

THE DENTAL ADVISORTM

"Improving Patient Care Through Research & Education"



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

Products for the Dental Hygienist

Hygienists are often the first to see and treat new patients. The type of treatment and products that hygienists use on new patients can leave a lasting impression on how they view the practice. With so many selections in a product-rich marketplace, making the right purchase decision is vital.

This issue of THE DENTAL ADVISOR discusses fluorides, desensitizers, topical anesthetics, and non-sharpening instruments, offering helpful hints to clinicians on what to look for when making a purchase decision. Eighteen fluoride foams, 26 desensitizers, and 16 topical anesthetics are compared and rated.

2006

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

Desensitizers

Hypersensitivity

Hypersensitivity is the transient sharp pain of rapid onset caused by thermal, evaporative, tactile, osmotic, or chemical stimuli.

Causes of Hypersensitivity

- Bruxism can expose dentin on occluding surfaces.
- Exposure of root surfaces due to gingival recession.
- Whitening of the teeth.
- Low dietary pH may play a role in removing cementum and opening dentinal tubules.
- Plaque retention on exposed root surfaces may prevent natural closure of dentinal tubules.

- Vigorous brushing can cause recession, loss of tooth structure, and dentin hypersensitivity.
- Open tubules may allow bacteria and their toxins to reach the pulp and lower the pain threshold.
- Restorative procedures.

Desensitizing Products

Topical gels, pastes, liquids, and varnishes are designed to block tubules and thereby reduce sensitivity. A variety of agents are used in desensitizers both independently and in conjunction with other agents to maximize benefits. Some ingredients encourage remineralization, while others are designed to immediately block the dentinal tubules.

Effects of Common Agents

- HEMA – blocks dentinal tubules.
- Fluoride (stannous or sodium) – enhances remineralization.
- Potassium nitrate – penetrates through tubules, depolarizes the nerve, and prevents repolarization.
- Oxalate acid/oxalic Acid – oxalate crystals form in the tubules blocking fluid movement, reducing pain.
- Glutaraldehyde – used in conjunction with HEMA or fluoride to seal dentinal tubules and prevent the fluid shifting which is recognized as one of the major causes of hypersensitivity – also acts to inhibit the growth of bacteria.
- Chlorhexidine – reduces bacteria.

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THE DENTAL ADVISOR Recommends:

**Admira Protect SingleDose (96%),
Health-Dent Desensitizer (95%),
PROSPEC MI Paste (95%), Zarosen (95%)**



Health-Dent Desensitizer
(Healthdent'l)



Zarosen
(Cetylite Industries)

Desensitizers

Product	Company	Active Ingredient(s)	Rinse	Topical Gel/Paste	Topical Liquid	Dispensing	Flavors	Cost	Rating
Admira Protect SingleDose	VOCO	HEMA, Fluoride, Ormocer			LC	MU, UD	None	MU: \$16.65/ml, UD 50 Kit: \$23.31/ml, UD 200 Kit: \$18.75/ml	96%
BisBlock	Bisco	Oxalate Acid			•	MU	None	\$10.33/ml	88%
D/Sense Crystal	Centrix	Potassium binoxalate, Nitric acid			•	MU	None	\$7.76/ml	86%
Dentin Desensitizer	Pulpdent	Glutaraldehyde, Fluoride			•	MU	None	\$3.75/ml	na
Duraflor Sodium Fluoride Varnish	MEDICOM	5% Sodium Fluoride, sweetened with Xylitol		•		MU, UD	Bubblegum (child dose 0.25ml), Raspberry (adult dose 0.4ml)	MU: \$2.80/ml, UD Adult 32: \$2.42/ml, UD Adult 200: \$1.81/ml, UD Child 32: \$3.69/ml, UD Child 200: \$2.70/ml	ce
Duraflor Sodium Fluoride Varnish	MEDICOM	5% Sodium Fluoride, sweetened with Xylitol		•		UD	Bubblegum	16 pack: \$3.12/ml	89%
Duraphat	Colgate Oral Pharmaceuticals	5% Sodium Fluoride		•		MU	None	MU Kit: \$3.09/ml, MU Refill: \$2.59/ml	91%
Gluma Desensitizer	Heraeus Kulzer	Glutaraldehyde			•	MU, UD	None	MU: \$19.30/ml, MU Bulk: \$16.90/ml, UD: \$23.16/ml	91%
Health-Dent Desensitizer	Healthdent'l	Benzalkonium Chloride, HEMA, Fluoride			•	MU, UD	None	MU: \$4.50/ml, UD: \$3.33/ml	95%
Hemaseal & Cide	Advantage Dental Products	Chlorhexidine, HEMA			•	MU, UD	None	MU: \$7.99/ml, UD: \$11.99/ml	92%
Hurriseal	Beutlich Pharmaceuticals	HEMA			•	MU	None	\$3.58/ml	88%
Microprime B	Danville Materials	HEMA, Benzathonium Chloride, Fluoride			•	MU	None	\$4.69/ml	na
Microprime G	Danville Materials	HEMA, Glutaraldehyde			•	MU	None	\$4.69/ml	na
Pain Free Desensitizer	Parkell	Oxalic Acid with Chelating Tripolymer			•	MU	None	\$8.90/ml	na
PrepEze Desensitizer	Pentron Clinical Technologies	Benzylammonium Chloride, N-Dimethyl Hydroxyethylmethacrylate, Sodium Chloride			•	MU	None	\$5.99/ml	na
PROSPEC MI Paste	GC America	RECALDENT™ (CPP-ACP)		•		MU	Melon, Mint, Strawberry, Tutti-Frutti, Vanilla	\$0.38/ml	95%
PROTECT Desensitizing Solution	Sunstar Butler	Polymerized Methacrylates, Potassium Fluoride, Methacrylate (MA-17)			•	UD	Mint	\$6.30/ml	na
Quell Desensitizer	Pentron Clinical Technologies	Calcium Chloride, Potassium Phosphate		•		MU	None	\$10.49/ml	87%
smartprotect	DETAX	Glutaraldehyde, Triclosan, Amino-fluoride			•	MU	None	\$8.57/ml	86%
soothe	SDI	Potassium Nitrate, Fluoride		•		UD	None	\$3.44/ml	ce
Super Seal	Phoenix Dental	Potassium Salt, Oxalic Acid			•	MU	None	8 ml: \$10.00/ml, 4 ml: \$12.50/ml	87%
Systemp.desensitizer	Ivoclar Vivadent	Glutaraldehyde, Maleic Acid, Polyethylene Glycoldimethacrylate				LC	None	MU: \$22.70/ml, UD: \$23.97/ml	94%
TOPEX White Care Desensitizer	Sultan Healthcare	Neutral Sodium Fluoride	•			MU	Berry	\$0.09/ml	na
UltraEZ	Ultradent	Potassium Nitrate, Fluoride		•		UD	None	UD: \$4.37/ml, UD Bulk: \$2.21/ml	82%
VANISH	OMNII Oral Pharmaceuticals	5% Sodium Fluoride		•		UD	Cherry, Melon	4.50/ml	na
Zarosen	Cetylite Industries	Strontium Chloride			•	MU	None	\$1.76/ml	95%

