

Preparing and Pouring of Alginate Impressions That Will Produce a Superior Model and Fit

Casts that have distortions, blurring of the gingival line and voids on the teeth due to air bubbles are termed "high risk casts". This means that the appliances fabricated on these casts will fit the casts, but not necessarily fit the patient. The following tips will help you improve the accuracy of your casts.

Before The Impression

Have the patient rinse well with mouth wash. This cuts down on the saliva bubbles and allows alginate to flow snugly against the teeth.

After The Impression

1. Rinse every impression immediately after removing it from the mouth to wash away excess mucous and saliva born contaminants.
2. Check the rim of the tray. If the alginate has pulled away from the tray, even a hair, an appliance fabricated on the poured cast will not fit. Retake the impression.
3. Check the incisal edge of the anterior teeth in the impression. If the alginate is cracked or split, the teeth will be distorted. Retake the impression.
4. Disinfect the impression according to current applicable OSHA guidelines. DO NOT SOAK impressions. Spraying is better, and will not distort the impression like soaking does.
5. After disinfection, the impression must be rinsed again and excess water gently blown out, just prior to pouring. Failure to do so could result in a poor model surface.
6. The Bureau of Standards recommends pouring alginate impressions within 5 minutes to maximize accuracy.

Pouring the Casts

The stone mix should not be too thin (runny), or too thick (doughy). Thick sour cream or yogurt would be a good consistency. Apply the stone mix to the impression, one side only, starting at the most distal molar and vibrate gently so that the mix flows towards the anteriors, and then on around to the distal of the opposite side, adding small amounts of mix only as needed at the starting point. It is important to watch the flow carefully for trapped air bubbles, so there won't be voids in the teeth after the mix has set. After the occlusal surfaces have been covered, stone can be added in larger amounts where needed to fill the impression.

When stone or plaster sets, the water in the mix tends to rise. If the filled impression is flipped over to make a base, the water will rise into the tooth area creating a cast with weak teeth. Therefore, instead of flipping the impression, just make sure that stone is piled on it (like an ice cream cone). To insure enough thickness over the palatal mandibular, a wet paper towel folded and inserted in the "tongue" area will support the stone. During setting, the water will rise and now the weak area will be in the base. Your cast will also be small and compact without "pounds" of extra stone that would have to be trimmed.

Inspect Your Casts

The last and indeed most important step, is to inspect the cast. Why send a cast to the laboratory if it has obvious flaws? The laboratory will reasonably assume that if you sent them a cast, you want the appliance to be fabricated on it. The appliance will of course fit the cast, but not necessarily fit the patient.

Advantages of Following the Above Steps

- A. The appliance will fit the patient.
- B. There will be reduced stress, lost time and cost for the patient, dentist, and the laboratory.