

THE DENTAL ADVISOR™

"Improving Patient Care Through Research & Education"

Sept. 2008

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

RATINGS

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

Green Dentistry

The importance of maintaining an environmentally-friendly world for our future has come to the forefront of public attention. As dental professionals, it is important to be conscious of the environmental impact dental offices have on this earth. Although dental practices generate a considerable amount of waste, there are many simple solutions that can be implemented to help reduce our carbon footprint.

This issue of THE DENTAL ADVISOR discusses ways to incorporate "green" principles into your practice by reducing the quantity and toxicity of healthcare waste while maximizing efficiency and environmental awareness. A comparative table of steam sterilizers is included as well as information products for the dental office and recycling centers for dental practice waste.

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Digital Radiography

Digital Radiography

The development of digital radiography has impacted dentistry in many ways. Digital images provide instant viewing capability; facilitate patient treatment procedures; increase diagnostic proficiency; and streamline storage, transfer and retrieval of data. One of the greatest benefits of digital systems is the reduction in radiation exposure to the patient by 75-90%. By integrating digital radiography into your practice, the need for film as well as the photochemical wastes needed to develop the film can be eliminated.

If your office is using traditional x-rays, here are some tips to help reduce waste:

- Collect lead foil and have it recycled through a scrap metal recycler.
- Recycle fixer and developer solutions.
- Purchase lead-free or leaded shields and aprons that are durable and will last.

Lead-free Aprons

- ◆ **Lead-Free Apron**
Flow X-Ray Corp.
www.flowdental.com
- ◆ **Wolf LeadLite Apron**
Wolf X-ray
www.wolfxray.com
- ◆ **Soothe-Guard Air**
DENTSPLY Rinn
www.rinncorp.com
- ◆ **Xenolite Lead Free Apron**
DUX Dental
www.duxdental.com

Going Paperless

With advances in computer technology and the development of user-friendly software, many dentists are making the decision to integrate a paperless environment into their practice. Digitizing patient charts, billing, and radiography not only increases efficiency of the practice and quality of patient care, but also eliminates over 90% of the paper used associated with daily normal practices. Going paperless saves paper, money, time and trees!

Maximizing Energy Efficiency

Conserving energy directly reduces the amount of power needed to run a dental office. By conserving energy there is a reduction in harmful emissions to the environment and an additional cost savings to the practice. Reducing energy consumption can be easy and economically advantageous. Here are some ways you can take action:

- Purchase energy efficient equipment and light bulbs.
- Turn off lights when not in the room.
- Unplug appliances when not in use.
- Plan the office layout to maximize natural light and ventilation.
- Use solar panels to power your practice or purchase energy from alternative producers – go to www.green-e.org for information on green energy to buy in your area.
- Use a dry dental vacuum instead of wet dental vacuum to save gallons of water.

Recycle and Reuse

Oil-less Compressors

- ◆ **AirMax Oilless Compressor**
MDS Matrx
www.matrxmedical.com
- ◆ **AirStar**
Air Techniques
www.airtechniques.com
- ◆ **CustomAir by RAMVAC Compressors**
DentalEZ Group
www.dentalez.com
- ◆ **Midmark PowerAir Oil-Less Compressor** **ONLINE**
Midmark
www.midmark.com
- ◆ **Ultra Clean Oil-Less Compressors**
TechWest
www.tech-west.com

ONLINE Visit online at www.dentaladvisor.com for clinical evaluations.

Dry Vacuum Systems

- ◆ **PowerVac Dry Vacuum Systems** **ONLINE**
Midmark
www.midmark.com
- ◆ **RAMVAC Bulldog**
DentalEZ Group
www.dentalez.com
- ◆ **CustomAir by RAMVAC Compressors**
DentalEZ Group
www.dentalez.com
- ◆ **STS**
Air Techniques
www.airtechniques.com
- ◆ **Whisperair Dry Vacuum**
TechWest
www.tech-west.com

Recycle and Reuse

Dental offices can effectively implement external and internal recycling practices to decrease the environmental impact of the office as well as reuse certain materials. Here are some tips:

- Place recycle bins in convenient locations for employees and patients.
- Focus on main waste producers like paper, aluminum and plastic containers. Most items can be recycled today. For more information check out www.epa.gov and your state and local government websites.
- Shred all office paper containing patient data and recycle.
- Reuse packaging materials, boxes, and paper.
- Make sure office paper and business cards are printed on recycled paper.
- Light bulbs, batteries, used toner cartridges, and old equipment may need to be recycled in your area. Contact your local government for regulations specific to your area.
- Learn about dental manufacturers who have recycling programs and take advantage of them.
 1. Hu-Friedy Envirodent instrument recycling program – www.hu-freidy.com
 2. KODAK Dental Lead Recycling Program – www.drna.com

The decision to make your office more “green” may initially take a little more effort, but it is simple and can often times be profitable to your practice. The commitment to reduce environmental impact

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“At Enzyme Industries, we are concerned about how our product affects the environment after it has been used and flushed out of the dentist’s facility. New **sani-treet GREEN** utilizes new generation cleaning agents that biodegrade quickly and efficiently. **sani-treet GREEN** cleans instruments and evacuation systems without the use of harsh chemicals.”

should be discussed with your team. Discuss your “green” goals and develop an action plan for your practice. Assign team members tasks and ask them to report during team meetings. Everyone in the practice can contribute to the improvement of the practice and the environment.

Ecobee, Inc
707.553.6190
www.ecobeeworld.com



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Our working environment with full recycling program:

- Use high post consumer content recycled paper.
- Recycling bins in each office room which are easily accessible.
- Electronic waste recycling program.
- Use of non-toxic cleaning products and supplies.
- Double sided printing and copying whenever possible.
- Incentives for employees to carpool.
- Reusable eating utensils in office pantry.
- Use of lighting motion sensors.

Other “Green” Tips:

- Encourage patients to give their email address to cut down on mailing appointment reminders.
- Always use chairside amalgam traps and collect scrap amalgam for recycling.
- Use steam sterilization for instruments (contains no harmful chemicals and uses less energy).
- Purchase energy efficient appliances.
- Purchase eco-friendly cleaners for general use.
- Support vendors who have “green” products.
- Conserve water by using in-office water treatment systems and foot-controlled faucets.
- Turn off every computer and every monitor at the end of the day.

Amalgam use in the Dental Office

The mercury content in amalgam has been an ongoing concern for the environment. Currently, there are minimal regulations in place for dental practices in terms of amalgam disposal.

Amalgam separators can be placed on delivery systems and help reduce the amalgam content in dental office wastewater discharge.

Amalgam separators are designed to remove waste amalgam from the water collected by the vacuum system before being discharged to municipal sewer systems.

In July 2008, the ADA testified before the House Committee on Oversight and Government Reform regarding the requirement and regulation of amalgam separators. The ADA recommends not requiring an amalgam separator in every dental practice. Instead, the ADA is proposing a voluntary amalgam separator program; reasoning that the majority (99%) of mercury in dental practice wastewater is captured by water treatment plants (after traveling through the sewer system) and very little is deposited in ground water. The cost of installation and yearly maintenance was also stated by the ADA as a reason not to mandate amalgam separators, that dentists would be more compliant if the program was voluntary. The ADA has best management practices (BMP) for handling disposal of amalgam available on their website, www.ada.org. These include recommendations and guidelines on recycling, containment and amalgam separators.

ISO standards describe and test methods for amalgam separators used with dental equipment in the dental treatment center, requiring the separator remove at least 95% of amalgam from the dental wastewater.

Amalgam should not be disposed of in the garbage or with hazardous waste. Also, amalgam should not be rinsed down the drain. Many communities incinerate medical waste. If amalgam

BENCO DENTAL CO.
800.462.3626
www.benco.com



- Partnered with the Environmental Engineering Program from Wilkes University to create and implement an Environmental Management System.
- Formed a “green team” of 15 volunteer associates to help establish and implement additional “green” initiatives, and also to educate the rest of the company on environmental issues.
- Broadcast’s a daily “green tip” on the company video monitor communication system.
- Created a vehicle for associates to recommend ideas that could reduce Benco’s environmental impact.
- Installed additional water coolers in conference rooms and discontinued the purchase of bottled water.
- Benchmarked and began to monitor natural gas, electric, and automobile fuel usage.

waste ends up in one of these incinerated waste streams, the mercury can be released to the environment due to the high temperatures used in the incineration process.