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

MU = Multi-use, UD = Unit dose, LC Light-cure
ce = currently evaluating, na = not available

Other Featured Products



Duraflor Sodium Fluoride Varnish
(MEDICOM)



soothe
(SDI)



UltraEZ
(Ultradent)



TOPEX White Care Desensitizer
(Sultan Healthcare)

- **RECALDENT™** (CPP-ACP) (*Cadbury-Schwepes*) – promotes remineralization of tooth structure – contains casein phosphopeptides and amorphous calcium phosphate (CPP-ACP). CPP binds calcium and phosphate to make them available for remineralization of the tooth surface.
- Calcium chloride and potassium phosphate – deposit amorphous calcium phosphate on the dentin surface and into dentinal tubules.
- Strontium chloride – blocks dentinal tubules.

Office Treatments

- Fluoride applied in a tray or burnished into the tooth.
- Application of a 5% sodium fluoride varnish.
- Liquids burnished into dentin.
- **RECALDENT™** (CPP-ACP) – pastes used to encourage rapid remineralization.
- Bonding agents.

Home Treatments

- Use of desensitizing pastes to enhance remineralization.
- Use of gels containing potassium nitrate in custom trays.
- Rinses of chlorhexidine to reduce bacteria, followed by fluoride rinse to encourage re-mineralization.

THE DENTAL ADVISOR
Recommends:



Cetacaine
(Cetylite Industries)

96%

Topical Anesthetics

Topical anesthetics are designed to provide temporary pain relief during procedures including local anesthetic injections, periodontal scaling and root planing, and packing retraction cord. The sprays are beneficial in reducing the gag reflex when making impressions and intraoral radiographs. Topical anesthetics can also assist in providing comfort to patients with mouth ulcers and other oral wounds.

While multiple-use jars are cost effective, the unit-dose delivery systems eliminate cross contamination and can be sent home with a patient to alleviate the pain associated with oral lesions, prosthetics, and orthodontic appliances.

Primary active ingredients

- Benzocaine and tetracaine have a rapid onset with pain relief within seconds. Benzocaine is most effective when applied to dry tissue and lasts approximately 12-15 minutes. Benzocaine with tetracaine, as found in **Cetacaine**, is effective when applied to wet or dry tissue and lasts approximately 30 minutes.
- Lidocaine for use as a topical anesthetic is available in an adhesive patch (**Dentipatch**) that is placed on dry mucosal surfaces. It is most effective in the maxillary anterior area, where the bone is cancellous and thin and the tissue can be dried. The onset is two minutes and the effect lasts approximately 35 minutes.

Allergies and Warnings

As there is virtually no systemic absorption of topical anesthetics, there are no significant contraindications or warning associated with their use. Some patients may experience an increased sensitivity to topical anesthetics that may result in a rash, gingival inflammation, or sloughing of the tissue.

Instruments

Traditional hygiene scaling instruments made from stainless steel can be heavy, thereby increasing hand fatigue, and require sharpening of the tip after each use. A few manufacturers have introduced hand instruments made from a stainless steel alloy that has been cryogenically treated and heat tempered. This process is designed to make the instruments retain their sharpness longer. The handles of these instruments have also been redesigned with various sizes and textures for greater comfort and tactile sensitivity. An overall reduction in weight of the instrument has resulted in less hand fatigue. **EverEdge** (*Hu-Freidy*), **PDT Cruise Line** (*Paradise Dental Technologies*), and **EagleLite** (*American Eagle Instruments*) are examples of this type of instrument. *American Eagle Instruments* also manufactures the **XP Technology Instrument Line**, which is reported by the manufacturer to last as long as standard instruments without the need to sharpen. The instrument is used until dull and then disposed of. ■



XP Technology
(American Eagle Instruments)

Other Featured Products



CaineTips
(J. Morita USA)



**Denti-Care Denti-Freezing
Topical Anesthetic Gel**
(MEDICOM)



Topex HandiCaine Stix
(Sultan Healthcare)



Topex Topical Anesthetic (Gel & Spray)
(Sultan Healthcare)

Topical Anesthetics

Product	Company	Active Ingredient(s)	Gel	Liquid	Ointment	Patch	Spray	Swab	Dispensing	Flavors	Cost	Rating
Bencocaine	Benco Dental	20% Benzocaine	*						MU	Bubble Gum, Cherry, Mint, Pina Colada, Raspberry, Strawberry	\$0.23/ml	na
Benzocaine	DENTSPLY Pharmaceutical	20% Benzocaine	*						MU	Cherry, Watermelon	\$0.27/ml	na
CaineTips	J. Morita USA	20% Benzocaine						*	UD	Cherry, Pina Colada, Peppermint	\$0.24/swab	93%
Cetacaine	Cetylite Industries	14% Benzocaine, 2% Butyl Aminobenzoate, 2% Tetracaine Hydrochloride	*	*			*		MU	Tropical	Gel: \$1.14/ml, Liquid: \$0.74/ml, Spray: \$1.76/ml	96%
ComfortCaine	Bosworth	20% Benzocaine	*						MU	Banana, Cherry, Grape, Mint, Pina Colada, Strawberry	\$0.33/ml	na
Denti-Care Denti-Freezing Topical Anesthetic Gel	MEDICOM	20% Benzocaine	*						MU	Bubble Gum, Cherry, Mint, Raspberry, Strawberry	\$0.22/ml	na
Denti-Care Denti-Freezing Topical Anesthetic Gel	MEDICOM	18% Benzocaine; 2% Tetracaine	*						MU	Bubble Gum, Cherry, Mint, Raspberry, Strawberry	\$0.22/ml	92%
Dentipatch	Noven Pharmaceuticals	Lidocaine				*			UD	None	\$2.20/patch	na
GingiCaine	Gingi-Pak	20% Benzocaine	*	*					MU	Banana, Cherry, Chocolate-Mint, Cotton Candy, Mint Julep, Pina Colada, Strawberry	Gel: \$0.23/ml, Liquid: \$0.23/ml	na
Hurricane	Beutlich	20% Benzocaine	*	*			*	*	MU, UD	Mint, Pina Colada, Watermelon, Wild Cherry	Gel: \$0.28/ml, Liquid: \$0.28/ml, Spray: \$0.49/ml, Swab: \$0.51/swab	na
LolliCaine	Centrix	20% Benzocaine						*	UD	Cherry, Mint, Pina Colada	\$0.28/swab	na
Topex HandiCaine Stix	Sultan Healthcare	20% Benzocaine						*	UD	Cherry, Pina Colada	\$0.33/swab	na
Topex Topical Anesthetic	Sultan Healthcare	20% Benzocaine	*	*			*		MU	Banana, Bubble-Num, Cherry, Mint, Pina Colada, Razzberry, Strawberry	Gel: \$0.23/ml, Liquid: \$0.23/ml, Spray: \$0.43/ml	na
Topicale	Premier	18% Benzocaine	*	*	*	*			MU, UD	Cherry (pump), Mint (patch), Pina Colada, Raspberry, Strawberry	Gel: \$0.31/ml, Liquid (pump): \$1.23/ml, Ointment: \$0.31/ml, Patch: \$2.08/patch	na
Topicale Xtra	Premier	20% Benzocaine	*						MU	Jammin' Strawberry, Mint Freeze, Very Berry Cherry	\$0.38/ml	na
Xylonor	Septodont	20% Benzocaine	*						MU	Pina Colada, Spearmint, Wild Cherry	\$0.18/ml	na

