
HENRY SCHEIN®
DENTAL SOLUTIONS
Rely on Us™
FEB / MAR 2022

HENRY SCHEIN®

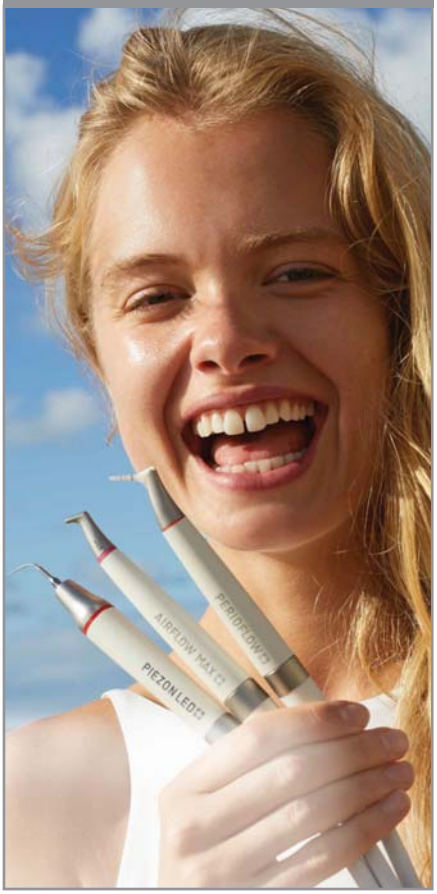
12-15

Monitoring and Removing Biofilm In Dental Unit Waterlines

26

What Wipes and Why?

27 - 31



EMS Now Available from Henry Schein!

INDEX

REALISE YOUR DREAM AND LET HENRY SCHEIN HELP YOU CREATE IT!

RENOVATION – EXPANSION – RELOCATION – BRAND NEW PRACTICE

HENRY SCHEIN®

At Henry Schein we pride ourselves in supplying New Zealand's largest portfolio of leading dental consumable and equipment brands, with the goal of providing the most comprehensive solution for your practice, and one that can be tailored to your individual needs.

To support this goal, we would like to introduce you to our newly created website packed full of the information needed when starting a set up project. Our aim is to provide our customers looking to either fitout a new practice or embark on some form of renovation with all the information they'll need to start their journey.
Surgery Setup Website: henryscheinsurgerysetup.co.nz

Every step of the way, our Sales Specialists and project management partners will be there to offer support and guidance in making your vision come to life. Our team are committed to making this sometimes-daunting process as stress-free as possible while ensuring completion on time and within budget!

Meet your Henry Schein Project Management Team

From vision to completion our team is with your every step of the way

Territory Manager
Start sharing your vision with your local Territory Manager

Product Specialists
Equipment, CAD/CAM, Surgical and Endodontic Sales Specialists

Henry Schein Financial Services
Tailored Finance Packages to meet your needs including deferred payment options

External Partners
We work with a team of Project Management, Design and Fitout

Service and Support Technicians
In-house High-Tech Digital Support and our Authorised Service Network

Business Solutions
Henry Schein One Dental Software and Practice Management

Robyn Mair
Territory Manager

One of the things I enjoy most about my job is helping with a surgery setup. To see a customer's dream being fulfilled is just the best feeling. Henry Schein offer everything from finance to cotton rolls, and everything else in between, including patient software. That means all our teams work together to get the best possible outcome for our customer.

Bruce Fowler
Equipment and Lab Manager

Henry Schein represents a wide range of equipment manufacturers, all of which are recognised as leading brands. Our team focus on the specific requirements of a project, big or small. We pay careful attention to the unique vision each new practice is shaped by. The flexible solutions we offer along with our decades of experience make us a safe choice. You can be confident that your Henry Schein team care about a successful opening day and an ongoing relationship that grows with your business.

Bruce Hampton
Commercial and Finance Manager

Through our finance partners we have a range of flexible options and payment structures, that allow you to achieve your project goals and take the pressure off while your appointment book builds up.

Scan to visit our Surgery Setup Website TODAY!

DIGITAL WORKFLOW IN IMPLANT AND RESTORATIVE DENTISTRY

PART 2: SECONDARY TEMPORISATION

ASIGA®

In this second article we will discuss the second set of temporary restorations, from capturing the intraoral situation effectively using a special intraoral scan technique, to the fabrication of the provisional crowns and bridges on natural tooth abutments and implants to favour the development of the gingival emergence profile.

Healing phase

Following implant surgery and placement of healing caps, the first provisional temporary was left in place for a four-month healing period (fig. 1).

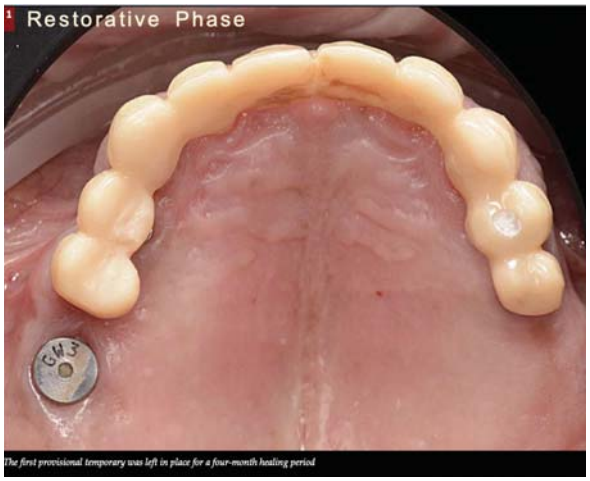
During the healing phase, tooth 24 (upper left first premolar) developed signs and symptoms of pulpal necrosis, which was treated.

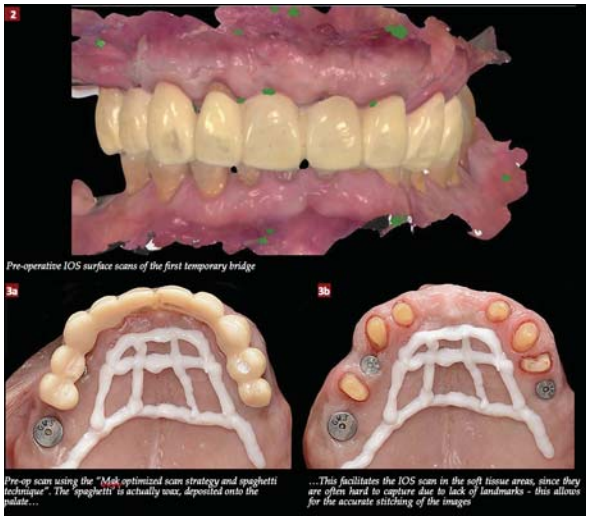
The second phase of temporisation involved individual temporary restorations, (implants and tooth abutment-supported), printed in GC Temprint resin using the Asiga Max UV printer.

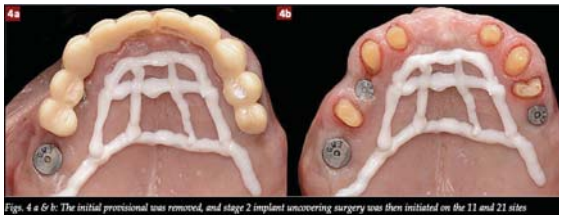
This second provisional phase would allow for the extraction of tooth 15, development of the soft tissue emergence profile and gingival contours, and the verification of the aesthetics and occlusion.

The implant on 11 needed stage 2 implant surgery to uncover the implant as we had to bone graft that site at the time of surgery. We have found that on implant sites it is always better to place a temporary implant restoration to develop the soft tissue and emergence profile around that site. This is especially important in an aesthetic zone. Since 15 was extracted and would be replaced by a pontic in an implant bridge, the temporary implant bridge would allow the development of the soft tissue in the pontic site, hence further improving the aesthetic outcome.

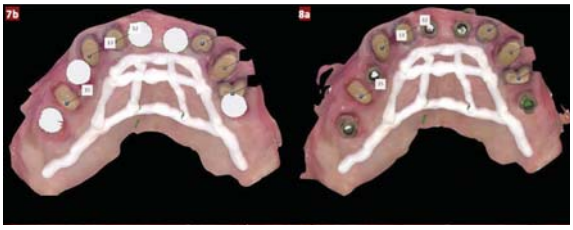
Since the patient had approved the shape and occlusion of the initial provisional bridge, the plan was to replicate the aesthetic and occlusal scheme as individual restorations.



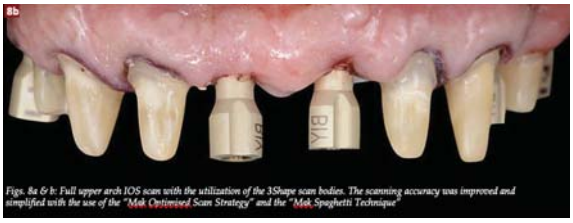




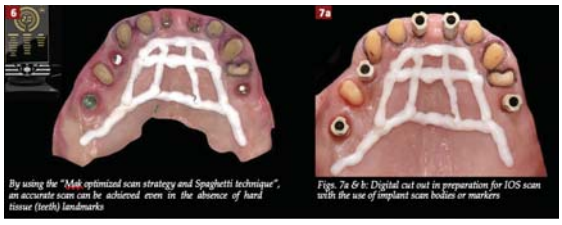
Figs. 4 a & b: The initial provisional was removed, and stage 2 implant uncovering surgery was then initiated on the 11 and 21 sites



Stage 2 surgery of 11 and 21 was done utilising a Gemini (Ultradent) diode laser to uncover the implant fixtures. Once completed, the remaining healing abutments were removed and a soft tissue scan was then done

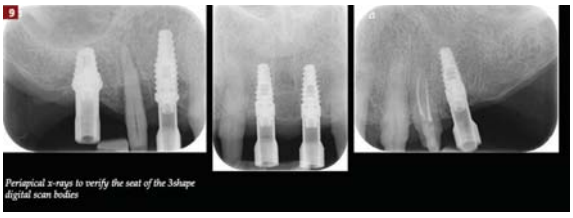


Figs. 8a & b: Full upper arch IOS scan with the utilization of the 3Shape scan bodies. The scanning accuracy was improved and simplified with the use of the "Mak Optimised Scan Strategy" and the "Mak Spaghetti Technique"



By using the "Mak optimized scan strategy and Spaghetti technique", an accurate scan can be achieved even in the absence of hard tissue (teeth) landmarks

Figs. 7a & b: Digital cut out in preparation for IOS scan with the use of implant scan bodies or markers



Periapical x-rays to verify the seat of the 3shape digital scan bodies

The treatment plan for this phase involved:

- Finalisation of the preparations and fabrication of single unit provisional crowns for teeth 13, 12, 22, 23 and 24;
- Fabrication of single unit implant retained provisional crowns for 11, 21 and 25;
- Fabrication of this implant-retained three-unit provisional fixed bridge from 16 to 14;
- The extraction of tooth 15 (which would become the pontic for the three-unit implant-retained bridge);
- Development of the soft tissue emergence profile and contours on the 11, 21 and 15.

The Mak optimised scan strategy and spaghetti technique

First a pre-preparation scan was done, with the healing abutments and temporary bridge in situ (fig. 2).

This was done using the "Mak optimised scan strategy and spaghetti technique" (figs. 3a & b), thus named because the wax looks like spaghetti.

This novel scan strategy allows the intra oral scanner to capture areas of soft tissue where the availability of 'landmarks' is often limited.

This optimises image acquisition and enables the accurate stitching of the images taken, providing the most accurate of scans.

There is an abundance of literature and evidence showing that the accuracy of IOS scans are largely dependent on the experience of the operator and the minimisation of soft tissues capture in the scans.

DR. ANDREW CHIO
BDSc. (Melb)

DR ANTHONY MAK
Dentist
BDS, Grad Dip Clin Dent (Oral Implants) (USyd)

EDGEENDO SOLUTIONS

AN INTERVIEW WITH DR. CHARLES J. GOODIS

Introduction

Henry Schein has been offering the endodontic solutions portfolio of EdgeEndo®, one of the world's largest NiTi rotary file suppliers, successfully for two years and has just enlarged this range by EdgeFile® X7, the number one selling EdgeEndo® NiTi system in the United States.

EdgeEndo® is conducting business in 35 countries around the world. The company's mission is to deliver high quality dental products and solutions at affordable prices which in turn benefits practitioners and patients everywhere.

US based Endodontist, Dr. Charles J. Goodis, Founder of EdgeEndo®, received his DDS from the University of Michigan, his GPR residency at the University of Minnesota, and his Endodontic residency at the University of Connecticut. Dr. Goodis has dedicated his career to constantly improving the root canal procedure. His findings led him to create more effective root canal instruments and procedures. He's been working as an Endodontist in Albuquerque, New Mexico, USA for 25 years.

Dr. Goodis, please tell us something about the company and the main products.

My background in mechanical engineering and training in endodontics, as well as trying to help the patient and dentist do the best they can, inspired me to found EdgeEndo. Edge has been in the US market since 2012. In this short time, we have become one of the largest endo companies in the world. We now offer our products in 35 different countries.

Our main products are NiTi files that are heat-treated through our proprietary FireWire process. Our best-selling system is the EdgeFile X7. It's one of the leading files used by endodontists in the US, Canada, New Zealand, Australia and many countries in the Middle East. EdgeTaper Platinum and EdgeOne Fire have also been very successful systems in these markets. EdgeEndo has been well received in the industry. In addition to files, we also sell a full assortment of accessory products including gutta percha and paper points.

What are the benefits of the EdgeEndo files and which endodontist will benefit mostly from these files?

The patient of course wants a quick root canal procedure because any time you can reduce chair time, they appreciate. And the patient wants a precise root canal clean-up to get rid of the pain but preserve the tooth. Both is supported by the flexibility paired with the stability, our files provide and thus allow endodontists to perform an accurate and fast procedure. In addition, the reasonably-priced files make the treatment also more efficient in respect of costs.

How do you achieve the balance between offering high-quality endodontic products at low price?

Quality and value are paramount in importance at EdgeEndo. We have a very detailed quality system that allows us to produce a consistent, high quality product. Unfortunately, being an endodontist treating patients, I saw how high costs are and I thought to myself we can still offer a great product at a good price which provides value for the money. I think reasonable prices are important to a dental practice because as the dental fee structure changes in the US some dentists are making less money than they did before, and I believe offering a high-quality instrument at a lower price really helps dentists succeed.

Which is the most important instrument for root-canal preparation? How many files does one require as a rule?

My personal preference is EdgeFile X7, it is super flexible, efficient and unbelievably strong. Each system varies somewhat. As a rule, most root canals can be completed with between 1 and 3 files.

We've simplified the technique for systems to help the dentist and eliminate waste. As an endodontist, I never used all of the different sizes in an assortment pack. With my file systems you can purchase the files needed and follow the techniques we've worked on with other dentists to develop.

EDGEFILE-X7™

A common concern within root canal preparation is the cyclic fatigue. How resistant are the EdgeFiles (perhaps with reference to a clinical study)?

Our file systems are very resistant to cyclic fatigue. We've done both internal and 3rd party peer reviewed testing to ensure our files are more resistant. Dentist can refer to all of the published research on our site that back up our claim (https://web.edgeendo.com/studies).

What if I already have a working system and technique? Are the EdgeFiles compatible?

Yes, I designed many systems to be an easy transition for the doctor to integrate Edge into their practice utilising the same technique and motor settings. If a dentist switched to Edge they can still use the gutta percha points, paper points and obturators they have in stock.

Do customers need new motors for the application of the files?

The motor currently being used by dentists should be able to work with our files. The only time we advise purchasing a new motor is when a dentist wants to use one of our reciprocating systems, such as EdgeOne Fire, which works in a reverse-reciprocating motion and can't be used with a rotary motor.

The heat treatment process of the EdgeEndo files seems to play a big role in the quality and thus differs from files of other manufacturers. Can you describe the advantages to us?

We spent a lot of time creating geometrically the best instruments out there. The proprietary FireWire heat-treatment process vastly improves the NiTi metallurgy, delivering excellent strength and flexibility, improving resistance to cyclic fatigue or in other words, reducing the chances our files will separate.

Another benefit of FireWire NiTi is it enables EdgeEndo files to not "bounce back", preserving canal anatomy, and carefully follows the canal as they shape.

How do you minimise the risk of file breakage with your files and are there any improved properties here compared to the files of other manufacturers?

Our files combine the attributes of being highly efficient and flexible, due to the proprietary FireWire heat treatment process, while being extremely safe and resistant to fracture. They are designed with a safe-unwinding feature. The files start unwinding before breaking. Unwinding signals to a practitioner that the file is fatigued and can break if they keep instrumenting with the file. This helps with stress and results in a more enjoyable procedure for the practitioner and patient. The patient is only in the chair for the time intended and this saves time and cost for both.

Thank you, Dr. Goodis, for these interesting insights.

