

THE DENTAL ADVISORTM

"Improving Patient Care Through Research & Education"



Photography by Marie Fluent, D.D.S.

Innovations in Prevention: Fluoride Varnish & Calcium Phosphates

Saliva contains fluoride, calcium, and phosphates that promote remineralization, which is necessary for strong and healthy teeth. Current advancements in tooth surface modifiers make it possible for providers to offer preventative, as well as caries management options, with supplementation of these minerals for their patients.

This issue of THE DENTAL ADVISOR will discuss the advantages, disadvantages, and indications of tooth surface modifiers and provides clinical tips.

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(Universal resin cement)

An Editors' Choice award is given to products recognized by our editors as being a unique or significant product.

RATINGS

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

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Innovations in Prevention

Fluorides are the most popular tooth surface modifiers (TSM) in dentistry and have been used as a measure to prevent caries for years. The popularity of fluoride use is no surprise, since its application has been shown to slow, arrest, and even reverse dental caries progression. Today, most dental professionals are applying 5% NaF varnish, replacing 1.23% APF gels and foams that were previously used for in-office fluoride treatments. Fluoride varnishes have been shown to improve substantivity in the oral cavity, allowing for a longer lasting, highly concentrated dose of fluoride to be in contact with teeth. Varnish comes in tubes for multiple applications using a cotton swab or as prepackaged single doses with a small disposable applicator brush.

Indications for use

- Moderate and high-risk caries patients, especially children 5 and younger.
- Dental hypersensitivity.
- Caries prevention on exposed root surfaces.
- Demineralized enamel.
- Newly erupted teeth.
- Orthodontic patients.
- Fluoridated cavity varnish.

Advantages

- Easy and quick application without trays or suction.
- Longer fluoride exposure on tooth and higher fluoride dose than foams and gels.
- Especially helpful for gaggers, elderly patients, and disabled individuals, who otherwise could not tolerate the use of trays or the bulkiness of gels or foams.
- Available in different flavors (good for younger patients).
- Less ingested fluoride during treatment.
- Dries rapidly and will set even in the presence of saliva.
- Sticky consistency helps it adhere to tooth surface.

Disadvantages

- Due to the color and adherence of most fluoride varnishes, they may cause a temporary change in the surface color of teeth.
- Patients may not like the feel of the varnish on their teeth.

Clinical Tips

- Apply to a relatively dry tooth – it allows the material to adhere.
- Send leftover material home with the patient for another application.
- Use a brush applicator to work the material into furcation areas.
- Do not use suction while applying varnish - may clog the suction tube.
- Most studies recommend applications at six-month intervals as effective in controlling or reducing dental caries in primary or permanent teeth for moderate or high-risk children.

Q: What Are the Advantages of Fluoride Varnish over Other Professionally Applied Fluorides?

A: Fluoride varnish works by increasing the concentration of fluoride in the outer surface of teeth, thereby enhancing fluoride uptake during early stages of demineralization. Varnish has improved substantivity, by hardening on the tooth as soon as it contacts saliva, allowing the high concentration of fluoride to be in contact with tooth enamel for an extended period of time (about 1 to 7 days). This exposure is much longer than that of other high-dose topical fluorides such as gels or foams, which is typically 10 to 15 minutes. The amount of fluoride deposited in the tooth surface is considerably greater in demineralized versus sound tooth surfaces.

Calcium and Phosphate Products

In addition to fluoride, calcium and phosphate products have also been used with increasing popularity in dentistry as TSM. Calcium and phosphates are natural building blocks of teeth, and when present in insufficient amounts can be detrimental to tooth integrity. Calcium and phosphate are known to help strengthen tooth enamel, reduce sensitivity, and buffer plaque acid. Amorphous calcium phosphate (ACP), casein phosphopeptide – amorphous calcium phosphate (CPP-ACP, **Recaldent**), and **NovaMin** are among the most popular products.

- ACP is a substance used as a dental treatment to help restore the necessary mineral balance in the mouth in an easy and efficient way. ACP provides several benefits: it binds to fluoride, thereby increasing fluoride uptake; replaces minerals lost from acidic beverage eroded enamel and re-strengthens it; reduces white spots caused by orthodontics; and is significantly more effective than conventional fluoride toothpaste in preventing tooth caries. ACP technology is found in various dental products including: toothpaste, bleaching gels, tooth sensitivity relief product, polishing paste, and pit and fissure sealants.
- **NovaMin** contains the active ingredient calcium sodium phosphosilicate and is used in dental care products for tooth sensitivity and remineralization. **NovaMin** particles bind to the tooth surface and, when the particle comes in contact with saliva and water, they react and release Ca and PO₄ ions. In areas with insufficient mineral content, a calcium phosphate layer is formed. **NovaMin** can be found in toothpastes and tooth sensitivity products.
- **Recaldent** (CPP-ACP) is a special milk-derived protein that can help replace lost minerals in teeth, make them stronger and helps protect them from decay and erosion. It provides increased stability for calcium and phosphate ions to provide bioavailable ions to the tooth more efficiently. **Recaldent** can be found in professional toothpastes and in some sugar-free gum from your local grocery store.

