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JULY-AUGUST 2019
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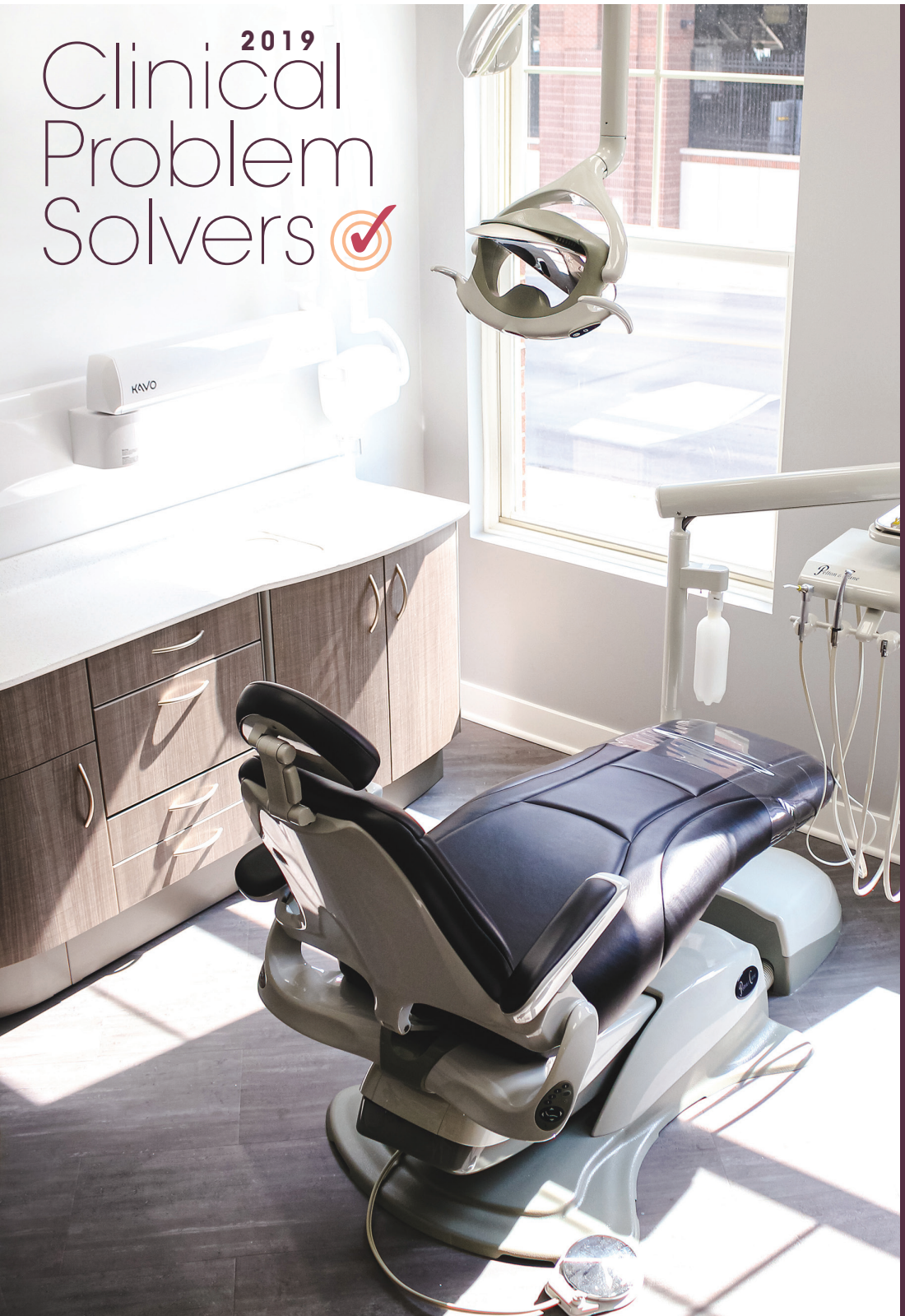

DENTAL ADVISOR

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VOL. 36, NO. 4

FROM THE DESK OF
Dr. Sabiha S. Bunek, Editor-in-Chief

As a member of the editorial board and clinical evaluator at DENTAL ADVISOR, I feel fortunate to be well-versed in a broad range of dental products that reach the market. Because of this unique position, I look forward to offering this issue of Clinical Problem Solvers each year to our subscribers. This issue allows us to recommend products which we have found solve very specific problems or address previously unresolved issues in dentistry.

We know that individual practicing dentists face an over-abundance of products (new and old) to choose from on a daily basis and limited time and resources can hinder the ability to thoroughly investigate the claims of manufacturers. It is gratifying to be able to combine our experiences as practicing dentists and clinical evaluators to offer you this list of go-to products that truly solve clinical problems.

While we all have our own opinions regarding individual products, this issue more directly offers you our advice on how these products can be utilized to overcome a specific challenge. I hope you find these suggestions useful, and please keep your own recommendations coming! As always, you may reach me at drbunek@dentaladvisor.com.

— *Sabiha S. Bunek*

Hygenic Framed Non-Latex Flexi Dam

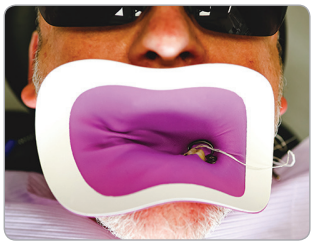
DENTAL ADVISOR CLINICAL PROBLEM SOLVER

Coltene
www.coltene.com

Clinician: Dr. Anthony Valentine, DDS

Problem:

Dental dam frames are cumbersome and may take a while to properly place. They are not flexible and require autoclaving.



Solution:

Hygenic Framed Non-Latex Flexi Dam solves all of these issues with their built-in flexible frame. They can be placed quickly and easily, do not need to be sterilized after use, and allow for maximum flexibility and increased patient comfort.

GC PLIERS

DENTAL ADVISOR CLINICAL PROBLEM SOLVER

GC America
www.gcamerica.com

Clinician: Dr. Sabiha S. Bunek

Emery powder

Problem:

Many clinicians use a pair of hemostats for removing provisional restorations or loose permanent crowns. Hemostats, as well as other crown removal instruments, can slip and cause discomfort to the patient.

Solution:

GC PLIERS are well-constructed stainless steel forceps designed to easily remove and handle indirect restorations. The working ends are rasped, so they grab into restorations well. They also come with rubber pads that can be snapped on the working ends to provide cushion and grip when needed. The pliers effectiveness is enhanced when paired with an abrasive powder.

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KaVo NOMAD™ Pro 2

KaVo
www.kavo.com

DENTAL ADVISOR CLINICAL PROBLEM SOLVER

Clinician: Dr. Sabiha S. Bunek

Problem:

When taking radiographs, the wall mount x-ray arm can drift, or the patient can move, before the shot can be captured accurately.

Solution:

KaVo NOMAD™ Pro 2 handheld x-ray system allows the operator to safely stay in the room while quickly capturing the image. This saves time by reducing retakes. From changing image capture settings to exposing the x-ray, you can be there by your patient's side, creating a positive radiographic experience for you both.

BEAUTIFIL FLOW Plus X

SHOFU
www.shofu.com

DENTAL ADVISOR CLINICAL PROBLEM SOLVER

Clinician: Dr. Sabiha S. Bunek

Problem:

Class V restorations can be cumbersome to place with conventional composite due to handling characteristics, and time spent finishing and polishing excess material.