Clinical tips for using amalgam safely

- Stock a variety of sizes of amalgam so that waste is minimized.
- Recycle disposable amalgam capsules.
- Use approved amalgam traps and vacuum filters.
- Change filters regularly, and dispose of trap contents in separate containers. Dispose of teeth that contain amalgam by disinfecting and/or sterilizing them.
- Use proper line cleaners which minimize amalgam dissolution.

Tips for safe amalgam removal

- Isolate teeth using a rubber dam. Utilize an HVE and/or external suction device *IQAir Hg FlexVac Air Cleaner (IQAir)*.
- Amalgam waste should be stored in a separate, airtight container, and can be recycled through various agencies. ■

Dental Waste Recycling Companies

- ◆ AERC Recycling Solutions (www.aercrecycling.com)
- ◆ Amalgaway (www.amalgaway.com)
- ◆ Barnes HazMat (www.barneshazmat.com)
- ◆ Bethlehem Apparatus Company (www.bethlehemapparatus.com)
- ◆ Dental Recycling North America, Inc. (www.drna.com)
- ◆ Dental Refiners, Inc. (800.786.1742)
- ◆ Doral Refining (www.doralcorp.com)
- ◆ EcoSolutions/Stericycle (www.stericycle.com)
- ◆ Enviro Medical Waste, Inc. (www.enviromedicalwaste.com)
- ◆ Enviro-Chem, Inc. (www.enviro-chem.biz)
- ◆ Envirolight & Disposal, Inc. (www.envirodisp.com)
- ◆ Environmental Recycling (www.envrecycle.com)
- ◆ Garfield Refining Company (www.garfield-refining.com)
- ◆ Green Lights Recycling, Inc. (www.greenlightsrecycling.com)
- ◆ Greymart Metal Co. (www.greymart.com)
- ◆ Maguire & Strickland Refining, Inc. (www.maguireref.com)
- ◆ Mercury Refining Co., Inc. (www.mercuryrefining.com)
- ◆ Mercury Waste Solutions, Inc. (www.mwsi.com)
- ◆ Metasys (www.ecotwo.com)
- ◆ Safety Kleen (www.safety-kleen.com)
- ◆ Veolia Environmental Services (www.veoliaes.com)

For additional information on recycling services go to www.dentaladvisor.com

Steam Sterilizers

Product	Company	Chamber Size	Number of Cassettes	Number of Trays	Number of Cycle Types	Cycle Time, Wrapped	Cycle Time, Unwrapped	Water
Delta Q 8" Sterilizer	Pelton & Crane	8.25" x 14" Exam Cassettes	8	4	5	42 min	33 min	Distilled
Delta Q 10" Sterilizer	Pelton & Crane	9.9" x 17.5"	3 large and 3 small	2	5	42 min	33 min	Distilled
EZ9 Autoclave	Tuttnauer	9" x 18"	2 full and 2 half	3	4	61 min cold, 47 min warm	27 min cold, 13 min warm	Distilled
EZ10 Autoclave	Tuttnauer	10" x 19"	3 full and 3 half	4	4	64 min cold, 48 min warm	30 min cold, 14 min warm	Distilled
EZ10k Kwiklave	Tuttnauer	10" x 19"	3 full and 3 half	4	4	55 min cold, 25 min warm	21 min cold, 11 min warm	Distilled
Lisa Sterilizer	A-dec/W&H	9.84" x 11.81"	3	5	3	19-50 min	19-50 min	7 to 12 oz. per cycle saves water
M11 UltraClave ONLINE Preferred Product	Midmark	11" x 18"	12	4	4	52 min	48 min	Distilled
M9 UltraClave	Midmark	9" x 15"	6	4	4	47 min	44 min	Distilled
PV Dry2 Steam Sterilizer ONLINE Preferred Product	Thermo Fisher Scientific	10" x 15.5"	3	6	4	na	na	na
STATIM 2000	SciCan	11" x 7" x 1.5"	4-8 small	0	4	22 min	14 min	Steam distilled
STATIM 5000	SciCan	15" x 7" x 3"	4-8 medium	0	4	34 min	16 min	Steam distilled
STATIM 7000	SciCan	13.7" x 8.6" x 2.5"	2 large	0	4	40 min	24 min	Tap
SterileMax	Thermo Fisher Scientific	12" x 18"	12 small or 4 large	na	5	na	na	na

