

Must have for micro-etching the direct repair of a fractured porcelain veneer

DR IAN E SHUMAN introduces EtchMaster, consisting of a universal adaptor and a group of powder blasting tips for intra-oral procedures, prophy and abrasion...

INSTEAD of having to replace a fractured porcelain veneer, a direct composite bonding technique can be used. This places complete control of the case in the hands of the clinician, while avoiding the time consuming and costly replacement of the porcelain veneer.

The problems and challenges in replacing a single porcelain veneer include:

- Laboratory fees.
- Shade matching to old porcelain.
- Multiple appointments.
- Provisional fabrication.

The benefits of direct resin repair are:

- Single visit.
- No provisional.
- Complete shade matching control.
- Reduced cost.
- Ability to evaluate if occlusion was the cause.

Step-by-step guide

Figures 1-8 (below) demonstrate step-by-step instructions for this common clinical scenario:

Figure 1: The patient had porcelain veneers placed about 12 years ago. She now presents with a fractured veneer at the mesio-facial-incisal aspect of the upper left canine.

Figure 2: The porcelain/enamel surfaces are mechanically etched using the EtchMaster with 27µm aluminum oxide (then rinsed and dried). The adjacent tooth is protected from the etching process by using dead soft foil.

Figure 3: The etched surfaces now show a frosted appearance. Preparing these surfaces with the EtchMaster increases bond strengths an incredible 30 times.

Figure 4: These surfaces are now chemically etched with a hydrofluoric acid gel for two minutes (then rinsed and dried).

Figure 5: A silane porcelain bonding agent is applied to the thoroughly etched surfaces

and dried.

Figure 6: A primer/resin bonding agent for both porcelain and enamel is applied, gently dried to a thin coat and then light cured.

Figure 7: A matching direct composite resin is sculpted to place (and light cured).

Figure 8: The completed case after occlusal evaluation, adjustment and polishing.

Stay in your comfort zone

Dental Practice Systems (DPS) has been providing dentists with products for 25 years. Always up to date, it was the first company to introduce the intra-oral camera into the UK and Ireland, which is now a standard piece of dental equipment.

DPS created the concept of "Comfort Zone Dentistry" based upon a group of products, which had all been chosen with the philosophy of minimally invasive dentistry and a comfortable dental experience for the patient.

Up until now, The Comfort Zone (TCZ) consisted of:

- The ClearVu intra-oral camera.
- The CariFree system for patients at risk of caries – offering a group of gels and rinses to prevent further decay.
- The Diagnodent laser early caries detector to discover occult caries.
- The CrystalAir air abrasion unit for preparing teeth quietly, with no LA usually being necessary.
- The Wand STA for anaesthetising the teeth comfortably, even for palatal injections.
- Crescent Memory Cushions for extra comfort in the chair, particularly for lengthy procedures.

The latest addition to TCZ is the remarkable EtchMaster, which has proved a great success in the US over the last six years.

EtchMaster consists of a universal adaptor

and a group of powder blasting tips for intra-oral procedures, prophy and abrasion. It is perfect for:

- Surface preparation prior to sealants.
- Composite and porcelain repairs.
- Crowns, veneers, brackets and bonding.
- Localised stain removal and surface polishing.

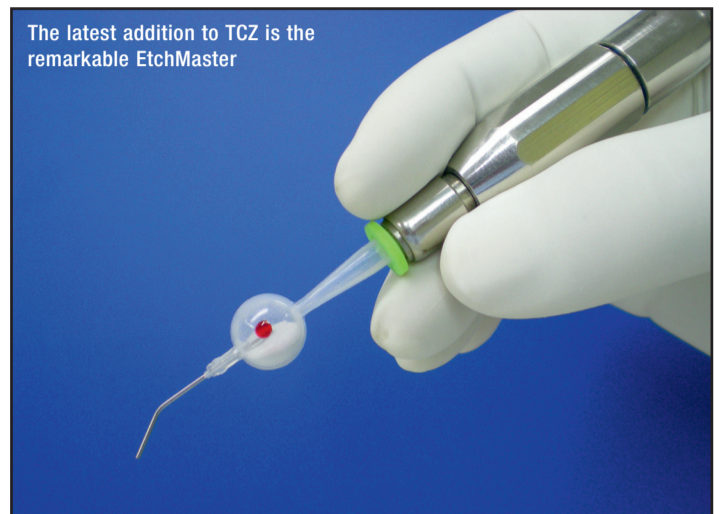
Know your colours

The colour coded tips are unidose and pre-filled with a selection of different powders:

- Hard: 27 (red) and 50 (black) micron aluminium oxide, and Co-JET (brown) siliconised sand for bond enhancement, restorative, preventive sealants, orthodontic brackets and cosmetic bonding.
- Mild: aluminium oxide and sodium bicarbonate for surface polishing, preventive sealants and ingrained stain removal.
- Soft: calcium carbonate (yellow) for light stain removal and cosmetic stain removal, and sodium bicarbonate (green) for superficial stain removal and pits and fissure brushing.

With the Etchmaster, there is no cleanup and no equipment maintenance; just an adaptor which screws directly into the standard chairside handpiece connector, with universal compatibility (3-6 hole). There is no overspray, and it never clogs. The tips fit into a simple adaptor, which fits into your chairside air. Airflow is controlled via the standard chairside foot pedal.

The PR Adaptor self regulates to optimal air pressure, regardless of chair airline setting.



The latest addition to TCZ is the remarkable EtchMaster

Comparison to other systems

The system is clinically effective and mess-free, using the same powders, air pressures, and nozzle sizes of traditional, non-disposable, air abrasive equipment.

To summarise, its advantages over other systems include:

- No overspray.
- No clogging.
- No equipment/maintenance.
- No refilling.
- No nozzle replacement.
- No cleanup.

There are two tip sizes available:

- Small size tips cover four tooth surfaces.
- Large size tips cover 16 tooth surfaces.

The small tips can be used for: sealants for four molars, all cosmetic bonding, bracket repair, composite and porcelain repairs and localised polishing; whilst the large tips can be used for: full mouth sealants, crown preparation, orthodontic brackets, stain removal and polishing.

Reader enquiry: 121

About the author

Dr Ian E Shuman, DDS – Master Academy of General Dentistry, Pasadena.



Figure 1



Figure 2



Figure 3



Figure 4



Figure 5



Figure 6



Figure 7



Figure 8