MU = Multi-use, UD = Unit dose
na = not available

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Five composite provisional materials were highly rated by THE DENTAL ADVISOR in individual clinical evaluations. These materials are now being compared to determine the *Best of the Best*. The ratings, as given at the time of each product's original evaluation, are shown in **Table 1**.

Clinical Protocol

Clinical consultants prepared 19 to 33 provisional restorations using each of the materials listed in **Table 1**. The characteristics were scored on a scale of 1 to 5 (1 = poor, 5 = excellent).

Results

The scores for each of the 13 characteristics evaluated and the overall average score for each composite provisional material are listed in **Table 2**.

Composite Provisional Material	Company	Rating
3M ESPE Protemp 3 Garant Temporization Material	3M ESPE	4.5+/93%
InstaTemp	Sterngold Restorative Systems	5+/96%
Integrity	DENTSPLY Caulk	4.5+/93%
Luxatemp	Zenith Dental/DMG	4.5+/94%
Systemp.C&B	Ivoclar Vivadent	4.5+/92%

Table 1

Characteristic	Protemp 3 Garant	InstaTemp	Integrity	Luxatemp	Systemp.C&B
Loading/mixing/dispensing	4.96	4.92	4.95	5.00	4.95
Viscosity/flow	4.85	4.28	4.64	4.94	4.58
No voids/bubbles	4.58	4.41	4.45	4.64	4.32
Setting time	4.40	4.78	4.45	4.91	3.84
Ease of removal after set	4.69	4.85	4.68	5.00	4.68
No excess on teeth	4.10	4.50	4.11	4.70	4.05
No air-inhibited layer	4.08	4.46	3.86	4.68	4.05
Ease of repair	4.67	5.00	4.50	5.00	4.50
Ease of finishing/polishing	4.56	4.68	4.85	5.00	4.58
Quality of polish	4.60	4.54	4.78	4.97	4.44
Final shade/esthetics	4.72	4.58	4.59	4.97	4.42
Fit of temporary	4.74	4.69	4.73	4.94	4.89
Retention of temporary	4.67	4.26	4.71	4.77	4.38
OVERALL AVERAGE	4.59	4.61	4.56	4.88	4.44

Table 2

Composite Provisional Material

- 1st Luxatemp
- 2nd (tied) InstaTemp
- 2nd (tied) 3M ESPE Protemp 3 Garant Temporization Material
- 2nd (tied) Integrity
- 3rd Systemp.C&B

Summary

While all are considered excellent materials, the objective of this evaluation was to select the *Best of the Best*. **Luxatemp** was awarded the *Best of the Best* based on its outstanding clinical characteristics, including the highest score for viscosity, setting time, no residue left on the teeth, lack of an air-inhibited layer, quality of polish and esthetics, and fit. ■

Editors' Note: The scores for the three products tied for second place are not statistically different.



3M ESPE Protemp 3 Garant Temporization Materials (3M ESPE)



InstaTemp (Sterngold Restorative Systems)

BEST OF THE BEST

2006

THE DENTAL ADVISOR

PROVISIONAL MATERIALS



Luxatemp

Zenith Dental/DMG



Legal Care of the Dental Professional by Keith P. Felty, JD

Q What are the first steps a dentist should take when faced with a lawsuit brought by a patient?

A Dentists need to drive the care they receive from their lawyers, within reason. Improved legal representation can be accomplished by the communication of expectations from the first contact forward and reviewing the lawyer's advice in light of those goals.

Here is a checklist of recommended questions that a dentist should ask himself/herself at the outset of any legal case.

- Do I believe that the care I provided to the patient involved was appropriate and not negligent?
- Do I want to defend the case in court so that I am found not to be negligent and professionally vindicated?
 - Am I willing to spend up to several days out of my practice and in court to accomplish the goal of defending my care and treatment?

Nearly every dentist would answer these questions with a "yes." Yet, over 90% of dental malpractice cases result in a settlement payment rather than a trial, even though professionals prevail nationally 88% of the time in malpractice jury trials. Unfortunately, settlements may be driven by counsel whose desires and defense plan are different from the doctor's wishes.

Dental professionals are the "legal patients" in any litigation against them. Their goals and desires should be pursued by counsel. Those desires may include settlement, as there are a number of reasons a doctor may choose that course. The keys to success are two-way communication of the goals and the strategy. By reviewing and critiquing the care they receive from their lawyers, the dental profession will be much better served and protected. ■

Keith Felty, JD, is a graduate of Michigan State University and Wayne State University Law School. Mr. Felty is a dental and medical defense attorney located in Plymouth, Michigan. He has litigated cases on behalf of dentists for 10 years throughout the State of Michigan, as well as

provided risk management advice and participated in presentations to general dentists and dental specialists.

Mr. Felty will be writing a variety of risk management topics in future issues of THE DENTAL ADVISOR, as well as presenting seminars held at THE DENTAL ADVISOR Education Center. Please contact our Director of Education, Annette M. Frederick, at 800.347.1330 x106 or email annette@dentaladvisor.com for more information.

3M ESPE
800.634.2249
www.3MESPE.com

Description

3M ESPE Filtek Supreme is a universal composite for anterior and posterior use. The composite is filled 57-60% by volume with 5-20 nm particles and 60-140 nm clusters of particles. The composite is available in dentin, body, enamel, and translucent shades. All shades, except for the translucent shades, are radiopaque. Curing time for 2-mm increments is 20 seconds for enamel, body, and translucent shades. For dentin shades, curing time for 1.5-mm increments is 40 seconds. **3M ESPE Filtek Supreme** is available in both syringes and unit-dose capsules in 35 shades. This product received a 97% rating.

