

3M™ Pentamix™ Lite Automatic Mixing Unit shows promise in a group practice setting.

An Israeli group practice recently ran a four-month observation using the Pentamix Lite mixing unit. 3M™ Impression Materials were used in the control and experimental groups. The wash material, 3M™ Express™ VPS Impression Material Light Body, was kept constant in both groups.

The Pentamix Lite mixing unit was a good match for this group practice, because it allowed them to continue to use tray material with a putty consistency.



Situation overview

- Eight participating dentists*
 - Control group: 93 hand mix cases
 - Experimental group: 86 auto mix cases



Methodology

- Observe 4-month control period with 3M™ Express™ STD VPS Impression Material Putty
- During a subsequent 4-month experimental period, replace 3M™ Express™ STD VPS Putty with:
 - 3M™ Express™ XT Penta Putty VPS Impression Material
 - 3M™ Pentamix™ Lite Automatic Mixing Unit

* Number of impressions varied by dentist.

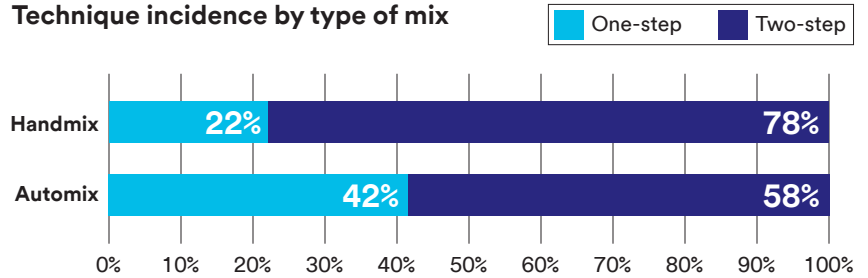


Results

In the four month experimental period:

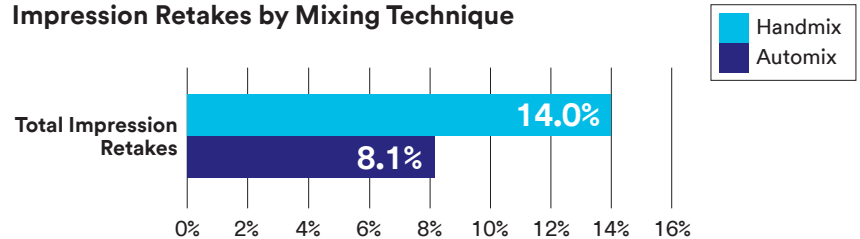
The incidence rate of the one-step technique nearly doubled with 3M™ Pentamix™ Lite Automatic Mixing Unit delivery. **One-step impressions take an estimated 6 minutes less than the two-step technique.***

Technique incidence by type of mix



Participating doctors also experienced a reduced impression retake rate during the experimental portion of the observation:

Impression Retakes by Mixing Technique



Feedback

The group practice has continued to use 3M™ Express™ XT Penta Putty Impression Material and Pentamix Lite delivery.

“ Using the Pentamix [Lite device] allows me to save time and get a more accurate impression...the mixing quality is better, and easier. ”

– Dr. Arie Greenberg, Owner, Greenberg Clinics

The practice realized the following benefits:

- Reduction of overall impression retake rate
- Reduction in time spent on impression procedure due to:
 - Utilization of one-step technique
 - Lower retake rate

*Time calculations extrapolated from Perry, Ronald D. “Time is Money in Impressioning.” Dental Economics, 19 Aug. 2013, <https://www.dentaleconomics.com/science-tech/article/16393647/time-is-money-in-impressioning>.

One-step (16 minutes): 5 minute set-up, 5 minute retraction, 1 minute mixing time, 1 minute seating time, 3 minute setting time, 1 minute evaluation

Two-step (22 minutes): 5 minute set-up, 5 minute retraction, 1 minute mixing time, 1 minute seating time, 3 minute setting time, 1 minute evaluating and preparing for second step, 1 minute mixing time, 1 minute seating time, 3 minute setting time, 1 minute evaluation



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