Class V, #28

F00 being placed

Final restoration #28

Solution:

I prefer ***BEAUTIFIL FLOW Plus X*** for Class V restorations because of its strength, and excellent handling characteristics. Unlike most traditional flowable composite, ***BEAUTIFIL FLOW Plus X*** has a high viscosity so it stays where you place it (no slumping). It also releases fluoride, which is beneficial especially because most Class V lesions are in an area more susceptible to caries. It is available in two viscosities, Zero Flow (F00) for stacking and Low Flow (F03) for when you desire a traditional flowable. It also comes in an assortment of shades, including opaque shades.

OMNICHROMA

Tokuyama
www.tokuyama.com

DENTAL ADVISOR CLINICAL PROBLEM SOLVER

Clinician: Dr. Sabiha S. Bunek

Problem:

Shade matching is complicated and time consuming. Composite kits can have over 30 shades and multiple opacities. Keeping this kind of inventory is costly and, if you do not use them in a timely manner, they expire.

Class V, #7

OMNICHROMA is opaque at placement

Perfect shade blending, post-cure, #7

Solution:

OMNICHROMA is a one-shade universal composite designed to blend and match any VITA classical shade. It is excellent for use in shallow preparations, such as Class V restorations. For deeper restorations, a blocker is available to mask out dark dentin. Initially when placing the composite it appears opaque; however, due to its unique filler it blends post-curing. The clinical time spent selecting a proper shade match is eliminated with this product.

TheraCal PT™

Bisco Dental
www.bisco.com

DENTAL ADVISOR CLINICAL PROBLEM SOLVER

Clinician: Dr. Ona Erdt

Problem:

Wiggly, salivating pediatric patients having pulpal treatment must sit for several minutes with medicaments in the tooth. In addition, other pulpotomy materials may require hand mixing a powder and a liquid and often have a long set time.

Solution:

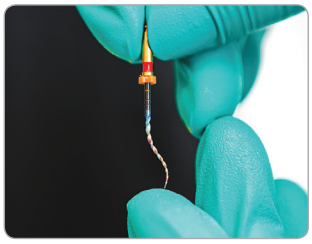
TheraCal PT™ is a resin-modified, dual-cured, biocompatible material designed for pulpal treatment that is light cured for 10 seconds. This allows for an immediate or same-day restoration. Once hemostasis is achieved, ***TheraCal PT*** can be conveniently placed from an automix syringe. In addition to saving time, ***TheraCal PT*** is highly radiopaque, releases calcium and has an alkaline pH.

Hyflex™ EDM NiTi Files

Coltene
www.coltene.com

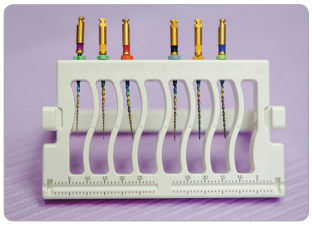
DENTAL ADVISOR CLINICAL PROBLEM SOLVER

Clinician: Dr. Sabiha S. Bunek



Problem:

I want to keep more endodontic treatment in house, but I need a simplified system that I can feel confident will help me achieve faster, more predictable results.



Solution:

Hyflex™ EDM NiTi Files combine flexibility, fracture resistance and cutting efficiency in one modular system. Fewer files are required for cleaning while preserving anatomy. ***Hyflex EDM NiTi Files*** have controlled memory properties which allow them to follow the anatomy of the canal. Additionally, they offer extreme fracture resistance and regenerate to their original shape after autoclaving. These features create a system that gives you reliable, quick and easy results.

Riva Star

SDI (North America)
www.sdi.com

DENTAL ADVISOR CLINICAL PROBLEM SOLVER

Clinician: Dr. Fiona Collins

Problem:

Many patients experience dentinal hypersensitivity. This is especially true of adult patients who have received periodontal therapy, or have extensive gingival recession and exposed root surfaces, or xerostomia.

Solution:

Riva Star is a new generation SDF (silver diamine fluoride) desensitizer that immediately relieves tooth sensitivity for adults over 21 years of age. ***Riva Star's*** key ingredients are silver diamine fluoride (SDF) and potassium iodide (KI). Unlike any other SDF based system, ***Riva Star's*** two-step patented procedure minimizes the risk of staining the tooth black. This process results in a more esthetically acceptable tooth colored appearance for the patient. The use of ***Riva Star*** enhances bonding of glass ionomers to dentin. ***Riva Star*** provides a quick, painless and easy treatment option for adults and the elderly.

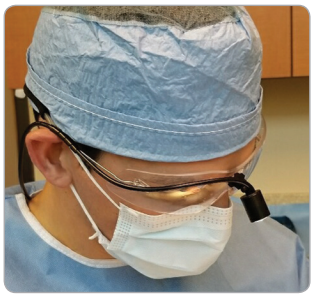
Note: *SDI Limited has been successful in registering **Riva Star** in several key Latin American countries such as Brazil, Peru and Colombia as well as in Canada as an anti-caries agent. In Europe and Australia it is registered for the treatment of hypersensitivity.*

Feather Light LED

UltraLight Optics
www.ultralightoptics.com

DENTAL ADVISOR CLINICAL PROBLEM SOLVER

Clinician: Dr.Julius Bunek



Problem:

Some cordless loupe lights tend to be heavy and they do not connect securely to the loupes, needing constant adjustment.

Solution:

Feather Light LED (cordless hybrid) is the lightest loupe light on the market with custom-fit mounts for each brand of loupe. Since the device is also a cordless hybrid, it eliminates the problem of tangling hands and arms with longer cords plugged in elsewhere.

GC Fuji® Automix LC

GC America
www.gcamerica.com

DENTAL ADVISOR CLINICAL PROBLEM SOLVER

Clinician: Dr. Gary Bloomfield

Problem:

Many dentists are interested in utilizing glass ionomer restoratives but do not have a triturator for mixing capsules.

Solution:

GC Fuji® Automix LC is a radiopaque resin-reinforced glass ionomer available in automix delivery. It comes with an ergonomic dispenser, which allows product to be directly dispensed into the cavity.

Unica Anterior Matrix System

Polydentia
www.polydentia.ch

Clinician: Dr. Upen J. Patel

Problem:

Traditional Mylar Strips do not adapt well to the interproximal contact areas, making it difficult to create ideal embrasure contour and broad/tight interproximal contact.

Clinical photos courtesy of Polydentia

Solution:

Unica Anterior Matrix System is a predictable, affordable and efficient method to treat Class III, Class IV and Class V restorations. The band is simple to use and can be positioned with ease using wedges and/or liquid dam to seal gingival areas. Ideal contours for interproximal contacts are straightforward to achieve and less stress is involved with these sometimes complex anterior restorations. ***Unica Anterior Matrix System*** is one simple system for the anterior esthetic zone.

Ivory® ReLeaf™

Kulzer
www.kulzerus.com

Clinician: Meghan Gardette, BS, RDH

Problem:

Many times, it is difficult for doctors, assistants and hygienists to manage saliva while working on children. This is especially the case when doing sealants with a single operator.

Solution:

Ivory® ReLeaf™ fits comfortably into the patient's buccal vestibule, while simultaneously suctioning and retracting the cheek. This product is also less bulky than other suction and retraction systems, making it more acceptable to patients. The field of view increases using ***Ivory ReLeaf***, and allows easier operator access to all areas of the mouth while maintaining a dry field.

Tokuyama Universal Bond

Tokuyama
www.tokuyama.com

Clinician: Dr. Ona Erdt

Problem:

When placing a composite in a deep interproximal area, it can be difficult to achieve an adequate cure due to limited access of the curing light. This can cause premature failure of the composite restoration.

Solution:

Tokuyama Universal Bond is a two bottle system that requires no light curing. Eliminating a step saves time and minimizes the potential contamination of the preparation. It is compatible with dual- and self-cured composite materials without the need for a separate activator. ***Tokuyama Universal Bond*** is fully compatible with all dental substrates (zirconia, lithium disilicate, indirect composites). The material releases fluoride as well.