MI Paste (GC America) contains **Recaldent** (CPP-ACP). It is a water-based topical paste for use in the dental office or to be dispensed to patients for use at home. Indications for use include high-carries-risk individuals such as orthodontic patients and those with xerostomia as well as patients who experience sensitivity as the result of recession, scaling and root planing, and bleaching. It is also indicated for use in patients less than six years of age. MI Paste may be applied with a prophy cup following routine prophylaxis or at home in a custom tray or with a fingertip.

Q: Prophyl paste can be challenging when used to polish teeth on patients who gag easily or elderly patients. Can you recommend an alternative to polishing with prophyl paste?

A: *Butler® Paste-Free Prophyl* (Sunstar Americas, Inc.) is a gluten- and latex-free, disposable, paste-free prophyl angle with non-fluoridated, polishing agent incorporated into the cup. The elimination of prophyl paste reportedly reduces splatter, saves time, is less abrasive on enamel and restorations, as well as increases visualization. ***Butler® Paste-Free Prophyl*** is recommended in select cases such as geriatric patients, due to the need to rinse less; young children, due to the lack of paste; and on restorations where a gentler polishing agent is required.



Butler® Paste-Free Prophyl
(Sunstar Americas, Inc.)

What's New?

MI PASTE PLUS (GC America) with **Recaldent** (CPP-ACP) and fluoride (CPP-ACPF) combines the proven benefits of fluoride with the breakthrough technology of **Recaldent** (CPP-ACP) to drive calcium and phosphate for even better tooth strengthening. For a complete list of indications and treatment protocol, please contact GC America, Inc.

3M ESPE Preventive Measures Risk Assessment and Management Program

The 3M ESPE Preventive Measures Oral Health Risk Assessment and Management Program is a comprehensive program designed to assist dental practices and dental schools in establishing a formal risk assessment plan. The purpose of a formal risk assessment program is to:

- Assign patients into recognized risk categories (low, moderate or high).
- Identify treatment options and therapies to achieve and maintain proper oral health.

There are a number of tools for implementation of 3M ESPE Preventive Measures Oral Health Risk Assessment and Management Program including:

(continued on page 4)

Innovations in Prevention

(continued from page 3)

- Comprehensive reference booklet - assists in identifying caries and periodontal disease risk factors and offers treatment options.
- Reference poster for operator use - includes treatment protocols and accompanying preventive products.
- Treatment wheel - a quick reference tool to keep in the operatory.
- Easel for reception area - informs patients about participation in the program.

- Set of 30 patient surveys - help assess patients' oral health. Answers to questions regarding oral hygiene habits, food consumption, and family oral health history are used to determine the most appropriate office treatment and home-care therapies for their particular situation.

According to 3M EPSE, identifying risk, followed by implementation of the appropriate protocols, is the first step in achieving and maintaining optimum oral health.

Fluoride Varnishes

Product	Company	Active Ingredient	Packaging	Flavors	Rating
3M ESPE Vanish Varnish	3M ESPE	5% NaF	Unit dose	Melon, cherry, mint	na
ALLSolutions 5% Sodium Fluoride Varnish	DENTSPLY Professional	5% NaF	Unit dose	Raspberry	na
Duraflor	MEDICOM	5% NaF	Tube, unit dose	Bubblegum, raspberry	91%
Duraflor Halo 5% Sodium Fluoride White Varnish	MEDICOM	5% NaF	Unit dose	Spearmint, wild berry	93%
Duraphat	Colgate Oral Pharmaceuticals	5% NaF	Tube		na
Durashield	Sultan Healthcare	5% NaF	Unit dose	Bubble Fun	na
Enamel Pro Varnish	Premier Dental Products	5% NaF, ACP	Unit dose	Strawberries 'n cream, bubblegum	84%
Flor-Opal Varnish	Ultradent	Fluoride	Unit dose		na
Fluor Protector	Ivoclar Vivadent	Fluorsilane	Unit dose	Neutral	na
Kolorz ClearShield Fluoride Varnish	DMG America	5% NaF	Unit dose	Watermelon	91%
NUPRO 5% Sodium Fluoride Varnish	DENTSPLY Professional	5% NaF	Unit dose	Raspberry	na
Profluorid L	VOCO America	5% NaF, CaF	Uni dose, bottle	Banana	na
Profluorid Varnish	VOCO America	5% NaF	Unit dose, tube	Melon	86%
VELLA Varnish, 5% Sodium Fluoride	Preventive Technologies, Inc.	5% NaF	Unit dose	Spearmint, strawberry	84%
Waterpik UltraThin Fluoride Varnish	Water Pik	5% NaF	Unit dose		na

For more information on Fluoride Varnishes visit the Product Comparison Tables or the online issue at www.dentaladvisor.com.



