

Tips on Pouring the Model

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Using an impression tray tree will allow your cast to set up distortion free.



Never place an impression on the bench – always use a tray tree!



Inverting the tray will cause the stone to flow away and excess water to move toward teeth.

Every time the dentist has to repeat a procedure, it's just like flushing money down the drain. With the high cost of running a dental office today, imagine what a lost hour of appointment time translates into. Equally important, but more difficult to measure, are the costs of unhappy patients, lab work that doesn't fit and an overstressed and unhappy staff.

The key to having the lab deliver a quality product is providing the technician with a quality model that is distortion free. This begins with the impression. To get consistently successful results, we recommend the following:

1. Take the time to check your impressions before they are poured in stone.
2. If you are unsure the impression is good, take another one right then (not after receiving a case that doesn't fit).
3. Always check your models for accuracy before sending them to the lab.

The following is a general set of steps and tips regarding pouring an excellent and accurate model.

Pouring the Model Checklist

1. Pour alginate impressions immediately using vacuum mixed stone and vibrator.
2. Use soft mix of stone. Thick mix apt to trap air bubbles and does not provide same strength upon setting.
3. Accurately measure out an appropriate amount of stone and water. Stone requires a water/powder ratio of .30 or 30 g of water for every 100 g of stone.
4. Slowly add the stone to the water to insure that all the powder is completely incorporated. Then vacuum mix the mixture. The consistency of the stone should be that of a pseudoplastic viscous liquid which has a glossy surface to it.
5. Holding the impression on a vibrator, start adding stone in the molar region of one side. Slowly allow the stone to work its way around the impression. Continue adding stone to the same side until the impression is completely poured.

6. Once the impression has been poured, hang it on an impression tree, wrap it in a moist paper towel and let it set up. Models that harden in 100% humidity have a superior stone surface.
7. Allow stone to set in trays with teeth down.
8. If tray is turned upside down onto base of stone, there is a tendency for water to rise to highest point (cusp tips). Result: faulty, very soft cusps on model. Inverting tray may also "bend" alginate away from tray if excess material not trimmed away prior to pouring.
9. Give a minimum of thirty minutes but not longer than one hour for the stone to set up. Then separate the alginate impression from the stone model.
10. Remove cast immediately after adequate set or ensure alginic acid in alginate neutralized (will give the model "moth-eaten" appearance). To neutralize alginic acid at surface of impression:
 - a) Wash impression with "stone soup" (stone powder and water) using camel's hair brush.
 - b) Thoroughly rinse impression with clean running water.
 - c) Dry with gentle compressed air.
 - d) Pour impression immediately with soft mix of vacuum mixed stone.
11. Evaluate the stone model carefully. Check to make sure that you have recorded all the areas necessary to achieve a successful result and that the model is distortion free.

NOTE: All impressions should be rinsed and disinfected before they are poured up and sent to the lab. The goal in choosing a method to disinfect alginate impressions is to select a material that will work without affecting the accuracy of the impression. Sodium hypochlorite, iodophor, glutaraldehyde and phenylphenol solutions are all being used. It is always best to follow the manufacturer's instructions since some companies have already added disinfectants to their alginate powder.