ONLINE Preferred Product Visit online at www.dentaladvisor.com for clinical evaluations.
The 2008 Preferred Products were selected by Dr. Farah and our Editorial Board. These are the products they rely on every day; favorites they reach for first.

Max-i-Probe + + + +

DENTSPLY Rinn
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Ask The Editors:
Visit online at www.dentaladvisor.com
to view Q & A about this product!

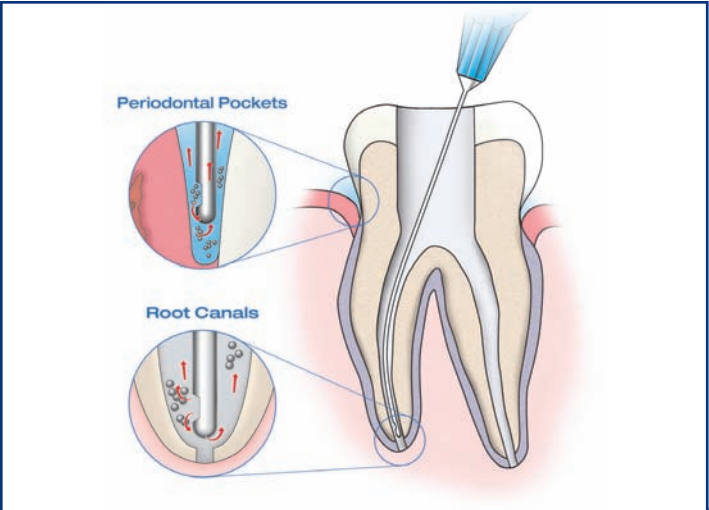
Description

Max-i-Probe is a sterile irrigating tip designed for use in endodontic procedures as well as the irrigation of periodontal pockets. The plastic hub twists onto luer-lock syringes. Designed with a rounded tip and side-port dispersal, **Max-i-Probe** reduces the risk of perforating the apex and allows for safe irrigation of the entire length of the root canal. The dispersal of the irrigating solution through the side-port in the cannula creates an upward, turbulent motion. This irrigates the canal while preventing solution and debris from being expressed through the apical foramen. The rounded tip design of **Max-i-Probe** also helps lower the risk of tissue damage when irrigating periodontal pockets. **Max-i-Probe** is available in eight sizes from 21 to 30 gauge and is available in boxes of 40 or 100 tips. Twenty-nine consultants, consisting of both general dentists and endodontists, evaluated **Max-i-Probe** 30-gauge tips in over 300 endodontic procedures and 70 periodontal procedures. This product received an 88% clinical rating.

- Suggested Retail Cost**
- \$44.05/box of 40
 - \$108.09/box of 100
 - \$118.92/box of 100 with 100 3cc syringes

Product Features

The small diameter of the 30-gauge **Max-i-Probe** evaluated allows it to approach the apical stop of even small canals. The flexibility aids in negotiating around curves of roots, but it bends easily when it hits a ledge. Several consultants commented that the irrigation achieved with this tip was far superior to results with other tips. Several consultants noted that the 30-gauge size allowed only a small amount of a fluid to be dispensed and therefore found it less useful for periodontal procedures. Use of a larger gauge **Max-i-Probe** (21-24- gauge) may work better in these situations. Seventy-five percent of consultants would recommend **Max-i-Probe**, while 55% would switch to it. ■



Consultants' Comments

- ♦ "I like the ability to seat the tip in the canal without feeling like I'm forcing fluid periapically."
- ♦ "The side port makes me confident that debris is being forced out instead of down."
- ♦ "The flexibility and length of the tip allow me to place it deep in the canal."
- ♦ "The 30-gauge size is ideal for small canals."