Scan to view the EdgeFile -X7 range.

DR. CHARLES GOODIS
DDS,
New Mexico, USA

3M™ HEALTH ACADEMY

3M Science. Applied to Life.™

Navigating the Recovery, Together

More than ever, patients and dental professionals have a heightened awareness of the dangers posed by bacteria, viruses and harmful contaminants. For many years, 3M has helped healthcare providers around the world protect against infection. As you navigate the recovery, 3M stands with your team – as a resource committed to lifelong oral health for all.

Past health crises around the world have shown that recovery will happen in phases and new business considerations will apply. And as time passes and we move into the next phases of recovery, as you re-open your practices, scale up services and seek to achieve a full recovery, 3M Oral Care is there to support you. Your patients are in good hands – yours. Trust our science to deliver solutions that help keep them clean and confident.

Infection Prevention Solutions for Dental Professionals

Dental professionals and patients now have a heightened awareness of potential exposure to infection and of the need to mitigate that risk with personal protective equipment (PPE). It's important for your team and your patients to feel comfortable and confident about the PPE you use. There have been many misconceptions on which mask to use and this is especially true since Covid 19. 3M is here to help explain the differences between masks and respirators and support you to make informed decisions on what is required to fit your needs.

The potential routes for the spread of infection in a dental office are direct contact with body fluids of an infected patient, contact with environmental surfaces or instruments that have been contaminated by the patient and contact with infectious particles from the patient that have become airborne.

Did you know?

The highest concentration of dental aerosols is found within 1 metre in front of the patient's mouth.[1]

Hand Hygiene Solutions

One of the best ways we can protect ourselves from contracting Coronavirus is to wash our hands. This is especially so in the dental environment as we aim to reduce contact transmission. We have been reminded to stop shaking hands when greeting and we are requesting patients to use hand sanitiser on entering and leaving the surgery.

Coronavirus is defined as an enveloped virus. Soap molecules are similar to those that make up the outer layer of the virus, whereby the molecules in the lipid bilayer are strongly attracted to soap molecules. This disrupts the fat membrane surrounding the virus, once the lipid envelope is damaged, the integrity of the virus is compromised.

Alcohol targets viral envelopes, but in a different way. Ethyl alcohol, at concentrations of 60%–80% denatures the cell wall proteins causing interference with metabolism and cell lysis.

Hands may be cleaned either by applying an alcohol-based hand rub (ABHR), to the surface of the hands, or the use of soap/solution (plain or antimicrobial) and water, followed by patting dry with single-use towels.

Hand hygiene Australia[1] provide comprehensive resources on hand hygiene including the 5 moments of hand hygiene. Within the 3M™ Avagard™ range of hand hygiene products we have antiseptic hand rubs and antimicrobial hand washes that can assist in dental procedures.

Contact your preferred distributor for updates on availability of these products.

1. https://www.safetyandquality.gov.au/sites/default/files/styles/resource_410x594px/public/2019-10/5momentsposter3_dental_thumb.jpg?itok=Rq5zeSRh - accessed 26.5.20. Veena HR, Mahantesha S, Joseph PA, Patil SR, Patil SH. Dissemination of aerosol and splatter during ultrasonic scaling: a pilot study. J Infect Public Health. 2015;8(3):260-265. doi:10.1016/j.jiph.2014.11.004

Masks vs. Surgical Respirators: A Practical Comparison

vs.

Surgical Masks				Surgical Respirators
Surgical masks are intended to put a barrier between the wearer and the environment. Some may contain filter media, but they do not form a tight seal around the wearer's face. Masks protect the wearer from splashes and spray and protect the patient from particles expelled by the wearer. • Helps reduce the risk of large particles (e.g. saliva and mucus) expelled by the wearer from reaching patients. • Helps reduce the wearer's exposure to blood and other body fluids. • Fits loosely and does not require fit testing or seal checks. • Does not reduce user exposure to airborne particles. • Tested and certified under AS/NZS 4381 - 2015 requirements.	✓	**Protects patients from particles expelled by wearer?**	✓	Respirators are specifically designed to protect the wearer from particles in the environment, including viruses and bacteria. They contain specialised filter media and form a tight seal around the face. Respirators help prevent the wearer from inhaling certain airborne particles, while also protecting the patient from particles expelled by the wearer. • Helps reduce exposure to certain airborne particles – by at least 95% in the case of P2 (also known as N95) models. • 3M's proprietary filter media features highly charged microfibers designed to significantly enhance capture of airborne particles and lessen breathing resistance. • Tested and certified under AS/NZS 1716 requirements. • Recommended for healthcare workers who may be exposed to airborne particles.
	✓	**Protects wearer from splashes and spray?**	✓	
		Reduces wearer exposure to airborne particles?	✓	
	✓	**Fluid resistant?**	✓	
		Fits tightly on face?	✓	
		Requires fit testing?	✓	

Protective Eye Wear

Dental professionals should wear appropriate protective eyewear with effective lateral coverage when splashes or sprays of blood and body fluids are likely.[2, 3] Protective eyewear is also recommended to help shield patients' eyes from spatter or debris generated by dental procedures.

Other useful resources include recommendations by ADA (ada.org.au) for assistance in providing information on relevant levels of restriction, starting up your practice from hibernation, triaging and managing the Covid 19 patient and exposure response plans.

2. Center for Disease Control Prevention. 2007 Guideline for Isolation Precautions: Preventing Transmission of Infectious Agents in Healthcare Settings.
3. CDC Literature References: Guidelines for Preventing the Transmission of Mycobacterium tuberculosis in Health-Care Settings, 2005. MMWR December 30,2005/ 54(RR17); 1-141.

3M Science. Applied to Life.™

STERILE SURGICAL GLOVE DONNING AND DOFFING

HENRY SCHEIN®

Personal protective equipment (PPE) acts as a barrier and plays a critical role in essential infection prevention and control principles, such as standard and transmission-based precautions. The 2016 New Zealand Dental Council Infection Prevention and Control Practice Standard[1] provides recommendations of PPE for dental professionals. Infection prevention and control is underpinned by the Health Quality & Safety Commission's (the Commission's) Infection Prevention and Control (IPC) programme.

With single use gloves the most frequently used PPE, medical examination gloves are continuously on the hands of dental professionals due to their exposure to blood and body fluids. For specifically recommended dental procedures, sterile surgical gloves are part of a suite that makes up the surgical aseptic technique to reduce infection transmission risk when undertaking surgical or invasive dental procedures. Due to less frequency and therefore, experience, the correct practice when using sterile surgical gloves may not be as instinctive as examination gloves, although basic infection prevention principles still apply.

The New Zealand Dental Council Infection Prevention and Control Practice Standard[1] provides basic guidance for the use of gloves, and recommends that when a sterile field is required, sterile gloves are required to maintain the sterility of critical items. The Dental Council Standard[1] does not provide recommended steps for aseptic or surgical technique, including the donning, and doffing of sterile surgical gloves. With more invasive procedures becoming the norm, more education is critical to ensure staff and patients are not placed at increased risk.

To maintain asepsis during surgical procedures, there are two donning methods that can be performed. Which one to use will depend on the task, and whether a sterile gown is being worn. If a sterile gown is not worn, then an 'open donning' technique is used, where after hand antisepsis, the gloves are touched directly but only by their folded cuffs, with care not to touch the fingers of the gloves while donning.

If a sterile surgical gown is worn, the recommended best practice is the 'closed donning' technique where fingers are kept inside the sleeves of the gown to eliminate potential hazards in the glove procedure and the aseptic field is maintained.

The glove doffing or removal technique is critical to avoid contamination. If gowned, the surgical gown should be removed prior to gloves to ensure protection of the hands against contamination. Gloves are then removed with care given not to touch bare skin with contaminated gloves. Gown and gloves are also sometimes removed in a single process. When removing just gloves:

- The gloved fingers should touch the glove material at the wrist of the other hand, slowly pulling it off inside out and then grasping the removed glove in the other gloved hand.
- Then remove the other glove by placing the bare fingers under the cuff, without touching the outside of the glove, and slipping it off, turning it inside out and containing the first glove.
- Gloves are then disposed of in the appropriate waste bin.
- Perform hand hygiene immediately before touching anything else. Contamination can still occur while wearing gloves due to the possibility of glove micro-perforations or defects through which micro-organisms can easily pass. Contamination can also easily occur following glove doffing, as noted by the World Health Organization (WHO),[2] if not performed correctly.

Scan to watch 'How to Properly Remove Single-use Gloves' video.

References 1. New Zealand Dental Council Infection Prevention and Control Practice Standard (2016). https://www.dcnz.org.nz/assets/Uploads/Practice-standards/Infection-prevention-and-control-practice-standard.pdf Accessed November 4th, 2021. 2. World Health Organization. Glove Use Information Leaflet (2009)

MONITORING AND REMOVING BIOFILM IN DENTAL UNIT WATERLINES

dentisan™
INNOVATION, EDUCATION, COMPLIANCE

Increased vigilance around decontamination and cross infection control has been heightened by COVID-19, and it's recommended that equipment within the practice is subject to constant monitoring.

The link between dental unit waterlines (DUWL) and bacterial biofilms has been proven with extensive research and this is one of the key areas in decontamination and cross-infection control. As every dental treatment centre relies on DUWLs as both a coolant for handpieces and equipment, and an irrigant during procedures, ensuring they are safe is essential.

Despite this, wide-ranging studies focussed on DUWL water quality have revealed that microbiological quality in DUWL systems indicates high levels of bacteria which is then delivered from the unit straight into the patient's mouth[1].

For practices to remain compliant with the Infection Prevention and Control Practice Standard, the Dental Council recommends the use of distilled water or water treated by reverse osmosis (RO) supplied through an independent fitted water bottle system[2].

Drinking water guidelines in New Zealand

Drinking water supplies are monitored by the Ministry of Health, looking specifically at *E. coli* as a key indicator. As long as the concentration of *E. coli* is less than one organism per 100 mL, it's assumed that the concentrations of other pathogens will have also been reduced to an acceptable level[3]. Other disease-causing microorganisms found in untreated dental unit water include *Pseudomonas aeruginosa, Legionella* species, and nontuberculous *Mycobacterium* species.

When treating patients, which may include those who are immunocompromised, any water supplied through DUWLs must comply with these standards. As water sources in New Zealand vary, the Dental Council recommends using an independent bottle system.

Ultimately, as DUWLs act as a reservoir for microbial contamination, water quality can easily be compromised. The process of both fitting a suitable water supply along with routinely cleaning, disinfecting and monitoring DUWLs regularly is necessary to mitigate this risk.

How does biofilm form?

Biofilm refers to a collection of microorganisms that cling to surfaces. It's recognisable by its sticky slime appearance, which is due to a protective layer which the bacteria secretes.

You can find biofilm in different water sources, including rivers and streams, cooling towers piped systems and U bends in domestic sinks. Interestingly, between 80-95% of bacteria in nature exist in biofilm, and it can be found elsewhere too, including the plaque on our teeth that causes decay and gum disease.

Biofilm is prevalent in water sources with low centration of solids and nutrients, and they grow over time. Initially, just a small number of individual planktonic bacteria stick to a surface such as a

Sourced from Wikipedia

pipe or a tube, but then they gather pace, with more bacteria attaching itself to the formed layer until it builds to a level where the water quality is compromised.

How biofilm compromises your DUWLs

We know that biofilm can grow relatively quickly, and when it does those microorganisms multiply and disperse throughout the water system. The issue with DUWLs is that they are the ideal environment for biofilm due to their nutrient-rich properties.

Other reasons why biofilm thrives in DUWLs include:

- A low and intermittent water flow of around 30ml/min, allows bacteria to form without being constantly disturbed
- The warmth of the surgery environment is ideal for biofilm
- Narrow, small-bore tubes further encourage growth
- Fresh bursts of liquid during use deliver more nutrients that aids bacterial build-up
- Bacteria prefer non-toxic materials, and these are exactly what DUWL tubing is made from

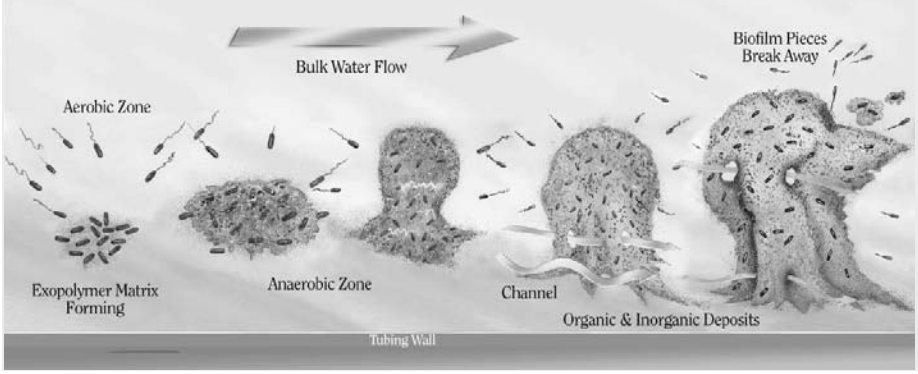
How biofilm puts people in your practice at risk

Once biofilm has formed in DUWLs the pathogens within it can be passed directly from the internal wall of the tubing to the patient's oral cavity. Equipment like high-speed handpieces and ultrasonic scalers which emit aerosols, air and water syringes and mouth rinsing water all provide potential routes of transmission.

When these types of equipment are used and the microorganisms are transmitted, it puts not only the patient, but also clinical staff at risk of these pathogens.

Business considerations

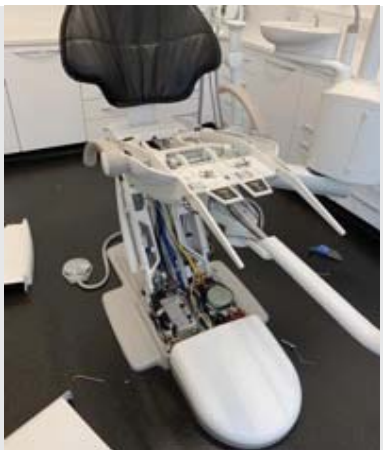
Monitoring the growth of biofilm isn't just vital to patient and staff safety, it can also disrupt general practice. Untreated biofilm restricts water flow and at its most severe can cause tube blockage, all of which can damage or render equipment useless. The result is unnecessary surgery downtime in addition to the cost of equipment repair or replacement.



Evolution and progressive maturation of biofilm community.

Being highly complex in nature, biofilms can have both aerobic and anaerobic zones along with nutrient and waste transport channels, communications networks and inherent defense mechanisms.

(Illustration based on information from the Center for Biofilm Engineering, Tortura, Funke, Case and others)



Three steps to protect patients and the dental team

Patients and staff are routinely exposed to water and aerosols in the dental environment and ensuring water quality are up to standard are integral to the day-to-day running of your practice. You can minimise the levels of biofilm with certain measures. Here are three ways to do that:

1. Purge cleaning

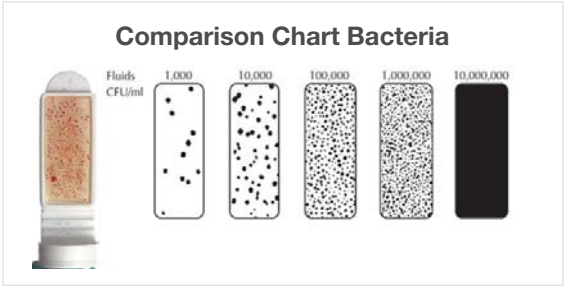
The first step is to test your DUWLs to check water quality. If the quality falls below acceptable levels you will need to purge clean, using a biofilm remover that is compliant with regulations. Bioclear from Dentisan is a ready-to-use, odourless, pH-neutral solution which requires no mixing. It is simply poured into the chair's water bottle so as to fill the waterline and left for a minimum of 12 hours, or preferably over the weekend. Once this time has elapsed, the line should be flushed until the water runs clear. The treatment centre is then ready to use. Bioclear comes in a single dose bottle, with one bottle containing enough for one biofilm removal treatment per chair.

2. Continued maintenance

Following a purge cleaning, you can manage biofilm levels with a product intended for low-level biofilm. Bioclear Daily is ISO10993 approved for biocompatibility, designed to pour straight into the dental unit water feed bottle, making it simple and easy to use. Bioclear Daily continually controls the level of active bacteria in the water, reducing planktonic bacteria count and preventing biofilm formation. This works on an ongoing basis rather than purging the system and can be used in conjunction with Bioclear.

3. Routine monitoring

It is vital to regularly monitor the microbial contamination of your DUWLs regardless of the method of decontamination used. This can be done effectively every three months with biological dip slides. To do this, simply wet each side of the dip slide with output water from each treatment centre in your practice and leave for 72 hours. If the slides reveal visible red spots this is an indication of microbial activity and you will need to purge the DUWL. However, if the DipSlide is clear you can feel assured that your DUWL is meeting safe water standards.



