



Michael J. Maginnis, D.D.S., M.S.

Board Certified Specialist in Removable Prosthodontics

7742 Office Park Blvd, Suite A-1, Baton Rouge, LA 70809

(225) 201-1000

Oh Alginate! How do I love Thee! Let me count the ways.....

Often, I'm asked, "What impression material do you use"?

I respond, "Alginate".

"That's fine for study models", says the dentist, "but, what about for complete dentures"?

I respond, "Alginate".

"And for partial dentures"?

Again, I respond, "Alginate".

And since I don't do fixed restorations any longer, I don't have to explain that I have done full crown restorations (quite well) with alginate – part of a test study – but alginate, none the less.

At this point, as a disclaimer, I should say that while alginate is used to construct my treatment dentures and partial denture frameworks, the final wash impressions for the dentures and corrected cast impressions for the partials are done with Microseal-Seal by AMCO (available through any dental supplier).

Why alginate? Why not? It's cheap, fast, easy to use and extremely accurate. When handled properly and poured immediately, it's as accurate as anything on the market.

Water::Powder Ratio vs. Water Temperature:



Don't mess with the W::P ratio -- this has a profound effect on accuracy. Variation in water temperature is a different story. For the most consistent setting times year-round, use water that is room temperature. (We keep a large bottle with a pump dispenser on the counter and refill it every evening). Our office stays fairly close to 72° year-round – our tap water doesn't – it varies from 65° to 85° from winter to summer creating large variations in setting times. If your office is warm and humid, replace approximately 1/3 of the water in the measuring vial with ice water. This will give you a normal setting time on the muggiest of summer days.



Interproximal Undercuts:

Alginate doesn't stick to alginate, so any place where tissue recession has led to open interproximal spaces, block them out on the facial with a small mix of alginate placed with a cement spatula. This "block out" mix will set by the time you prepare the main mix.

This may produce an unsightly facial surface on the model, but a very accurate lingual surface – after all, this is the portion of the model that the partial framework or bite splint has to fit.



Mechanical vs. Hand-Spatulation:

For the best results, use a mechanical spatulator with vacuum – mine is located just outside the operatories as pictured above in the first figure. Short of this, I would recommend a Cadco Alginator or similar mechanical spatulator. It can be used chairside and produces a consistently smooth mix that is relatively bubble-free.

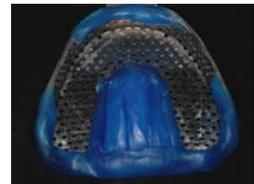


Custom Tray vs. Stock Tray:

Yes, I have made very nice impressions with custom acrylic trays that have been perforated and painted with alginate adhesive – usually in a situation where the patient has a very limited oral opening.

Otherwise, I use perforated stock trays that have been altered with periphery wax (coated with tray adhesive) to make sure the alginate is carried out to the borders of the vestibules and down to the depth of the mylohyoid space and over the retromolar pads. The patient’s existing prosthesis can be used to judge the amount of wax needed. The wax is also used to reduce the thickness of alginate in the palatal vault – alginate works best at no greater thickness than 6mm (1/4”). Beyond this, it slumps,

producing a denture with little palatal seal and a partial framework that stands away from the tissue.

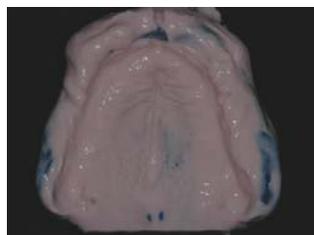


A 12cc disposable syringe can be used to inject a portion of the alginate into the vestibules and down into the mylohyoid space.



A finger full of alginate is wiped across the palatal vault and onto the occlusal surfaces of any teeth that are present. The loaded tray is seated from the rear to the front of the mouth. The lips are lifted up and over the borders of the tray which is then held in position. The impression is set one minute after the alginate no longer sticks to your glove.

Pouring the



Impression:

Immediately, if not sooner, is my best advice. Upon removing the impression from the mouth, rinse with tap water, spray with algicide, wrap in a wet paper towel and let sit 5 minutes while preparing stone or plaster for mixing. Just prior to pouring, rinse again in tap water, blow dry, spray with debubbler and pour model.



*With apologies to Elizabeth Barrett Browning,
Maginnis the Dentist*