

Waxing and Processing the denture

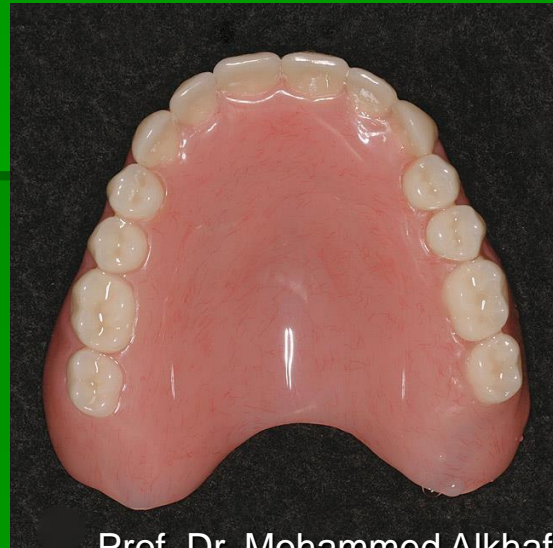


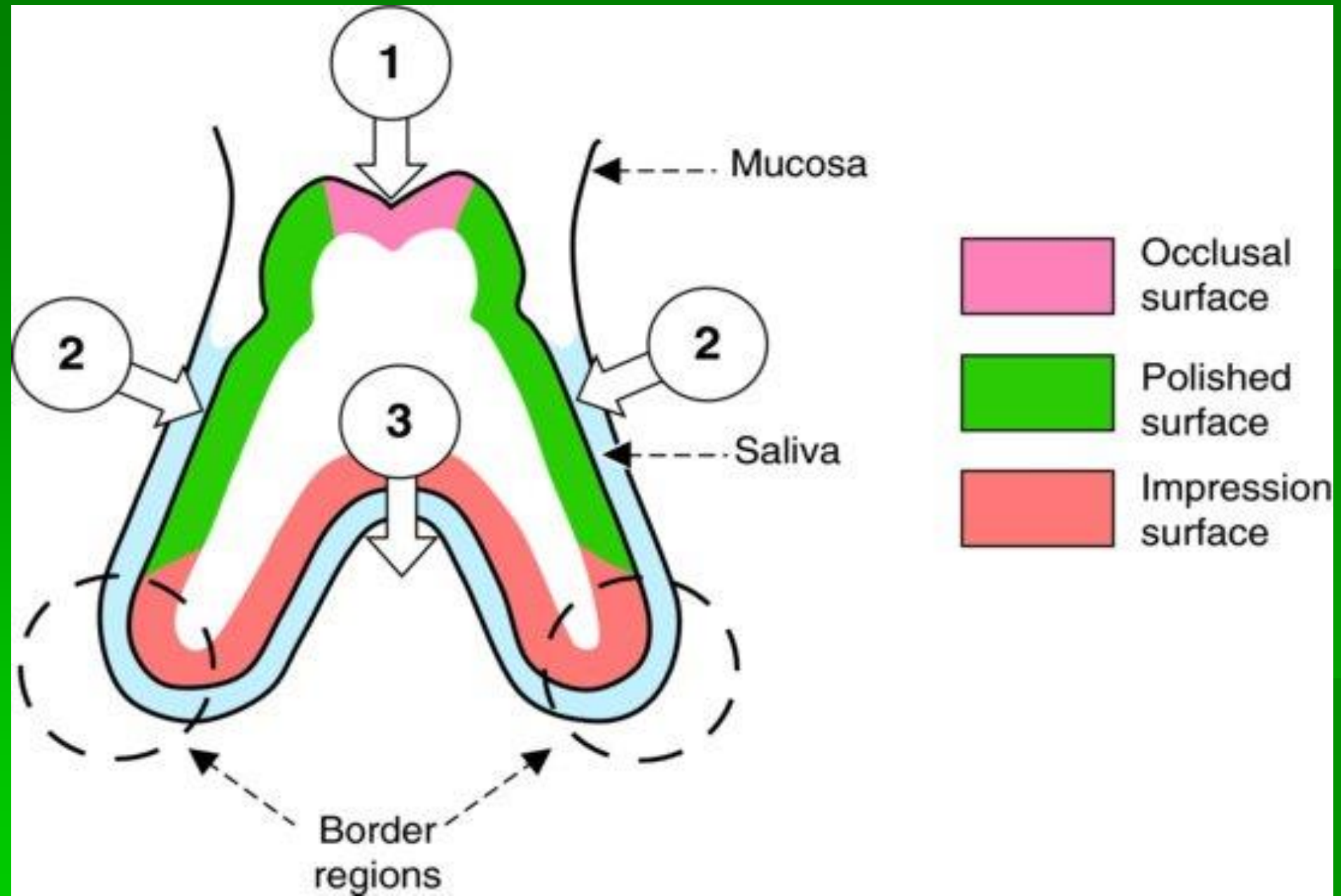
Trial denture

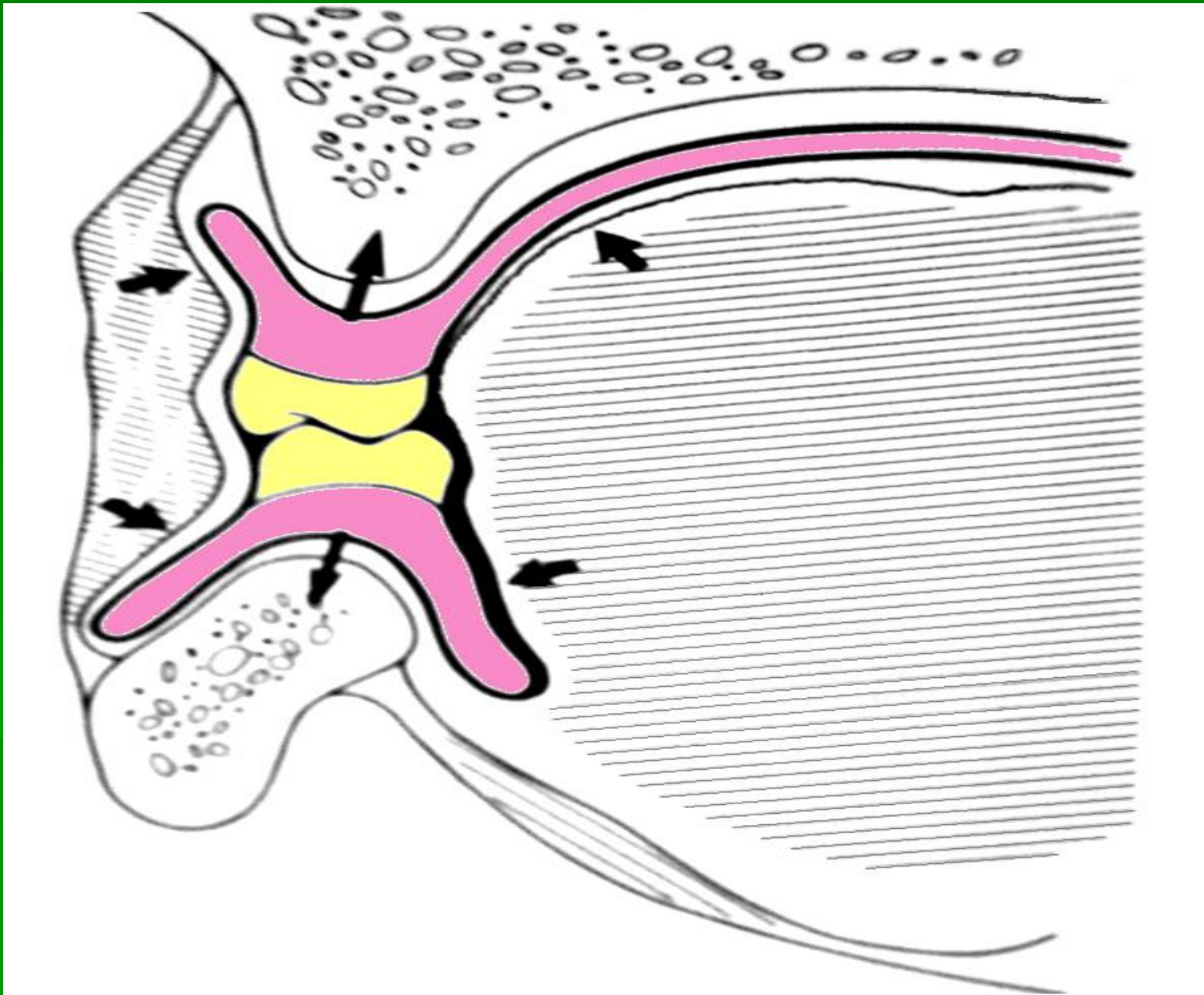


Bit rim with
record base

Surfaces Of Complete Dentures



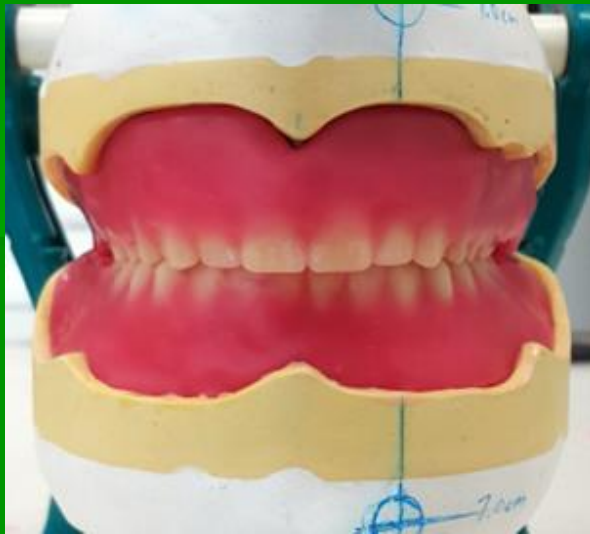




Festooning

the process of carving the denture base to simulate the contour of the natural tissues which are being replaced by the denture.

Festooning procedure for complete dentures





Processing the denture

After the trial dentures (Acrylic base, wax and teeth) have been waxed, they are prepared for denture processing to substitute the acrylic record base and the wax with a hot cure denture base attached to the teeth.