Conclusion

Biofilm has been an issue in dental practices for as long as DUWLs have been used. Fortunately, there are ways to monitor, maintain and purge clean your DUWLs to eliminate and stay on top of biofilm formation. By doing this, you'll be protecting the health and safety of patients and staff, working within recommended guidelines from the Dental Council, and safeguarding your equipment.

To read more on the Dental Council's guidelines around DUWLs and infection prevention and control, visit their guide at https://bit.ly/3oEZZ7l

References:

1 Walker JT, Bradshaw DJ, Bennett AM, Fulford MR, Martin MV, Marsh PD. Microbial Biofilm Formation and Contamination of Dental-Unit Water Systems in General Dental Practice. Applied and Environmental Microbiology. 2000; 66(8):3363-3367

2 Dental Council, https://www.dcnz.org.nz/assets/Uploads/Consultations/2015/Infection-prevention-and-control-practice-standard-effective1May16.pdf

3 Ministry of Health 5 Compliance requirements for bacteria 1 June 2008

HENRY SCHEIN® DENTAL

LEANNE BURRELL
Brand & IPC Category Manager,
Henry Schein New Zealand

BIOCLEAR WATERLINE PRODUCTS

TESTING DIP SLIDES & SHOCK TREATMENT

dentisan™
INNOVATION, EDUCATION, COMPLIANCE

Guidelines for Infection Control in regards to Waterline Management:

- Flush lines for 2 minutes at the start of the day and for 30 seconds between patients
- Take extra care during periods of non-use eg vacations and part time surgeries
- Chemical water treatments minimise biofilm formation in dental unit waterlines
- Water used on patients during treatment should meet potable water standard – Drinking Water Guidelines indicate 500 CFU/ml
- When treating immunicompromised patients – 200 CFU/ml
- Levels of microorganisms can be assessed using commercially available testing kits

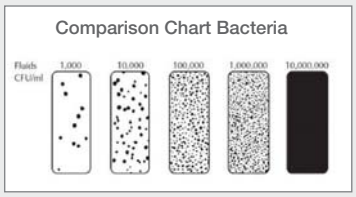
*Copy extracted from https://www.ada.org.au/Dental-Professionals/Publications/Infection-Control/Guidelines-for-Infection-Control/1ADA_GuidelinesforInfectionControl_3.aspx

Bioclear Dip Slides

Continually monitor input and output water quality with dental dip slides. These easy-to-use biological dip slides identify microbial contamination of water. Simple, highly visual red spots indicate contamination and highlight where in your practice's waterlines the contamination is most prominent. The Dentisan Dip Slides provide a clear pass/fail. The ideal result is a clear slide with No Red Dots.
If red dots are present, you will then need to 'Shock Treat' the unit and re-test again.

QD-DS026

- Results in 72 hours
- 10 dip slides per box



Bioclear Shock Treatment

A ready-to-use solution that requires no mixing, Bioclear is a treatment for cleaning dental waterlines to prevent build-up of biofilm. Bioclear has proven efficacy, enabling waterlines to maintain water quality of <200 cfu/ml, in line with HTM 01-05 section 6.79 (subject to input water quality).

QD-DS025200

- Kit contains 12 bottles - 1 bottle will treat 1 dental treatment unit
- Ready to use - no mixing required
- pH neutral

WATER WOES

GLENDOWIE DENTAL CENTRE

When the residential properties across the road from our practice were sold to developers back in 2019, work began in our street to demolish existing homes and rebuild new housing complexes. The work began - but not for us…

The major consequence to our practice, was the constant outages to our water supply. Sometimes for many hours of our working day. Cancelling patients and rescheduling appointments became part of our everyday workload. As our dental chairs are connected to the town water supply, there was no water for us to complete the dental treatment and care for our patients. We noticed each time the water was turned back on, the water quality through our taps was poor and full of sediment. So, what was it doing to my dental gear?

Unable to work due to another water outage, I sat in on a webinar called “Infection Control in your Dental Practice: How Clean is your Water?”, presented by Dr Kerry Roberts, formally an Australian dentist (for 30 years), now a Dental Service Technician and Biofilm Consultant. The webinars learning objectives were understanding the biofilm problem in your dental unit’s waterlines, what does it look like, the steps in biofilm control, and the different chairs and the varying protocols required.

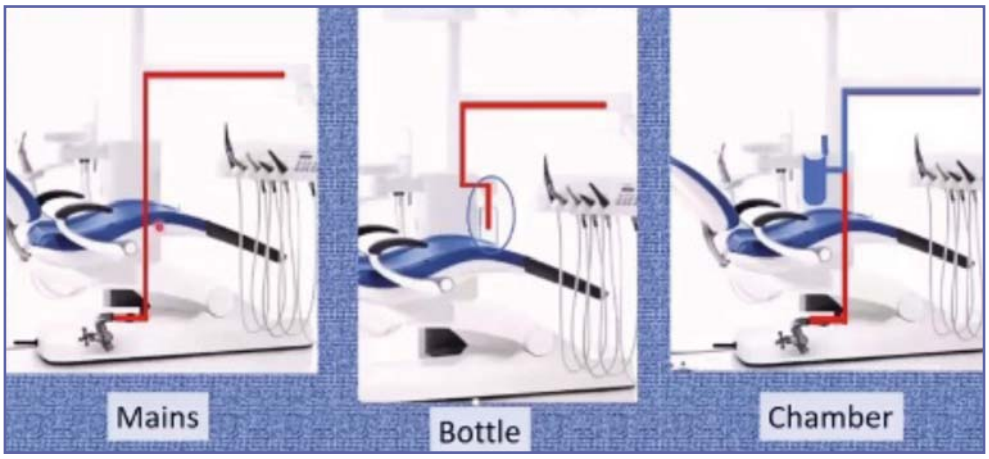
It became clear that the water outages were the least of the problems. Biofilms in the Dental Unit Waterline (DUWL) are a reservoir of microbial contamination and a source of known pathogens. Both patients and the dental team are regularly exposed to water and aerosols generated by dental equipment, and fragments of biofilm can cause illness. The water that comes out of our tap is normally healthy and drinkable, but as it enters our chair and travels through to the triplex, scalers, and handpieces, and then into the patient’s mouth, it becomes contaminated from biofilm that has built up in the dental unit’s waterline.

This is Biofilm...

Actual photos of biofilm from dental waterlines and handpieces.

It was the varying water supply options for different chairs that captured my interest and encouraged me to convert our chairs to bottle systems. I could then guarantee a continuous supply of water in times of outage, but long term, I could also supply healthy clean water to my patients’ and protect the dental team.

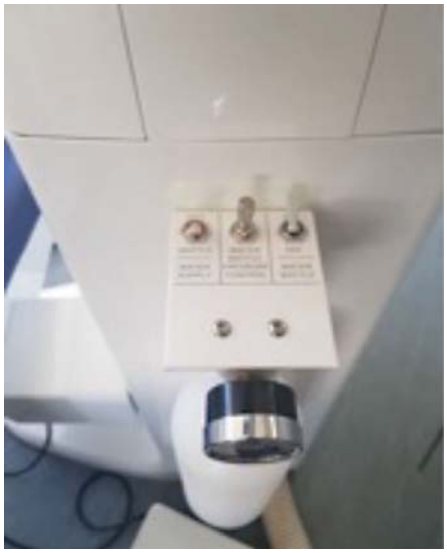
All chairs develop biofilm, due to the complex narrow-bore tubing, slow, intermittent water flow rate, and warm surgery environment. It is the plumbing in your chair that controls how you might manage and prevent biofilm building up in the DUWLs. There are three ways water can be delivered to your chair; mains, mains-chamber, or separate water bottle supply. As mains or mains-chamber plumbing is hard to access, a service technician is typically required to remove the biofilm for you. Implementing a preventive



protocol to control the water quality is difficult when connected to mains water supply. An independent bottled water supply can help to reduce the accumulation of biofilm as it makes adding chemical agents to the water easy to undertake.

For non-surgical dental procedures, the number of bacteria should be less than 200 CFU/mL according to the guidelines. Bacterial levels can be tested using commercially available test strips. When high counts are found, the waterlines need to undergo additional sanitising treatments (also called shock treatments) to remove biofilms and bring the bacterial levels back to within an acceptable range. Waterlines must be treated with a suitable chemical agent in accordance with the instructions for use. Verify that any chemical treatment of the waterlines is in accordance with the manufacturer's instructions for your dental chair.

With the retrofitted water bottle systems installed on three of our chairs, we have the choice between mains supply or the water bottle supply. We can easily test, 'shock' and prevent biofilm build up in our chairs and comply with the Dental Standards. We can continue with the dental care for our patients without interruptions and water outage delays…. but then there are lockdowns – however, that's another story!



Glendowie Dental Centre
dental surgeons

DR GIN WONG
Principal Dentist
Glendowie Dental Centre

REVOLUTIONISE YOUR WATERLINE MAINTENANCE

DentaPure®
Clean Water. Clear Choice.™

SAFE

- Elemental Iodine (I2) is non-allergenic and safe for patients to ingest
- Contains no silver
- Not restricted by the EPA Rule BMP for Dental Amalgam Waste
- No harsh chemicals
- Dispose of used cartridges in your regular rubbish

SIMPLE

- Installs in minutes
- Cost-effective
- Compatible with bottle and municipal systems
- Can use either tap or distilled water
- Once installed, no monitoring or shocking protocol is required for 365 days, or 240L of water if usage records are kept

RELIABLE

- Reduces the possibility of human error
- 1 DentaPure cartridge purifies dental unit water for 365 days, or 240L of water if usage records are kept
- Will not interfere with dental materials and bonding
- No concerns with dental unit corrosion or etching

EFFECTIVE

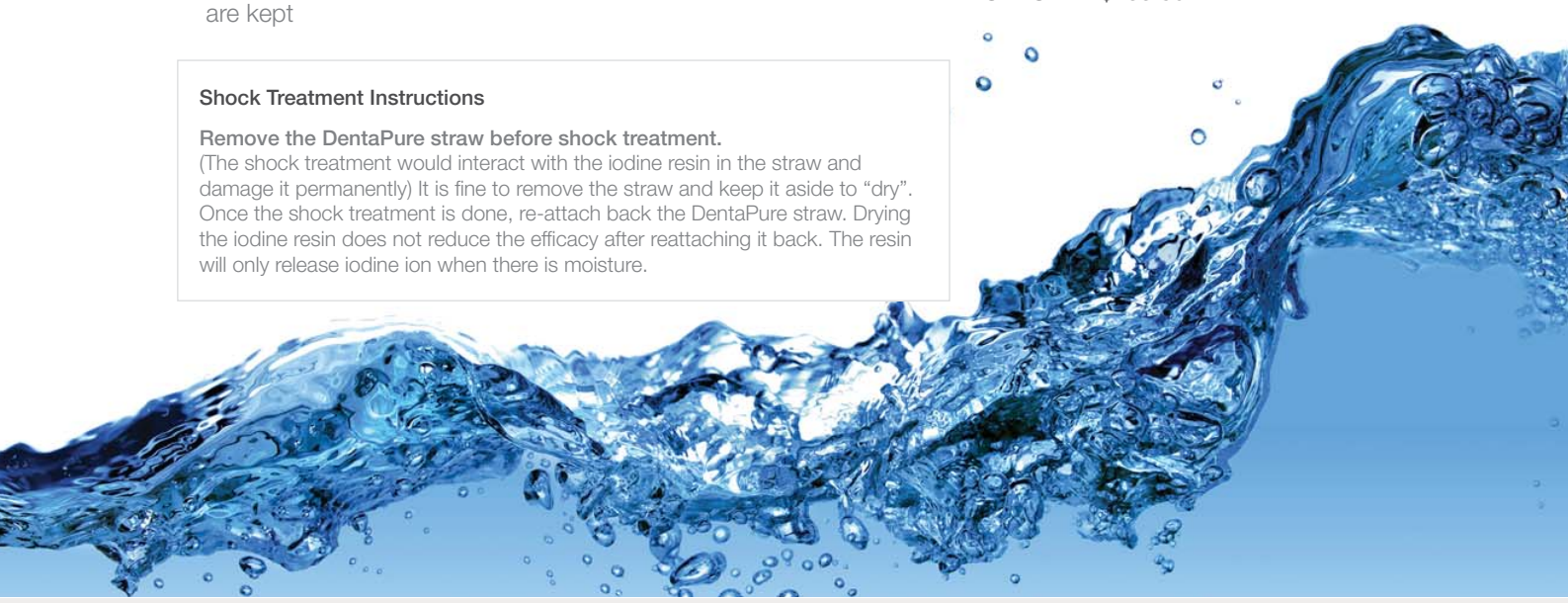
- In independent ADA testing, the DentaPure cartridge performed at ≤10 CFU/mL
- EPA registered to provide ≤200 CFU/mL

SAVE 15%

DentaPure Water Bottle Cartridge Iodine Resin Bead Waterline System.
CR1-DP365B Was $510.00
NOW ONLY $433.50

Shock Treatment Instructions

Remove the DentaPure straw before shock treatment.
(The shock treatment would interact with the iodine resin in the straw and damage it permanently) It is fine to remove the straw and keep it aside to “dry”. Once the shock treatment is done, re-attach back the DentaPure straw. Drying the iodine resin does not reduce the efficacy after reattaching it back. The resin will only release iodine ion when there is moisture.



Colgate®

Preprocedural Rinse Pack

Peroxyl®
Oral Hygiene Rinse

- *Formulated* with hydrogen peroxide 1.5% w/v – Ideal for preprocedural rinsing of your patients prior to examination*
- *Rapid release of oxygen flushes away oral debris*
- *Provides an antibacterial effect*
- *Convenient, pre-mixed rinse formulation*
- *Great tasting mint flavour*
- *Alcohol Free and non-staining – does not contain ethanol*

- *For use with adults and children over 6 years, as an oral debriding agent that kills germs.*
- *Patients rinse with half a capful (10mL) for 1 minute. Spit out.*
- *Please read and follow the label warnings and directions.*

12 Bottles of Peroxyl (1000+ doses)
+1000 Henry Schein Paper Cups
Usually $354.95

Bundle ONLY $319.95

That's only 32 Cents per dose!

2 x CG-61012802 Colgate
Peroxyl Mouthrinse In Office 946ml Pkt 6

1 x HS-1125051 Henry Schein Cares
Paper Cups Box 1000

INSTRUMENT MANAGEMENT

WITH HUFRIEDYGROUP

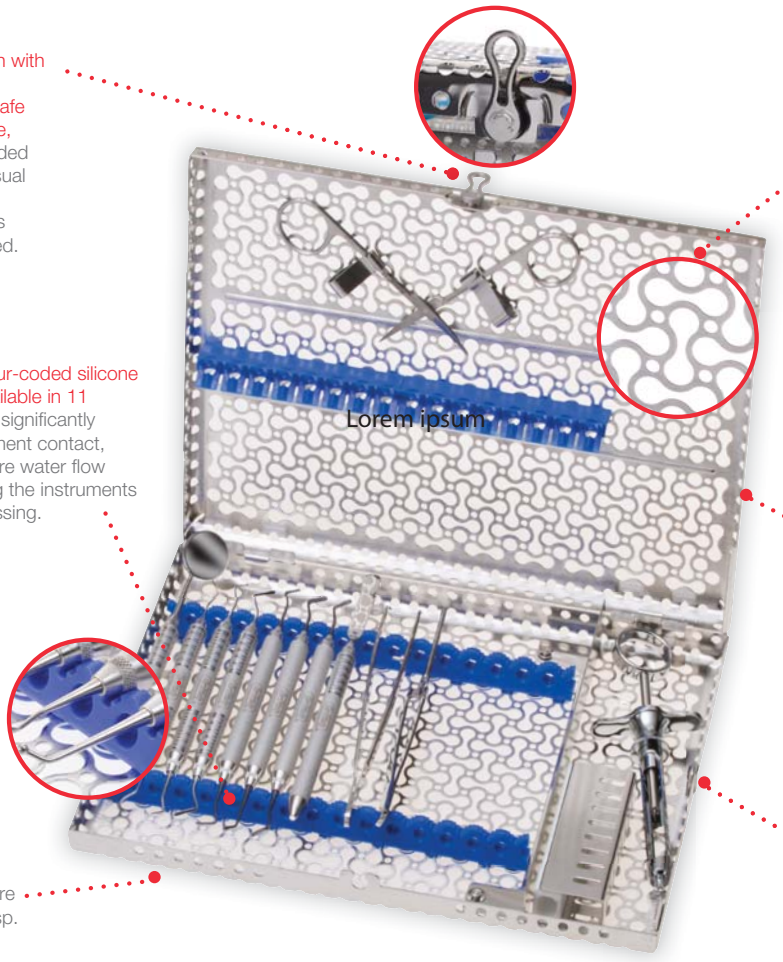
HuFriedyGroup
The Best In Practice

Instrument Management may seem like a small step, but it can have a big impact on any facility.