Correction

THE DENTAL ADVISOR incorrectly reported the **3M ESPE Z100 15-year Clinical Performance Report** and the **3M ESPE Filtek Z250 Universal Restorative 9-year Clinical Performance** in the June 2008 issue with a 4.5 plus rating each. The correct rating is + + + + + for both composites. Please visit www.dentaladvisor.com for the complete articles and ratings.



TECO + + + + 1/2

Zenith Dental/DMG
800.662.6383 • 201.894.5500
www.zenithdental.com

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

Ask The Editors:
Visit online at www.dentaladvisor.com
to view Q & A about this product!

Description

TECO is a 5th-generation light-cured bonding agent for use with light-cured composite in direct and indirect restorations. Etching the enamel and dentin surfaces is required (total-etch technique) before applying **TECO**. The etched and rinsed tooth surface should have a moist, frosty appearance and should not be desiccated. The adhesive is brushed onto the tooth surface for 20 seconds and air dried lightly for five seconds. The adhesive is then light cured for 10 seconds with a light that has an intensity of at least 400 mW/cm². The adhesive; is supplied in the patented **SilvR** single-dose dispenser. The kit evaluated contained 60, 0.12-ml single doses of the **TECO** adhesive, a 2-ml syringe of etching gel and a reference card. Twenty-nine consultants evaluated **TECO** in more than 760 clinical applications. This product received a 94% clinical rating.

- Suggested Retail Cost**
- \$188.35/kit

Product Features

The written instructions are supplemented with a laminated, illustrated card for quick reference. Consultants evaluated **TECO** in the **SilvR** single-dose dispenser which has the applicator brush attached. This patented delivery system was judged to be unique and easy to use. A simple press of the silver foil bag wets the attached brush, which is then removed, and the adhesive is applied directly to the etched tooth surface. There is sufficient bonding agent in the container for multiple restorations. All aspects of the **TECO** adhesive, such as dispensing, application and viscosity were rated as very good. The lack of postoperative sensitivity was also a highly rated feature of this adhesive. The



Consultants' Comments

- ♦ "The single-use dispenser is excellent and easy to activate."
- ♦ "Just one coat is needed and the material stays in the light-proof container."
- ♦ "Nice viscosity - coats the tooth well."
- ♦ "Difficult to maintain the bend on the brush if you have to dip it in the container multiple times."
- ♦ "The working end of the applicator brush is too thin and flexible."

only negative comment related to the kit was the thickness of the etching gel. Eighty-eight percent of the consultants rated **TECO** the same as or better than the adhesive they were currently using and 79% would recommend it.

Clinical Tip

- This adhesive should not be used with self-cured restorative materials. If dual-cured restoratives are used with **TECO**, the restorative material must be light-cured. ■

Prophy Star® 3 + + + + ½

DentalEZ
866. DTE. INFO • 610.725.8004
www.dentalez.com

Description

The *Prophy Star 3* is a hygiene handpiece for use with disposable prophy angles or Doriot-style reusable angles. It is a lightweight (62 g), anodized aluminum handpiece, four inches (10.2 cm) in length that connects with a standard four-hole line configuration and a 360° swivel. Recommended air pressure is 35-40 psi for operation at 4000 rpm. The handpiece is autoclavable up to 135°C and is packaged with a cleaning brush to allow easy removal of any debris. Four different autoclavable colored grips are also provided to allow color-coding of handpieces for multiple hygienists, as well as efficiencies of sterilization. Installation and removal of the prophy angles require a simple push-on, pull-off motion. The handpiece has a two-year warranty. Twenty consultants evaluated the handpiece in over 725 procedures, and it received a 91% clinical rating.