TDA Recommends The Following Products

Fluoride Varnishes

- *Duraflor Halo 5% Sodium Fluoride White Varnish (MEDICOM)*
- *Kolorz ClearShield Fluoride Varnish (DMG America)*



Profluorid Varnish
(VOCO America)

www.dentaladvisor.com

Innovations in Caries Detection

Caries detection is becoming a hot topic in dentistry. The standard of care for many years has been to utilize an explorer to detect a “stick” in a carious lesion in conjunction with radiography. With the availability of digital radiography, exciting advances have been made. Recently, the focus has shifted to early detection and reduction or elimination of invasive procedures. Currently, there are two commercial devices [**DIAGNOdent** (*KaVo America*) and **Midwest Caries I.D.** (*DENTSPLY Professional*)] to assist in detecting caries. New technologies use different detectors to identify early carious lesions or enamel breakdown. **Spectra™ Caries Detection Aid** (*Air Techniques*) is now commercially available. **Canary Digital Caries Detection System** (*Quantum Dental Technologies*), **FluoreCam** (*Daraza*) and **SOPROLIFE** [*ACTEON North America (Satelec & Sopro companies)*] are awaiting FDA approval. Early detection allows for more treatment options that are non-invasive and will improve patient outcomes over time.

Future issues of THE DENTAL ADVISOR will report on devices that detect caries utilizing novel detectors as well as innovations in software to analyze data captured from different devices as well as remineralization materials to repair the detected damage.



Spectra™ Caries Detection Aid
(*Air Techniques*)

Cavex Temporary Cement + + + +

Cavex Holland B.V.
+31 (0)23 530 77 00
www.cavex.nl • www.practicon.com/cavex

Description

Cavex Temporary Cement is intended for the cementation of temporary crowns and bridges. Its eugenol-free formulation is designed not to inhibit the polymerization of resin permanent luting cements. According to the manufacturer, **Cavex Temporary Cement** provides high adhesion to dentin, low solubility, and will not dissolve in a moist environment. **Cavex Temporary Cement** is also compatible with resin composite. A mixture of equal parts of Base and Catalyst forms a homogeneous paste that is pale yellow in color for easy distinction from dentin. The cement is odorless. Setting time in the mouth is 1-1.5 minutes. It comes packaged with a 35-g tube of Base; a 16-g tube of Catalyst; and mixing pad with spatula. **Cavex Temporary Cement** was evaluated by 23 consultants in over 468 clinical cases. It received an 86% clinical rating.

Suggested Retail Cost

- \$18.59/kit

Product Features

Cavex Temporary Cement is simple to dispense from the tubes and easily mixes to a uniform consistency. The light yellow color aids in visibility during removal of cement, and the color is neutral enough for all but thin anterior restorations. After setting, removal of excess cement is easy, with no crumbling or smearing residue.



Consultants' Comments

- ◆ “I like the smooth and creamy consistency.”
- ◆ “Easy to dispense and cleanup.”
- ◆ “Provide an automix syringe as an alternative to the tubes.”
- ◆ “Offer a fast-set formulation to save on chair time.”

Temporary restorations are easy to remove, and the cement cleans nicely off of the preparation. Seventy-eight percent of consultants reported that **Cavex Temporary Cement** was the same as or better than their current temporary cement; 48% would switch to it and 56% would recommend **Cavex Temporary Cement** to their colleagues.

Clinical Tips

- Mix quickly to allow more time for application.
- For easier cleanup, wait for 1.5 minutes after cementation. ■

Enamel Pro Varnish + + + 1/2

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

Request a Sample:

Visit www.dentaladvisor.com to request a sample or more information!



Description

Enamel Pro Varnish is a 5% sodium fluoride varnish that also contains ACP (amorphous calcium phosphate). It is indicated for the treatment of dentinal hypersensitivity and for the reduction of post-operative sensitivity. **Enamel Pro Varnish** can be placed on sensitive root surfaces and under temporary restoratives and cements to seal exposed dentinal tissue. It can also be used as a cavity liner. **Enamel Pro Varnish** may be used on moist teeth according to the manufacturer and leaves a film of varnish which, when set, allows for visual verification. **Enamel Pro Varnish** is available in sealed, single-dose packages with applicator brush and mixing well. It is available in Strawberries 'n Cream and Bubblegum flavors. **Enamel Pro Varnish** was evaluated by 27 clinical consultants in 539 treatments. This varnish received an 84% clinical rating.