Clinical Evaluation Protocol

- Over 1200 restorations have been placed as part of an ongoing clinical evaluation of **3M ESPE Filtek Supreme**. Additional restorations are continuing to be placed.
- Various 5th- and 6th-generation bonding agents were used.
- This report contains data regarding restorations that have been in place for three years or more. (Figures 1 and 2)

3-YEAR CLINICAL PERFORMANCE



Consultants' Comments

- "Surface texture is very smooth."
- "Excellent esthetics with a single shade."
- "Material handles nicely during placement – it is easy to sculpt and does not stick to instruments."
- "I would like to see an increase in strength in this composite."

- 501 restorations in 274 patients were available for evaluation of clinical performance at three years.
- 18 anterior and 483 posterior restorations were evaluated, 65% of which involved one or two interproximal surfaces.
- Restorations were evaluated on a 1-5 rating scale: 1 = poor, 2 = fair, 3 = good, 4 = very good, 5 = excellent

Clinical Observations

Resistance to Fracture/Chipping

Eighty-nine percent of restorations recalled showed no chips or fractures at three years. Slight chipping occurred on 10% of the restorations, mainly at the marginal ridge of interproximal restorations or at the tooth/filling interface. None of these restorations required replacement; some were refinished or recontoured. One posterior restoration had a more significant chip that did require a repair. Two restorations fractured and were subsequently replaced.

Shade Match/Esthetics

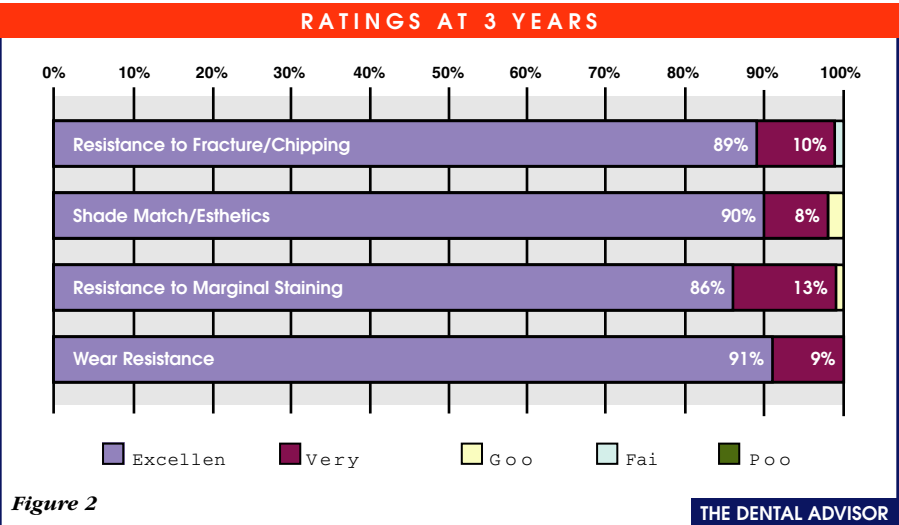
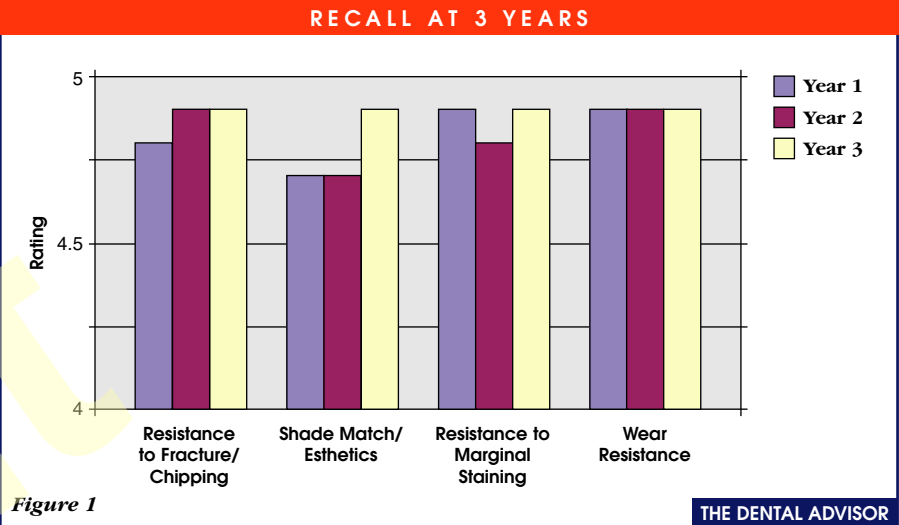
3M ESPE Filtek Supreme restorations maintained a highly esthetic appearance at three years. Ninety-eight percent of the restorations were rated excellent for shade match and blending. Consultants noted that an overwhelming number of restorations were undetectable. Surfaces were generally smooth with a high level of gloss.

Resistance to Marginal Staining

Eighty-six percent of restorations exhibited no marginal discoloration at three years. Mild staining was noted in a number of restorations. Many of these areas of staining occurred at the margins exhibiting chipping. Only one restoration was observed to have deep marginal staining, requiring replacement of the restoration due to suspected bond failure.

Wear Resistance

All **3M ESPE Filtek Supreme** restorations received ratings of very good to 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 surface were observed. ■



Southern Dental Industries
800.228.5166 • 630.238.8300
www.sdi.com.au

Description

soothe is a colorless and tasteless, topical desensitizing gel containing 6% potassium nitrate and 0.1% fluoride ions. It is designed to relieve tooth sensitivity caused by chemical and thermal changes. The manufacturer suggests using it before and after bleaching procedures. It can be applied either in the dental office or given to the patient for use at home. **soothe** is packaged in plastic dispensing syringes (four, 1.2-ml syringes per kit). The gel should be rubbed onto the affected area for two minutes at each application

and repeated every 2-3 hours until symptoms are gone. **soothe** was evaluated by 20 consultants in 115 cases. This product received an 88% clinical rating.

Suggested Retail Cost

- \$16.50/package

Product Features

soothe is packaged with syringes of material and brief instructions. Written instructions are to rub the desensitizer onto the teeth. The written instructions are minimal, and more detailed directions with



Consultants' Comments

- "Effective after in-office bleaching."
- "Offer the desensitizer in various flavors."
- "Improve written instructions."
- "Make it thicker or in a foam vehicle for tray and localized use."

photos showing usage both in the office and at home were suggested. Consultants and patients found it easy to apply with a brush. The viscosity of the gel is low and

tends to run out of a bleaching tray. The need for repeated applications, each with a two-minute rub, was reported as time-consuming. Sixty-six percent of consultants found **soothe** to be equivalent to or

better than their current topical desensitizer. Forty percent of the evaluators would switch to **soothe** and 50% would recommend it to colleagues.

