

KATANA™ CLEANER

SCIENTIFIC REPORT

Effectiveness of temporary cement removal

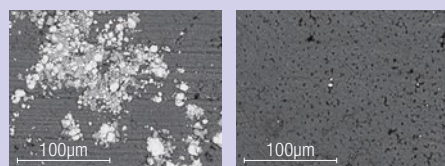


CLEANING THE RESIDUES & OPTIMIZING YOUR CEMENTATIONS

After the removal of the temporary crown before cementing the final restoration, traditional abutment cleaning methods may not be enough to remove residual temporary cement. This could result to a reduction in bond strength. KATANA™ Cleaner has a high cleaning effect due to the surface active characteristic of MDP Salt, which is formed from the phosphate monomer „MDP“ and an alkaline compound. It is a simple way to optimize your cementation procedures and recover the bond strength.

WITH KATANA™ CLEANER

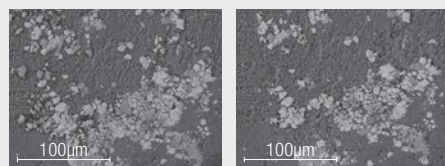
Surface observations (Scanning Electron Microscope)



Before

After
rubbing for 10 s

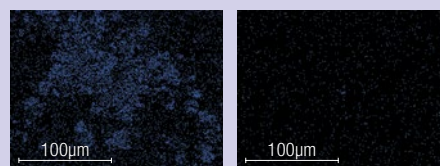
WITHOUT KATANA™ CLEANER



Before

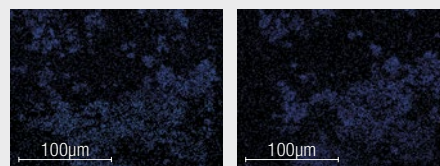
After
water rubbing for 10 s

Temporary cement detection (EDX mapping: Zn)



Before

After
rubbing for 10 s



Before

After
water rubbing for 10 s

Test conditions

Adhesion surface treatment: 1) Polishing #1000 bovine teeth, 2) Temporary Crown (acrylic self-curing resin) was cemented with temporary cement (zinc polycarboxylate cement), 3) Stored at 37 °C and 95% RH for 1 week, 4) Temporary Crown was removed and the temporary cement was removed with an ultrasonic scaler, 5) Rubbing with KATANA™ Cleaner for 10 s (upper images)/Water rubbing for 10 s (lower images).

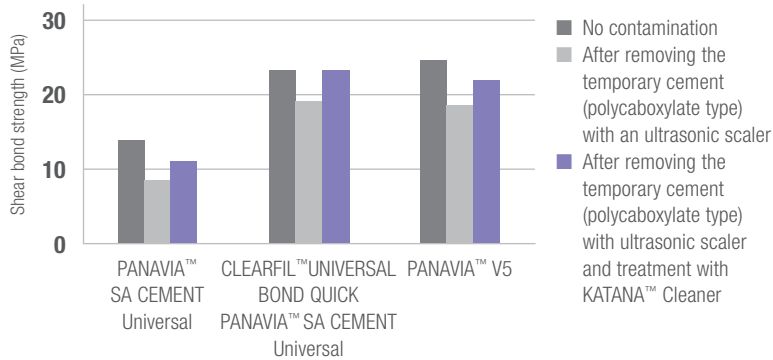
Source: Kuraray Noritake Dental Inc.

IMPROVING THE BOND STRENGTH

As shown in the graphs below, removal of residual cement either with an ultrasonic scaler or pumice paste & prophylaxis cup may not be enough. KATANA™ Cleaner's high cleaning effectivity contributes for an optimised bonding surface.