Suggested Retail Cost

- \$69.30/35-count box
- \$350.35/200-count box

Product Features

Packaging, instructions and ease of use received the highest ratings from consultants. Patients liked both of the flavor choices. The smoothest application occurs when the teeth are thoroughly air dried as recommended by the manufacturer; otherwise, if applied to wet teeth, the varnish goes on sticky and clumpy. Patients commented on the waxy feeling of the varnish. Sixty-six percent of the consultants rated **Enamel Pro Varnish** the same as or better than their current fluoride varnish. Fifteen percent of consultants would switch and 44% would recommend **Enamel Pro Varnish** to their colleagues.



Consultants' Comments

- ◆ "Good for patients during orthodontic treatment."
- ◆ "Color is acceptable, although I would like it even more transparent."
- ◆ "Flavors are great for children. Add more flavors for adults."
- ◆ "Patients complain that teeth are sticky after application."

Clinical Tips

- Isolate or lubricate the lips to prevent the varnish from sticking to them.
- Teeth should be air dried for optimal application.
- Apply quickly and try to keep saliva off the brush as long as possible.
- Avoid use of other fluoride preparations, such as fluoride gels, during the same day. ■

Ivoclar Vivadent, Inc
800.533.6825 - 716.691.0010
www.ivoclarvivadent.us.com

Request a Sample:

Visit www.dentaladvisor.com to request a sample or more information!



Description

SpeedCEM is a self-curing, self-adhesive resin cement with light-cure options. It is indicated for cementation of crowns, bridges, inlays and onlays made of metal, porcelain/metal or high-strength ceramic (zirconium oxide, aluminum oxide, lithium disilicate), and metal or fiber posts. It is dispensed from an automix syringe and is available in three shades: Transparent, Yellow and White Opaque. Refrigeration is recommended. Specialized endodontic dispensing tips for post cementation are available separately. Working time is 2-3 minutes; intraoral setting time is an additional 2-3 minutes unless light curing is done. The refill kit contains one syringe each of Transparent, Yellow and White Opaque cement; mixing tips; manufacturer's instructions; and Technique Guide. **SpeedCEM** was evaluated by 22 consultants in 563 uses. It received a 93% clinical rating.

Suggested Retail Cost

- \$149.00/Refill Kit

Product Features

SpeedCEM is easy to work with and has shades that satisfy the needs of most clinical cases. The cement is neat and easy to dispense from the automix syringe with a viscosity that coats the surface of the restoration without being too runny. After a brief tack cure, excess cement peels cleanly from the margin. In most cases no post-operative sensitivity was noted.



Consultants' Comments

- ◆ "Easy to use with simple directions and quick cleanup."
- ◆ "I observed no post-operative sensitivity."
- ◆ "Working time is adequate for multiple-unit restorations."
- ◆ "Transparent shade is a little opaque - looks like a white shade."

During the evaluation, three restorations were removed due to sensitivity, which resolved after replacement, and two restorations debonded. Ninety-five percent of consultants reported that **SpeedCEM** performed the same as or better than their current self-adhesive resin cement; 66% would switch to it and 76% would recommend **SpeedCEM** to their colleagues.

Clinical Tips

- Do not use on veneers.
- Cure margins for one second per surface before removing excess cement. Hold crown in place to prevent dislodging. ■

E4D Dentist System (1 yr)

D4D Technologies

US - 972.234.3880

Canada - 800.737.5029

www.d4dtech.com

Description

E4D Dentist is a chair-side CAD/CAM system capable of scanning in the mouth, from an impression or on a model. A laser is used to scan the preparation, preoperative condition, approved provisionals or diagnostic wax-up. **DentaLogic** software and **Autogenesis** are used to create a 3-D virtual model and proposed restoration compatible with the neighboring teeth and opposing dentition. Multiple design tools allow the user to manipulate the virtual tooth and a multi-color display shows strength of occlusal and interproximal contacts as well as material thickness. The **E4D mill** uses two of the three **Two-Striper** (Premier Dental Products) diamond burs under constant water spray to fabricate the final restoration from porcelain or composite blocks (from Ivoclar Vivadent or 3M ESPE). The **E4D Mill** features a proprietary automatic bur changer and a variety of prompts to direct the user in operating the mill and complete diagnostic and maintenance procedures. For customer support, **Support on Sight (SOS)** is a team of experienced dental professionals, software and hardware specialists who are able to remotely access your system and assist you during every aspect of the scan, design and milling process.