Fit Strip™ IPR

Interproximal Finishing & Contouring System

Garrison Dental
www.garrisondental.com

Clinician: Dr. Brad Stieper

Problem:

I need an interproximal reduction (IPR) kit that takes the guesswork out of creating exact interproximal spaces for clear aligners.

Solution:

Fit Strip™ IPR reduction kit has color-coded diamond-impregnated strips, and gauges that make the process of creating interproximal spaces more straightforward. The system provides a guide for size progression and works in concert with most clear aligner systems. ***Fit Strip*** has a removable handle and can be used in either a straight or curved position to obtain the ideal anatomical shape of the teeth.

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Biomaterials Research Report

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Machinability of n!ce® Block on a Cerec® inLab MC XL Mill

M. Cowen, J. Montealegre, J.M. Powers

Number 126 – June, 2019

Introduction:

The machinability of new ceramic materials on current milling hardware is a hot topic for the ever-changing digital dental materials landscape. Swiss-based Straumann recently introduced ***Straumann® n!ce®,*** a high-strength lithium aluminosilicate CAD-CAM block which claimed to be compatible with current milling programs while requiring no additional post-processing other than polishing. We tested these claims by milling this new material on a ***Cerec® inLab MC XL*** and compared the machinability to ***IPS e.max CAD*** using the same milling parameters and 12S step bur and 12S cylinder pointed burs. We looked at important properties for milling restorations like machining accuracy, machining damage, minimum thickness, surface roughness and polishing time.

Conclusions:

Machining the ***n!ce*** block on the ***inLab MC XL*** mill ***showed equivalent results*** to ***IPS e.max CAD*** in its ability to be milled with similar minimum wall thickness, surface roughness, machining damage and accuracy. Combined, these results suggest that the ***n!ce*** block could be used with a similar restoration design and workflow as ***IPS e.max CAD*** with the ***inLab MC XL, but without an additional crystallization step.***

Machining Accuracy:

Being able to machine a material to high accuracy is an important consideration for material and mill combinations. We applied the ISO TR 18845 method to evaluate the machining accuracy of ***n!ce*** and ***IPS e.max CAD*** by milling standardized crown specimens with a diameter of approximately 12 mm and a height of 10 mm, with flat sections 1 mm thick and a 6° wall angle. Milled crowns were scanned and compared to the original design file in FOM-Inspect software to measure any discrepancy with 5 different surface measurements.

Machining Accuracy Discrepancy

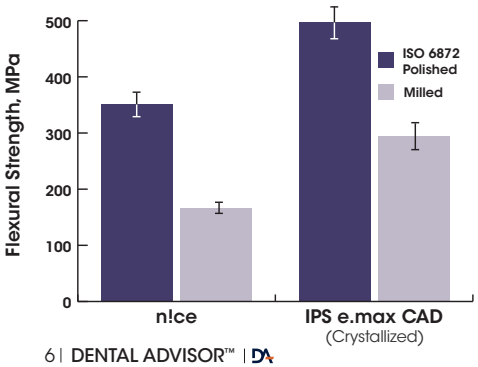
Material	Intaglio Lateral, µm	External Lateral, µm	Intaglio Z-Direction, µm	External Z-Direction, µm	Prep-line, µm
n!ce	47 (42)	3 (37)	25 (53)	9 (31)	-34 (40)
IPS e.max CAD	34 (31)	14 (28)	21 (48)	8 (24)	-28 (36)

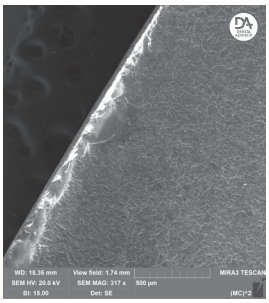
Comparable mean accuracy results were found with both milled materials, and both were below 50 µm. The large standard deviations are a result of the calculation taking in account local minimums and maximums which varied +/- ~100 µm in some areas. Similar accuracy should be expected when milling each material using the ***inLab MC XL*** mill.

Flexural Strength:

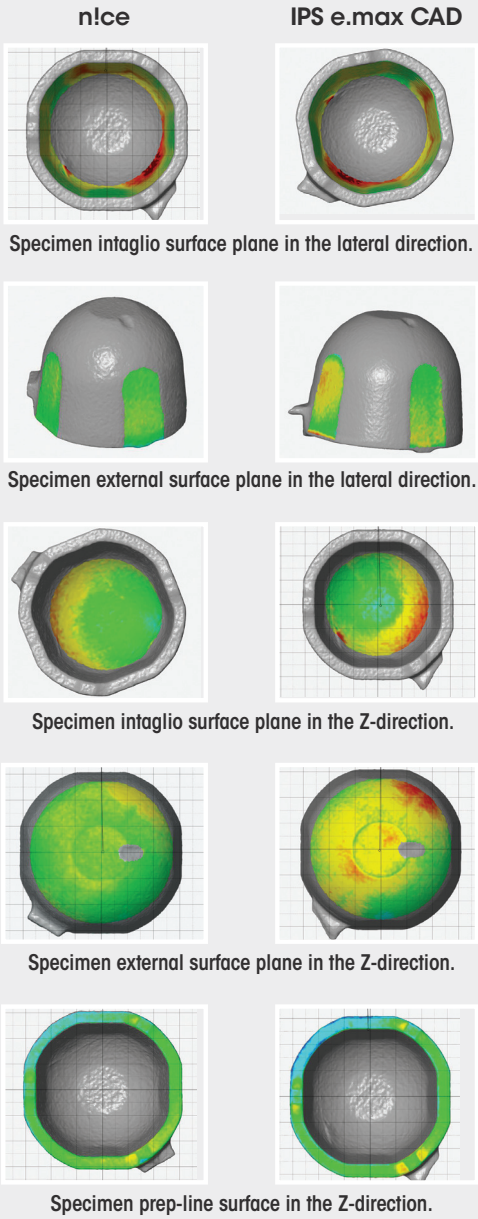
Machining any ceramic will introduce flaws and microfractures, which can reduce the overall strength of the resulting restoration. Polishing the restoration can minimize the critical flaws where fractures initiate, leading to a higher strength. To test the effect the machining damage has on these materials, we measured the 3-pt bend flexural strength of milled ***n!ce*** bars (2 x 4 x 16 mm) and milled, crystallized ***IPS e.max CAD*** bars without any polishing as the worst-case scenario, and compared this to standard ISO 6872 wafer cut and polished bars under ideal conditions as a positive control. It should be noted that, unlike crowns, flexural strength bars have four right angles which can increase the chipping factor of milled bars (see below). This results in a lower strength than might be expected clinically.

Both materials showed a drop in flexural strength as expected, with ***IPS e.max CAD*** dropping about 40% and ***n!ce*** block dropping 50%. In both materials, the ISO 6872 tested values are very close to the manufacturer stated values, thus confirming those results.





Edge damage of an ***IPS e.max CAD*** flexual strength bar after milling.



Specimen intaglio surface plane in the lateral direction.

Specimen external surface plane in the lateral direction.

Specimen intaglio surface plane in the Z-direction.

Specimen external surface plane in the Z-direction.

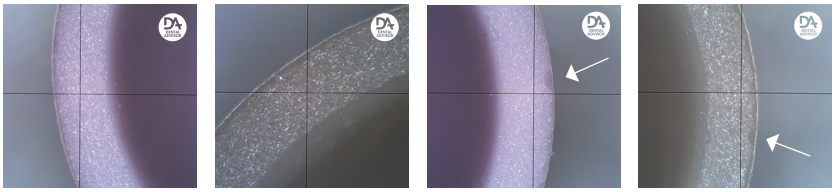
Specimen prep-line surface in the Z-direction.