Processing the denture

This is done in the following steps:

- 1) *Flasking.*
- 2) *Wax elimination*
- 3) *Mixing.*
- 4) *Packing.*
- 5) *Curing.*
- 6) *De-flasking.*
- 7) *Shaping and Polishing.*

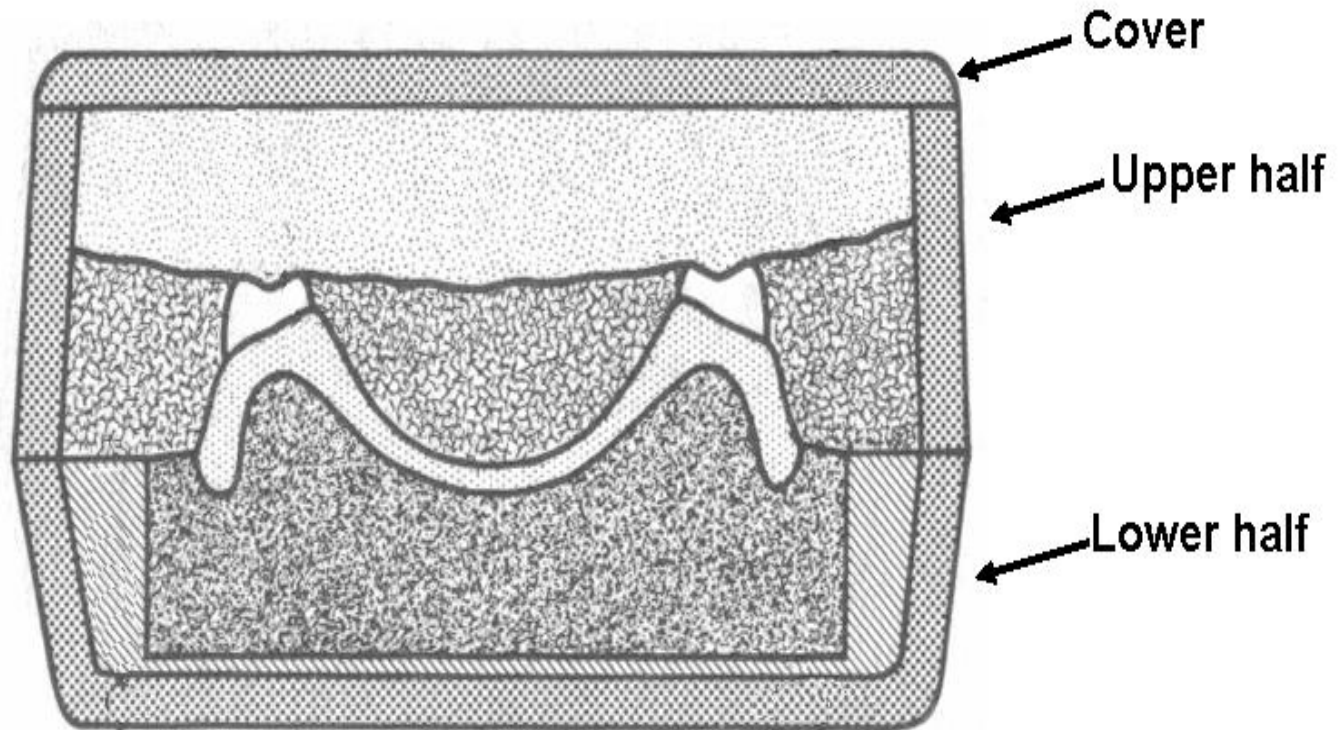
1) Flasking:

The process of investing the cast and a waxed denture in a flask to make a sectional mould used to form the acrylic resin denture base.

Flask: Is a metal case or tube used in investing procedures.



Parts of flask



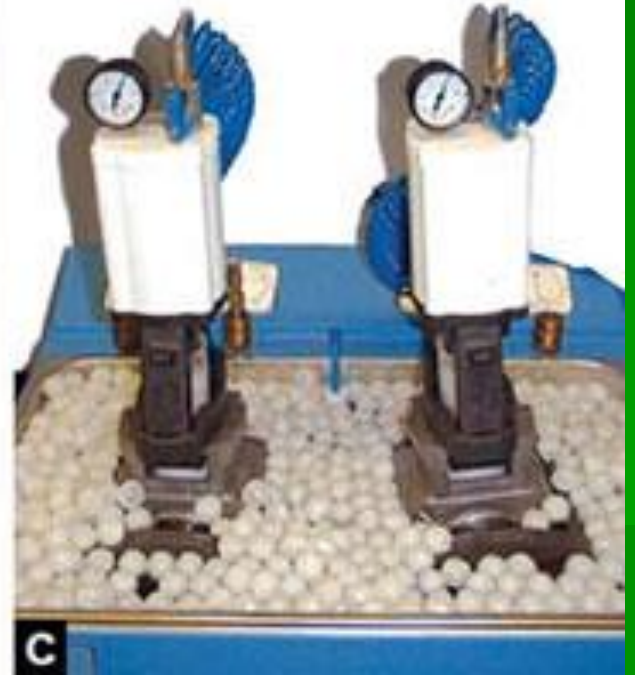
Parts of flask ...