Keeping instruments organised and managing them properly improves the flow of the facility, which allows the sterilisation area to run more efficiently and clinicians to focus on providing the best level of care.

With our Instrument Management System, you can take your facility to the next level. Our IMS™ Cassettes keep instruments organised and protected throughout the facility, allowing you to go from chairside to cleaning to sterilisation to storage without ever touching contaminated instruments. This helps to improve efficiency, safety, compliance, organisation, standardisation, instrument protection, and more.

Points of Performance



Ergonomic latch with positive locking mechanism is safe and easy-to-use, allows one-handed opening and visual confirmation if the cassette is locked /unlocked.

Revolutionary hole pattern design provides more access to instruments during cleaning and sterilisation and increases compatibility with today's cleaning equipment, including automated washers.

Innovative colour-coded silicone rail system, available in 11 colour options, significantly reduces instrument contact, allowing for more water flow while protecting the instruments during reprocessing.

High quality, electropolished stainless steel protects against corrosion and provides more durability than plastic.

Beveled edge allows for a more ergonomic grasp.

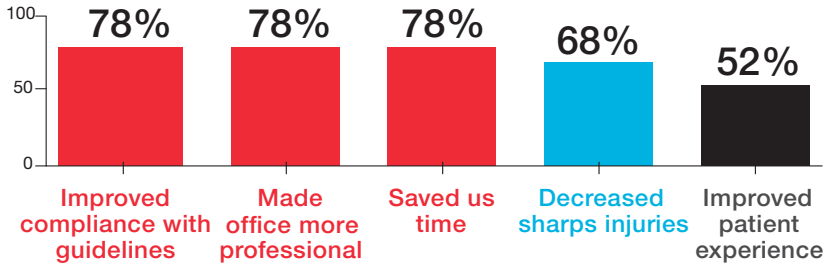
Smooth round corners and slotted edges increase drainage and reduce drying time.

The Impact of IMS™ Cassettes

"It would be physically impossible to be able to see the number of patients that we see in a clinical day without the [IMS™ Cassettes]."

Dr. Edward Lin | Orthodontic Specialists of Green Bay

TOP BENEFITS OF USING IMS™ CASSETTES



HOW CUSTOMERS FEEL ABOUT IMS™ CASSETTES

Improved our organisation

Worth the investment

Satisfaction rating

Data on file. Based on survey conducted May 6 through June 1, 2020 with current users of the IMS™ Cassettes.

Hu-Friedy now have a NEW landing page for Australia and New Zealand full of local content, promotions, KOL's, articles and more!

Check it out now at www.hu-friedygroup.aus-nz

Hu-Friedy is now a proud member of HuFriedyGroup The Best In Practice

EQUIPMENT INFECTION PREVENTION AND CONTROL

REGULATORY BODY STANDARDS VS. MANUFACTURER GUIDELINES

HENRY SCHEIN®

A brief discussion document on our local Infection Prevention and Control requirements from an equipment perspective. Here we offer a few recommendations on selecting the best IC products for your dental equipment.

Various guidelines from the NZDA, Standards New Zealand, The New Zealand Dental Council, along with panels of qualified experts; form the basis of best practice for infection control in the dental practice. If things go wrong, this body of expert advice becomes the resource from which outcomes are judged.

When in the market for new dental equipment, most clinicians choose from one of the reputable mainstream manufacturers. These companies have become mainstream by providing a consistently high quality and fit for purpose product offering, whilst also managing to stay current.

From their factories, they've studied materials, design, infection control and of course costs to strike a balance of a product that's fit for purpose and also of universal appeal to assure their commercial success. Their care instructions by necessity are also designed to provide a universal guide, striving for a common and global denominator on how to care for the equipment and how to achieve an acceptable level of infection control without compromising longevity or function.

Some manufacturer documents will suggest what to do but not name a specific product, some will name a product, while others will suggest what not to use. You'd be forgiven for expressing frustration as to why we don't have more products on the approved list?

There is a simple explanation in part, which can be found in that pile of catalogues sitting on your office desk. You could probably choose from 10's if not 100's of infection control consumables, catering for yourself and your 1,200 or so New Zealand peers. Expand those choices globally to the approximately 700,000 dentists, and it's easy to see that the scale of product choice would easily outstrip any manufactures testing ability, hence they respond by recommending a subset of global products that may form the basis of your product choices. It's almost enough to toss it all in and buy a gin distillery to manufacture hand sanitiser.

The logic becomes apparent; global equipment companies select global material companies. Companies such as Durr, Kerr and Schulke to name a few, can reach their same worldwide client base. Such organisations are ideal partners to select and invest the significant time and money required to test, identify and approve products that are of a known quality to protect you, their clients.

The confusion comes about when New Zealand Guidelines and the manufacturer recommendations don't line up, or the guidelines place additional stress on your equipment.

Our first recommendation is to follow the New Zealand guidelines where possible. The defence, "officer I didn't know the speed limit was 50km/h", is not a defence. As a self-regulating practice, your documented adherence to the expert prevailing advise, is your correct response.

Our next recommendation is you should follow the manufacturers guidelines where they align with our local expert advice. When a choice exists to choose a product they recommend, you should select that product as you'll know it's been tested to perform the task without detriment to the equipment.

Although it seems very un-Kiwi to suggest this; read the instructions. Chemistry processes in cleaning and disinfection are well researched. Follow the instructions to the letter.

When it comes to dilution, if the instruction says 35ml, that's not a splash, it's not about 50ml. Some of the most epic material failures we've seen over the decades are from the splash and dash approach to inexpensive cleaners and disinfectants rendering havoc on expensive equipment. **Dilution matters.**

Based on the above 35ml example, if it were a Gin and Tonic, you've just added 43% more Gin. Possibly fun, definitely more costly and likely to cause damage (that'll creep up on you).

When it comes to selecting chemistry for cleaning, consider the whole product. By that we mean, please don't stop reading at neutral pH detergent. Sounds perfect right? Perhaps not, what if the fine print revealed it had EDTA, or formaldehyde additives in the mix? Understanding what you are purchasing can touch on multiple areas, including applicability, maintenance impact and even OH&S considerations too.

What would be our recommendation when selecting cleaning and disinfection products for equipment, where the manufacturer has not named a specific product? In this case read the intent of the instruction, then consider the intent of the product. Do these two aspects align with what you need, if not grab your Henry Schein Territory Manager and look for alternatives?

For example, Planmeca says, 'clean with neutral pH detergent' (they've not specified product). Our New Zealand protocol says remove bioburden with neutral or slightly alkaline detergent and rinse. From this we surmise; it looks like we have an alignment with both manufacturer and NZ standards.

We then move to intent of the product selected. We're cleaning a medical device. Is the specific product tested and recommended for medical device surfaces?

This is important, your dental equipment is medical equipment, don't use products designed for floors or bedpans and trolleys. Dental equipment is more delicate, and product for dental equipment is quite different to hospital surface cleaners or disinfectants. Expensive damage has been done by not recognising these distinctions matter.

This advice also applies to the internal surfaces, waterline products and suction cleaners. Although hidden from view, just using any old thing, or ignoring the process has led to plenty of unexpected and unwanted service visits as the practice screams to a halt with a seized motor.

When we see damage to equipment due to the appropriate products not being used correctly, it's not like flipping a switch, this damage is generally cumulative and changes things slowly over weeks or months. If it's degrading the composition of the materials, often things go from looking OK to just falling apart.

With this in mind, we add a further recommendation - experience counts. If you are using a product not specifically named by the manufacturer and it passes the initial investigation. Tread conservatively; that old adage of test in an inconspicuous spot is good advice. Use it for a while and look for changes, compare highly cleaned areas to areas less touched – is the surface that gets wiped after every patient still looking the same as that hidden away spot under the chair that barely gets touched? Do this over weeks if not months.

A quick note on your wipes, please use cleaning wipes designed for the purpose. Medical wipes are designed to lift and capture the bioburden and not abrade surfaces. Substituting paper towels can be tempting but abrasive. You'd never clean your spectacles with a paper towel. Imagine now the cumulative damage of cleaning your equipment eight times a day, five days a week for five years of the unit's life.

Lastly, you've done everything right and followed all instructions on disassembly, cleaning, disinfection, sterilisation, lubricated things that need to be lubricated and reassembled. You've checked and documented your infection control protocols, checked to see that policy creep has not happened with staff changes or changed products due to the 'deal of the month'.

And…

The equipment is still getting old.

Our last recommendation is a simple one - rinse. Plain old water and a non-abrasive wipe. All the above protocols and procedures often leave a small film of chemistry that simply sits there, builds up in some cases and keeps the reaction going on your surfaces.

Using water and a cloth to remove all chemical residues, leaves your equipment squeaky clean. If there are no residues or stickiness left, there is no bioburden remaining and no ongoing reactions to prematurely age your equipment. A win win in any equipment/infection control environment.

To conclude, under intense load, infection control longevity can be challenged. We expect when following the manufacturers recommendations as closely as possible, the outcome will maximise your equipment's lifespan and appearance in this challenging environment.

We have a terrific depth of expertise at Henry Schein and stand ready to help. If you'd like to discuss any aspect of this document or would like specific product information, please reach out to one of our team.

All our infection prevention for equipment quick guides can be found on the Henry Schein Equipment website: https://henryscheinequipment.co.nz

Source: Dental Education Hub

CYCLE RECORD COMPLIANCE WITHOUT THE NEED OF A PRINTER

The Mocom range of sterilisers meets the intended requirements of New Zealand Standard/s without the need for a printer.

Mocom are internationally recognised as experts in the design and manufacture of sterilisers and hold compliance certificates for all relevant international standards. The Supreme, Futura and Classic series have been specifically designed by Mocom to meet onscreen parametric release requirements.

AS4815 is the applicable New Zealand standard currently for General Practice ("office-based practice"). A summary of the sections that refer to Parametric Release (i.e. the "authorised person" checking that all the required parameters have been met before "releasing" the load for use) are as follows:

Table 7.1 - Cycle monitoring (every load) – this says you must have:

- Print-out of cycle parameters or
- Direct observation and recording of cycle parameters (i.e. writing them down every 10 seconds!) or
- Class 4, 5 or 6 chemical indicator (where no print-out is available).

And…

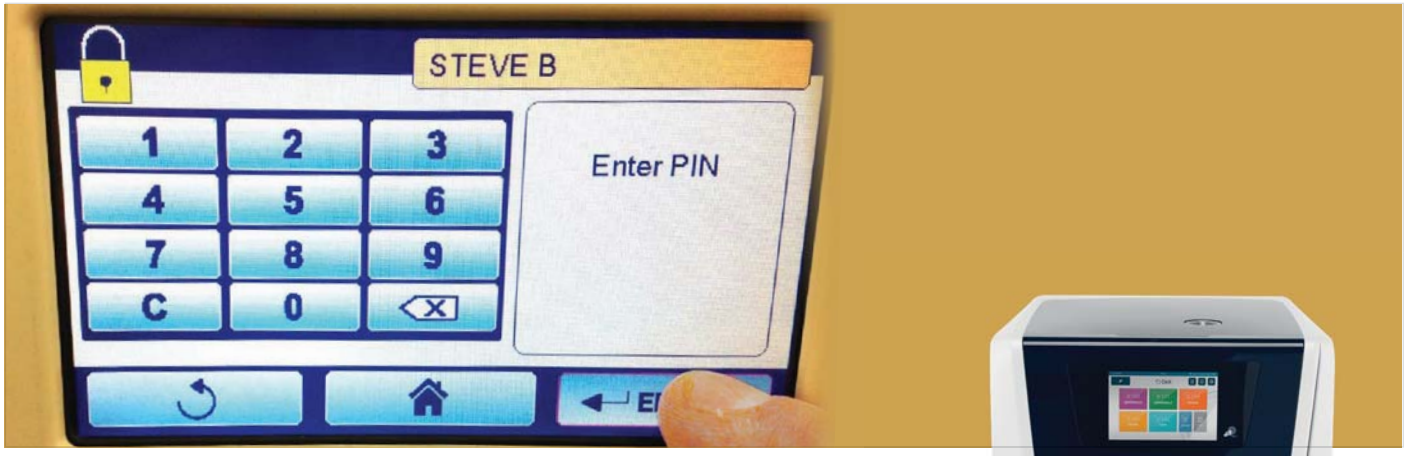
- Class 1 chemical indicator in each load of unwrapped items.
- Class 1 external chemical indicator on the outside of every packaged item in the load.

And optionally:

- Biological/enzymatic indicator(s).
- Chemical indicator-on tray or inside pack(s) (Class 1, 4, 5 or 6).
- Process challenge device(s) reflective of the type of loads processed.

Clause 7.7.4.1 says in relation to the physical parameters to be monitored:

- They shall include time and temperature, and, where applicable, pressure.
- The parameters shall be automatically measured and permanently recorded (by print-out or non-volatile electronic record).
- The monitoring must identify that critical physical parameters have been met (cycle type/time/temp/pressure)
- At the end of each cycle, the operator shall …verify that correct cycle parameters were met and record it to permit later identification (of the operator).
- For existing steam sterilisers (with no printer), …a Class 4, 5 or 6 chemical indicator shall be used with each load.



So, the "parameters" that the authorised operator must verify prior to "release" of the load are:

1. The correct (intended) cycle was run (identifying the cycle name and number)
2. The target sterilising time was achieved
3. The target sterilising temperature was reached and was within limits
4. The target sterilising pressure was reached and within limits
5. The cycle was completed fully and had a "positive" result
6. The operator who released the load can be identified
   AND
7. The packs are dry
8. The packs are intact
9. The correct (intended) cycle was run (identifying the cycle name and number)

The Mocom range presents all of the required physical parameters on the screen at the end of each cycle, then requires the operator to identify themselves, before the steriliser opens the door. This cycle and operator detail are recorded within the steriliser for later download.

This "onscreen parametric release" functionality in the Mocom range of sterilisers meets all the requirements for authorised parametric release without the need for a printer. The operator must select their name and enter their (unique) pin number in order to open the door of the steriliser, adding an extra layer of security and preventing unauthorised (or accidental) release of a load.

You may have experienced other steriliser brands that show a "completed" screen without detail at the end of the cycle, but the Mocom "completed" screen includes all parametric release data and still will not open the steriliser door without recording the authorised operator. In our view this more than meets the requirements and intent of the standard.

In our view, Onscreen Parametric Release is only acceptable if the authorised operator can identify all parameters and the operator can be identified and securely recorded permanently. We strongly agree with the view that "Completed" is not enough (unless a Class 4,5,6 Indicator is used and recorded).

Below is a typical Mocom Futura "Completed" cycle screen and the Operator Screens that follow, showing that points 1 – 6 listed above confirm that this data is presented to the operator at completion of a cycle, therefore no printer is required.

JIM OWEN
Sales Relationship Manager
Mocom Australia

WHAT WIPES & WHY

DELVE INTO THE HENRY SCHEIN EXTENSIVE WIPES RANGE

HENRY SCHEIN®

Our Henry Schein wipes range covers products that are designed to clean only, clean and disinfect, or disinfect only. This gives you the flexibility to decide what combination to use to suit your practice needs and infection prevention protocols.

CLEANS

CleanND Wipes Neutral Detergent

NEW

HS-672-2628

Henry Schein CleanND Wipe is a Neutral Detergent surface cleaner approved for use with medical devices. These premium grade wipes are more absorbent and have a special texture which traps and helps lift off soil from surfaces. Presoaked in a pH neutral, biodegradable detergent solution, these wipes do not stain nor leave streaks. Compliant to AS/NZS 4187 and AS/NZS 4815.

Neutral Detergent Wipes

HS-NWIPE

An economical neutral detergent with a standard wipe. Cleans soil and contaminant from surfaces prior to disinfection and is Medical/Dental grade, pH neutral, non-ionic, non-staining and biodegradable and is non-corrosive to instruments and hand-pieces. These wipes are compatible with disinfection and sterilisation products and approved for use with medical devices.

CLEANS & DISINFECTS

Surface Disinfectant Wipes

HS-6722826

Henry Schein Surface Disinfectant Wipes are a premium quality wipe soaked in a cleaning and broad-spectrum disinfection solution. Developed to reduce cross contamination in healthcare environments, they provide fast acting disinfection including activity against SARS-CoV-2 (Covid-19) in 2 mins. The wipes are absorbent, lint free and textured to aid cleaning. For use on hard, non-porous surfaces, not intended for use on medical devices or on skin. To clean and disinfect with this product, you need to do th is in two steps using a fresh wipe when disinfecting.