Machinability:

An important factor for the compatibility of milling a material is whether the material will withstand the forces of milling without fracturing or chipping. This can result in wasting materials with excessive remakes, or force-changing restoration designs to have a higher minimum wall thickness. Excessive chipping can require more extensive polishing of the margins, which can affect the restoration's fit. We tested how well the ***n!ce*** block mills with an ***IPS e.max CAD*** profile using methods proposed in a new ISO/TS 18675 test method to measure the chipping factor and minimum wall thickness.

Chipping factor is determined by milling standardized crown shapes with 1 mm thickness and examining the margin surface under a microscope to detect any chips or flakes greater than 0.1 mm in size. The total length (L) of the chipped areas is divided by the perimeter length (P) to give a chipping factor (CF = L/P).

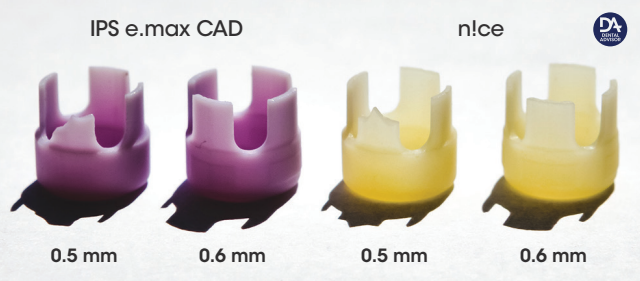
After examining five crowns of each material, we measured a nearly identical number and length of chips for both the ***n!ce*** and ***IPS e.max CAD*** blocks. The shallow chips were found over approximately 1% of the circumference and were difficult to see without magnification.



No chips - *IPS e.max CAD* | No chips - *n!ce* | One chip - *IPS e.max CAD* | One chip - *n!ce*

Merlon Fracture Test: Minimum wall thickness is measured by machining hollow cylinders with four distinct free-standing walls called merlons, and another wall at the base of the cylinder to determine at what thickness the material can survive the machining process. Specimens were machined per 0.1 mm wall thickness until a 100% success rate was determined.

The ***n!ce*** and ***IPS e.max CAD*** materials showed identical success rates with 73% (11/15) walls surviving at 0.5 mm and 100% of walls surviving at 0.6 mm. This demonstrates that both materials should survive machining with the same wall thickness without fracturing. Although the materials may survive machining at this thickness, it is suggested to design restorations according to the manufacturer's specifications for successful clinical use and added strength.



Representative samples of failed merlon wall fractures at 0.5 mm and successful merlon specimens at 0.6 mm.

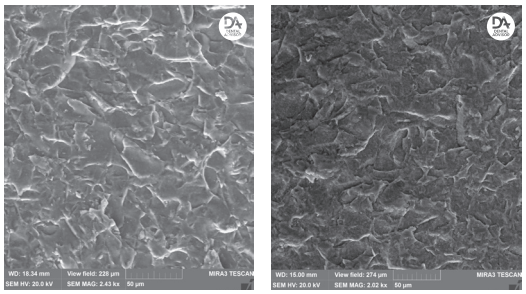
Surface Roughness and Polishing:

When considering whether a material can be machined, an important factor is the amount of surface roughness the resulting restoration will have, which can impact the time required to polish it to a tooth-like luster for stain resistance and esthetics. To test this, we measured the initial surface roughness and topography of both materials over an 80 x 80 µm area with a nano-sized contact probe using an atomic force microscope (Bruker Dimension Icon). Both materials were polished with the Meisinger ***Luster Polishing System*** for 15 and 30 seconds per step to establish the time to polish, and for 120 seconds to determine the maximum expected polishing level.

Surface Roughness and Polishing

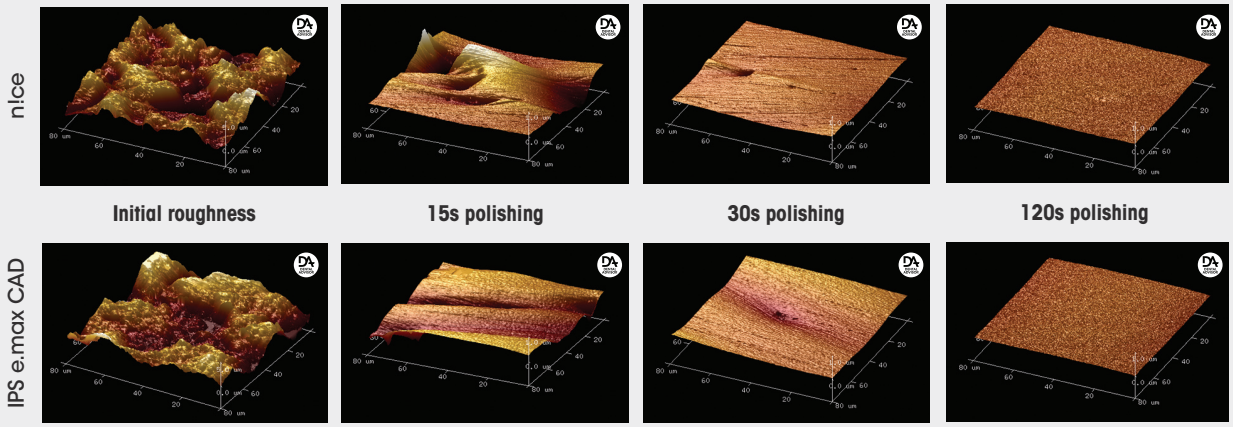
Product	Test	Initial	15s	30s	120s
n!ce	Gloss, gu	3.0 (0.3)	65.2 (4.1)	89.2 (2.8)	97.7 (1.0)
	Roughness Ra, nm	1161 (57)	194 (47)	39 (5)	14 (5)
IPS e.max CAD	Gloss	2.7 (0.2)	68.0 (4.0)	84.0 (5.0)	96.6 (1.2)
	Roughness Ra, nm	1100 (170)	178 (47)	35 (6)	12 (3)

IPS e.max CAD and ***n!ce*** showed similiar polishing characteristics and initial surface roughness after milling. Only marginal improvement was noted with polishing over 30 seconds using *Meisinger Luster Twist Polishers,* which achieved an average roughness of less than 40 nm with both materials.

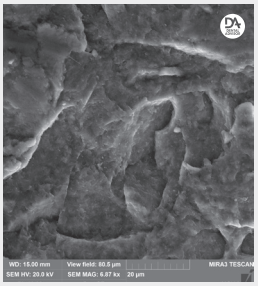


Surface Appearance of IPS e.max CAD (left) and n!ce block (right) after milling

Topographic maps of surface roughness



SEM image of the representative appearance of an 80 x 80 µm area of initial surface evaluated by AFM



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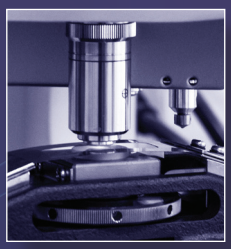

Number 127– May, 2019

Zone of Inhibition Test Against Three Desensitizers

Performed by a Third Party Independent Testing Laboratory

Purpose:

To verify the antimicrobial properties of three desensitizers.