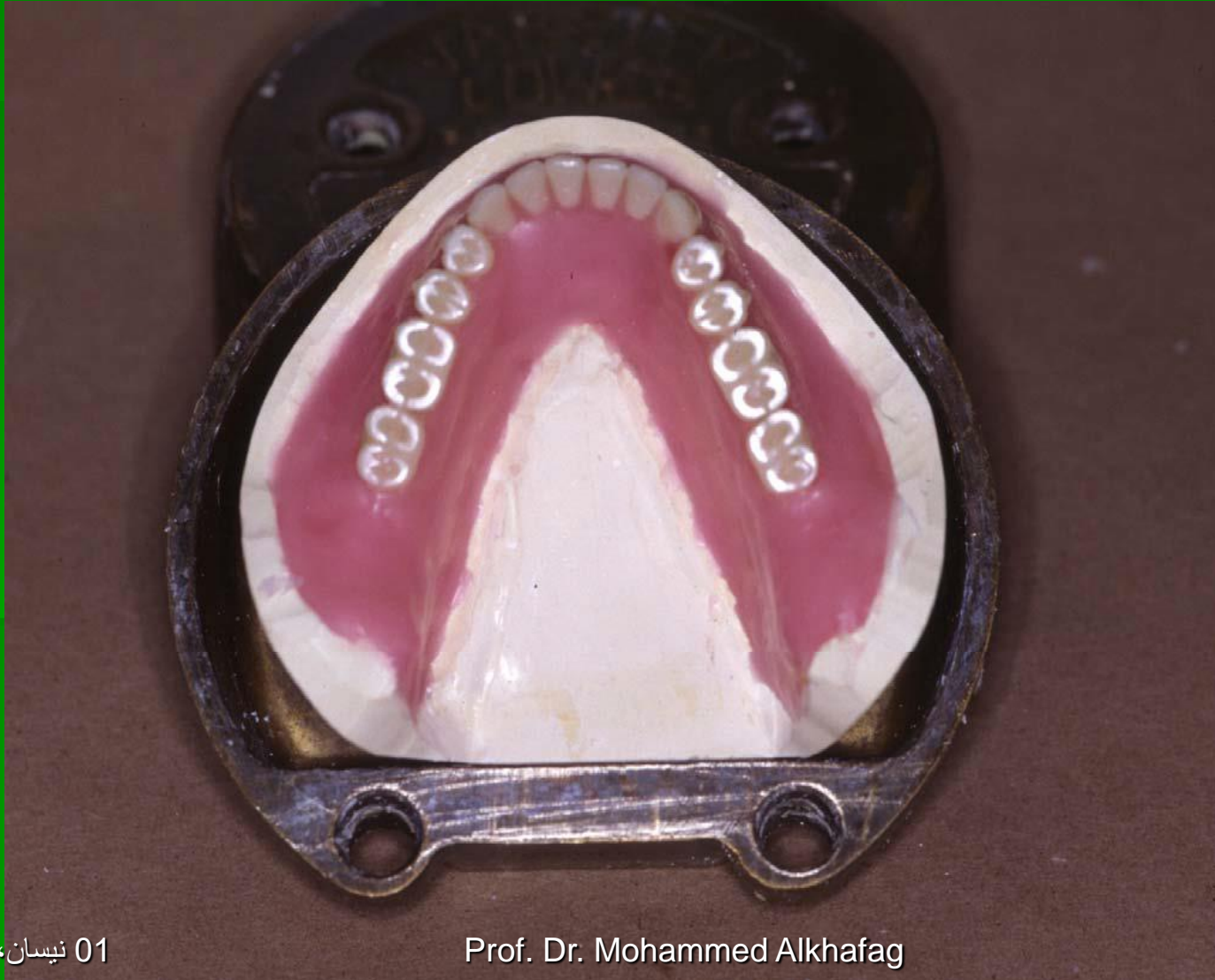
1) Flasking:

Molding or flasking Techniques:

- **Compression technique**
- **Injection molding technique**

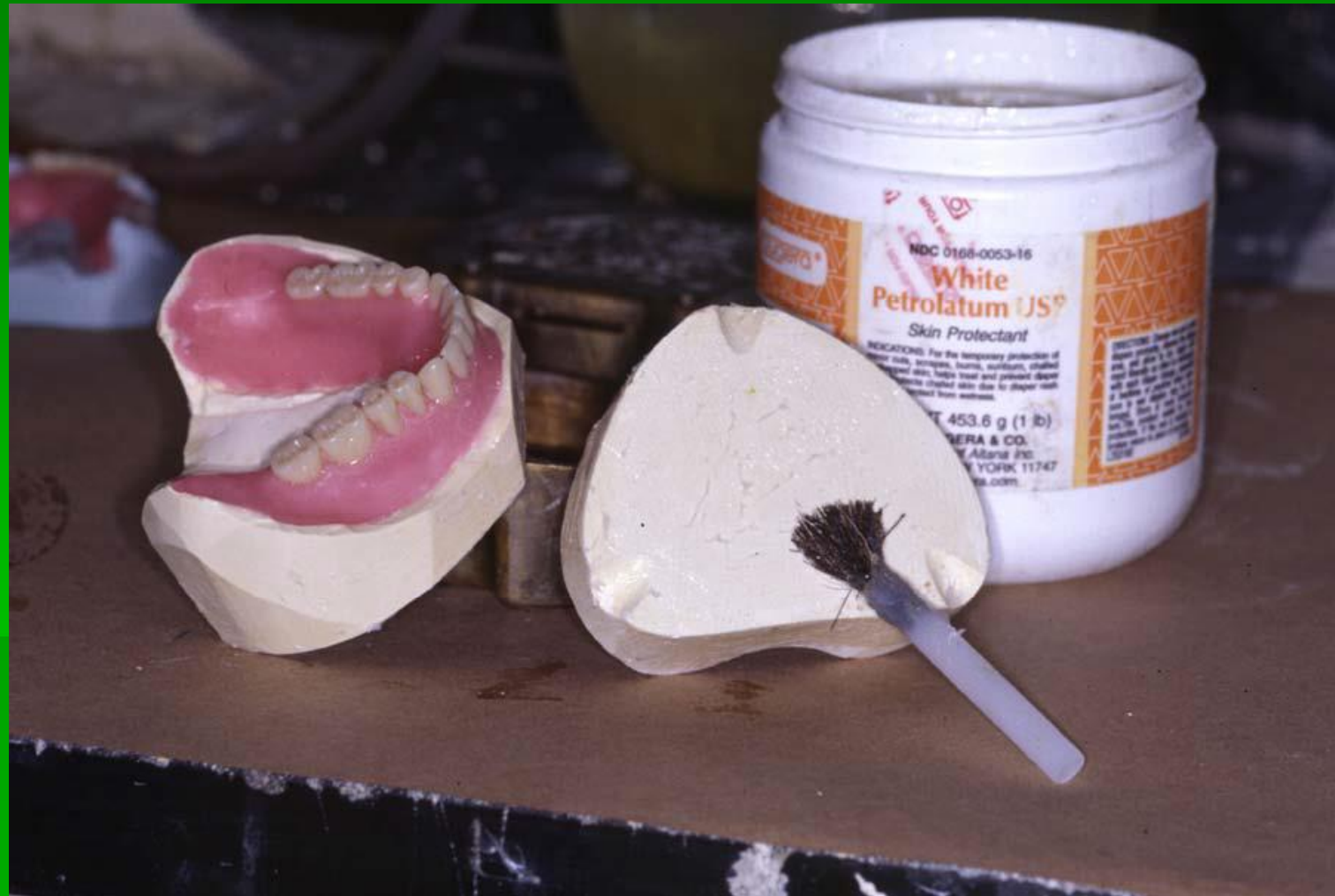


The procedure of flasking a denture in compression technique





painting the stone cast with separating medium , especially the indexes.
Not the wax pattern!