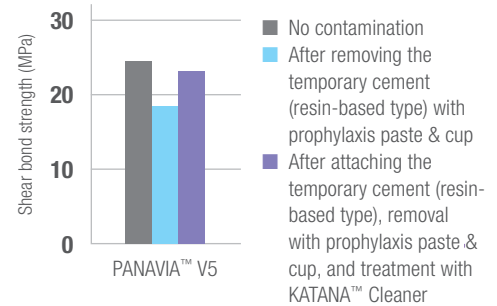
Temporary cement removed with:

Ultrasonic scaler



Temporary cement removed with:

Pumice paste and prophylaxis cup

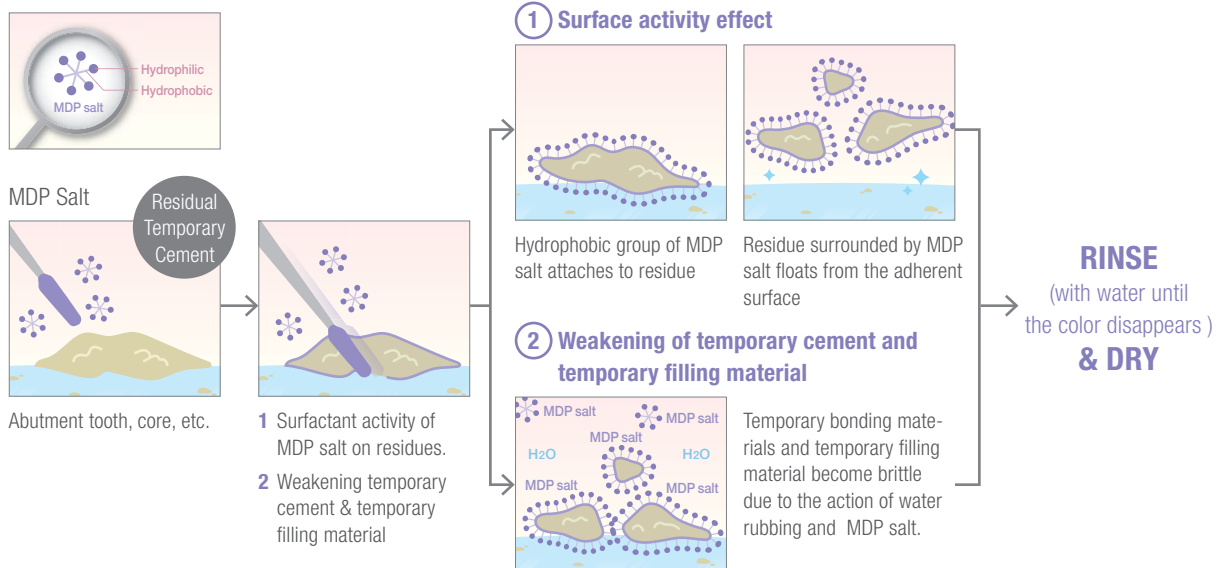


Test conditions

Adhesion surface treatment: 1) Polishing #1000 human teeth, 2) Temporary Crown (acrylic self-curing resin) was cemented with temporary cement (polycarboxylate type, resin-based), 3) Stored at 37 °C 95% RH for 1 week, 4) Temporary Crown was removed and the temporary cement was removed with an ultrasonic scaler or pumice paste and prophylaxis cup at low revolution (5000 rpm, 10 s), 5) Cleaning with KATANA™ Cleaner. Bonding strength measurement: 1) SUS chip (3mm²) was bonded by each bonding operation (PANAVIA™ SA Cement Universal, CLEARFIL™ Universal Bond Quick/PANAVIA™ SA Cement Universal, PANAVIA™ V5), 2) Measured after storage in water at 37 °C for 1 day.

Source: Kuraray Noritake Dental Inc.

HOW IT WORKS schematic illustration



CONCLUSION

Appropriate cleaning of residual temporary cement before cementing a restoration is crucial for reliable cementation. KATANA™ Cleaner's high cleaning effect removes contamination to optimize your cementation procedures.

For more information visit kuraraynoritake.eu/katana-cleaner