Experimental Design:

Three desensitizers were evaluated: ***Hemaseal & Cide,*** and two competitive products, ***GLUMA,*** and ***Microprime G***
The zone of inhibition test, also known as the Kirby-Bauer Test, was performed against two microorganisms, *Streptococcus mutans* and *Porphyromonas gingivalis.*

Challenge microorganisms:

- *Streptococcus mutans* ATCC 25175
- *Porphyromonas gingivalis* ATCC 33277

Test Products:

- ***GLUMA***
- ***Microprime G***
- ***Hemaseal & Cide***

Culture Preparation:

- Test microorganisms were prepared in liquid culture medium.
  a) *S. mutans* was propagated in brain heart infusion broth for approximately 48 hours.
  b) *P. gingivalis* was propagated in tryptic soy broth supplemented with 5% defibrinated sheep blood for approximately 72 hours.
- The inoculum concentration upon initiating testing was approximately 4.85x108 CFU/mL for S. mutans and 1x108 CFU/mL for *P. gingivalis.* For *P. gingivalis,* inoculum counts were estimated due to the small colonies, which were only observable under magnification.
- Test microorganisms were spread onto agar plates, with care taken to spread the bacterial cells over the entire agar plate.
- A volume of 0.1mL of test substance was bored into the center of the inoculated agar plate. For control plates, the same volume of phosphate buffered saline (PBS) was applied as the control substances. All plates were tested in triple replicate.
- Plates were incubated for aerobically at 36 ± 1°C for S. mutans and anaerobically at 36 ± 1°C for *P. gingivalis.* All plates were incubated for 48-72 hours.
- After incubation, zone of clearance was measured and recorded.

Results:

Table 1. The observed zone of inhibition for testing of three test substances and one control substance against *Streptococcus mutans.*

Test substance	Replicate	Zone of Inhibition (mm)
PBS (Control)	1	No zone observed
	2	No zone observed
	3	No zone observed
GLUMA	1	22.1
	2	22.5
	3	26.7
Microprime G	1	21.4
	2	24.8
	3	23.1
Hemaseal & Cide	1	41.4
	2	42.1
	3	39.4

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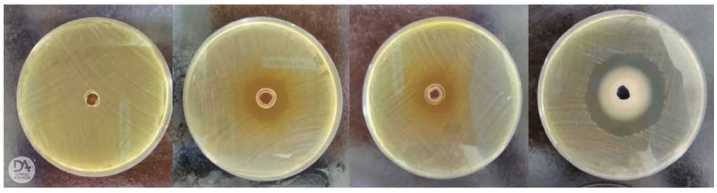
Figure 1. Post-incubation photos of one agar plate inoculated with *S. mutans* per each treatment group.



PBS control | ***GLUMA*** | ***Microprime G*** | ***Hemaseal & Cide***

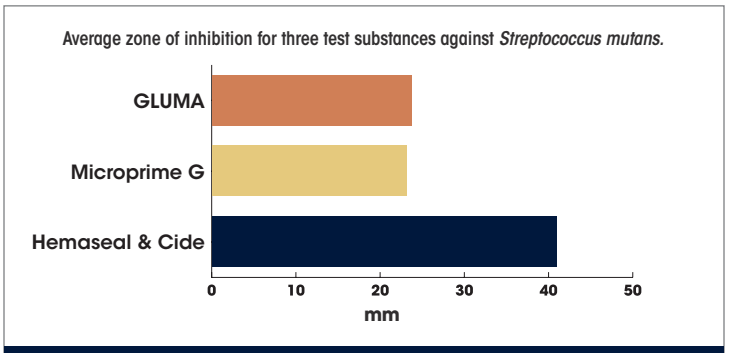


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Table 2. The observed zone of inhibition for testing of three test substances and one control substance against *Porphyromonas gingivalis.*

Test substance	Replicate	Zone of Inhibition (mm)
PBS (Control)	1	No zone observed
	2	No zone observed
	3	No zone observed
GLUMA	1	22.3
	2	18.5
	3	22.3
Microprime G	1	21.0
	2	21.8
	3	22.3
Hemaseal & Cide	1	46.3
	2	45.8
	3	39.4

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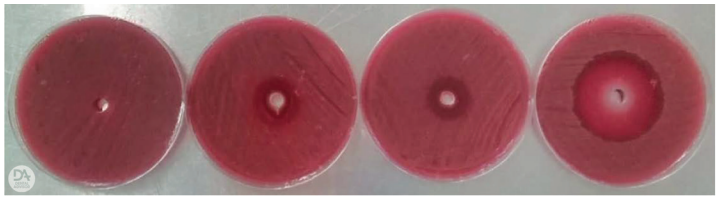
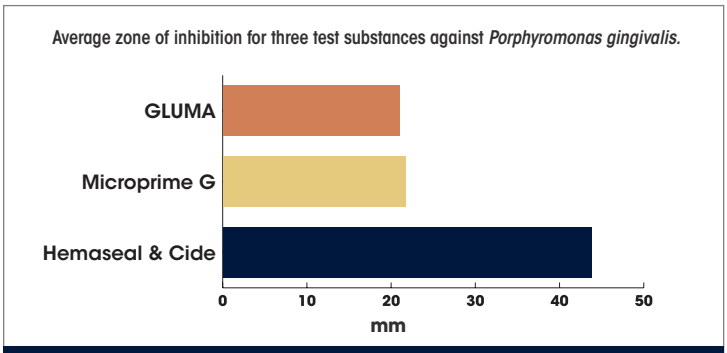
Figure 2. Post-incubation photos of one agar plate inoculated with *P. gingivalis* per each treatment group after incubation.



PBS control | ***GLUMA*** | ***Microprime G*** | ***Hemaseal & Cide***



©DENTAL ADVISOR, 2019

Conclusion:

In this investigation, three desensitizers were evaluated to verify their antimicrobial properties. Many times, in clinical practice areas in need of desensitizing are also very vulnerable to oral bacteria, such as exposed root surfaces. A desensitizer that also protects against bacteria can be extremely advantageous.

One chlorhexidine containing product, ***Hemaseal & Cide*** was compared to two prevalently used glutaraldehyde containing products. Once exposed to the bacteria, each product established a zone of inhibition, which measures the ability of an antimicrobial agent to inhibit the growth of an organism. The size of the zone of inhibition is usually related to the level of antimicrobial activity present in the sample or product; therefore, a larger zone of inhibition generally means that the antimicrobial is more potent.

When the zones of inhibition were compared for each product, ***Hemaseal & Cide*** produced a zone of inhibition twice the size of both glutaraldehyde containing products. This establishes the fact that ***Hemaseal & Cide*** inhibited the growth of twice as much bacteria as the glutaraldehyde containing products. Although more clinical studies are needed, this demonstrates that ***Hemaseal & Cide*** could have a significant impact on prevention in addition to desensitizing.

EDITORS' CHOICE

ELECTROmatic™ Premium

KaVo www.kavo.com

+++++

dentaladvisor.com RATING SYSTEM: Excellent + + + + + Very Good + + + + Good + + +

7 CLINICAL EVALUATORS

555 TOTAL USES

96% CLINICAL RATING

Key features: Excellent balance of handpieces ● Speed adjustable with slider on color touch screen display ● Displays bur speed ● Prep and endo functions

Description

The ***ELECTROmatic™*** is available in three models. All feature *SMARTdrive™* sensor-less control, which allows for high torque even at low speed ranges:

ELECTROmatic™ Premium (evaluated)

- 4.3" TFT color touch screen display
- Available with one or two motors to switch between high and low-speed functions
- Up to five speed memory presets in prep mode
- Integrated endo function with pre-programmed file systems to make it easy to plan and customize your endodontic sequence
- Speed adjustable with slider on display
- Pairs with KaVo *MASTERmatic™* attachments

ELECTROmatic™ Plus

- LCD-color display
- Three speed programs
- Easy program and change of individual speed settings
- Forward/reverse option
- Pairs with KaVo *MASTERmatic* or *EXPERTmatic* attachments

ELECTROmatic™

- Dynamic speed regulation for constant bur speed regardless of variable incoming air pressure
- Integrated water filter
- Pairs with KaVo *COMFORTdrive™* ***200 XDR*** handpiece

Indication

- Any dental procedures requiring the use of a handpiece system capable of high-speed, low-speed, or endodontic applications

ELECTROmatic Premium

ELECTROmatic Plus

ELECTROmatic

Clinical Tips

- The option to lower speed is great when finishing margins.
- The handpiece requires a softer touch, so 'go light' when first using.