DISINFECTS

Alcohol Wipes Hospital Grade

NEW

HS-6722824

Henry Schein Alcohol Wipes are hospital grade disinfectant with rapid bactericidal activity. To be used on pre-cleaned surfaces in healthcare environments. Suitable for use on hard, non-porous surfaces. Not intended for use on medical devices, therapeutic products or on skin. Tested under dirty conditions: Pseudomonas aerugi nosa; Escherichia coli; staphylococcus aureus; Proteus vulgaris, Salmonella choleraesuis. Can be used in conjunction with CleanND wipes or Henry Schein Neutral Detergent Wipes.

Scan to watch Emma Jones CICP-P, our in-house Credentialled Infection Control Professional, provide a great overview of each of the wipes within our Henry Schein Wipes Range.


ems-dental.com
S.O.S.
SAVE OUR SMILES
USE ORIGINAL EMS PARTS ONLY
"I FEEL GOOD"
PERIOFLOW
AIRFLOW MAX
PIEZONLED
WHY CHEAP IS EXPENSIVE:
Protect your patients and your equipment.
Rely only on original PIEZON® PS Instruments and Handpieces by EMS Switzerland. With compatible, fake or copied tips and handpieces, you risk to ruin your patients' teeth and gums and your premium EMS components. Only original EMS products are made and warranted to be used in EMS units.
➤ One use of an original PS Instrument costs only 20 cents. So why use worthless me-too tips?
EMS
MAKE ME SMILE.

S.O.S. SAVE OUR SMILES

PRESERVING SMILES FOR ALL GENERATIONS

Henry Schein New Zealand Announces Partnership with EMS Dental

Henry Schein New Zealand are proud to now offer customers the full range of EMS PIEZON® devices and instruments. EMS are the world leaders in dental prevention and Mike Engle, Managing Director at Henry Schein "feels very excited to be newly affiliated with EMS Dental". Oral health is now more important than ever and using safe, reliable and evidence-based technology from a trusted supplier is crucial". We interviewed Mike to learn more about EMS PIEZON® No Pain technology and the dangers of using non-EMS instruments.

Mike, EMS is currently attracting attention with its "S.O.S. Save our Smiles" campaign. What is it about?

Many patients understand that there is a direct link between a healthy mouth and overall general health. Good oral hygiene and professional biofilm management significantly contribute to a stable immune system – and this is particularly important considering the COVID-19 pandemic. Therefore, more and more patients seek professional prevention based on science, technology and clinical evidence. With the S.O.S. campaign we wish to preserve patients' smiles with painless technology. Our main aim is that patients get what they expect and what they pay for: a medically clean and healthy mouth or as we frame it, their best "No Pain" dental experience ever!

In the campaign, EMS explicitly warn against using allegedly compatible, copied, or counterfeit products. Why is this important?

For EMS, oral biofilm management has been the driving force for innovations since the company was founded in Switzerland in 1981. One example is the ultrasonic PIEZON® (Perio Slim) PS Instrument, probably the most copied ultrasonic device in the world! It is optimally suited for subgingival debridement in 95% of ALL cases. Like the other piezoceramic devices from EMS, the PIEZON® PS is a technical masterpiece: with its precise interaction between the handpiece and the PIEZON® No Pain module, it ensures perfect linear transmission of energy, without any lateral impact by circular or other amplitudes, and is therefore also quiet and virtually painless for the patient. "When the PIEZON® No Pain module is activated, the intelligent feedback control supports automatic power adjustment throughout the procedure, so the clinician doesn't need to manually change the sittings".

WHAT IS "INTELLIGENT FEEDBACK CONTROL"?

A dynamic response technology that senses changes in the tooth surface 200x per second and adjusts itself accordingly. As a result, when adapting the instrument tip along areas where there are no hard deposits, vibrations remain low. When the instrument tip detects hard deposits, ultrasonic power increases instantly to the maximum power set by the clinician.

PIEZON® No Pain can be integrated into almost any dental unit on the market or ordered as a factory fitted option. "Henry Schein New Zealand is thrilled to offer PIEZON® NO Pain Technology to customers" says Marinko Glucina, Brand Manager at Henry Schein New Zealand. "Henry Schein New Zealand customers are now able to access all the benefits of ultrasonic technology to deliver high quality care, effectively with the absence of any pain or discomfort to the patient with the correct technique. Delivering pain free ultrasonic scaling is a science that requires both clever technology and high-quality manufacture," he said. "There are always less expensive options but purchasing an EMS product is an investment in both clinical efficiency and most importantly, patient comfort." Mike added that pain associated with ultrasonic scaling is typically caused by incorrect power settings, using worn or incorrect instrument tips or more common, using counterfeit EMS instruments.

"Counterfeit products don't have the same inherent flexibility that is required to create the frequency of vibration that facilitates gentle and effective care," Mike said. "EMS systems require precision instruments and whilst they may look like other instruments/ scalers the science inside the PIEZON® No Pain Module is very different.

"The fact that EMS products are copied so often certainly implies a high level of recognition for EMS" says Mike "but it poses a considerable risk, because teeth and gingiva can be damaged and this jeopardises the EMS mission – that of happy and healthy patients." If patients perceive their treatment as unpleasant, they will not attend the recall. Furthermore, copies can damage the perfectly matched EMS components or impair their performance. Both will end up costing the practice dearly!

Even in these challenging times, do you think it is worth insisting on original products?

The technology behind PIEZON® No Pain was developed by EMS engineers in close cooperation with dentists. It takes profound knowledge to create highly efficient products that offer both simple design and easy operation.

We know that patients are more than ever concerned with health issues, especially in light of COVID-19. And this is where S.O.S. comes into play: if I replace an original instrument with an inferior copy, the medical objective will never be achieved. "If fake instruments are used, EMS along with Henry Schein cannot fulfill our promise to patients of providing both thorough and painless treatment. The patient's health and smile are at considerable risk" says Mike.

Instead of having a synchronised orchestra playing the same vibration for a beautiful melody, by changing the tip you now have one instrument totally out of tune. The biggest misconception, though is that you think you save money buying counterfeit. The true opposite is the fact as the longevity of EMS tips is outliving any counterfeit by a multiple. In short, the most affordable and predictable investment is a genuine EMS!

WHAT IS THE PIEZON® NO PAIN DIFFERENCE?

- Linear tip movement: optimised linear instrument movements are clearly aligned with the tooth surfaces for minimum abrasion
- More power settings: all PIEZON® units have more power settings than industry standard for a customiseable treatment for every patient and clinical situation
- Intelligent feedback control: all devices sense when there is a tougher deposit and adjust the power accordingly for less treatment disruption
- Less noise: When PIEZON® Technology is operated using the precise linear technique, it is almost silent - taking away the fear associated with past procedures.

Last but not least, yet very important: how can we recognise original EMS products?

The combination of know-how built over decades by passionate researchers and developers, the Swiss quality, and the Swiss Dental Academy, the training institute that ensures the correct use of EMS products, makes EMS market leaders. To check whether your Instrument is EMS Swiss-Made, check that the EMS logo is engraved on the thread shaft of your tip. This logo is present on all original EMS Instruments. All original EMS Instruments are in a torque wrench, the so-called CombiTorque. This protects the tips. A satisfied and healthy patient who gladly attends their appointment again is inimitable proof that original EMS products have been used. And that is what counts!

Call Henry Schein New Zealand on 0800 808 855 and discover EMS PIEZON® NO Pain technology today!

BUNDLE & SAVE WITH EMS

Saving big is calling! To announce our new partnership with EMS, we're offering BUNDLE & SAVE deals across your favourite EMS PIEZON® Instruments and Handpieces

SAVE UP TO 40%

PS INSTRUMENT

Universal instrument for sub- and supragingival PIEZON®. Best interproximal access suitable in 95% of all cases.

REF EMS-DS016A

FRONTSIDE

PSR INSTRUMENT

Easier approximal, mesial and distal access, supra- and subgingival.

REF EMS-DS084A

PIEZON® NO PAIN HANDPIECE SET

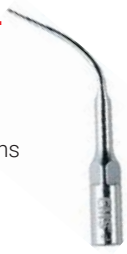
> PIEZON® NO PAIN LED Handpiece
> PIEZON® PS Instrument
> 4 Spare Light Guides

REF EMS-FS455

P INSTRUMENT

Precise removal of stubborn subgingival and supragingival calculus and conretions in all quadrants.

REF EMS-DS011A



PSL INSTRUMENT

Easier approximal, mesial and distal access, supra- and subgingival.

REF EMS-DS083A

PIEZON® NO PAIN NON-LED HANDPIECE

Universal PIEZON® NO PAIN Original Handpiece

REF EMS-EN061

PIEZON® NON-LED HANDPIECE

Universal PIEZON® Original Handpiece for older generation PIEZON® devices

REF EMS-EN041

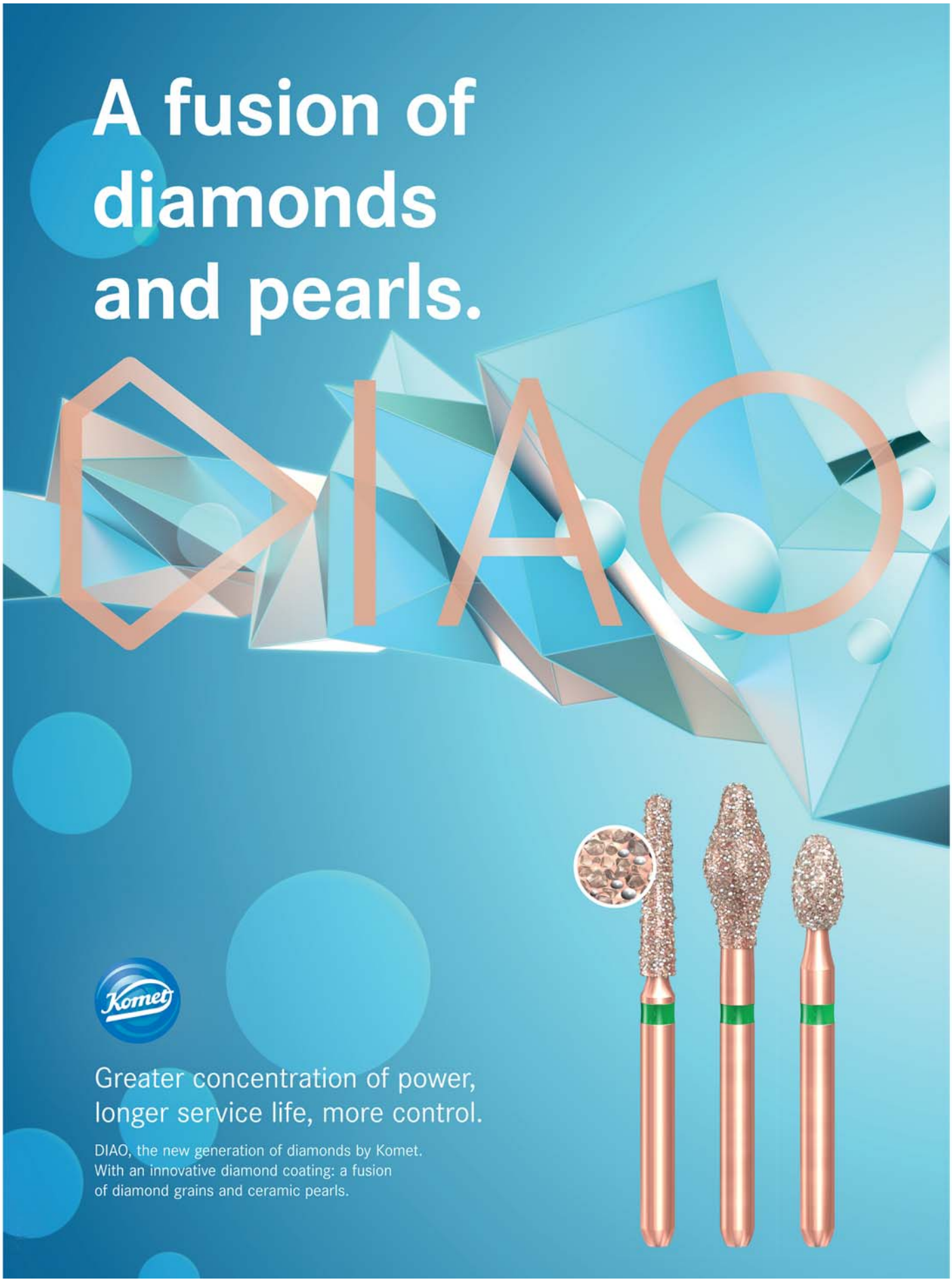
GUIDED BIOFILM THERAPY®

BONUS FOR FIRST 50 CUSTOMERS

GET A FREE PIEZON® TRAINING TOOL WITH EVERY PURCHASE TO PRACTICE YOUR TECHNIQUE AT HOME!

SECURE YOUR DISCOUNT BUNDLE TODAY!
CONTACT CUSTOMER SERVICE ON 0800 808 855

HENRY SCHEIN® | Rely on Us | EMS


A fusion of
diamonds
and pearls.
DIAO
Komet
Greater concentration of power,
longer service life, more control.
DIAO, the new generation of diamonds by Komet.
With an innovative diamond coating: a fusion
of diamond grains and ceramic pearls.

NEW

A POWERFUL INNOVATION WITH AMAZING DURABILITY

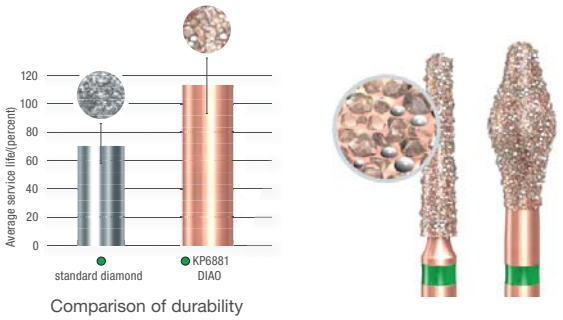
Crown preparation counts among the core jobs at the dental practice. A routine that demands a lot: Concentration, time and physical effort. Isn't there a way of making these jobs easier and better at the same time?

The answer: DIAO, with its innovative diamond coating that combines diamond grains and ceramic pearls. This combination creates concentrated power that can be applied with the utmost precision, giving the instrument amazing durability and significantly prolonging the sharpness of its coating. You can rely on the instrument staying sharp over an extremely long time. That's not all: DIAO is easy and comfortable to guide for perfect control.

For optimum recognition facilitating the workflow in everyday use, DIAO is provided with an unmistakable colour: a classy, modern, radiant rose gold.

Concentrated power for exceptional durability

The combination of diamond grains and ceramic pearls leads to an unprecedented concentration of power that ensures an incredibly long service life. The optimal density of the coating guarantees that the instrument stays sharp for an exceptionally long time – a sharpness you can rely on time and time again.



Comparison of durability

Optimum control

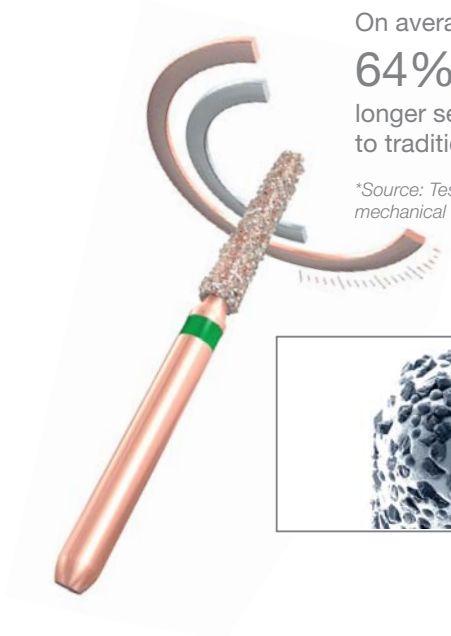
Thanks to its innovative diamond coating, the DIAO can be guided smoothly and with ease, thus increasing the safety during the treatment.

Easy recognition during everyday work thanks to the rose gold colour

DIAO supports the entire team every day at the practice. With its distinctive rose gold colour, DIAO greatly facilitates the instrument management. The instruments stand out wherever they are, during the treatment, during reprocessing process or when placing the instruments back into storage. This contributes to a smooth workflow at the practice.

Efficiency, created from diamonds and pearls.

The innovative diamond coating of the DIAO burs is interspersed with ceramic pearls to increase the distance between the diamond grains. Like this, any pressure exerted is concentrated on the tips of the diamond grains which greatly increases the efficiency of the instrument.