Clinical Tips

- Dispense from the syringe slowly as the gel will flow easily.
- Use a fiber-tipped applicator to apply in the office.
- Dry the teeth with gauze before application so the gel will stay in place. ■

Clearfil S³ BOND + + + + +

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

Description

Clearfil S³ BOND is a 7th-generation bonding system comprised of a self-etching primer and adhesive in a single bottle. It is indicated for bonding light-cured composite restorations, porcelain repair, desensitizing indirect preparations, and desensitizing dentin. The homogeneous liquid contains monomers and nano-fillers in water and ethanol solvents. The material is applied to the tooth and left undisturbed for 20 seconds. Strong air and high-volume suction are utilized to evaporate the solvents, after which **Clearfil S³ BOND** is light-cured for 10 seconds. Refrigeration is recommended for overnight or long-term storage. **Clearfil S³ BOND** is available in a 4-ml bottle or in 0.1-ml single-dose applicators. This product received a 99% clinical rating for resistance to microleakage.

Suggested Retail Cost

- \$98.00/4-ml bottle kit
- \$250.00/100 single-dose kit

Purpose

Clinical evaluation of microleakage experienced in direct restorations bonded with **Clearfil S³ BOND**.

Bond Strength to Tooth Structure, MPa		
	Enamel	Dentin
Bond Strength	28	23

MICROLEAKAGE STUDY



Consultants' Comments

- ▶ "Restorations are virtually invisible."
- ▶ "Looks as good as the day I placed it."
- ▶ "Easy to use, quick, and reliable."
- ▶ "This material bonds to everything."

Clinical Evaluation Protocol

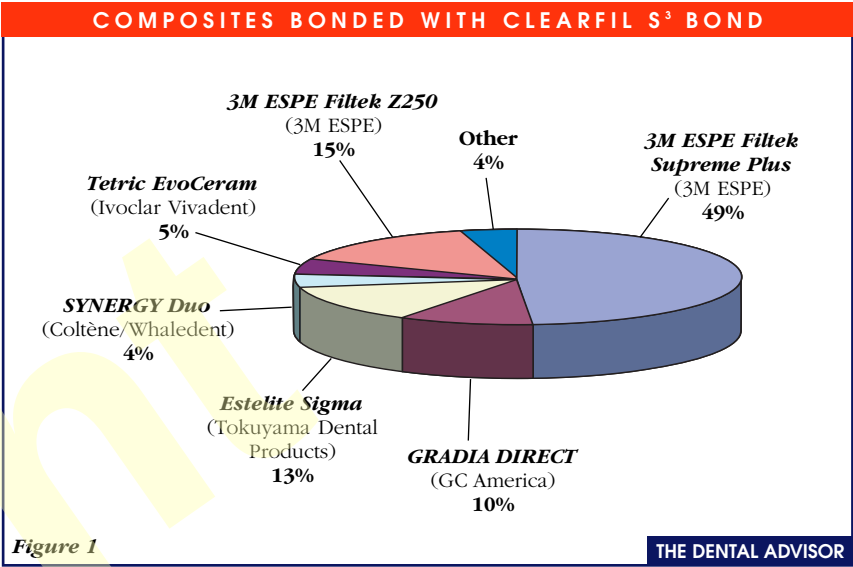
- One hundred thirty-six composite restorations (Figure 1) were placed in 70 patients utilizing **Clearfil S³ BOND**. Of the restorations placed, 93% were posterior and 7% were anterior.
- No phosphoric etchant was used on enamel margins.
- All materials were used according to the manufacturers' recommendations, and restorations were finished and polished according to each clinician's preferences.
- Of the 136 restorations evaluated at recall, 110 had been in place for six months and 26 for 12 months.
- Restorations were evaluated by visual observation for marginal staining as an indicator of microleakage.
- Resistance to marginal staining was rated on a 1-5 scale:
 - 1 = poor – severe marginal stain
 - 2 = fair – moderate marginal stain
 - 3 = good – mild marginal stain
 - 4 = very good – minimal marginal stain
 - 5 = excellent – no marginal stain

Clinical Observations

The occurrence of microleakage, as evidenced by marginal staining, was almost nonexistent. Ninety-nine percent of the restorations recalled at six months and one year were rated as 5 (excellent). One Class I restoration, tooth #7-L, showed a 1-mm stain at the cavosurface margin and was rated 4 (very good); one Class II restoration, tooth #2-DO, exhibited a light stain along the occlusal portion of the cavosurface margin and was rated 3 (good). The remaining 134 restorations had no marginal staining.

Discussion

A variety of resin composites and types of restorations were included in this study to provide a diverse sample of clinical conditions. Generally, ratings for resistance to marginal staining of composite restorations are fairly high during the first year then decrease slightly over time. This property is influenced greatly by the bond between the adhesive, tooth structure, and restorative material. THE DENTAL ADVISOR will continue to monitor the restorations bonded with **Clearfil S³ BOND**. The resistance to marginal staining has been excellent at six and 12 months.



Clinical Tips

- Use material within three minutes of dispensing from the bottle or opening the unit dose.
- Use a wax pencil or silicone to coat the inner aspect of the matrix band to prevent bonding the band to the restoration.
- If using an uncoated band, use a spoon excavator to scrape cured **Clearfil S³ BOND** from the band.
- Use high volume suction and air to evaporate the solvent.
- During finishing, dry the tooth and inspect it carefully for adhesive residue. ■

colorbite D + + + + ½

Zhermack, Inc
877.819.6206 • 732.389.8540
www.zhermack.com

Description

colorbite D is an addition silicone bite registration material with a reported final hardness of 45 Shore-D. The material changes color from green when placed in the tray to yellow during intraoral setting and then returns to green when removed from the mouth and stored at room temperature. It has a mild lime flavor and scent. **colorbite D** is packaged with two, 50-ml auto-mix cartridges and 12 mixing tips. Working time is 30 seconds and setting time is 60 seconds. Twenty-seven clinical consultants used **colorbite D** in over 250 cases. This product received a 95% clinical rating.

Suggested Retail Cost

- \$35.99/package

Product Features

The color-change during setting of **colorbite D** and its lime flavor are unique features appreciated by consultants. The material adapts well, staying on the teeth once applied. Rigidity and tear resistance of **colorbite D** received a 96% rating and ease of removal received a 90% rating. Reproduction of detail, ease of trimming, setting time, and ease of application scored well.