"I LOVE BEING ABLE TO ADJUST SPEED."

Evaluators' Comments

"The automatic calibration using my existing system's air pressure worked out beautifully."

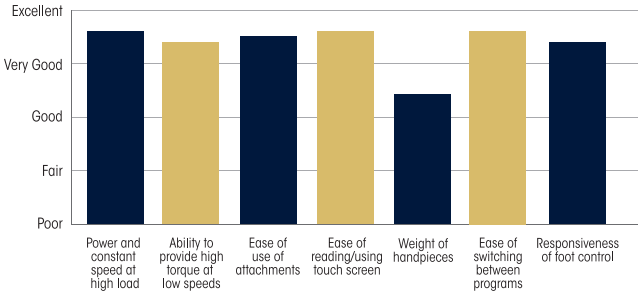
"The SMARTdrive™ sensor-less control is a plus."

"I liked it for adjusting temps."

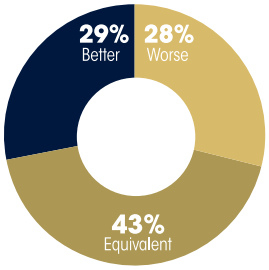
"I prefer controlling water spray from the rheostat rather than a switch."

"Heavier than what I am used to."

Evaluation Summary



Compared to Competitive Products:



Percentage of Consultants Who Would:

29%	Recommend in addition to product they currently use
71%	Recommend instead of product they currently use
0%	Not recommend

EDITORS' CHOICE

Cranberry® 360™ 4-Ply Earloop Face Masks +++++

Cranberry www.cranberryglobal.com

dentaladvisor.com RATING SYSTEM: Excellent + + + + + Very Good + + + + Good + + +

12 CLINICAL EVALUATORS

354 TOTAL USES

96% CLINICAL RATING

Key features: V-shaped design ● Hydroguard outer layer ● Two sizes ● Complete peripheral seal ● Available in ASTM Levels 2 and 3

Description

Cranberry® 360™ 4-Ply Earloop Face Masks:

- Are designed to provide full coverage protection with a complete peripheral seal
- Form a V-shape when opened that provides extra breathing room and prevents the mask from collapsing during use
- Include a curved-edge design to provide for a good fit with different face contours
- Available in small and regular sizes in ASTM Levels 2 and 3

Unique Attributes

- Inner layer contains no dye, chemicals or lint
- Lightweight, silky material

Clinical Tips

- Make sure you use the correct size - it makes a difference for comfort.
- Straighten the metal nosepiece when you first remove it from the box and then adapt to your nose to reduce fogging.

"VERY SILKY, BREATHABLE MATERIAL."

Evaluators' Comments

"Adapts well – be sure to use the correct size."

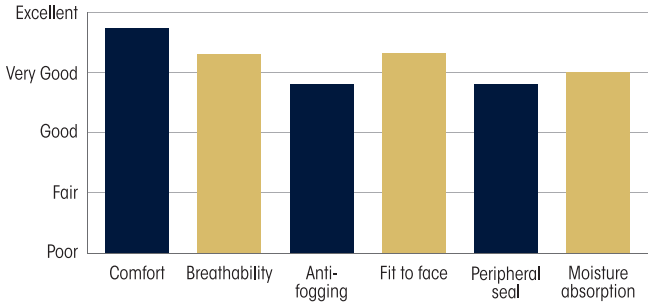
"Very comfortable to wear."

"I like the shape - it gives it a complete peripheral seal."

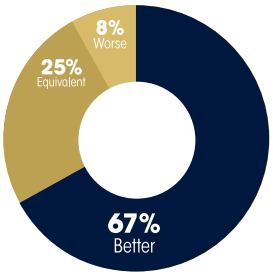
"The pointed shape is a different look, but I can get used to it easily."

"My microscope would fog up."

Evaluation Summary



Compared to Competitive Products:



Percentage of Consultants Who Would:

8% Recommend in addition to product they currently use

84% Recommend instead of product they currently use

8% Not recommend

CLINICAL EVALUATION

EZ-Fit® Translucent Post System

++++½

EDS www.edsdental.com

dentaladvisor.com RATING SYSTEM: Excellent + + + + + Very Good + + + + Good + + +

DENTAL ADVISOR ++++½

28 CLINICAL EVALUATORS

254 TOTAL USES

91% CLINICAL RATING

Key features: Passive translucent fiber post system ● Esthetic ● Multiple tiers and positive seating head ● Two-part drill system

Description

EZ-Fit® Translucent Post System is a highly translucent post system that:

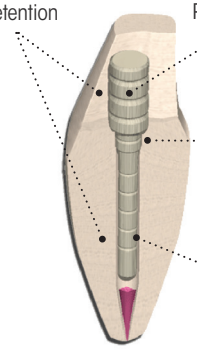
- Allows for optimal use of light-cured, dual-cured, and self-cured cements and core materials
- Eliminates shadows through composite restorations at the crown
- Is high strength due to unidirectional fibers
- Has multiple tiers allowing for optimum dentin-to fiber contact
- Evenly distributes stresses and maximizes retention
- Has undercuts in shank that lock the post into the root, providing high post retention

Indication

- Any procedure where a post is needed in the root canal to stabilize and support a restoration

Unique Attributes

- Undercuts in the positive seating head allow for greater core retention
- Positive seating head for greater stability
- Translucency reduces shadowing for a more esthetic final restoration and allows for curing light use
- Multiple tiers countersink the post into the tooth preventing high apical stress under function



Clinical Tips

- Make sure there is adequate preparation for the wider positive seating head so the post will fit properly.
- Have enough access opening to fit the shank of the second drill into the post preparation.
- These drills are sharp! Angulation and canal size awareness is needed to avoid root penetration.

"EASY TO USE AND CONSISTENT RESULTS."

Evaluators' Comments

"The undercuts secure core material tenaciously."

"The second tier makes it more secure."

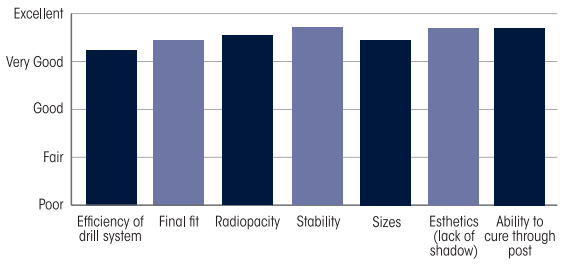
"Great physical characteristics."

"Preparing the second tier requires longer chair time."

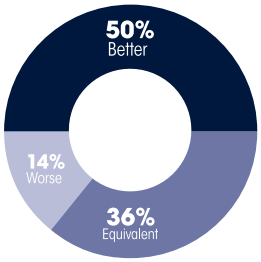
"The posts are short for some teeth with longer roots."

"I did not feel that the posts showed up very well on radiographs."