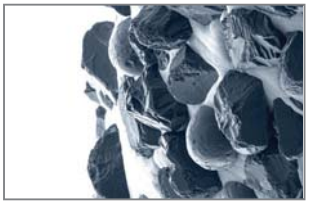


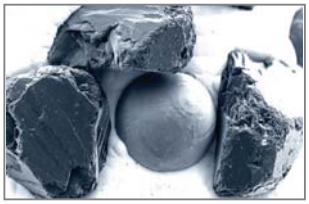
On average,

64%

longer service life compared to traditional instruments*

**Source: Test lab Komet Dental, mechanical cutting test 2020*





DIAO

Maxima Diamond Burs

Features of greater diamond exposure:

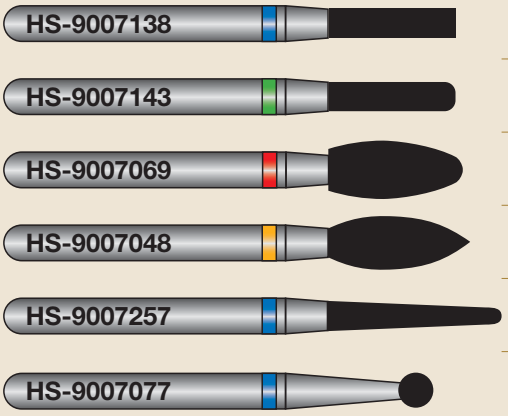
- Stronger bonding
- Larger exposure of each diamond crystal
- Uniform diamond coating, including the tips

Benefits of greater diamond exposure:

- Faster & cooler cutting/grinding
- Lasts longer
- Slower clogging due to higher exposure of diamonds

Buy 5 or more packs to receive your **FREE MAXIMA BUR GAUGE!**

Our Top 6 Maxima Burs



	Head Diam	Head Length	Grit
Flat End Cylinder	1.0mm (010)	4.0mm	Medium
Round Edge Cylinder	1.0mm (010)	4.0mm	Coarse
Egg	2.3mm (023)	4.5mm	Fine
Bud	1.8mm (018)	4.6mm	Extra Fine
Round End Taper	1.4mm (014)	8.0mm	Medium
Round	1.0mm (010)	1.0mm	Medium

OVER 100 VARIATIONS AVAILABLE | View the full range and new catalogue online.

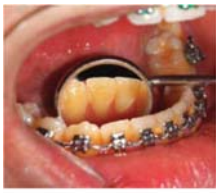
TOOTH MOUSSE™ & TOOTH MOUSSE™ PLUS

Tooth Mousse – is the delicious tasting crème that contains calcium and phosphate, the major minerals teeth are made of.

Nature knows best

Made from cow's MILK

When do your teeth need extra protection?



If acid from bacteria in your mouth attacks your teeth

GC Tooth Mousse offers extra protection for teeth if you are unable to effectively clean your teeth. Brushing your teeth poorly allows dental plaque to build up and acid from bacteria in your mouth to attack teeth. For example, patients undergoing orthodontic treatment with brackets or aligners tend to find it more difficult to clean teeth and remove dental plaque.

If acid from diet attacks your teeth

GC Tooth Mousse offers extra protection for teeth if your diet contains acidic foods or drinks. Examples of acidic drinks and foods include fruit juices, soft drinks, sport drinks, alcohol, coffee, refined sugars, artificial sweeteners, vinegar and processed foods.

If acid from reflux (heartburn) attacks your teeth

GC Tooth Mousse can alleviate the negative effects of acid reflux on your teeth by offering extra protection. During pregnancy, nausea from morning sickness can lead to frequent reflux of acid contents of the stomach, particularly in the second and third months of pregnancy. Some people suffer from reflux when they drink caffeine, alcohol beverages, smoke or chew tobacco, or eat acidic foods.

Tooth Mousse & Tooth Mousse Plus Patient Brochures Available Now

GC-TMPATIENTBRO Pkt of 25

GC-TMPLUSPATBRO Pkt of 25

Scan to download a copy.

G-ænial® A'CHORD

The advanced universal composite with unishade simplicity

Simplicity, aesthetics and performance in your hands

G-ænial A'CHORD represents another significant step forward in the advancement of composite materials. It is the combination of two remarkable proprietary technologies created by GC; **Full-Coverage Silane Coating (FSC) and High Performance Pulverised CERASMART (HPC)**. The result? The ideal synergy between advanced physical properties such as wear resistance*, gloss retention* and low discolouration[1] with simplified handling, providing the clinician excellent adaptation to the cavity preparation. Reducing placement time, it provides excellent marginal integrity and consistently yields natural-looking restorations!

Refills

GC-GACHORDSYR_	Syringe Refills (1 x 2.1ml (4g)
GCGACHORDUNI_	Unitip Refills (15 x 0.16ml (0.25g)

Syringes	WAS $122.00	**NOW $109.80**
Unitip	WAS $152.50	**NOW $137.25**

SAVE **10%**

[1]Mizukami et al. IADR2020. Evaluation of Water Sorption and Colour Stability of Paste-Resin Composite. J Dent Res. 2020;99 Spec Issue A: #2471.
*Source: GC R&D, Japan, 2019. Data on file.

GC-BONDS

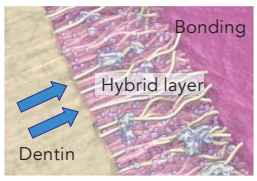
Challenges of dentine bonding...

Trying to achieve long term durability and a strong bonding interface

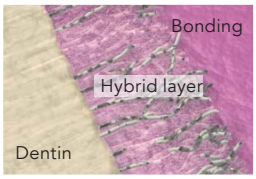
To absorb and relieve shrinkage stress

Water and HEMA, avoiding long term degradation

HEMA containing bonding systems have much higher water uptake and greater risk of degradation



polyHEMA attracts water, adhesive starts to degrade



Exposed collagen fibres degrade (MMP activity)

Dentin bonding—Variables related to the clinical situation and the substrate treatment

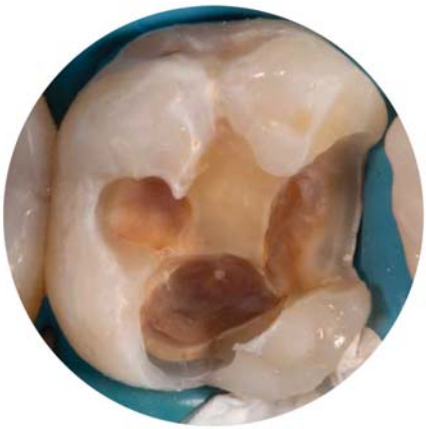
Jorge Perdigão*

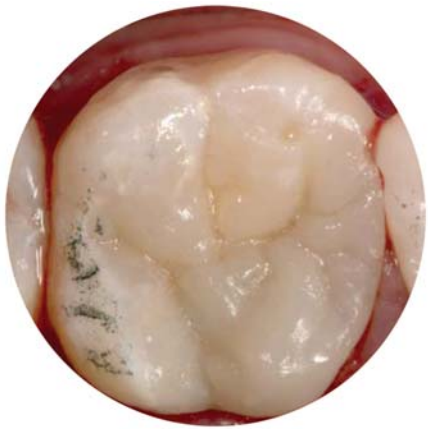
"The wetness of dentin surfaces, the presence of pulpal pressure, and the thickness of dentin are extremely important variables during bonding procedures...

The water content of dentin near the DEJ is about 1% (vol), while that of dentin near the pulp is about 22%"

...and when to use a 2-bottle system

Ideal for large posterior restorations and deep cavities





Courtesy of Dr Benjamin Georg, Germany

IDS - Immediate Dentin Sealing

TECHNIQUE

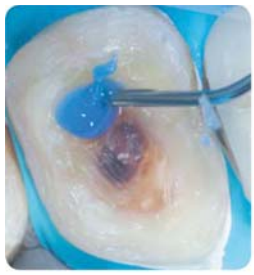
The bonding agent is applied to freshly cut dentin immediately after tooth preparation, for indirect restorations, prior to impression taking

PURPOSE

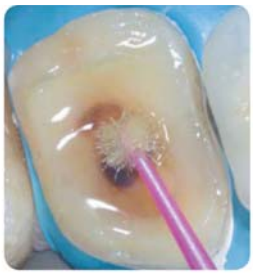
Seal dentin immediately after its exposure and to optimise adhesive performance of indirect restoratives

Ordering code	Description
GC-013647	G2-BOND Universal Bottle Kit 1x 1-PRIMER Bottle 5mL; 1x 1-PRIMER Bottle cover 1x 2-BOND Bottle 5mL; 1x 2-BOND Bottle cover 20 dispensing dishes, 50 x applicators 1x Technic Card
GC-013653	G2-BOND Universal 1-PRIMER Refill 5ml
GC-013654	G2-BOND Universal 2-BOND Refill Bottle 5ml

IDS technique

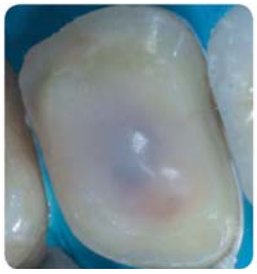


Etching the tooth structure



Application of 1-PRIMER

Application of 2-BOND



After photopolymerisation, the sealed dentin is ready for digital impression.

Courtesy ofDr Jean Meyer, France

G-Premio BOND, single bottle universal bond

Premium adhesive bond strengths

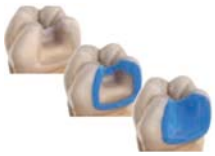
- **Exceptional bond strengths** to enamel and dentine, regardless of the etching mode
- **4-MET, MDP and MDTP** universalise its bonding capabilities, providing strong adhesion to: GIC, metals (including precious), composites, zirconia and alumina
- Combines with G-Multi Primer for **optimum adhesion** to glass ceramics

Direct composite bonding plus

- **Repairs** (in conjunction with G-Multi PRIMER)
- **Indirect Bonding** (in conjunction with G-CEM LinkForce)

G-Premio BOND direct bonding technique

A simple application technique with immediate adhesion and high bond strengths provides an ideal platform for clinical success in direct bonding procedures.



1. Select preferred technique. Etch for 10-15 sec, rinse and dry.

*2. Apply **G-Premio BOND** and wait for 10 sec.*

*3. Dry for 5 sec at **MAX** air pressure.*

4. Light-cure for 10 sec.

G-Premio BOND repair application technique

G-Premio BOND enables excellent adhesion to all substrates after thermocycling, recognising that the use of a separate primer (G-Multi PRIMER) together with G-Premio BOND is essential on glass ceramics to ensure durable adhesion.

1. Roughen the surface; Rinse and dry

*2. If there is a glass ceramic surface, apply **G-Multi PRIMER** and dry.*

*3. Apply **G-Premio BOND** to all surfaces to be repaired and leave for 10 sec.*

*4. Dry for 5 sec at **MAX** air pressure.*

5. Light-cure for 10 sec.

G-Premio BOND as part of the G-CEM LinkForce system

G-CEM LINKFORCE

UNIVERSAL RESIN CEMENT

Now you can secure all your indirect restorations with one aesthetic resin cement solution.

LINK 1: G-Multi PRIMER

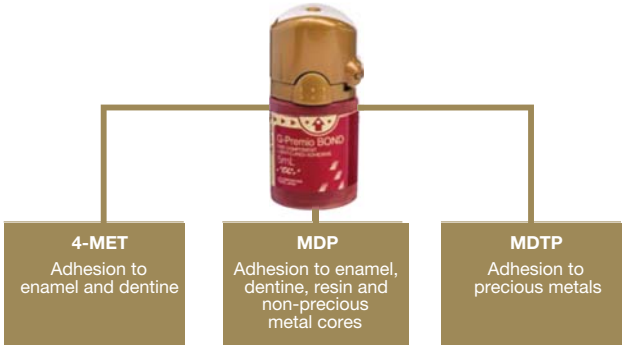
One primer for all substrates

G-Multi PRIMER uses three different chemical bonding agents to ensure perfect adhesion in all situations to all substrates. By adding silane to the primer (and not to the dentine adhesive), stability of adhesion is assured.

LINK 2: G-Premio BOND

A premium chemical bonding formulation

Featuring three functional monomers in a proven formulation, G-Premio BOND delivers a no compromise adhesive performance to all prepared tooth surfaces including liners and composite or metal cores.



LINK 3: G-CEM LinkForce™

Strength, aesthetics and great handling

G-CEM LinkForce™ provides durable retention and long term margin aesthetics through enhanced dual cure polymerisation systems and incorporation of high density, single dispersion glass filler technology.

SIMPLIFYING POSTERIOR COMPOSITE RESTORATIONS

DR ADHAM ELSAYED DISCUSSES CLEARFIL MAJESTY™ ES-2 UNIVERSAL

kuraray Noritake

In this interview, Dr Adham Elsayed, certified specialist in dental prosthodontics and implants and clinical and scientific manager at Kuraray Noritake Dental, details the benefits of the company's new CLEARFIL MAJESTY™ ES-2 Universal composite and explains its application in the daily dental workflow.

Though dentists are becoming increasingly specialised, there's a growing demand for products that can be used for all indications. How does CLEARFIL MAJESTY™ ES-2 Universal fit this model?

First, we need to explain the meaning of the term 'universal' in this context. Previously, there have been two types of composites that differ according to the area of application: anterior composites, used in Class III, IV and V restorations where the aesthetic outcome is the priority, and posterior composites, in which the mechanical properties like strength and wear rate are more important. Universal composites, then, are those that can be used for all types of restorations in the anterior as well as the posterior region.

Another way in which 'universal' can be considered is in relation to shade. In this case, the term is used to describe a restorative composite system that exists in fewer shades, one that can adapt to the tooth structure independent of the colour of the tooth. A major benefit of this type of composite is that it offers a simplified workflow.

CLEARFIL MAJESTY™ ES-2 Universal is essentially universal in both meanings: it is one system that can be used for posterior and anterior restorations, and it is also provided in only three shades—one for posterior, and two for anterior. Universal products, whether they are luting cements, bonding agents or composites, are attractive to dentists as long as they offer simplification of the treatment procedure without compromising quality and durability.

How does CLEARFIL MAJESTY™ ES-2 Universal build upon the success of the CLEARFIL MAJESTY™ range?

The CLEARFIL MAJESTY™ family is very well established at this stage. It includes such products as CLEARFIL MAJESTY™ Posterior, one of the most popular posterior composites owing to its superior mechanical properties and minimal polymerisation shrinkage.

CLEARFIL MAJESTY™ ES-2 is an extensive system that is highly beneficial thanks to its out-standing optical properties and ability to produce high-end aesthetics in the anterior region using Kuraray Noritake Dental's multilayering technique. CLEARFIL MAJESTY™ ES Flow, (Low Flow) is another successful member of the family.

Kuraray Noritake Dental now continues the success story of CLEARFIL MAJESTY™ with the latest innovative product that can change the definition of the universal composite. CLEARFIL MAJESTY™ ES-2 Universal incorporates several attributes from the well-established ES-2 and ES Flow, including Kuraray Noritake Dental's light diffusion technology (LDT).

Speaking of LDT—how does this technology benefit the composite?

LDT allows the material to scatter and reflect light rays at many different angles, which, in turn, allows the composite restoration to diffuse light in a similar way to the surrounding tooth structure. Hence, it

eliminates aesthetic problems like the visibility of restoration and preparation borders.

Thanks to innovative LDT, optimal particle fillers and opacity, CLEARFIL MAJESTY™ ES-2 Universal blends seamlessly with the surrounding tooth structure and emulates natural teeth, eliminating the need for shade selection.

As you mentioned, CLEARFIL MAJESTY™ ES-2 Universal comes with one shade for posterior restorations and two for anterior restorations.

Can such a reduced shade range still truly deliver aesthetic restorations?

CLEARFIL MAJESTY™ ES-2 Universal is not the first composite on the market with a reduced shade system. However, we can safely say that it is the first to focus on aesthetics and not just on reducing the number of shades.

We know from experience that using one-shade composite systems in the anterior region mostly leads to unsatisfying aesthetic results, even with the use of an opaquer composite to reduce shade-matching interference. This is due to the fact that trying to provide one shade for all posterior and anterior restorations, and for all tooth shades, compromises the aesthetic to a high extent. In other words, using a highly translucent material to try to match all restorations and shades will result in the interference of other objects in the mouth, such as the tongue, gingivae and so on.

Kuraray Noritake understood this fact well and solved the problem by introducing three shades with translucencies designed to match specific indications. It is important to note the simplicity of the workflow, since only one syringe per restoration is required. This makes CLEARFIL Majesty™ ES-2 Universal a true game-changer, as it provides the perfect match between simplicity and aesthetics.

What other advantages does this new composite deliver?

Other advantages include the superior mechanical properties for which the CLEARFIL MAJESTY™ family is already known, such as favourable wear properties, low shrinkage stress and high strength. It can be polished easily and retains its gloss. Moreover, the handling of the material is a huge advantage: this includes a long working time of about 270 seconds under ambient light. It is nonsticky and can be sculpted easily.

Which dental professionals would benefit most from this product?

The perfect match between simplicity and aesthetics offers the clinician several benefits. It delivers a very straightforward time-saving procedure without compromising aesthetic results.

There is no need for exact shade selection, thereby excluding visible errors of non-matching shades, and there is also a reduced amount of material stock needed. Therefore, in my opinion, this should be the product of choice for most cases in everyday practice.