Suggested Retail Cost

- \$121,995.00 USD/system

Clinical Evaluation Protocol

- **E4D Dentist** was evaluated by Editors of THE DENTAL ADVISOR during a 12-month period.
- Two hundred fifty restorations were designed and milled with the **E4D Dentist** system. Forty-one restorations have been in service for one year and were available for evaluation of clinical performance. The type of restoration, ceramic material and cement were noted.
- Restorations were evaluated on a 1-5 rating scale: 1 = poor, 2 = fair, 3 = good, 4 = very good, 5 = excellent.

Clinical Observations

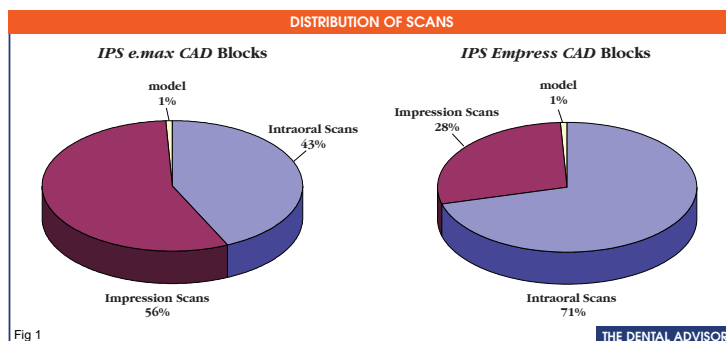
Placement

Success with CAD/CAM, as with all dental restorative processes, begins with proper tooth preparation and tissue retraction. Imaging and creating a clear working three-dimensional model are best achieved when the prepared tooth has smooth line angles, proper line of draw and the margin is clearly visible. The initial training and access to the SOS support team significantly reduced the learning curve. As users gain experience and familiarity with the system, the design becomes more intuitive and ideal results are achieved more readily. Software updates such as **Rapid Scan** (automatic scanning function) further reduce the time needed to fabricate a restoration. The ability to scan in the mouth, from an impression or from a model enables the operator to use **E4D** with every patient (Fig 1). Because of these capabilities, use of the **E4D** was possible in challenging situations such as excessive salivary flow, limited opening, and a strong gag reflex which could limit use of other technologies.

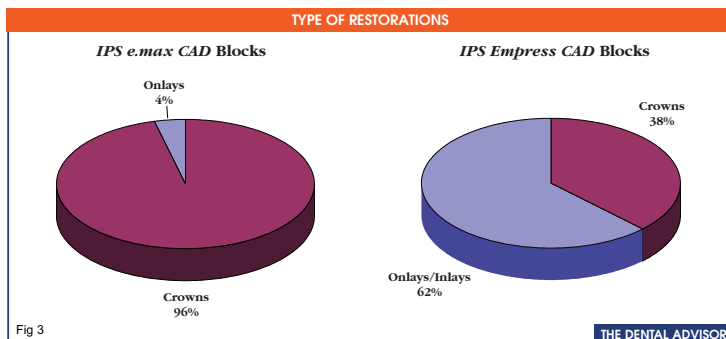
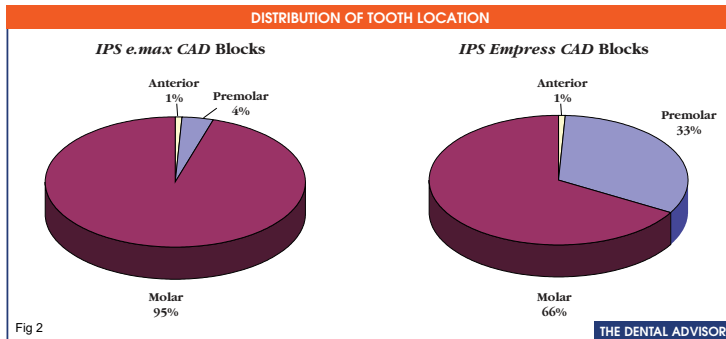


Consultants' Comments

- ◆ "The ability to scan in the mouth, from an impression or a model is invaluable and unique."
- ◆ "Autogenesis provides excellent proposals for inlays, onlays and crowns."
- ◆ "The design tools are very intuitive."
- ◆ "The ability of SOS to log onto my cart and mill enabled me to address every challenge immediately."
- ◆ "The detailed mode of the E4D Mill provided crisp margins and deep anatomy."
- ◆ "Patients are impressed by the advanced technology and appreciated the convenience of a same day or next day restoration."



