

Skinning cats

Seven deadly sins of heat cure processing

Part 1 - The first three

By Jordan Nikoloski

You've set the teeth - perfect; wax-up - magnificent; try-in - excellent! Now for the 'easy' bit - flask, pack and finish, it's only a process right?

What are the sins of heat cure processing? Tooth movement, dirty teeth and acrylic work, fractures, plaster inclusions, raised bite, porosity and teeth de-bonding. Any of these sins can and do happen, leading to frustration and damage control. Do we prevent them from occurring (a system) or will we fix them later (an unknown quantity).

We need to implement a systematic approach, a sure fire process that is simple, predictable and repeatable which will also save time at the finishing stage.

In this article I will examine the first three deadly sins: tooth movement; dirty teeth and acrylic work; and fracture prevention, and how to avoid them.

Tooth movement: Denture teeth can and do move during the acrylic packing process, there are two factors which we

should be aware of. The first is failing to expose enough of the tooth surface, buccal-lingual and labial-lingual. Exposing these surfaces sufficiently will anchor the tooth in the plaster on more than one aspect and help resist movement during the boil out separation and tooth roughening processes.

The second factor is bubbles around the teeth, which leave space for the teeth to be forced into during acrylic packing. Simple solution - vibrate and be careful.

Dirty teeth and acrylic: We know that a good boil out, wash out with a moisturiser-free detergent and the use of a good separating medium should give us a clean and smooth denture base - easy. What about the teeth? Formula X is a surface treatment for acrylic teeth. When applied to the teeth before topping up with plaster, it prevents that annoying fine film of plaster sticking to the teeth, which is incredibly difficult to remove, often requiring



brushing, scraping and sometimes the use of burs and polishers. Formula X is a tooth/plaster and plaster/plaster separator, which when applied, leaves the teeth shiny and clean. Unlike liquid soap, Formula X does not retard the plaster setting.

Fractures: These generally occur through the midline when removing the plaster/stone that is above the occlusion. A forgotten but very useful technique is double topping the flask. Fill the flask up to the occlusal surfaces and then expose them, let the plaster set and then top up the flask. This technique allows for the bulk of stone above the occlusion to be removed easily, thus reducing the risk of denture-based fractures. You'll see what I mean when deflasking.

About the author

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Figure 1. Denture waxed-up, note teeth exposed sufficiently on buccal, lingual and labial surfaces so that the teeth will be anchored in the stone.



Figure 2. Flask up the denture.



Figure 3. Apply Formula X generously to the stone, teeth and wax. Blow off the excess and leave for a couple of minutes to dry.



Figure 4. Fill the flask up to the top of the teeth and expose the occlusal surfaces by running your finger over them.



Figure 5. Let the stone set.



Figure 6. After the stone has set, apply Formula X again, this time as a plaster to plaster separator, then top up the flask.



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