Advances and developments in dental materials are rapidly accelerating, and clinicians should integrate these innovations and make their daily practice more efficient with simplified workflows, timesaving procedures, fewer material selections and, accordingly, less technique sensitivity and less need for dental practice personnel to become acquainted with an abundance of materials.

Simplifying Posterior Composite Restorations - The bread and butter of your daily practice

By Dr. Jorge Espigares, DDS, PHD

Learn how the new universal shade concept trend can benefit and simplify your daily work. Discover CLEARFIL MAJESTY ES-2 Universal, a smart and easy-to-use system that will work for the vast majority of your daily cases. See for yourself the results you can achieve when Dr. Espigares presents clinical cases and tips that you can incorporate into your practice to achieve consistent results with a simplified and more efficient workflow.

Scan QR Code to Watch Now!

SIMPLIFYING CEMENTATION

3M Science. Applied to Life.™

Confused about dental cement?

You're not alone. Discover how to simplify cementation and streamline your practice – starting with your inventory

When it comes to choosing modern dental materials, the goals are simple: effectiveness, safety, ease of use, accuracy and predictability. But true simplification is often easier said than done, particularly for complex procedures. And cementation remains one of the most complex – and often confusing – parts of indirect restorative procedures.

Why is cementation so confusing?

Indirect restorative procedures tend to be time-consuming, complicated and take many steps to complete. And while crown cementation only accounts for a small fraction of that time, it's one of the most critical steps in the workflow.

Mistakes during cementation can lead to a number of issues, including early restorative failure – which is incredibly costly to both practitioner and patient. But what makes cementation so challenging?

Successful cementation depends on two critical factors: isolation and cement selection. While proper isolation rests on the skills of the dentist with only a few approaches to choose from, selecting the right cement depends on a number of factors, including restorative material, substrate, indication and more. These variables alone can make the choice difficult, but the sheer number of dental cements available can make it seem insurmountable.

Cementation and bonding materials have evolved to meet the needs of modern restorative materials, resulting in many different groups of cements on the market – some with very subtle differences, even from the same manufacturer. Some require additional conditioning and bonding agents, while others are only feasible for one indication or situation. Because there are so many options out there, it can be hard to know what to use, when – not to mention, which options are going to give you the best, most predictable results. For many dentists, this leads to a massive collection of cements with overlapping indications and looming expiration dates. The question then becomes: how do you solve the cementation equation and simplify your procedure?

Does this look familiar to you? How many products for different cementation procedures do you keep in your drawer today?

Simplify and standardise your cementation.

Have you ever checked your inventory to find you have multiple cements with the same indication? Or had to toss a bunch of barely used materials because they'd passed their expiration dates? Unfortunately, this is a regular occurrence for many dental professionals, and a major hurdle toward simplification. And while simplifying your practice entails more than just your inventory, reviewing the products you use – and don't use – could help you get that much closer to a streamlined workflow.

By narrowing your inventory to a select number of versatile cements, you can reduce the number of overlapping products and the risk of premature expiration while helping your bottom line. What's more, by working exclusively with a smaller set of choice products, you'll strengthen your expertise in those materials. When you change products constantly, it's hard to get familiar enough with them to make the most of the materials' properties. But if you use the same materials repeatedly, you'll get to know their unique chemistries, their pros and cons, and how to handle them most effectively – reducing risk of error and improving results.

Refining your inventory not only helps solve the age-old debate of which cement to use, but it can also reduce educational hurdles between you and your team: if everyone knows what's on hand

and how to use it, you can collectively reduce the chance for miscommunication or mistakes.

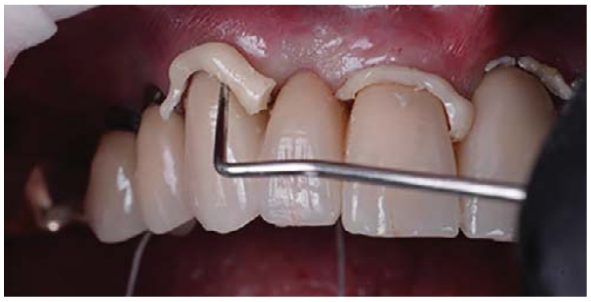
However, simple doesn't mean easy. It's important to understand the different cement classes and to know how to use them. With the materials available up to now, I believe every dentist should have four types of definitive cement available in the practice: a resin-modified glass ionomer, two adhesives (dual cure and light cure) and a self-adhesive resin cement.

The reduction to four types of cement has been very advantageous to my practice. Stock management is easy, I gain more experience with selected products and I still have some flexibility when it comes to choosing the type of cement for my case. Indications still partially overlap between self-adhesive and adhesive resin cement, but that's where personal preference comes in – and, more importantly, experience with the materials.

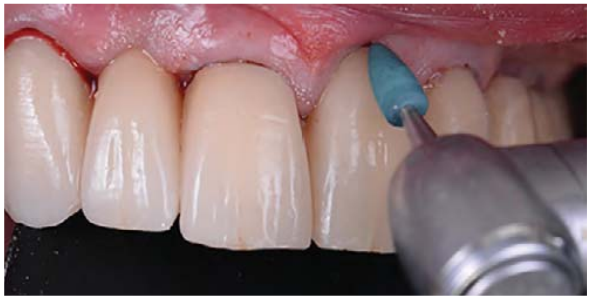
However, as materials evolve, there's a new opportunity to simplify further, from four materials to three – with the introduction of universal cements.

A new class of cement: What does a universal cement material mean for your practice?

As we look toward simplifying cementation, the next logical step is a universal solution, such as 3M™ RelyX™ Universal Resin Cement – which works for both selfadhesive and adhesive procedures (alongside 3M™ Scotchbond™ Universal Plus Adhesive). Combining these properties into one product not only eliminates the need to choose between multiple cements, but also reduces complexity – both in procedure and inventory. Plus, the new initiator system improves the rheology of the cement, making excess clean-up easy and helping reduce waste. Add in the fact that in a clinical setting, I found RelyX Universal Resin Cement to be straightforward and easy to handle while providing a strong bond to dentine regardless of curing mode – and you get a material class that lends itself to a modern, simplified dental practice.

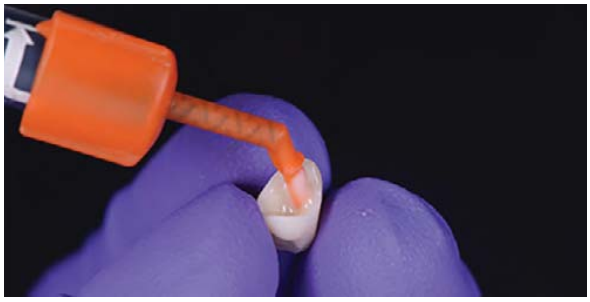


Easy excess removal of 3M™ RelyX™ Universal Resin Cement after tack curing.....



… resulting in clean margins after polishing.

The innovative, self-sealing automix syringe allows for hygienic storage without used mixing tip. The cement can be used with or without the dedicated 3M™ Scotchbond™ Universal Plus Adhesive.



The 3M™ RelyX™ Universal Micro Mixing Tip significantly reduces cement waste.

Conclusion

While cementation can be challenging and confusing, there are ways to simplify the procedure – and it starts in the stockroom. By taking the time to review your materials, you can refine your inventory, your procedure and your skillset. And the growing trend toward truly universal products opens the door to new opportunities for reducing complexity across the board. So you can make your day universally simpler.

About Prof Stefan Vandeweghe

Stefan Vandeweghe completed his studies in dentistry at Ghent University in 2006 and subsequently specialised in oral implantology. In 2010, he obtained his PhD with his thesis "Factors affecting bone remodeling around surface-modified Southern Implants". From 2010 to 2011, Dr Vandeweghe was a postdoctoral researcher at the University of Malmö, Sweden, before he returned to Belgium, where he started his private practice.In addition, he continued his research at Ghent University, where he became Professor and Head of the department of Reconstructive Dentistry in 2017.

RESTORING ENDODONTICALLY TREATED TEETH

A SIMPLIFIED TECHNIQUE

COLTENE

Restoring endodontically treated teeth is one of the procedures that we regularly see in our dental offices.

This type of situation - which represents a specific issue because the tooth structure is compromised - is currently one of the biggest challenges for the practitioner [1].

When we find a tooth that has been restored with a post and core/crown, we understand that they are all made from different materials, but at the same time, they should all function as one unit [2].

Teeth restored with flexible fiber posts are at less risk to suffer from root fractures and have also exhibited longer life-spans than those restored with rigid materials [3].

As the deformation of the post closely resembles that of the cement - deflection to occlusal forces – it will be better at reducing the incidence of root fractures. This is the reason why the mechanical and adhesive properties of the cement are as important as those for posts [4].

This long and complex restorative procedure has been reduced to a simplified technique by introducing fiber posts and materials with adhesive-cementation properties that can perform like a core and also like a permanent cement for the final restoration. All-in-one systems for cementing the post, preparing the core and cementing the final restoration, such as ParaCore Automix 5ml Syringe System (Coltène/Whaledent), are excellent options for use with these procedures (Fig. 1).

Fig. 1: ParaCore Automix 5ml Syringe System (Coltène/Whaledent)

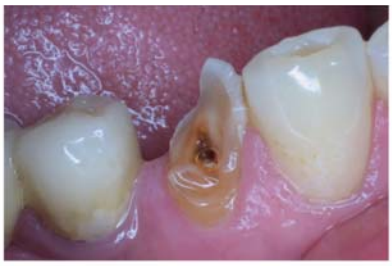


Fig. 2: Preoperative situation

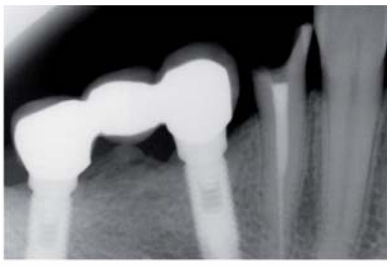


Fig. 3: Radiographic evaluation

Fig. 4: ParaPost Fiber Lux (Coltène/Whaledent)

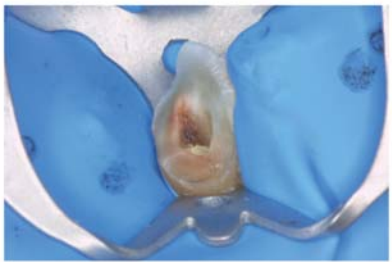


Fig. 5: Isolation using a rubber dam

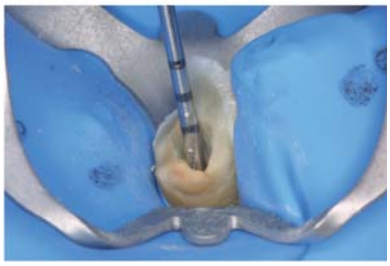


Fig. 6: Preparation of the site for the post

Clinical Case

The patient presented with a coronal fracture in the buccal, lingual and distal aspects of the first lower-right premolar (Fig. 2).

The first procedures are: a) diagnose and determine if the tooth can be restored, and b) its prognosis. The clinical and radiographic exams will allow us to make the correct decision. In this case, the tooth has already undergone root canal treatment (Fig. 3). The correct treatment is to restore the tooth with a fiber post and crown.

The type and size of post will be determined by radiographic analysis, and we will always respect the principles of endodontic sealing. We decided to use the ParaPost Fiber Lux yellow post (Coltène/Whaledent) (1.0mm) (Fig. 4).

Since we will use an adhesive technique, we recommend the use of a rubber dam, since it not only improves the visibility, but also provides a dry and contaminant-free site (Fig. 5).

Immediately after this, we clean and eliminate caries with the indicated drills - depending on the posts to be used - and prepare the site for the ParaPost Fiber Lux post (Coltène/Whaledent) (Fig. 6).

Once the site has been prepared for the post and we have verified that the remaining gutta-percha is in the apical portion, we then place the post into the root canal

(Fig. 7) and adjust the length of the post as needed. In this case, we had to reduce the apical length of the post by 1 mm using a diamond bur (Fig. 8).

Now, it is time to prepare the tooth with the ParaBond Non-Rinse Conditioner from the ParaCore Automix 5ml Intro Kit (Coltène/Whaledent) (Fig. 9 and 10). Message it for 30 seconds inside the root canal and on the crown, and dry it using air and paper points to eliminate any residual conditioner (Fig. 11).

Once the root canal has been dried, but not dehydrated, the ParaBond Adhesive from the ParaCore Automix 5ml System (Coltène/Whaledent) should be applied (Fig. 12). Mix equal parts of liquid A+B. To allow better access into the canal, use a mini sponge to apply the mixed components for 30 seconds to all previously prepared structures (Fig. 13).

The next step is to thin down the adhesive with air to eliminate the solvent before light curing for 20 seconds (Fig. 14). Now we are ready to cement the post by injecting the ParaCore Automix 5ml cement into the canal (Fig. 15) using an endodontic tip and placing the post in the correct position. We then remove any excess and light cure for the final 20 seconds (Fig. 16, 17 and 18).

Following this, we proceed by re-building the core immediately and syringe the ParaCore Automix 5ml cement (Coltène/Whaledent) into the ParaForm (Coltène/Whaledent) matrix for cores. This will form the preliminary shape of the core. It is then placed on the tooth and light-cured again for 40 seconds (Fig. 19, 20 and 21).

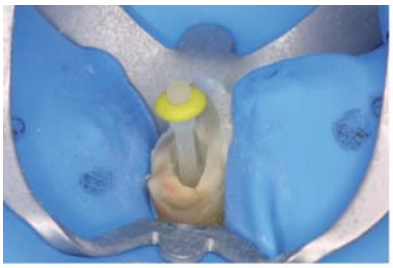


Fig. 7: Trial seating of the ParaPost Fiber Lux post (Coltène/Whaledent)

Fig. 8: Adjusting the length of the post

Fig. 9: ParaBond Non-Rinse Conditioner

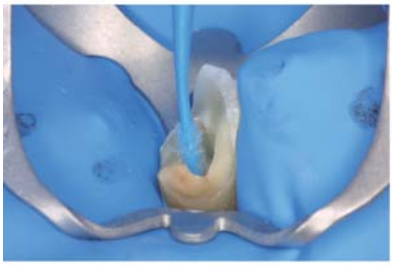


Fig. 10: Placement of the ParaBond Non-Rinse Conditioner (Coltène/Whaledent)

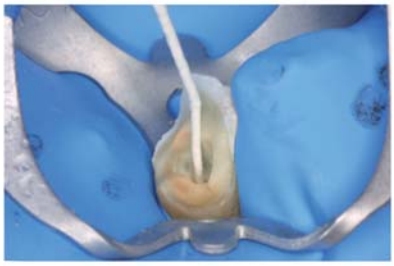


Fig. 11: Removal of the residual conditioner

Fig. 12: ParaBond Adhesive (Coltène/Whaledent)

We can then proceed with preparing the core (Fig. 22), taking the impression and evaluating with x rays (Fig. 23).

Once the final restoration has been verified and adjusted, we can cement it using the same ParaCore Automix 5ml cement (Coltène/Whaledent). We had previously used ParaBond Non-Rinse Conditioner (Coltène/Whaledent) for 30 seconds (Fig. 24), and after drying we had placed the Adhesive ParaBond A+B (Coltène/Whaledent) for 30 seconds (Fig. 25). At this point, we can cement the restoration permanently by light curing for 20 seconds (Fig. 26) to create one homogenous unit comprising the fiber post, core, permanent cement and crown.