Consultants' Comments

- ▶ "This is an excellent product."
- ▶ "My laboratory really likes this material."
- ▶ "Provides excellent detail."
- ▶ "Material stays on the occlusal surfaces and does not run into embrasures."
- ▶ "Work quickly for a full-arch application."
- ▶ "Include more mixing tips with the kit."

Moderate hand pressure is required to dispense this material because of the high viscosity. Eighty-seven percent of consultants found **colorbite D** to be equivalent to or better than their current bite registration material. Sixty-one percent of evaluators would purchase **colorbite D** and 82% would recommend it to colleagues.

Clinical Tips

- Dry the teeth before application so the material will not run off.
- Use small amounts to avoid 'locking on' in heavily undercut areas. ■

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
K. 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. Alexander, PA
J. Allen, MI
J. Amara, CT
S. Anderson, MI
R.M. Arnett, MI
R. Averbach, CO
A. Azrak, NY
M. Bannan, MI
D. Barnes, MD
F. Berman, PA
M. Beyramian, MI
L. Bishop, MI
J. Bostic, OH
D. Bowen, MI
E. Bowser, PA
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
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P. Campo, NY
M. Chaben, MI
D. Chacko, TN
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P. Chiaravalli, MI
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A. Colarusso, NY
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M. Cooks, MI
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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



THE DENTAL ADVISOR typically evaluates products that are relatively new to the market. Recently, we have identified a category of products we call *Classic Products*. A *Classic Product* is one that was rated highly in a previous evaluation and continues to perform consistently well. Manufacturers are offered the opportunity to have their *Classic Products* re-evaluated to determine how they rate in today's market and to introduce them to a new generation of dental professionals. ■

Virtuoso Flowable + + + + ½



Den-Mat Corp.
800.445.0345 • 805.922.8491
www.denmat.com

Description

Virtuoso Flowable is a light-cured, flowable composite with fluoride release. This hybrid composite contains barium glass and submicron particles of silica. It is reported to have high flexural and compressive strengths with high radiopacity. The material may be used for small Class I, III, and IV restorations; repair of provisional restorations; blockouts; and as a sealant. The introductory kit contains four, 1-g syringes of shades A2, A3, B3, and C3 and 20 syringe tips. All 16 Vita shades are available in addition



Consultants' Comments

- ▶ "Flows easily, yet stays where it is placed."
- ▶ "Adapts well to cavity walls."
- ▶ "The availability of all the Vita shades is beneficial."
- ▶ "There were occasional bubbles in the dispensed material."

to clear and opaque shades. Twenty-four consultants evaluated **Virtuoso Flowable** in over 500 clinical applications. This product received a 95% clinical rating.

Suggested Retail Cost

- \$65.00/introductory kit

Product Features

The **Virtuoso Flowable** introductory kit has an adequate selection of shades along with the necessary accessories for most clinical cases. The material dispenses easily from the syringe, and the angled needle tip provides precise placement of the composite. It flows easily due to its low viscosity but has minimal slumping, which is beneficial for Class V restorations. The shades evaluated provide very good color match with the tooth structure. Conventional finishing and polishing result in a high surface luster for excellent esthetics. Ninety-six percent of the consultants rated **Virtuoso Flowable** equivalent to or better than their current product. Seventy-one percent would switch to **Virtuoso Flowable**, and 96% would recommend it. ■

Core Paste + + + + ½



Den-Mat Corp.
800.445.0345 • 805.922.8491
www.denmat.com

Description

Core Paste is a self-cured, radiopaque composite core material that contains fluoride. It is available in white and enamel shades. **Core Paste** is indicated for core buildups under fixed prostheses when there is insufficient coronal tooth structure remaining and for cementation of posts and pins in conjunction with buildups. The introductory kit includes 25-g jars of **Core Paste** A and B material (initiator and base) along with mixing sticks, mixing pads, and tips to be used with a composite syringe. Also included in the introductory kit is *Bond Link Bond Enhancer*, which the manufacturer recommends to increase bond strength when

using certain bonding agents. Twenty-four consultants evaluated **Core Paste** in over 220 restorations. This product received a 91% clinical rating.

Suggested Retail Cost

- \$240.00/introductory kit

Product Features

Overall, consultants rated **Core Paste** as a good to excellent core material. They found the ease of preparation and quality of the prepared surface to be the best qualities of **Core Paste**. Very few voids were reported, and the color differentiation between **Core Paste** and tooth structure was excellent. Manufacturer's instructions, packaging, consistency, adaptation, working time, and setting time were all rated as good or better. Several consultants felt that mixing the A and B paste together

greenbite apple + + + + ½

DETAX GmbH & Co. KG
++49 (0)7243/510-0
www.detax.de

Description

greenbite apple is an automixed, addition silicone, bite registration material. It is applied directly to teeth from a dual-barreled cartridge. The medium-bodied material is bright green and has a mild apple flavor. It is packaged with two, 50-ml dual-barreled cartridges, 12 mixing tips, and 12 flat ribbon tips. The working time is 30 seconds with an intraoral setting time of 60 seconds. Thirty consultants used **greenbite apple** in over 350 cases. This product received a 92% clinical rating.

Suggested Retail Cost

- \$43.00/package

Product Features

The packaging and dispensing of **greenbite apple** were familiar to the consultants. The ease of removal from the mouth, rigidity, and resistance to tearing received high ratings. The scent and taste are mild and pleasant. Quality of detail in the bite registration was rated excellent. Dispensing **greenbite apple** through the mixing tip requires a moderate amount of force; adding a flat ribbon tip reduces the opening size, requiring even more force on the dispensing



Consultants' Comments

- ▶ "Very nice detail and color."
- ▶ "Good viscosity and it sets quickly."
- ▶ "I use this material to make templates for provisional crowns and it works great!"
- ▶ "Patients liked the taste but often could not identify it as apple."

gun to extrude the material. Most consultants reported dispensing the material directly from the mixing tip onto the teeth. Eighty-six percent of consultants approved of the working time and setting time. **greenbite apple** was found to trim easily and cleanly with a sharp scalpel, but a set registration may break (like all silicone bite registration materials) if scissors are used; therefore, scissors are not recommended. Fifty-seven percent of consultants would purchase **greenbite apple**, and 70% would recommend it to a colleague.

Clinical Tips

- Since the set material is very rigid, limit the amount of **greenbite apple** used to make it easier to remove.
- Drying the teeth before application helps retain the material in place.
- Trim the bite registration with a scalpel. ■

before loading into a syringe was inconvenient, although ease of mixing, ease of dispensing, and syringeability were all rated as good to very good. All but one consultant found no perceptible difference between the two shades. Fifty-seven percent of consultants found **Core Paste** to be equal to or better than their current composite build-up material, and 57% would recommend **Core Paste** to a colleague.