- Suggested Retail Cost**
- \$641.00/handpiece and 4 grips (1 of each color)
 - \$30.00/package of 4 replacement grips (1 of each color)
 - \$90.00/replacement nosecone

Equipment Features

The *Prophy Star 3* is lightweight, resulting in less stress and fatigue for the operator. It connects with a 360° swivel for better



Consultants' Comments

- ♦ “Lightweight and small, easy to grasp and use all day.”
- ♦ “Nice low-maintenance, lube-free feature.”
- ♦ “Appropriate torque for prophy.”
- ♦ “Holds up well after sterilization.”
- ♦ “No quick disconnect available.”

control and less drag from the tubing on the hygienist’s hands. The handpiece provides consistently smooth, quiet operation. Consultants appreciated the low-maintenance, lube-free feature. The color-coded grips are a nice feature for larger offices with multiple hygienists. These colored silicone pieces are easy to place, but they do create an area where debris can collect around the edges. Ninety percent of the consultants stated *Prophy Star 3* was equal to or better than their current hygiene handpiece, while 94% would recommend it to a colleague. ■

SURFACE COAT + + + + ½

Kuraray America, Inc.
800.879.1676 • 888.700.5200
www.kuraraydental.com

Description

SURFACE COAT is a one-coat surface glaze designed to provide a clear and smooth surface, reducing or eliminating final polishing. The principal components are methyl methacrylate and a multifunctional acrylate monomer. The material is compatible with direct and indirect resin composites, acrylic provisional restorations or appliances, resin-modified glass ionomer, and glass ionomer restorations. *SURFACE COAT* is applied with a disposable brush and then light cured for 10-20 seconds. The kit contains one, 5-ml bottle of glaze. The recommended storage temperature is 2-25 °C (36-77 °F). *SURFACE COAT* was evaluated by 30 clinical consultants to glaze 715 restorations. This product received a 91% clinical rating.

Consultants' Comments

- ♦ “No yellow tint left behind.”
- ♦ “I was surprised by the exceptionally glossy appearance and life-like esthetics.”
- ♦ “It’s the best yet!”
- ♦ “Nice esthetics and surface smoothness on temporary crowns.”

- Suggested Retail Cost**
- \$60.00/5-ml bottle

Product Features

In general *SURFACE COAT* rated well in all categories. Several consultants commented on the ease of use of this product as well as its truly clear appearance. The viscosity makes the glaze easy to apply using a variety of applicators. The resulting surface



Kuraray America, Inc.
800.879.1676 • 888.700.5200
www.kuraraydental.com

Description

CLEARFIL CERAMIC PRIMER is a single-bottle silane/acidic adhesive monomer (MDP)-based coupling agent for use with indirect porcelain, ceramic, hybrid ceramic and composite restorations. It may also be used for intraoral porcelain or composite repairs. *CLEARFIL CERAMIC PRIMER* is reported to bond to any kind of dental ceramic, including feldspathic porcelain, zirconia, alumina, lithium disilicate and leucite-reinforced ceramics. No hydrofluoric acid etching is necessary for ceramics before using this product. A phosphoric acid etching agent may be used to treat the intaglio surface of any restoration other than zirconia or alumina. Instructions recommend a single coat followed by air-drying. *CLEARFIL CERAMIC PRIMER* contains an ethanol-based solvent and requires refrigeration but should be brought to room temperature before use. Twenty-seven consultants evaluated *CLEARFIL CERAMIC PRIMER* for use with over 240 restorations. This product received a 96% clinical rating.

Shear bond strengths of CLEARFIL ESTHETIC CEMENT (in self-cure mode of a dual-cure resin cement) with CLEARFIL CERAMIC PRIMER	
Treatment	Shear Bond Strength, MPa
As-sintered zirconia	23
Sandblasted zirconia	36

- Suggested Retail Cost**
- \$89.00/2-ml bottle

SURFACE COAT + + + + ½

is smooth and glossy. Despite the manufacturer’s instructions of roughening the surface to be glazed, most consultants felt more comfortable with some polishing of direct restorations before applying *SURFACE COAT*. As with other products in this category, long-term durability has not been established. Some of our consultants reported excellent durability and surface gloss on direct restorations in low wear areas at six weeks, while others reported their temporary crowns had lost the glossy finish at three weeks. Seventy-three percent of consultants found *SURFACE COAT* to be equivalent to or better than their current surface glaze. Likewise, 73% of consultants would recommend this product to a colleague and 77% indicated they would switch



Consultants' Comments

- ♦ “Easy to use on a variety of materials.”
- ♦ “Wets ceramics well and is quick to apply!”
- ♦ “Saves step of etching ceramic restorations, decreases placement time.”
- ♦ “I didn’t like that it has to be refrigerated.”