Evaluation Summary:



Compared to Competitive Products:



Percentage of Consultants Who Would:

61%	Recommend in addition to product they currently use
28%	Recommend instead of product they currently use
11%	Not recommend

CLINICAL EVALUATION

HyFlex® EDM

Coltene www.coltene.com

++++ ½

DENTAL ADVISOR

DENTAL ADVISOR ++++ ½

21 CLINICAL EVALUATORS

163 TOTAL USES

92% CLINICAL RATING

Key features: Viscosity and handling ● Ease of finishing ● Time saving ● Ease of dispensing ● Working time

Description

HyFlex® EDM are 5th-generation NiTi rotary endodontic files fabricated using Electrical Discharge Machining (EDM) technology, which hardens the surface of the nickel-titanium (NiTi) file. This provides for excellent flexibility and fracture resistance. The files are also designed to offer high cutting efficiency for the preparation of all canals, from straight to complex. The combination of flexibility, fracture resistance and cutting efficiency makes it possible to reduce the number of files required during root canal therapy, while preserving root canal anatomy. The built-in shape memory of ***HyFlex EDM*** files prevents stress during canal preparation by changing their spiral shape.

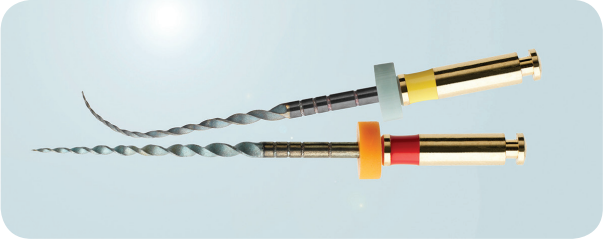
HyFlex EDM is provided as a pre-sterilized modular system that includes *Shaping*, *GlidePath*, *OneFile*, *Orifice Opener*, and *Finishing* files. *OneFile* is designed to increase the number of cases that can be prepared with confidence using just one or two ***HyFlex EDM*** files. Matching gutta percha points are also available.

Indication

- Endodontic preparation of all canals, from straight to complex

Unique Features

- Pre-sterilized NiTi files, fabricated using EDM technology
- Normal autoclaving returns the files to their original shape
- Up to 700% greater fracture resistance compared to traditional Niti files
- Variable cross section design contributes to high fracture resistance
- Hardened surface plus controlled memory improves cutting efficiency
- Built-in shape memory prevents stress during canal preparation by changing their spiral shape
- Hardened surface reduces risk of file separation
- Fewer files required for canal preparation
- Matching gutta percha points
- Modular system



Clinical Tips

- Tips are so flexible they can distort easily if you are not careful with initial placement.
- Files can be pre-curved, making them highly effective in curved canals.
- After obtaining a good glidepath, the *OneFile* can be used to shape most canals to terminus.

Evaluation Highlights

HyFlex® EDM was evaluated by 21 consultants, with a total of 163 uses.

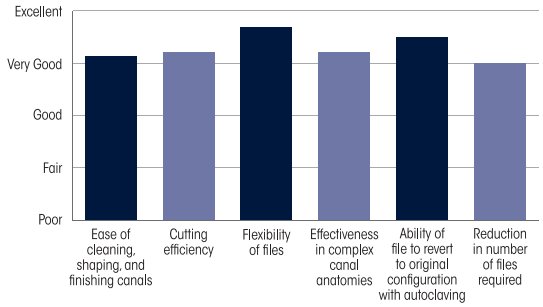
- Fewer files for canal preparation, most needing only *OneFile*
- Autoclaving returns files to original shape
- Extremely flexible with shape memory
- Modular system that is simple to follow
- Effective in straight or curvy canals

"VERY EFFICIENT AND SMOOTH CUTTING ACTION."

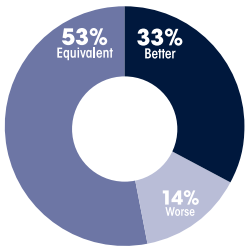
Evaluators' Comments

- *"Simple system to follow."*
- *"More flexible than the system I currently use and fewer steps to finish."*
- *"Tracked the canal anatomy very well."*
- *Being able to shape many canals effectively with one file is nice."*
- *"I like the file's ability to return to its shape after autoclaving."*
- *"I did not feel the cutting was as effective in the apical 3rd of the canal."*

Evaluation Summary:



Compared to Competitive Products:



Percentage of Consultants Who Would:

19% Recommend in addition to product they currently use

67% Recommend instead of product they currently use

14% Not recommend

EDITORS' CHOICE

Ceramir® Crown & Bridge Quikcap

++++ ½

Doxa Dental AB www.ceramirdental.com

dentaladvisor.com RATING SYSTEM: Excellent + + + + + Very Good + + + + Good + + +

9 CLINICAL EVALUATORS

96 TOTAL USES

95% CLINICAL RATING

Key features: Esthetics ● Fluoride-releasing ● Efficiency of cementation ● Lack of post-operative sensitivity ● Bioceramic

Description

Ceramir® Crown & Bridge Quikcap is a radiopaque, biocompatible, bio-ceramic luting cement. It is supplied in a *Quikcap* capsule that is activated and mixed before direct application. The cement is self-setting with a working time of two minutes and a setting time (from end of mixing) of up to eight minutes. The set cement nanostructurally integrates with enamel and dentin. No etching, priming, bonding or conditioning is required prior to application of the cement. Clean-up is performed during the gel-phase setting, when clean-up is fast, and excess easily peels away. ***Ceramir Crown & Bridge Quikcap*** is available in unit dose *Quikcap* capsules.

Indications

- Metal and porcelain-fused-to-metal crowns and bridges
- Gold inlays and onlays
- Cast or prefabricated metal posts
- High-strength ceramic crowns and bridges and implant crowns suitable
  for conventional cementation such as zirconia, alumina, and lithium disilicate

Clinical Tips

- Make sure to clean in the gel stage. Once it is set, it is very difficult to remove excess.
- The cement hardens quickly at the 2-minute mark, so I carefully floss the contacts at 1-minute 30 seconds.

Unique Attributes

DENTAL ADVISOR tested ***Ceramir*** in its lab, measuring a bond strength to dentin of 9 MPa.

- Contains glass ionomer powder
- Bioceramic
- Quikcap capsules
- Maintains a high pH to resist acid and acid-producing bacteria
- Hydrophilic and requires no etching, priming, bonding, or conditioning
- Nanostructurally integrates with enamel and dentin; self-sealing
- Fluoride-releasing
- High strength and retention

Evaluation Highlights

Ceramir Crown & Bridge Quikcaps were evaluated by 9 consultants, with a total of 96 uses.

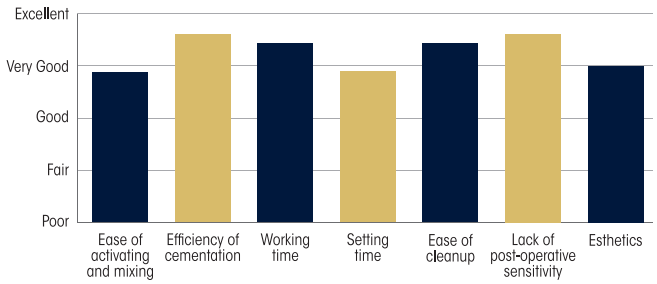
- Easy clean up
- Nanostructurally integrates with enamel and dentin
- No etching, priming, bonding, or conditioning required
- Quikcap capsules

Evaluators' Comments

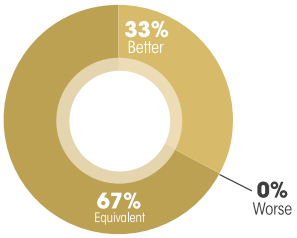
"SIMPLE APPLICATION AND I LIKED THE CONSISTENCY."