Clinical Tips

- Wet instruments with resin before manipulation of material to prevent sticking.
- Condense with finger pressure to minimize voids.
- About two minutes after placing, one can perform minor sculpting with a composite instrument. ■



Consultants' Comments

- ▶ "I have used it for years and it is very reliable."
- ▶ "An easier way to mix exact amounts would be nice."
- ▶ "Flowable, yet stacks nicely."

CLINICAL CONSULTANTS

K. Fischer, IN
S. Galster, ND
D. Garber, CA
R. Gardner, MI
N. Garlisi, OH
L. Gee, OK
A. Giovanardi, MI
J. Glick, 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
B. Herrmann, CA
R. Herwig, KS
M. Hewko, OH
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
S. Kelly, OH
D. Keren, NY
J. Kim, NY
B. Klym, MI
J. Kostohryz, TX
J. Kotapish, OH
J. Kotnour, WI
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F. Leal, VA
S. Lever, MD
I. Levine, NY
R. Lezell, MI
R. Lieder, MI
M. Livernois, FL
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
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C. Miller, PA
S. Miller, NV
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THE DENTAL
ADVISOR™

SENN + + +

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

Description

SENN is a polyether/addition silicone hybrid impression material. The material is designed to improve hydrophilicity during intraoral placement. **SENN** is spearmint-flavored and is available in four viscosities: putty (light blue), heavy-body (green), monophasic (purple), and light-body (orange). Setting times are four minutes for regular set and 2:15 for fast set. **SENN** is packaged in two, 48-ml cartridges and with 12 mixing tips. The material was evaluated by 14 editors making 115 impressions during a 10-week period. This product received a 78% clinical rating.

Suggested Retail Cost

- \$39.00/package

Editors' Observations

Manufacturer's Instructions

The instructions are clear, with easy-to-read text. Material specifications and technique instructions are easy to follow.

Ease of Expressing/Viscosity/Handling

Many editors and their staff found that extruding the material was difficult. The light-body was too viscous and did not mix completely within the tip. Many found streaking in the material after extruding. Some found that the heavy-body displaced the light-body or that the light-body and heavy-body separated after setting.

Taste/Odor

SENN was well received by patients and editors for the acceptable taste and lack of odor.

Working Time/Setting Time

Editors found the working time to be satisfactory for one or two units, but not long enough for multiple-unit cases. The combined working and setting time of five minutes seemed to be long for a fast-set material. In many cases, the material did not set properly, requiring additional impressions to be made.

EDITORS' EVALUATION

Exclusive
Review

Editors' Comments

- ▶ "Unique hybrid material."
- ▶ "The material did not set. There was streaking after dispensing with the mixing tip."
- ▶ "Quality of the impression was poor. If the tooth was moist, the material did not stay where placed and deformed."
- ▶ "Light-bodied and heavy-bodied consistencies did not blend well and often delaminated."
- ▶ "Light-bodied material is too viscous."

Ease of Removal from the Mouth

Impressions were flexible enough to be easily removed from the mouth, in contrast to traditional polyether materials that typically set very rigid. Editors still suggest using caution when undercuts or large interproximal spaces are present.

Color Contrast/Tear Resistance

SENN has a good color contrast between the green heavy-bodied and orange light-bodied consistencies. Many consultants found this to be the best feature. The tear resistance was rated as good with occasional reports that the material tore easily in thin areas.

Resistance to Deformation

Editors noted a problem with the fit of crowns. Some stated that **SENN** deformed easily, while others found the deformation was hard to judge because the light-body was too viscous.

Quality of Final Impression

Editors are very much divided about the quality of the final impression. Some reported excellent results while many found a lack of detail and improper setting of the material. ■

CLINICAL CONSULTANTS

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. Piskrowski, MI
D. Pitak, MI
S. Pomerance, MI
D. Powers, MI
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D. Qualliotine, NC
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R. Sambuchi, MI
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P. Sandvick, WI
D. Schimmel, PA
G. Schultz, PA
J. Sedlock, WI
R. Shah, MI
M. Shapiro, MI
J. Shea, MO
J. Sinkwits, MI
H. Sletten, PA
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

CompuDent® + + + + ½ and SafetyWand® + + +

Milestone Scientific
800.862.1125 • 847.272.3207
www.milesci.com

Description

CompuDent is a microprocessor-controlled anesthetic delivery system. This is an updated model of the original **CompuDent** evaluated in THE DENTAL ADVISOR Vol. 18, No. 9, November 2001, and evaluated as the **Wand**® in Vol. 15, No. 10, December 1998.



Consultants' Comments

- ▶ "I love the fact that I can do PDL injections with CompuDent."
- ▶ "Excellent for palatal injections."
- ▶ "The SafetyWand is much lighter than my traditional syringe."
- ▶ "Patients appreciated the high-tech nature of CompuDent."
- ▶ "The beeping is not needed - too noisy."
- ▶ "The retractable safety device needs improvement."

The new unit features:

- A faster aspiration rate.
- A cruise option with shorter waiting time.
- Unit resets when carpule is empty allowing quicker replacement.
- Auto retraction of a safety shield (**SafetyWand**) that complies with OSHA recommendations.

CompuDent delivers local anesthetic in all traditional sites at a controlled flow rate through an ergonomically designed handpiece. The speed by which anesthetic is delivered can be adjusted by the foot pedal, either *ControlFlo*™ (one drop

every other second) or *RapidFlo*™ (about 1.4 ml in 60 seconds), to be used once the final site is reached, such as with an inferior alveolar nerve block. **CompuDent** accommodates most standard local anesthetic cartridges in addition to a variety of needle lengths and gauges. Its innovation involves holding the handpiece like a pen and rotating it between the thumb and forefinger during needle insertion to adjust the direction of the bevel and minimize needle deflection. As an option to the original **Wand** handpiece, the new **SafetyWand** features an auto-retraction mechanism to reduce the risk of needle sticks. The **SafetyWand** is held in a pen grasp during use. A needle-control tab at the index finger position is used to retract the needle shielding it when not in use. The **CompuDent** system

provides a drive unit, foot control, power cord, a technique/operation video, manual, and chairside quick-start cards. **CompuDent** was evaluated by nine consultants, who used it in over 430 injections. **CompuDent** received a 95% clinical rating. The **SafetyWand** feature received an 80% clinical rating.