IPS e.max CAD (Ivoclar Vivadent) restorations were fabricated for most full-coverage molar restorations, while **IPS Empress CAD** (Ivoclar Vivadent) was most often used for fabricating crowns in the premolar and anterior regions as well as for inlays, onlays and $\frac{3}{4}$ crowns throughout the mouth (Fig 2 and 3).



IPS Empress CAD and IPS e.max CAD (Ivoclar Vivadent) ceramic blocks were used. IPS Empress CAD is available in high and low translucency, as well as a multi-shade block with a gradient of high to low chroma within the block. IPS e.max CAD is available in high and low translucency blocks. The excellent fit of the restorations was the result of proper retraction, accurate imaging, advanced Autogenesis software and the ability of the assistant to utilize the design tools (Fig 4).

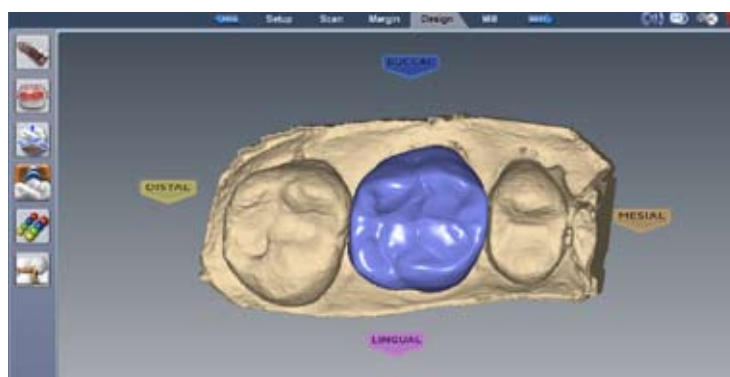


Fig 5. Final design before milling

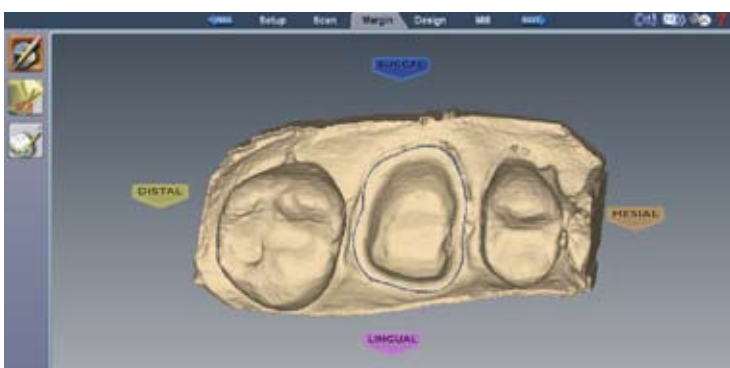


Fig 4. 3-D virtual model

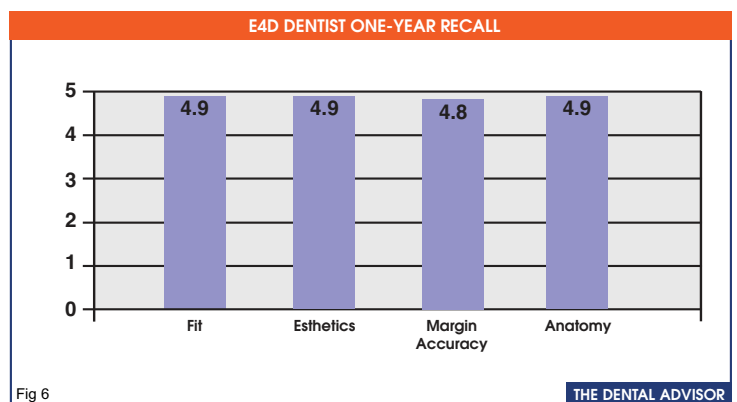
Slight adjustment of proximal contacts or occlusion is sometimes necessary and easily achieved. The variability in need for adjustment is a result of the level of experience of the dentist or assistant doing the design, tooth preparation, parameter settings, and sprue location (Fig 5). All restorations were clinically acceptable and were bonded with MultiLink Automix Easy (Ivoclar Vivadent).

The E4D Mill produced ceramic restorations that were rated excellent for fit to the tooth. Clearly defined margins, proper reduction and slightly tapered walls allow ideal seating of each restoration. The quality and accuracy of the restoration margins are dependent on adequate soft tissue retraction and accurate margin marking during the design phase. Restoration margins were observed to be excellent when placed into the mouth. IPS Empress CAD and IPS e.max CAD (Ivoclar Vivadent) are both known for their exceptional esthetics and ability to blend with natural tooth structure.

While Autogenesis provides proposals with very good anatomy, the operator can create deeper grooves and enhance the occlusal morphology using many design tools. E4D Mill also has a third detailing bur that allows the deeper grooves and thin margins to be milled with accuracy.

