips; and *ParaPost* core formers. Twenty-five consultants evaluated this product in over 300 procedures. This product received a 92% clinical rating.

Suggested Retail Cost
• \$189.00/introductory kit

Product Features

ParaPost ParaCore Automix 5ml was well received by consultants. The introductory kit was complete and instructions for bonding application were clear. The ease of dispensing the material and the consistency (viscosity) of the mix were most



Consultants' Comments

- ▶ "Good flow – easy to place into narrow spaces."
- ▶ "Viscosity great for cementing post and building up the tooth at the same time."
- ▶ "Loved the core formers!"
- ▶ "The 5-ml syringe is easier to handle than the large 25-ml auto-mix cartridge."
- ▶ "Not enough resistance to cutting."

frequently cited as positive features. Working and setting times were also excellent, providing adequate time for application but with the ability to light-cure for rapid set. Packability of the material is minimal. Although the low viscosity provides good adaptation to preparations, it limits instrument manipulation. Shade differentiation from the tooth with the white shade was excellent, and the dentin shade blended well. Cured material is easy to cut but provided less resistance than some consultants desired. Minimal bubbles and voids were encountered, and a good final surface quality after crown preparation was reported. Overall, 83% of consultants found **ParaPost ParaCore AutoMix 5ml** to be equivalent to or better than their current core material. Three out of four consultants indicated that they would switch from their current product, and 86% would purchase the product and recommend it to a colleague.

Clinical Tips

- Thirty-five percent phosphoric acid can be used for etching instead of the *ParaBond Non-rinse Conditioner*.
- Working time for the *ParaBond Adhesive* is two minutes from the start of mixing.
- The maximum acceptable time lapse between adhesive application and core placement is five minutes. ■

Chicago Midwinter Meeting
February 23-25, 2007

THE DENTAL ADVISOR invites you to join us at The 142nd Chicago Dental Society Midwinter Meeting, February 23-25, 2007. Visit us at booth #1507 and take advantage of our show discount to renew your subscription at 30% off the regular price. Speak directly to our knowledgeable staff about our 2007 Preferred Product List; upcoming features; new products; and upcoming seminars, lectures and meetings. Also, learn about our state-of-the-art facility that includes THE DENTAL ADVISOR Biomaterials Research Center, led by John M. Powers, Ph.D.; THE DENTAL ADVISOR Education Center; and administrative offices. Our growth has increased our ability to combine results from clinical and laboratory research to better educate dental professionals. We are looking forward to seeing you!

3M ESPE Vitrebond Plus + + + + +

3M ESPE
800.634.2249
www.3MESPE.com

Description

3M ESPE Vitrebond Plus is a light-cured, resin-modified glass ionomer base/liner. It is packaged in *The Clicker™ Dispensing System*, which provides simultaneous dispensing of the two-components of this liquid-paste system. The composition is based on the original *Vitrebond* powder/liquid material. The liquid contains a modified polyalkenoic acid. **Vitrebond Plus** provides the major benefits of glass ionomer cements including adhesion to tooth structure and sustained fluoride release. Additionally, **Vitrebond Plus** offers a combination of a 2:30 working time with a short setting time achieved by light curing (20 seconds). Twenty-seven consultants evaluated **Vitrebond Plus** in over 250 applications. The product received a 96% rating.

Suggested Retail Cost
• \$179.00/kit

Product Features

Overall, consultants found **Vitrebond Plus** to be an excellent product. The manufacturer's instructions were found to be clear, and the packaging to be simple and straightforward. *The Clicker™ Dispensing System* allows for very easy dispensing followed by hand mixing. Additionally, consultants appreciated the ability to light cure the material and reported the working and setting times to be good. Although all consultants appreciated the even mix of the material, several found the viscosity of the material slightly too flowable. There were no reports of post-operative sensitivity with the use of **Vitrebond Plus**. Ninety-six percent of consultants found **Vitrebond Plus** to be equal to or better than their current liner/base. Seventy-four percent of consultants would switch to **Vitrebond Plus**, and 96 percent would recommend it to colleagues.



