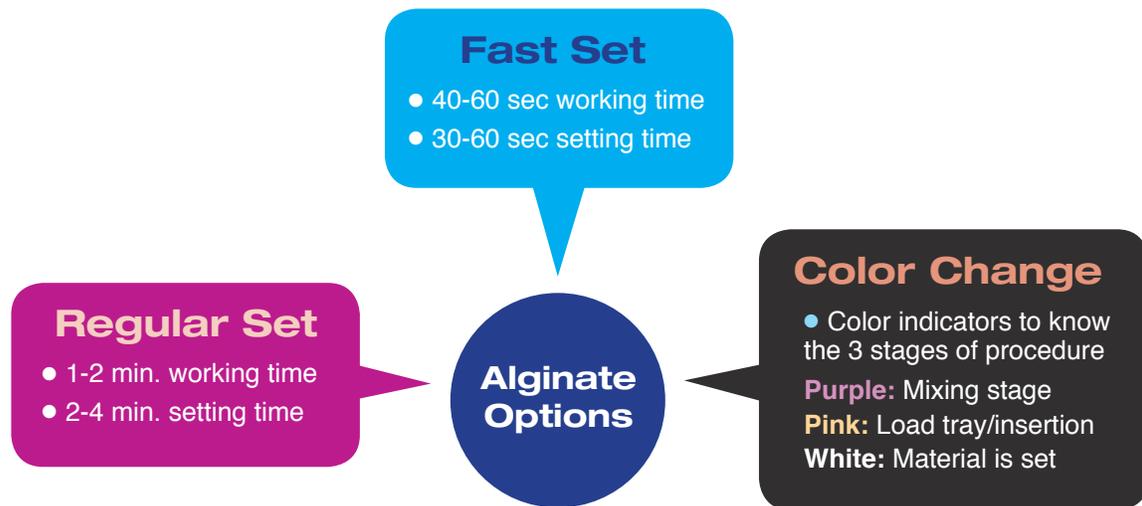


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LAB SERIES: ALGINATE MIXING

This is the first topic in a series of articles about lab related duties an assistant may perform.

When assistants are in school they are trained to do things by the book. But as you know in the real world that is not always the case. You find when you go to work in an office you may want to do things your own way, and it's possible the office way of doing task may also not be proper. Also keep in mind you'll be using whatever materials they have available (that is until you may convince them to change). Mixing alginate is not a difficult task to do but it may take a few tries to get it right. Regardless of how you do it, taking an alginate impression is one of the duties that has to be done correctly. Improper mixing can distort the impression which in turn will cause distortion in the model.



To simplify it, think of mixing alginate as having the same similar principles as mixing a cake.

- **The mix** (powder) should be fluffed in container before each use (alginate can settle to the bottom causing your measurements to be off)
- **Measurement** (scoops) of powder should be level
- **Liquid** (water) should be room temperature and accurately measured
- **Make a well** in the center of the powder first, then add water (easier to incorporate)
- **Start mixing** in the center of bowl until the p/w is well blended
- **Mix swiftly** until the batter (alginate) starts to become creamy (this is important to do before the next step)
- **With firm, rapid strokes**, spatulate the alginate back and forth against the side of bowl until smooth (this will also help minimize air entrapment to avoid bubbles).

*This should all take around **40 seconds** or so to thoroughly mix (if using a fast set).*

The more you practice the easier it will become. You should be able to look at the material and see if there are any flaws (i.e. runny, grainy or crumbly). If so, just go ahead and mix another bowl, don't waste time taking an impression that will most likely be unusable.

(FYI: There are automatic alginate mixing machines available as an alternative to hand mixing but this article will just touch on doing it manually).

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Here is a checklist to know what details are important to a good mix:

CONS

- Alginate drips off the spatula
- Mix is runny; too much water
- Material appears too grainy
- Dry & crumbly, does not incorporate well; not enough water
- Material set too fast, water too warm

PROS

- Mix should have the same consistency and smoothness like that of frosting
- Alginate clings to spatula, does not drip
- Incorporates easily, transition is smooth
- Bowl should be soft, easy to grip for better spatulation
- Water / powder ratio should be accurate

TIP: Measure water just slightly under the line to achieve a thicker mix



RUNNY



GRAINY



IDEAL

Recommended Items for mixing Alginate Impressions



Soft translucent mixing bowls with glossy insides for easy alginate removal and a round edge plastic spatula. Replace any plastic bowl that has deep scratches or grooves.

ImpressESSIX (DENTSPLY Raintree Essix)
Extra Fast-set or Color change alginate

Water Dosing Bottle: Has accurate water dosage by simply squeezing the bottle – provides room temperature water and a consistent setting time

Powder Canister: this canister has a convenient push button flip top lid that has a tight seal to prevent moisture contamination of the powder. (Moisture contamination can affect setting time)



NEXT MONTH: Taking Alginate Impressions