- *"Very easy to clean up."*
- *"Good radiopacity."*
- *"Easy to use and mix."*
- *"Smooth, complete seating with no sensitivity."*
- *"Slower setting time than I am used to."*
- *"Did not like that I had to triturate in the amalgamator."*
- *"My assistant had a hard time activating the capsule."*

Evaluation Summary:



Compared to Competitive Products:



Percentage of Consultants Who Would:

22%	Recommend in addition to product they currently use
67%	Recommend instead of product they currently use
11%	Not recommend

Cervitec® Plus

Ivoclar Vivadent www.ivoclarvivadent.com

++++ ½

DENTAL ADVISOR ++++ ½

43 CLINICAL EVALUATORS

656 TOTAL USES

91% CLINICAL RATING

Key features: Targeted application ● Reduces bacterial activity where placed ● Effective for hypersensitive cervicals ● Chlorhexidine and thymol varnish

Description

Cervitec® Plus varnish contains a combination of the active ingredients, chlorhexidine and thymol. Chlorhexidine diacetate is an antimicrobial that has long been used in dentistry to reduce bacteria known to cause plaque formation, inflammation, and caries. Thymol, derived from oil of thyme, is a common ingredient found in oral mouth rinses because of its antiseptic characteristics.

- Allows for selective placement to targeted areas for both reduction of bacteria and for desensitization of hypersensitive dentin.
- Available in a 20-count box of 0.25 g single dose packets or in a 7 g tube.

Cervitec Plus is ideal for use:

- After temporary restoration placement
- After root planing and scaling
- In areas susceptible to caries
- Along the margins of implants, crowns and bridges
- Around orthodontic brackets to prevent white spot lesions
- Cervical hypersensitivity

Indications

- Protection of exposed root surfaces
- Treatment of hypersensitive cervical areas

Unique Attributes

- After varnish has been applied and dried, the concentration of chlorhexidine and thymol increases to 10%.
- Wide variety of uses because of antimicrobial properties.
- Low film thickness and clear application ideal for patient acceptance.
- No discoloration of tooth structure after application.

Clinical Tips

- Proper isolation is recommended for best results.
- Use for orthodontic patients with poor oral hygiene that have already started developing decalcifications.
- Have readily available in hygiene appointments for high-risk patients.

"SUPER EASY AND QUICK APPLICATION."

Evaluators' Comments

"Tissue responds very well and quickly."

"No taste, so even kids didn't object."

"Patients did not notice the film as much as they do with fluoride varnish."

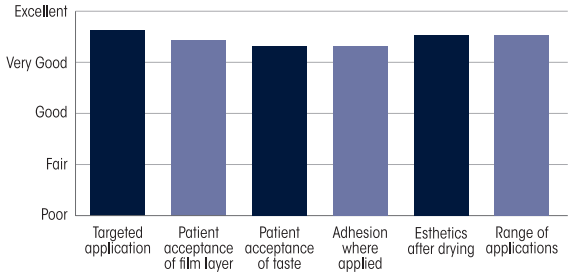
"It was very effective against sensitivity."

"Bottle drips out too much."

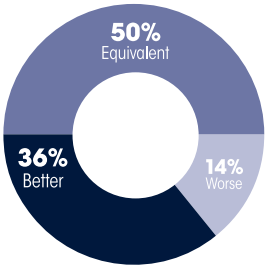
"Inconvenient that it needs to be refrigerated."

"It was a bit runny and didn't adhere like fluoride varnish."

Evaluation Summary



Compared to Competitive Products:



Percentage of Consultants Who Would:

86% Recommend to a colleague

63% Purchase in addition to product they currently use

23% Purchase instead of product they currently use

CLINICAL EVALUATION

Blossom® Latex Rubber Dental Dam ++++

Mexpo International, Inc. www.blossom-disposables.com

dentaladvisor.com RATING SYSTEM: Excellent + + + + + Very Good + + + + Good + + +

DENTAL ADVISOR ++++

13 CLINICAL EVALUATORS

290 TOTAL USES

88% CLINICAL RATING

Key features: Tear resistant • High Stretch • Mint scent • Forms easily around rubber dam clamps

Description

Blossom® Latex Rubber Dental Dam is a pre-cut natural latex rubber dam that possesses high stretch while also being very tear resistant. ***Blossom Latex Rubber Dental Dam*** is available in: blue or green 5"x 5" with 52 sheets per box and blue or green 6"x 6" with 36 sheets per box. The green sheets also feature a light mint scent.

Unique Features

- Pre-cut sheets of 6"x 6" or 5"x 5"
- Light mint scented green sheets
- High stretch
- Tear resistant

Evaluation Highlights

Blossom Latex Rubber Dental Dam was evaluated by 13 consultants, with a total of 290 uses.

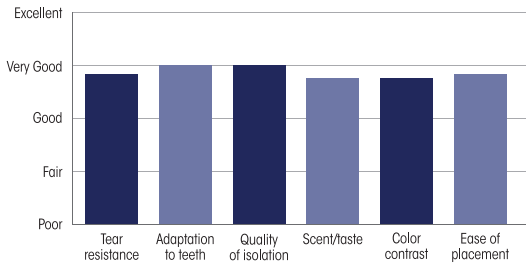
- Thinner than the average dental dam
- Green features light mint scent
- Highly stretchable, yet tear resistant

"MUCH THINNER THAN WHAT WE NORMALLY USE AND EASIER TO PLACE."

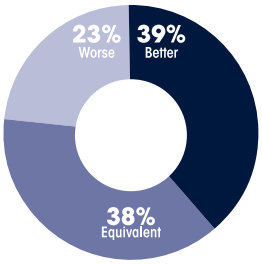
Evaluators' Comments

- *"Didn't tear easily like other latex brands I've tried."*
- *"Seemed to have decreased elasticity."*
- *"Easy to form around rubber dam clamps without tearing."*
- *"I liked the smell."*

Evaluation Summary:



Compared to Competitive Products:



Percentage of Consultants Who Would:

85% Recommend in addition to product they currently use

0% Recommend instead of product they currently use

15% Not recommend

SPECIAL THANKS TO:

Select Senior Clinical Consultants (Over 20 years):

R. Fisher, OH · E. Katkow, MD · J. Lockwood, MI · G. Poy, MI · R. Trushkowsky, NY · P. Yaman, MI · K. Baker, TX · F. Berman, PA · J. Bostic, OH · L. Brimhall, MT · M. Briskin, NY · W. Brownscombe, MI · R. Ciccone, MI · C. Colbert, MI · M. Conrad, PA R. Dost, VA · J. Doueck, NY · M. Eannaccone, NY · R. Engle, IL · K. Fairbanks, MI · M. Feinberg, NY · K. Fischer, IN · G. Franco, NY · N. Garlisi, OH · S. Graber, IL · P. Grandsire, NY · E. Gutman, NY · D. Haas, Ontario · K. Hamlett, TX G. Hart, OH R. Herwig, KS · J. Kaminski, MI · R. Kaprielian, NJ · M. Kastner, OH · D. Keren, NY · M. LaMarche, WA · J. Leitner, MI · S. Lever, MD · R. Lezell, MI · M. Man, NY · B. Manne, FL · N. Mansour, MI · N. Markarian, CA · C. McLaren, MI · J.W. Mikesell, IL R. Mizrahi, NY · G. Mosso, PA · E. Mosso, PA · J. Nash, MI · A. Nazarian, MI · R. Oshrain, NY · J. Paris, TX · D. Parris, GA · M. Patel, MI · D. Peterson, MD · T. Pieper, WY · D. Pitak, MI · V. Plaisted, NY · D. Qualliotine, NC · G. Raichelson, Ontario C. Reed, MI · G. Reskakis, NY · K. Schwartz, FL · J. Shea, MO · B. Shumaker, NJ · B. Sims, NY · P. Symeonides, NY · H. Tetalman, OH · C. Trubschenck, CA · S. Ura, NH · W. Walcott, MI · M. Waranowicz, MI · L. Wee, MI H. Yeung, CA · P. Zanetti, MI · S. Zimmer, MI

Clinical Consultants (19 years or less):

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