Consultants' Comments

- ▶ "Lowers sensitivity and takes the worry out of deep fillings."
- ▶ "Excellent product! A pre-measured amount allows a better mix."
- ▶ "Material is a universal dentin shade."
- ▶ "Include a two-sided instrument for mixing and application."

Clinical Tips

- Use **Vitrebond Plus** for the initial cervical portion of Class V restorations. It adheres to dentin without phosphoric acid etching while providing fluoride release for future caries control and a dentin shade for esthetics.
- A small ball-tipped instrument is perfect for applying the product.
- **Vitrebond Plus** should not be used in patients with a known acrylate allergy and is contraindicated for direct pulp capping. ■

CLINICAL CONSULTANTS

- 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. Piskorski, 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
- 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. Sinkwits, 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

Clearfil S³ BOND Single Dose + + + + +

Kuraray America, Inc.
800.879.1676 • 212.986.2230
www.kuraraydental.com

Description

Clearfil S³ BOND Single Dose is a 7th-generation adhesive system that allows simultaneous bonding to both enamel and dentin with one liquid. Each unit is individually packaged in a container with 0.1 ml of liquid and one applicator tip for direct placement into the prepared tooth. To use, push the applicator tip into the container using finger pressure. Remove the moistened tip, apply the tip to the tooth surface, and leave the liquid in place for 20 seconds. Then, thoroughly air dry and light cure for 10 seconds. **Clearfil S³ BOND** is indicated for use with direct composite restorations, cavity sealing, treatment of exposed root surfaces, and core build-up using light- or dual-cured composite. **Clearfil S³ BOND** requires refrigeration. One hundred percent of those who evaluated **Clearfil S³ BOND Single Dose** found it equal to or better than their current adhesive system. Eighty-eight percent would recommend it and 76% would switch. This product received a 98% clinical rating.

Suggested Retail Cost

- \$135.00/50 single-dose package
- \$250.00/100 single-dose package



EDITORS' EVALUATION

Editors' Comments

- ▶ *"Faster bonding with fewer steps!"*
- ▶ *"Nice glossy tooth surface after one application indicating good coverage with adhesive."*
- ▶ *"There is plenty of material in each container for treating one quadrant."*
- ▶ *"The opening of the container is small, and the applicator brushes are for small preparations."*
- ▶ *"Cover the adhesive if light curing is delayed because it is sensitive to ambient light."*

Evaluation Protocol

- Twenty-seven editors and clinical consultants of THE DENTAL ADVISOR clinically evaluated **Clearfil S³ BOND Single Dose** over a four-week period.
- Over 560 clinical cases were completed.
- **Clearfil S³ BOND Single Dose** was evaluated on a 1 to 5 rating scale: 1 = poor, 2 = fair, 3 = good, 4 = very good, 5 = excellent.

Editors' Observations

Manufacturer's Instructions

The different clinical procedures are clearly illustrated with color diagrams and complete instructions in text form. The individual foil packets also have color illustrations with the recommended treatment times.

Packaging/Design of Unit Dose

This was the most-liked feature of the product. Editors felt confident that the material they were using was always fresh. The single-dose container is easily activated with gentle finger pressure and is excellent for infection control.

Ease of Dispensing

Activation of the container results in a well-moistened applicator tip. The slight yellow color verifies that the brush is wet. The adhesive does not spill out of the container.

Volume of Adhesive in Each Single Dose

Each container has sufficient adhesive for treatment of two or three teeth, depending on the size of the preparation. Material should be used within three minutes of opening.

Viscosity

The adhesive does not drip from the moistened tip but wets the tooth surface easily to produce a uniform coating.

Surface Wettability

A glossy appearance of the tooth surface is evident after one, 20-second application of the adhesive. If the surface is not totally wetted, place a second application.

Time Required for Procedure

The procedure is a predictable and easy one-step process that reduces the number of steps for bonding and treatment time compared to other adhesives.