Suggested Retail Cost

- \$2,495.00/system
- \$90.00/box of 40 **SafetyWand** handpieces
- \$87.50/box of 50 original **Wand** handpieces

Equipment Features

Consultants appreciated the advances **CompuDent** had to offer in local anesthetic administration. The unit is easy to set up and load with an anesthetic cartridge and needle. Consultants reported that the patients' comfort level was superior to that when using traditional syringes. It reduced their anxiety and also resulted in decreased stress for the operator. Palatal injections especially were found to be more comfortable to the patient than with traditional syringes. The auditory tones are of help in providing a non-visual cue to the amount of anesthetic solution delivered. When the slower rate was used exclusively, some patients mentioned that the injection time was too long. The design and weight of the **SafetyWand** handpiece afford a comfortable and accurate mode of anesthetic delivery, which produces quicker and more profound anesthesia. Consultants reported that the

auto-retraction device was not always easy to activate with one hand and at times released on its own. Overall 90% of patients indicated a preference of **CompuDent** over a traditional injection device. The overwhelming majority of consultants found **CompuDent** to be better than the system they were currently using and would purchase it for their practices. All consultants indicated they would recommend it.

Clinical Tips

- Slowly bend the plastic handpiece or snap off excess length if needed to facilitate control of the needle when injecting into tight areas.
- Do not place **CompuDent** within 30 cm (12 in) of other electrical devices, such as electro-surge units, as they may cause interference.
- Test anesthetic cartridges for fit before the first use. Some manufacturers produce the glass with a rounded shoulder at the aluminum hub, preventing proper seating of the cartridge in the holder and failure of needle to puncture the diaphragm.
- Note that 0.225 ml of anesthetic is expelled during the start-up cycle, and 0.12 ml remains in the tubing after the cartridge is emptied; therefore, out of a 1.8-ml cartridge, the injection volume is about 1.4 ml. ■

ALPHA-CROWN + + + ½

Dental Technologies Inc.
800.835.0885 • 847.677.5500
www.dentaltech.com

Description

ALPHA-CROWN is a self-cured, composite provisional material indicated for use in crowns, bridges, veneers, inlays, onlays, and long-term temporaries. It is filled (23% by volume) with a blend of barium-alumino-silicate and quartz, is radiopaque, and exhibits fluorescence to duplicate the appearance of enamel. The material is compatible with light-cured flowable composite for making repairs. **ALPHA-CROWN** has a working time of approximately 90 seconds, and removal of the temporary from the mouth is 2.5 minutes from the start of mixing. The material sets completely within three minutes after removal from the mouth. **ALPHA-CROWN** is available in six shades: A1, A2, A3, A3.5, B1, and B3. Each package contains one, 74-g cartridge of material and 10 mixing tips. **ALPHA-CROWN** shade A2

was evaluated by 23 consultants in the fabrication of 216 provisional restorations. This product received an 84% clinical rating.

Suggested Retail Cost

- \$79.95/package

Product Features

The majority of consultants found **ALPHA-CROWN** simple and easy to use. The auto-mix system produces a consistent viscosity that is easily loaded into any temporary matrix. The most highly rated features of **ALPHA-CROWN** were the lack of bubbles, the final polish, and the match of the temporary to the natural dentition. The viscosity is lower than that of similar materials and tends to run onto adjacent teeth and into embrasures. Upon removal of the matrix from the mouth, the sticky air-inhibited layer needs to be cleaned from the surrounding teeth and the inner aspect of the provisional restoration. The 2.5-minute setting time

was too long for most cases, and consultants preferred a faster set. For multiple-unit cases, however, the time provided was excellent. The provisional is easily removed within the recommended time of 2:30 but may lock onto the preparation if left on the tooth too long. Many consultants accelerated the extraoral setting by immersing the provisional restoration in hot water for 30 seconds before trimming. After trimming and polishing, **ALPHA-**

CROWN produced strong, esthetic provisional restorations. Eighty-one percent of the consultants commented that it provides a more esthetic temporary restoration than materials without fluorescence. Forty-five percent of consultants rated **ALPHA-CROWN** equivalent to their current temporary material and 26% would switch to it, while 41% would recommend it to their colleagues.

Clinical Tips

- After removal from the mouth, the setting time may be reduced by immersing the provisional restoration in hot water for 30 seconds.
- Refrigeration is recommended for storage. Bring the material to room temperature before use.
- Compatible with both eugenol and non-eugenol cements. ■



Consultants' Comments

- ▶ "This material worked great for anterior temporaries."
- ▶ "The material does not produce excessive heat during setting."
- ▶ "A good material with great value."
- ▶ "Include more mixing tips with each cartridge of material."
- ▶ "Heavy air-inhibited layer left a sticky residue on the teeth."

Whip Mix Corp.
800.626.5651 • 502.637.1451
www.whipmix.com

Description

HandiMix is a rapid-setting powder/liquid dental stone used to cast models for custom trays, mouth guards, study casts, orthodontic appliances, interim restorations, and denture repairs.

It is classified as a Type 5 die stone but is not recommended for crown and bridge master models. **HandiMix** powder is supplied in a screw-top plastic jar; the liquid is supplied in a soft plastic pouch. When the two components are combined in the jar and shaken vigorously by hand for 20 seconds, a mix is produced with a working time of 2 to 4 minutes. Pouring into the impression should be done with vibration; setting time is 4-5 minutes, and models may be separated in 10 minutes. Each case contains 20 jars of powder and 20 pouches of liquid. For this evaluation, **HandiMix** was used in 30 dental offices over 400 times. This product received a 94% clinical rating.

Suggested Retail Cost

- \$40.00/case of 20

Product Features

All features of **HandiMix** evaluated received ratings of very good to excellent. Since the powder and water are pre-measured, each mix is consistent and has the proper viscosity. The powder jar and liquid pouch provide neat and easy mixing without the use of a bowl. The "shake-mixing" technique received a 97% rating as did the ability to pour the stone directly into the impression without the use of a spatula or other instrument. The viscosity of the mix is somewhat runny to use in mounting models or model base formation. The clean-up convenience (discard the jar and pouch) was judged "most liked" by 92% of consultants. The vanilla scent is very mild and was unnoticeable to many consultants. Eighty-two percent rated **HandiMix** equivalent to or better than their current fast-set stone, 70% would switch to it, and 85% would recommend **HandiMix**.



Consultants' Comments

- ▶ "This product does exactly what it claims to do and does it well."
- ▶ "Great idea – and no mess."
- ▶ "No bubbles – nice appearance to models."
- ▶ "Make small and large packages for different sizes of models."
- ▶ "Bulk packaging would reduce the cost."

Clinical Tips

- Pour stone into the impression within the 2- to 4-minute working time for best fluidity.
- One jar holds enough material for one full arch with a base or two full arches without bases.
- Very useful when a model is needed in a hurry.
- For a thicker mix, don't put all of the liquid in – give it a good shake.
- Useful for traveling mouth guard clinics.
- When forming a base, use a paper towel to absorb moisture from the material. ■



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