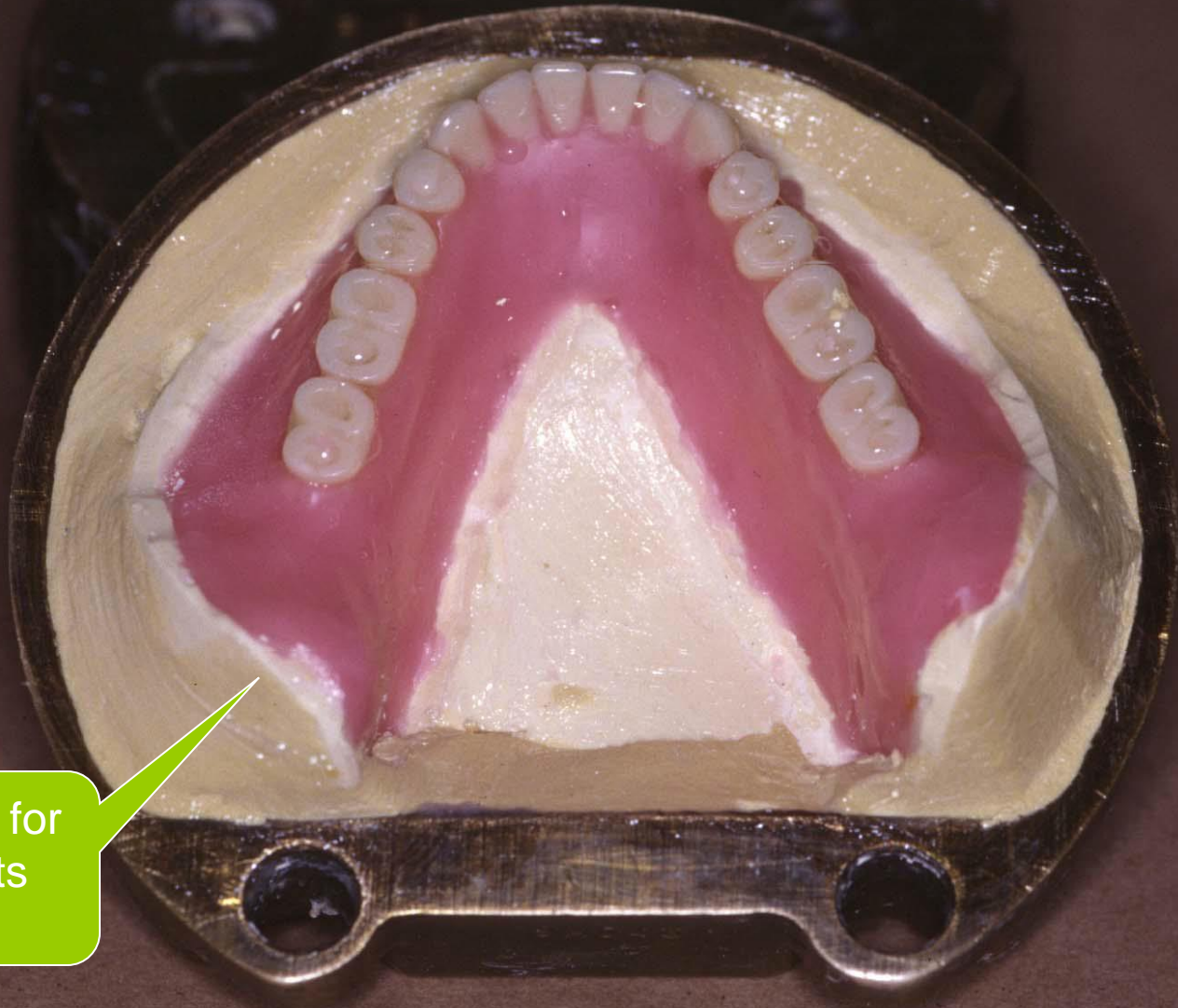


Add stone to flask, Seat cast completely to bottom of flask



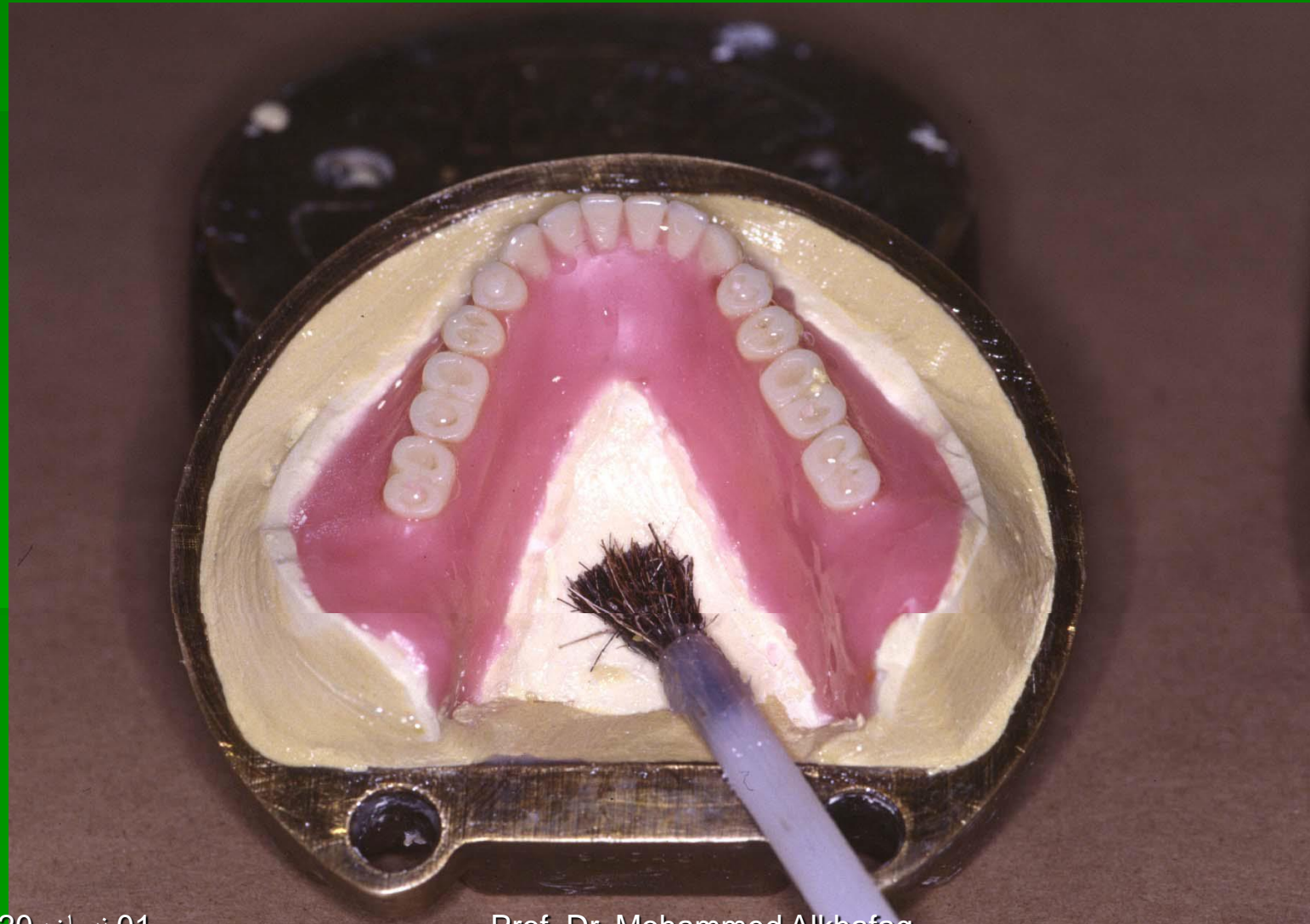
Notice that there is no stone on surface of flask, preventing seating of next (upper part) of flask.





Watch out for undercuts here!

**Smooth, NO UNDERCUTS, and lubricated.
Don't forget the separating medium!!!**



Vacuum mixed stone. Rub stone around teeth to prevent bubbles. And to keep the teeth in their position.



Cover cast and teeth with vacuum mixed stone, barely covering teeth.



Clean flasks, ready for boil out/wax removal.