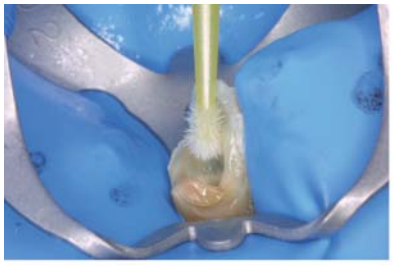


Fig. 13: Placement of the ParaBond Adhesive (Coltène/Whaledent)

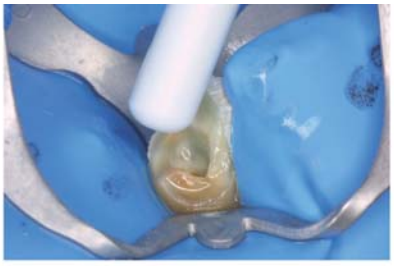


Fig. 14: Thinning down the adhesive

Fig. 15: ParaCore Automix 5ml cement (Coltène/Whaledent)

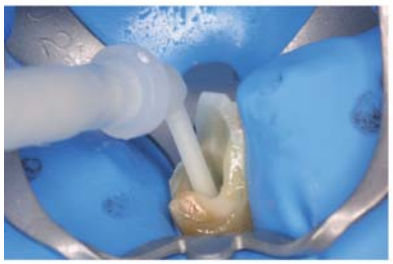


Fig. 16: Injection of the ParaCore cement (Coltène/Whaledent)

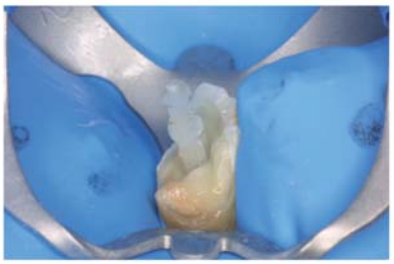


Fig. 17: Placement of the post

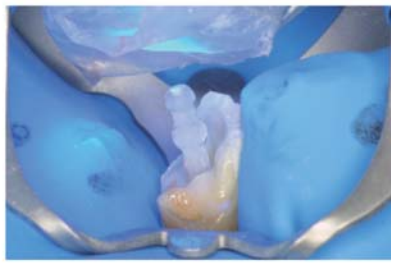


Fig. 18: Light curing the cement

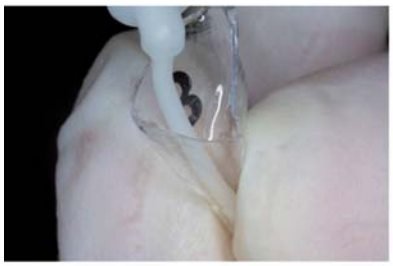


Fig. 19: Placement of the ParaCore cement (Coltène/Whaledent) in the ParaForm Coreformer matrix

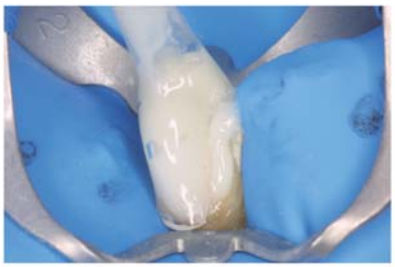


Fig. 20: Matrix in place

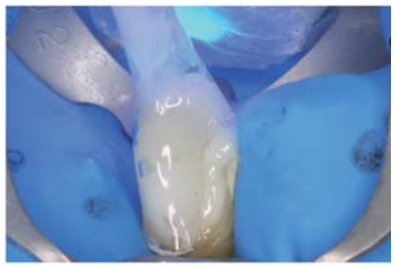


Fig. 21: Light curing the core

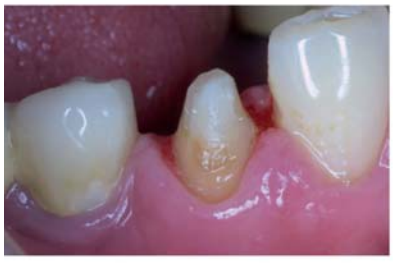


Fig. 22: Final preparation

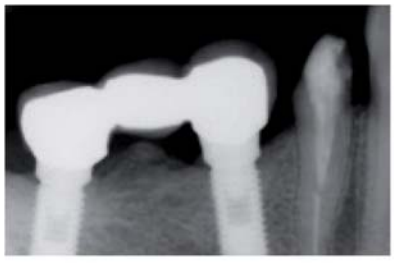


Fig. 23: Evaluation with X-rays

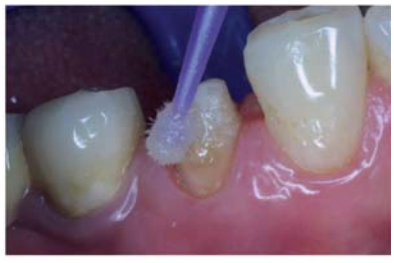
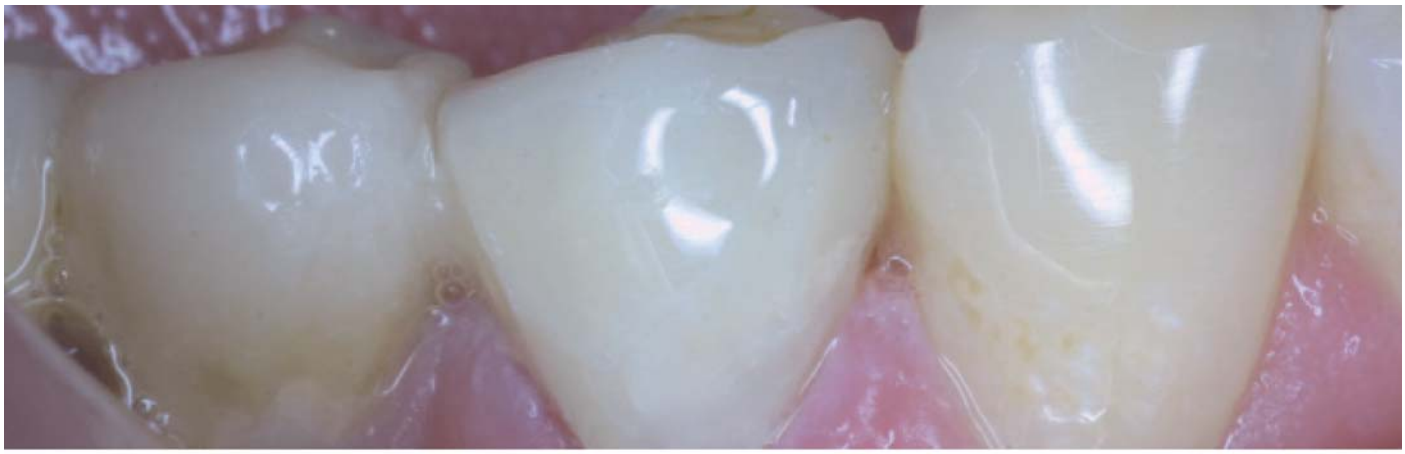


Fig. 24: Placement of the ParaBond Non-Rinse Conditioner



Thanks to the advances of this all-in-one system, we can now cement the fiber post with the same material that was used for building up the core and cementing the final restoration. The good prognosis that we had been looking for is now reality. The bonding and adhesion seen under a scanning electron microscope proves it (Fig. 27 and 28).

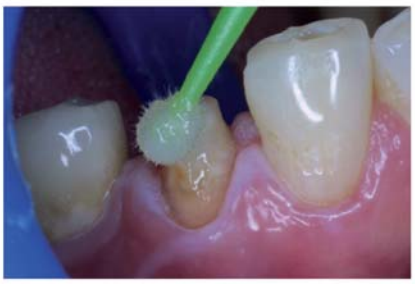


Fig. 25: Placement of the ParaBond Adhesive

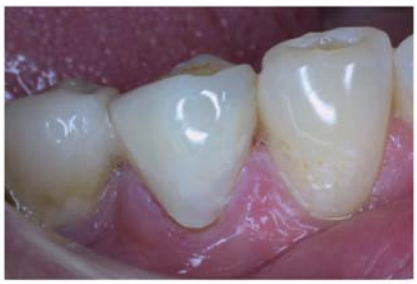
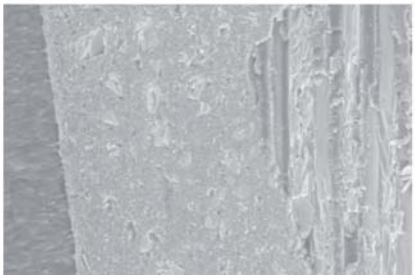


Fig. 26: Final restoration



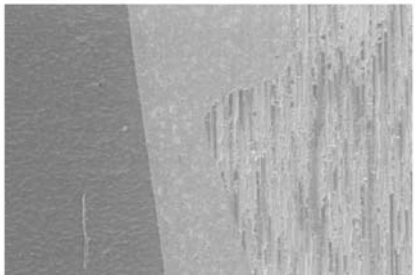


Fig. 27 and 28: Scanning electron microscope images showing the fiber Post cemented with ParaCore Automix 5ml cement (Coltène/Whaledent). Photos are the courtesy of Dr. Enrique Kogan and Dr. Rodrigo Arias.

Conclusions

As this technique is highly simplified, the probability of errors occurring is much lower: The ParaCore Automix 5ml all-in-one system (Coltène/Whaledent) provides us with an alternative that is fast and efficient for restoring teeth which have undergone endodontic treatment.

[1.] Geirsson J., Sigurdsson.- Posts in Endodontically Treated Teeth. J Esthe. And Rest. Dent. Sep-Oct. 2003. [2.] Pitel M., Hicks N.- Evolving technology in endodontic posts. Comp. of Cont. Educ. in Dent. January 2003. [3.] Mannocci F., Ferrari M., Watson T.- Intermittent Loading of teeth restored using quartz fiber, carbon -quartz fiber and zirconium dioxide ceramic root canal posts. J. Adhes Dent. Jan 1999. [4] Baldissara P.- Mechanical Properties and in Vitro Evaluation (Chapter 5). In Ferrari M., Scotti R.- Fiber Posts. Characteristics and Clinical Applications. Masson. 2002.

September 2009

Scan to view the Coltene Whaledent ParaCore range.

DR. ENRIQUE KOGAN & ALEJANDRO KOGAN B.
Palmas 830-101, México D.F. 11000

THERAPEUTIC EFFECTS OF TOOTH WHITENING

AN EXTRACT FROM DR. LINDA GREENWALL'S ARTICLE: WHITENING, THERAPEUTIC AESTHETICS, AND ORAL HEALTH IMPROVEMENT: THE FUTURE

With the success of tooth whitening treatments, several health benefits have emerged that can improve patients' oral health (Dr. Linda Greenwall 2013).

A tooth whitening product not only whitens teeth, it also reduces several issues on gingivae and improves soft tissues and oral health in general.

Many people do not know that whitening treatment offers these oral health benefits, which can be harnessed for patients at different times of their lives. It is now essential to make use of these health benefits - to develop them further and create a program to improve patients' dental health throughout their lives.

Therapeutic Aesthetics and the Usage of the Tray as a Vehicle for Delivering Materials

Therapeutic aesthetics is the process of sustaining a patient's oral health while improving and maintaining the aesthetic health of their teeth.

The whitening tray can be transformed to a therapeutic tray to deliver chemicals to help the patient achieve a sustained health gain throughout his or her life. The placement of the tray helps to keep the material in situ and prevent being spread to other areas of the mouth or rinsed away with saliva over the treatment time. The concept is that the tray remains in place overnight while the materials are soaking into the teeth or gingivae.

The tray design for therapeutic use can be varied. However, a scalloped tray around the papillae does not impinge on the gingivae. The tray margins are cut just next to the gingival crevices.

The most used formulation for tooth whitening is 10% carbamide peroxide. Carbamide peroxide heals the soft tissues and gingival areas.

Pola Night 10% Carbamide Peroxide Take-Home Kits.

The antibacterial properties in the high viscosity, neutral pH tooth whitening gel helps in tooth recovery and minimises plaque formation.

Benefits of Tooth Whitening

- Whitens and lightens the teeth
- Reduces stain build up on teeth
- Preserves tooth structure

Gingivae

- Reduces gingival inflammation
- Reduces gingival swelling
- Reduces plaque formation
- Reduces extrinsic stain build-up
- Reduces plaque adherence to teeth
- Reduces gingival bleeding
- Improves gingival index scores

Soft Tissues

- Improves health of soft tissue, healing of soft tissue lacerations
- Improves wound healing in the mouth

Oral Health

- Improves oral hygiene as the patient looks in the mirror to see the whiter teeth
- Whitens, brightens, and lightens teeth
- Reduces caries formation (Lee et al. 2005)
- Reduces root caries formation (Haywood 2007)
- Cleaner-feeling teeth as a result of improved oral hygiene

Psychological and Related Effects

- Improves patients' self-esteem
- Improves patients' sense of self-worth
- Patients smile more
- Patients become "walking advertisements" for the practice
- Patients help to market the practice as they show off their beautiful white smiles

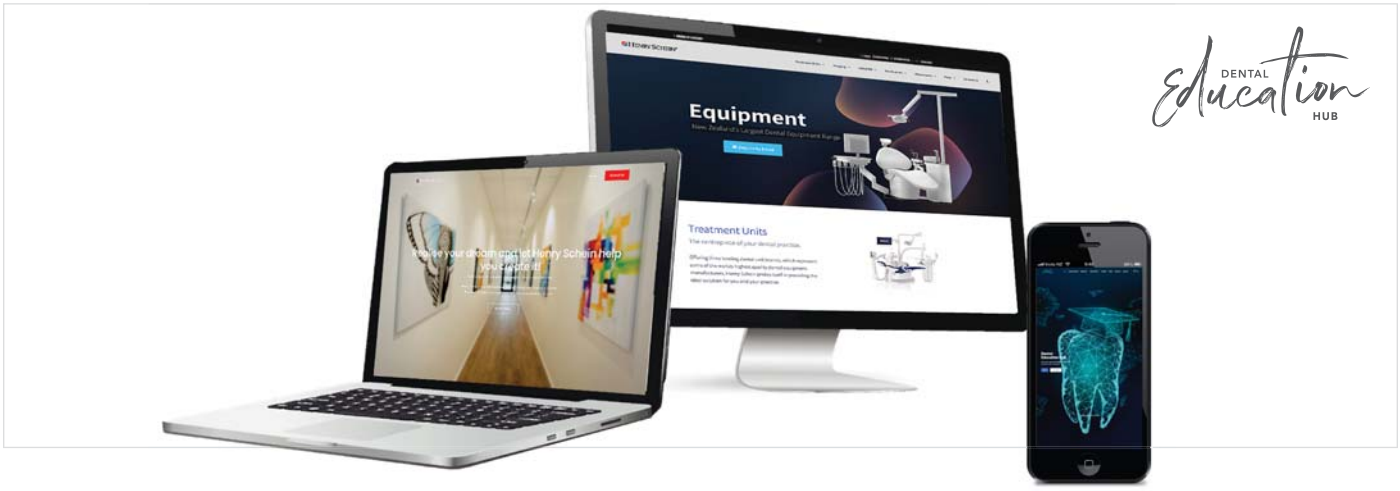
Other Effects

- The tooth whitening materials have antibacterial properties, which help to heal the mouth (Lazarchik and Haywood 2010)
- Reduction in oral malodour (DeVizio 2008)
- Carbamide peroxide was originally used as an oral antiseptic

Materials that can be placed into therapeutic trays

- Potassium nitrate
- Fluoride gel
- Carbamide peroxide
- Hydrogen peroxide
- Amorphous calcium phosphate
- Amorphous calcium phosphate in combination with fluoride
- Corsodyl Dental Gel (chlorhexidine gel)
- Hydrocortisone for patients with severe lichen planus
- Prostaglandin gel for patients experiencing menopause
- Antibiotics
- Other medications according to the patient's needs (e.g., dry mouth gel)

DR LINDA GREENWALL
BDS MGDS RCS MSc MRD RCS FFGDP FICD BEM
Specialist in Restorative Dentistry and Prosthodontics



HENRY SCHEIN ONLINE

Whilst 2022 continues to pose challenges to many industries and business, Henry Schein is committed to supporting our customers and our mission of focusing on practice care so dental professionals can focus on patient care.

One of the ways we are doing this is to continue to develop our online offering whether through our website www.henryschein.co.nz or through our education platform DentalEducationHub.com.au. Beyond the articles and information in this publication we would like to give you a snapshot of a few exciting development going on behind the scenes at Henry Schein.

LIVE CHAT

Did you know we have Live Chat? If you have any questions or queries when logged in to our website you can chat directly to one of our local, friendly and experienced Customer Service Team Schein Members who are always happy to help. The aim for this is to make it simple, quick and easy for you to contact us in the medium that is most convenient, whilst hopefully saving your practice time and giving you the answers you need. If you have not had chance to use it yet we encourage you to check it out for your next enquiry.

EQUIPMENT WEBSITE

At Henry Schein we pride ourselves in supplying and servicing New Zealand's largest portfolio of leading dental equipment brands, with the goal of providing the perfect solution for your practice tailored to your needs and requirements. To support this, in January 2022 we launched a brand-new website **www.henryscheinequipment.co.nz**, aimed at providing all the information, images and brochures you need to start your journey towards your new purchase.

NEW SURGERY SETUP WEBSITE

Check out our newly created Surgery Setup Website! With our years of experience, Henry Schein is your ideal choice for practice fitout, renovation or revamp. Every step of your journey, which can be a daunting and sometimes stressful process, our team along with our project management partners will be by your side. We are here to offer guidance and support, and most importantly ensure you achieve your business goals.

www.henryscheinsurgerysetup.co.nz

DENTAL EDUCATION HUB

We continue to grow our educational offering through DentalEducationHub.com.au. The website hosts over 250 pieces of clinical and educational content including webinars, articles, videos, publications and more, most of which are completely free to access. The team continue to add new content on a daily basis including new live and on-demand webinars every month. So, if you are looking to kill some time on an evening or weekend check out DentalEducationHub.com.au.

0800 808 855
info@henryschein.co.nz
www.henryschein.co.nz

HENRY SCHEIN® DENTAL | Rely on Us™