Recall

Forty-one restorations were evaluated at 12 months after placement. Results for fit, esthetics, margin accuracy and anatomy are shown (Fig 6).



One IPS Empress CAD restoration fractured and required replacement. One IPS e.max CAD restoration debonded and was recemented. No chipping was noted on any of the restorations. Most of the intracoronal restorations were finished with ceramic polishers, while most of the crowns (IPS e.max CAD) were stained, glazed and crystallized. The glazed restorations maintained their luster, and the polished restorations were sufficiently glossy (Fig 7 - Page 10).

Summary

E4D Dentist and Mill were used to fabricate 250 restorations, 41 of which were evaluated at 12 months after placement. Through proper training, access to the SOS team and the capabilities of the design center and mill, the consultants and assistants were able to effectively and efficiently fabricate excellent indirect restorations in a single patient visit.

E4D Dentist System (1 yr)



Fig 7. Highly esthetic IPS e.max CAD restoration

At one-year recall, the majority of **E4D** restorations received excellent ratings. *IPS Empress CAD* and *IPS e.max CAD* ceramics exhibited excellent esthetics, showed no signs of wear, and blended well with the surrounding tooth structure in nearly all restorations. At one-year recall, only one onlay showed staining at the cavosurface margin. No post-operative sensitivity was reported at one year.

Clinical Tip

- Take the time to properly prepare the tooth for a porcelain restoration and provide very good tissue retraction. It then becomes easy to build an accurate 3-D model and fabricate a restoration with accurate margins and ideal thickness. ■

Ionic ProClean + + + +

Global Ionics LLC
914-773-8700
www.ionicproclean.com

Description

Ionic ProClean is a manual toothbrush with ionic action. The brush has a polypropylene handle and soft nylon bristles with a staggered brush trim. It contains batteries inside its hermetically sealed handle. The batteries power an internal circuit board that sends a flow of positive ions to the silver contact plate on the handle and a flow of negative ions to the ionic emitter located at the base of the brush head. The manufacturer asserts the **Ionic ProClean** temporarily changes tooth enamel to a (+) positive charge by sending a flow of positive ions to the silver contact plate on the handle; the ionic action repels plaque from tooth enamel. At the same time, the flow of negative ions to the ionic emitter at the brush head attracts the plaque; thereby allowing the plaque to be swept away. While brushing, a red light on the handle shines to indicate that the energy circuit is complete and the ionic action is working. The red light will only shine when the user touches the contact plate on the handle while brushing their teeth – proof that the energy circuit is complete and the ions are flowing as asserted by the manufacturer. **Ionic ProClean** is recommended for use by all patients, including those with orthodontic appliances, and is available with a soft bristle and four colors: red, orange, purple, and yellow. **Ionic ProClean** was evaluated by a team of dental professionals and 107 patients in over 11,100 uses. It received an 87% clinical rating.

Suggested Retail Cost

- \$9.95/toothbrush

Clinical Feedback

Ionic ProClean received the highest ratings from patients for

Consultants' Comments

- ♦ "I noticed a lot less staining and tartar buildup in the lower lingual anteriors."
- ♦ "Gum tissue appeared healthier than previous recalls."
- ♦ "A must for ortho cases!"
- ♦ "Bristles seemed stiff."

Patients' Comments

- ♦ "Clean feeling lasts for hours."
- ♦ "This toothbrush can replace my standard toothbrush any day."
- ♦ "I love this toothbrush; it made my teeth feel as though they were cleaned by a hygienist everyday."
- ♦ "Increase size of metal switch."
- ♦ "Provide different brush head sizes."

effectiveness of tooth cleaning, gentleness on gums and comfort of the handle. While a few patients would like to see different options for the brush head and handle, most patients commented positively on the ease of use. Numerous users noted that their teeth felt clean all day. Consultants reported that they observed less tartar buildup and gingivitis and believed the toothbrush contributed to good oral hygiene. Seventy-two percent of patients reported that the **Ionic ProClean** was equivalent to or better than their current brush. Fifty-nine percent of patients reported that they would continue to use the **Ionic ProClean**.