Odor

There is a slight odor associated with the adhesive, but no negative comments regarding the odor were reported by patients.

Post-operative Sensitivity

No cases of post-operative sensitivity were reported by the consultants. Compared to other adhesive systems, some consultants noticed a reduction of post-operative complaints from patients when using **Clearfil S³ BOND Single Dose**.

Ease of Band Removal

The adhesive sticks to metal matrix bands, making removal difficult. The band may be lubricated before placement. Use care when applying the adhesive to the cavity preparation to avoid excessive bonding agent on the band.

Sensitivity to Ambient Light

The adhesive is sensitive to ambient light and needs to be covered if opened before use. It is not a problem if the applicator tip is left in the container when it is not being used. ■

JET BLUE BITE + + + + ½

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

Description

JET BLUE BITE is an addition silicone bite registration material available in fast and super-fast setting times. It comes packaged in either 50-ml auto-mix cartridges for use with standard 1:1 dispenser guns or in 25-ml *microSystem*[™] cartridges for use with a *microSystem (MKII) Dispenser*. Spreader tips, which can be attached to the mixing tips, come with each kit for extrusion of material in a ribbon-like form. The fast-set material has a 30-second working time with a 40-second intra-oral setting time. The super-fast material has a 20-second working time, and a 30-second intra-oral setting time. Both the fast and super-fast set times

were evaluated, as well as the standard cartridge and *microSystem* kits. Twenty-nine consultants evaluated **JET BLUE BITE** in over 290 procedures. This product received a 94% clinical rating.

Suggested Retail Cost

- \$19.95/single pack (1, 50-ml or 2, 25-ml auto-mix cartridges)
- \$66.82/refill pack (4, 50-ml or 8, 25-ml *microSystem* cartridges)

Product Features

JET BLUE BITE is packaged with an adequate number of mixing and spreader tips. Both the standard 50-ml auto-mix cartridge and the 25-ml *microSystem* cartridge are easy to load and operate. The material is extruded with a smooth-flowing, whipped cream-like viscosity and sets to a rigid consistency. The set material is blue in color, with no scent or taste



Consultants' Comments

- ▶ *"Stays where you put it!"*
- ▶ *"Easy to trim – remains in one piece."*
- ▶ *"Does not lock in undercuts."*
- ▶ *"Cannot see the amount of material remaining in the microSystem cartridge."*

reported by consultants or patients. The working and setting times of the fast and super-fast materials are quite similar to each other, and both products were well received; however, greater differences in the working and setting times between the two materials would have been appreciated by some consultants. Rigidity and tear resistance of

the material are excellent, as is the detail in the registration. Consultants found the spreader tip to be very useful, providing a ribbon of material evenly on the occlusal surfaces. The material is easy to trim when set, and remains in one piece, with better results compared to many other bite registration materials. Overall, 90% of

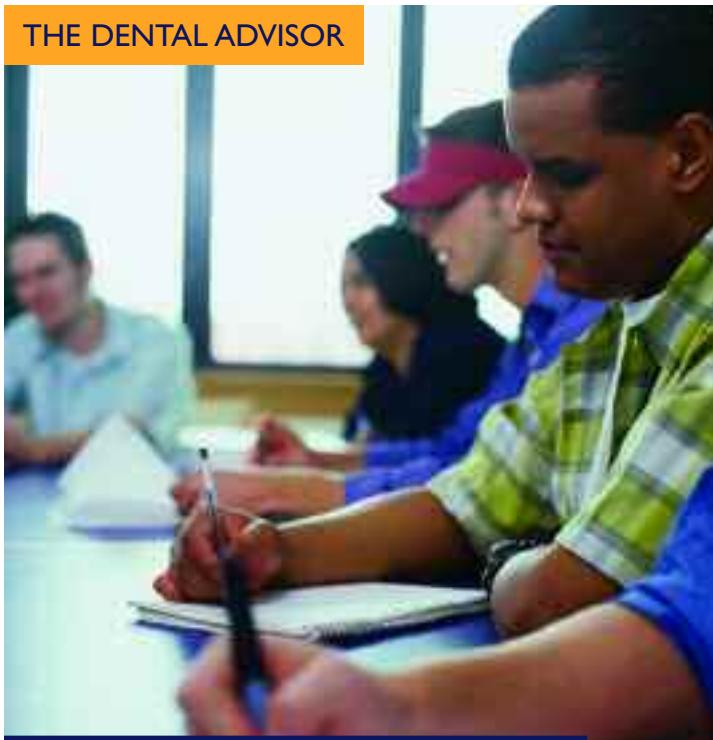
consultants found **JET BLUE BITE** to be equivalent to or better than their current bite registration material. Four out of five consultants indicated that they would switch from their current product, and 88% would purchase the material and recommend it to a colleague. ■