2- Wax elimination

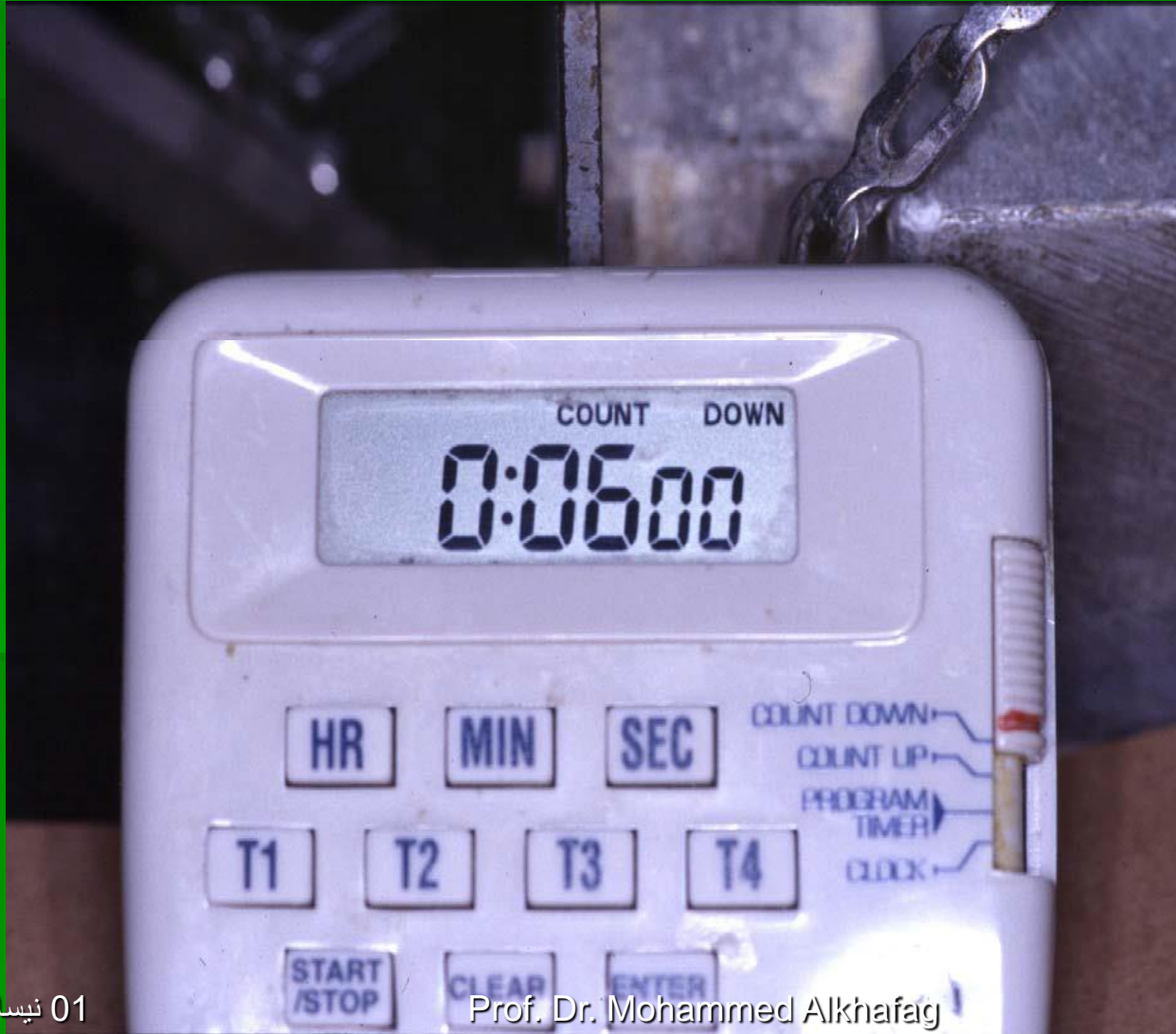
Flask compress used to place and remove flasks in boil out and keep flasks closed during curing.