Product Features

CLEARFIL CERAMIC PRIMER is efficiently packaged in an easy-to-use squeeze bottle. Drops of primer are easy to dispense, so the volume dispensed is easily controlled. The viscosity of the product is excellent, wetting ceramic surfaces well. The liquid is colorless and has minimal odor upon application. Application time is very fast and the wide-ranging indications for use of this product made it highly appreciated by all evaluators. Every consultant judged *CLEARFIL CERAMIC PRIMER* to be equal to or better than their current silane coupling agent. Eighty-one percent of consultants indicated they would switch to the product and 96% would recommend it to a colleague. ■

from their current surface glaze product.

Clinical Tips

- To ensure a sufficient bond, the manufacturer recommends roughening the restoration surface with a diamond bur before applying *SURFACE COAT*.
- Don’t place too much. A thin layer is sufficient.
- Brush it on like nail polish.
- Patients are encouraged to avoid sources of potential stain for three days following application of *SURFACE COAT*. ■

MIRRO-VAC + + + +

IndiGreen Innovations
866.429.4902
www.indigreen.com

Description

MIRRO-VAC is a disposable, single-use, combination saliva ejector and mirror. It reduces the number of instruments used and reportedly, procedure time. **MIRRO-VAC** is ideal for sealants, air abrasion, bonding, and other dry-field procedures. It has an easy-lift film to protect the mirror surface until use and has an upper suction inlet that relieves tissue grab and ensures that the anti-fog acrylic mirror stays clear even under direct exhalation. It is available in a soft blue color with a round, textured handle for improved grip. **MIRRO-VAC** has a size 4 lens with a 35° inclination angle. It may be utilized with a low-volume saliva ejector tube or with an HVE/SE adapter to free up the low-speed evacuation line. **MIRRO-VAC** was evaluated by 36 consultants in 500 dental procedures. This product received an 87% clinical rating.

Suggested Retail Cost
• \$22.99/50 count package

Product Features

Consultants gave high ratings to **MIRRO-VAC** as a cheek

Consultants' Comments

- ♦ “No need for cotton rolls, easier to retract cheek and tongue.”
- ♦ “Not good for long procedures.”
- ♦ “It is not sturdy enough to retract the cheek without separating from the suction line housing.”
- ♦ “It would be better with a mirror surface on both sides.”

retractor. The size of the mirror (No. 4), the quality of the reflection, and the anti-fog features were also highly regarded. Consultants agreed that the use of the product for hygiene procedures, especially with ultrasonic scalers, was very effective and helpful in keeping the field dry. Sealant placement and other dental procedures are facilitated by the dual action of the mirror both for vision and suction, especially in cases where an assistant is unavailable. Some consultants noted that the **MIRRO-VAC** had the tendency to dislodge from the vacuum line. Fifty-seven percent of the consultants said that they would recommend **MIRRO-VAC** and the majority would make it available in their office for hygiene recall visits. Sixty-two percent of the consultants reported the **MIRRO-VAC** to be equal to or better than the product they are currently using. .

Clinical Tips

- Use cotton forceps to remove protective film from the mirror surface. ■

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Description

Vitapex is a calcium hydroxide and iodoform paste for use in endodontic procedures. Indications for **Vitapex** include root canal treatment, apexification and hard tissue formation, apexogenesis, treatment of root resorption, and childhood endodontic trauma. Additionally, **Vitapex** is indicated for use during pulpectomy or root canal treatment of deciduous teeth. The manufacturer reports that **Vitapex** resorption approximates that of root resorption. The material is a soft, yellow, pre-mixed paste that can be delivered directly into root and apical areas by a plastic syringe and delivery tips. According to the manufacturer, **Vitapex** is chemically and physically stable, highly radiopaque, and has excellent antibacterial and bacteriostatic properties. **Vitapex** is available in a 2-gram syringe kit which contains one, 2-gram syringe of **Vitapex** and 20 disposable tips. The introductory kit contains one, 0.5-g syringe of **Vitapex** and three disposable tips. Twenty-six consultants evaluated **Vitapex** in 200 clinical situations. This product received a 92% clinical rating.