CLINICAL CONSULTANTS

G. Trompeter, MI
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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



EDUCATION CENTER

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

Keith Felty, JD

The Anatomy of the Dental Malpractice Suit

Tues., Jan. 9, 2007, 5:30 p.m. – 8:30 p.m. (light dinner provided)

This program will provide an understanding of the legal process related to claims involving dental malpractice. Topics will include the role of the defense attorney, the judge and jury, and why the dentist prevails in nearly every case that actually goes to trial. (2 CE Credits)

Course Fee: \$150

Keith Felty, JD

The Dental Patient: Friend or Foe?

Fri., Jan. 19, 2007, 8:30 a.m. – 11:30 a.m. (light breakfast provided)

This program will delve into potential legal claims against dentists and how they may be avoided. Claims often arise from breakdowns in communication with the patient. Various communication methods will be discussed to reduce the risk of a malpractice suit. (2 CE Credits)

Course Fee: \$150

John M. Powers, PhD

Master's Series

Dental Materials for the 21st Century: Bonding Agents

Wed., Feb. 7, 2007, 6 p.m. – 8 p.m. (light dinner provided)

Total-etch and self-etch bonding agents will be reviewed with an emphasis on 6th- and 7th-generation bonding systems. Variables that affect bonding clinically will be discussed. (1 CE Credit)

Course Fee: \$50 (Register for four **Master's Series** programs at \$40 each!)

Sponsored by: **DENTSPLY Caulk**

Peter Yaman, DDS, MS

Master's Series

To Post or Not Post Endodontically Treated Teeth

Wed., Mar. 7, 2007, 6 p.m. – 8 p.m. (light dinner provided)

Endodontically treated teeth are compromised relative to the amount of remaining tooth structure and therefore require additional retentive features for successful restoration. The clinician needs to understand the philosophy and principles for post and core construction and recognize the options available for auxiliary retention. Selection of the most appropriate post and core materials for specific clinical situations – fiber, cast metal, amalgam, composite, or glass ionomer, will be reviewed and discussed. (1 CE Credit)

Course Fee: \$50 (Register for four **Master's Series** programs at \$40 each!)

Keith Felty, JD

The Dental Patient: Friend or Foe?

Tues., Mar. 13, 2007, 5:30 p.m. – 8:30 p.m. (light dinner provided)

This program will delve into potential legal claims against dentists and how they may be avoided. Claims often arise from breakdowns in communication with the patient. Various communication methods will be discussed to reduce the risk of a malpractice suit. (2 CE Credits)

Course Fee: \$150

Keith Felty, JD

The Anatomy of the Dental Malpractice Suit

Fri., Mar. 23, 2007, 8:30 a.m. – 11:30 a.m. (light breakfast provided)

This program will provide an understanding of the legal process related to claims involving dental malpractice. Topics will include the role of the defense attorney, the judge and jury, and why the dentist prevails in nearly every case that actually goes to trial. (2 CE Credits)

Course Fee: \$150

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 (Register for four **Master's Series** programs at \$40 each!)

Sponsored by: **DENTSPLY Caulk**

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 (Register for four **Master's Series** programs at \$40 each!)