Clinical Tips

- Recommend this product to patients who use a manual toothbrush.
- Recommend this product to patients with plaque buildup. ■

Shofu Dental Corp.
800.827.4638 760.736.3277
www.shofu.com

Description

ResiCem is a dual-cured, universal resin cement compatible with all types of framework and restorative materials, and is specifically designed for use with zirconia and alumina ceramics. It combines adhesive and resin composite technologies. **ResiCem** can be expanded for use as an all-purpose bonding system by using primers specific to the restorative materials: *Porcelain Primer* for porcelain and indirect composite, *AZ Primer* for alumina and zirconia, and *ML Primer* for metal. It is translucent in color and designed for easy clean up. **ResiCem** comes in a proprietary dual-barrel syringe with short automix tips. The Basic Set includes: 2, 5-ml syringes of **ResiCem** paste (clear color); 1, 3-ml bottle of **ResiCem Primer A**; 1, 2.5-ml bottle of **ResiCem Primer B**; 20 mixing tips; microbrush applicators; microbrush holder; mixing well; manufacturer's instructions; and MSDS. **ResiCem** must be refrigerated when not in use. **ResiCem** was evaluated by 22 consultants in over 223 uses. It received a 91% clinical rating.

Suggested Retail Cost

- \$ 273.17/Basic Set

Product Features

ResiCem is easy to use and clean and simple to dispense with the automix syringe. A mixture of *Resi-Cem A* and *B Primers* is applied to the dentin/enamel surfaces of the prepared tooth and air dried. The appropriate primer is placed on the internal surface of the restoration and air dried. Since the tooth primer accelerates setting of the cement, cement should not be loaded into the tooth - as is often done for inlays/onlays - and should only be placed in the restoration to prevent premature setting and incomplete seating. After tack curing, excess cement peels off nicely at the margins. While the system is very complete, some consultants thought there were too many bottles and the instructions were not clear as to when to use each primer. Bond strengths of **ResiCem** to ceramic and metal substrates are excellent. Seventy-six percent of consultants reported that **ResiCem** was the same as or better than their current resin cement; 14% would switch to **ResiCem** and 67% would recommend it to their colleagues.



Consultants' Comments

- ◆ "Easy to dispense and use."
- ◆ "Cleanup is easy if cement is tack cured for 3 seconds."
- ◆ "Primers A and B seal the dentin tubules and minimize postoperative sensitivity."
- ◆ "The Porcelain, AZ and ML Primers are effective, do not have a strong odor and coat nicely, making it easy to adapt ResiCem to the intaglio surface of the restorations"
- ◆ "ResiCem with AZ Primer bonds very effectively to zirconia and to date there have been no de-bonds."
- ◆ "Make self-cured mode set faster."
- ◆ "Create a universal A2/A3 shade and an opaque shade."

Clinical Tips

- Remove from refrigerator 15 minutes before use.
- Lightly apply petroleum jelly to outer margins of restorations for easy cement removal.
- Spot cure, remove excess cement and floss contacts before final cure. ■

Bond-1 SF Solvent Free SE Adhesive + + + 1/2

Pentron Clinical Technologies
800.551.0283 - 230.265.7397
www.pentron.com

Request a Sample:

Visit www.dentaladvisor to request a sample or more information!



Description

Bond-1 SF is a solvent-free, one-coat, self-etching (7th-generation) bonding agent. The formulation has 40% by weight filler. Application requires three steps: dispense, spread evenly and rub for 20 seconds, and light cure for 10 seconds. Air thinning is not required. This bonding agent should not be used with self-cured composites or resin cements. **Bond-1 SF** is available in 2 ml syringes with flocked needle tips or in single doses with microbrushes. **Bond-1 SF** in both delivery systems was evaluated by 25 clinical consultants in bonding 663 restorations. This bonding agent received an 84% clinical rating.

Suggested Retail Cost

- \$44.95/syringe kit
- \$143.95/50 single-dose pack

Product Features

Bond-1 SF is quick and easy to use. Consultants liked the concept of a solvent-free bonding agent that does not require air thinning. Consultants commented on the high viscosity of the bonding agent

Consultants' Comments

- ◆ "Both the syringe and single doses are easy to use and the procedure is quick."
- ◆ "Adhesive is easiest to apply in larger preparations."
- ◆ "Material is thick when applied."
- ◆ "Material leaves a visible residue on the tooth – polish off after finishing restoration."
- ◆ "Improve the design of the syringe to control amount of material dispensed."

when applied and some observed pooling, especially in proximal boxes. The syringe provided convenient delivery and the flocked tip was narrow enough to fit into conservative preparations. The single doses contain enough adhesive for an entire quadrant. No post-operative sensitivity was reported. Fifty-two percent of the consultants reported that **Bond-1 SF** was the same or better than their current bonding agent.

Clinical Tips

- Use care with the amount of adhesive applied to the preparation to avoid pooling.
- Use the microbrush to remove excess material.
- Do not use with self-cured composites or resin cements.

Editor's Note: While not required, it is understood that some clinicians have a personal preference to etch enamel. That being the case, it has been determined that etching enamel will not have any detrimental effect on the efficacy of the product. ■

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