Suggested Retail Cost
• \$15.85/introductory kit
• \$45.00/2-gram syringe kit

Product Features

Vitapex has an excellent delivery system. The long, flexible tips fit deep in canals, often with access to the apical area. Many consultants found **Vitapex** to be an excellent inter-appointment medication for two-appointment root canal treatment since the material does not ever harden in the canal. This was especially true when presented with a “hot tooth.” Consultants were pleased to have the addition of an iodine compound to traditional calcium hydroxide and felt that this ingredient aided in pain relief. Many consultants noted that dispensing the material from the syringe would be enhanced if the material were less viscous. This consistency also caused removal of **Vitapex** to be quite tedious. Seventy percent of consultants found **Vitapex** to be equal to or better than their current canal medicament. Sixty-two percent of consultants would switch to **Vitapex**, and 77% would recommend it to a colleague.



Consultants' Comments

- ♦ “Finally, a delivery system that gets the material to the apex!”
- ♦ “A product that should be in every office that does endodontic treatment.”
- ♦ “Dramatic improvement in patients’ symptoms.”
- ♦ “The delivery tips get to the apex, but the material is too thick.”
- ♦ “Due to the thickness, it was hard to tell if I was backing the tip out enough.”
- ♦ “Thick paste is hard to remove from canals. Material sticks to the side of the canals.”

Clinical Tips

- **Vitapex** is contraindicated for use in individuals with history of iodine allergy.
- During placement, avoid overfilling of paste through the root canal apex.
- Use a hand file measured to length to manipulate the paste within the canal.
- Use rotary or ultrasonic instrumentation for efficient removal of **Vitapex**. ■

KaVo America Corp.
800.528.6872 • 847.550.6800
www.kavousa.com

Description

The **701 KL Electric Motor** is a brushless electric motor designed for use with high- and low-speed electric attachments to complete most dental procedures. The motor utilizes a contactless magnet system rather than the carbon brushes found in other systems. It is designed to reduce noise, eliminate vibration and require no maintenance. **701 KL Electric Motor** has two programmable modes and a digital speed control with forward and reverse, which provides constant torque. The water spray can be adjusted at the motor. Cellular-optic handpiece attachments provide illumination. The speed range of the motor is 2,000 to 40,000 rpm, and the entire speed range with the attachments is 27 to 200,000 rpm. **701 KL Electric Motor** can be integrated into the *Kavo Environment Delivery System* or is available as an external control box that can be mounted on any existing delivery system. It can be calibrated to the existing air pressure of any dental unit. KaVo provides a three-year warranty on the motor, tubing and control box. In this evaluation, the **701 KL Electric Motor** was integrated into an existing delivery system and evaluated by seven consultants over a nine-month period. This electric motor received a 97% clinical rating.

Suggested Retail Cost

- \$2,380/ *KaVo ELECTROtorque plus* (motor kit which includes the **701 KL Electric Motor**)

Consultants' Comments

- ♦ "Smooth operation."
- ♦ "Excellent constant torque."
- ♦ "Easy snap-on handpiece connection."
- ♦ "I appreciate the ability to digitally control the speed, especially when finishing and polishing or performing endodontic procedures."
- ♦ "Custom mounting brackets are available for installation on existing delivery units."
- ♦ "It is very convenient to control water spray at the motor rather than on the delivery system."

Equipment Features

The **701 KL Electric Motor** provides constant torque to the handpiece with minimal noise and no vibration. It is shorter and more lightweight than other electric motors. Consultants appreciated the excellent illumination delivered to the handpiece and the easy water adjustment at the base of the motor. The speed and direction of rotation are easily adjusted on the digital control box. The two programmable modes are very convenient for setting the most commonly used speeds for high- and low-speed operation. All assistants reported the control box and motor were easy to clean and the system required no maintenance. One hundred percent of consultants would purchase and recommend **701 KL Electric Motor** to their colleagues. Sixty-two percent of consultants would switch to **Vitapex**, and 77% would recommend it to a colleague.

Editor's Note: A brushless motor is advantageous because carbon brushes wear with time and need to be replaced. The carbon dust produced by the brushes can collect in the motor and should be cleaned to prevent motor failure.

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