Place dentures in boil out

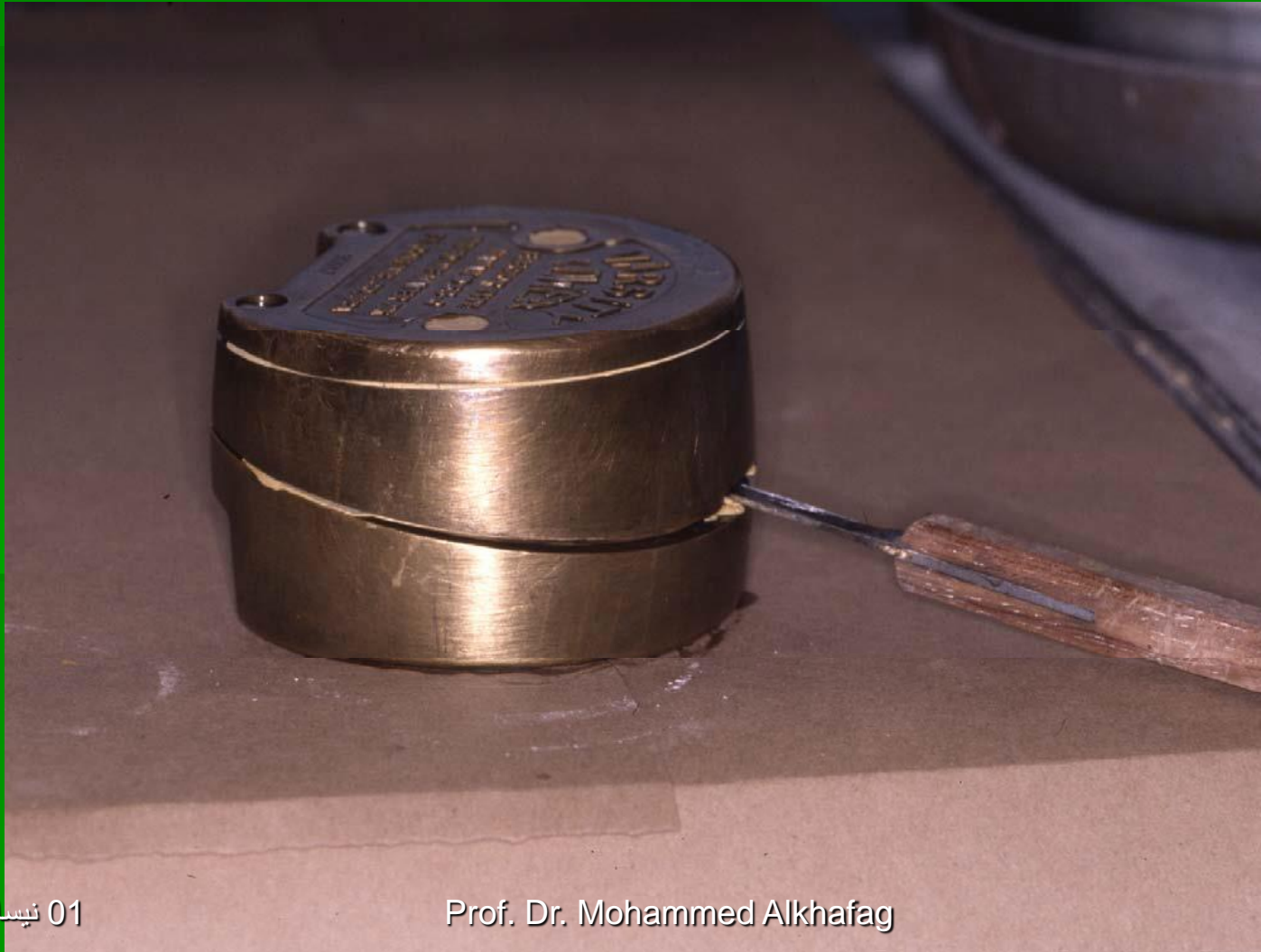


**Boil 6 minutes to soften the wax.
Shortened boil out results in pulling teeth from second pour.**



Remove flasks from boil out and gently pry open flask from anterior.

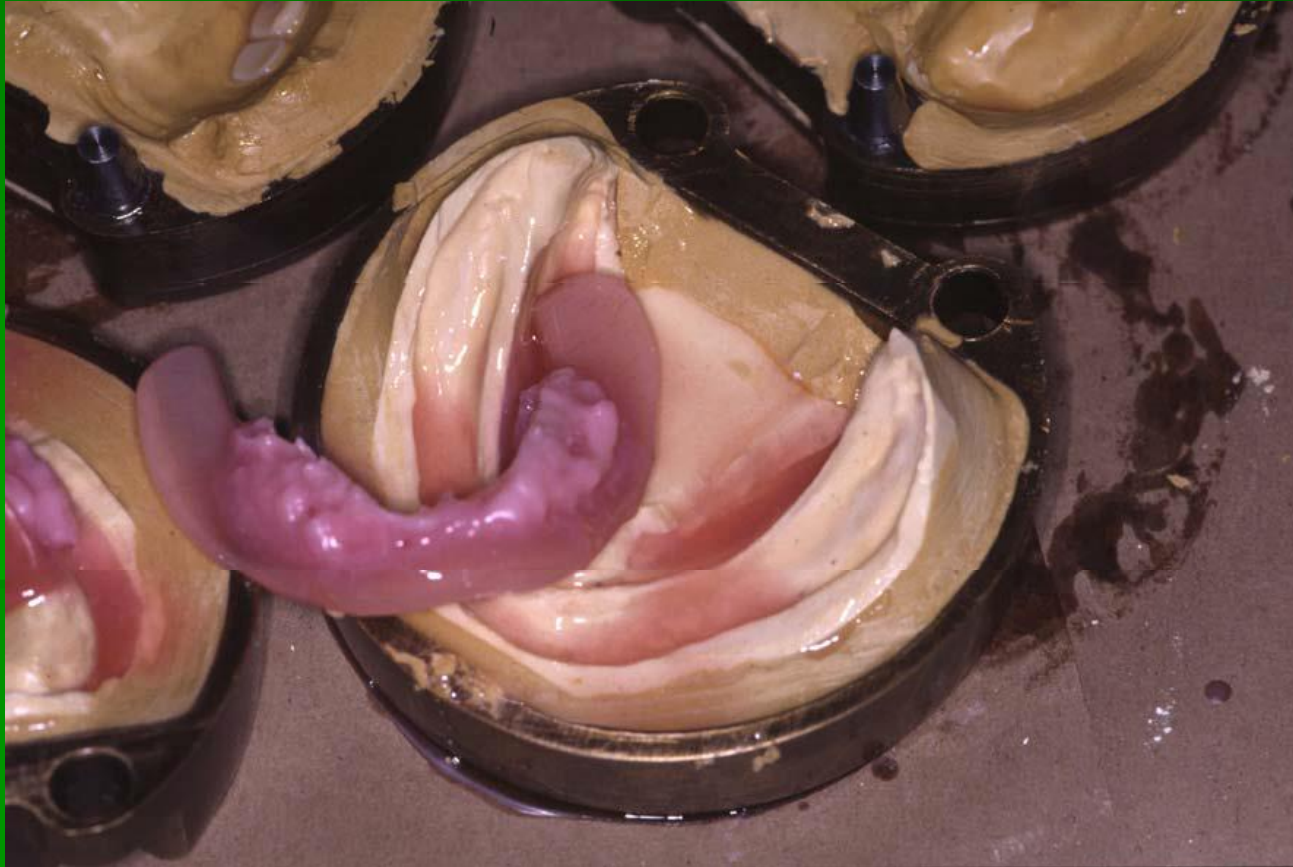
Most undercuts will be in posterior. If it doesn't come apart easily, there were undercuts in the first pour, or not enough separating medium.



Opened flasks after six minute boil out. Remove palatal form and base plates and discard. Watch for loose teeth. Teeth should have stayed in upper part of flasks.



Remove the record base from the flask





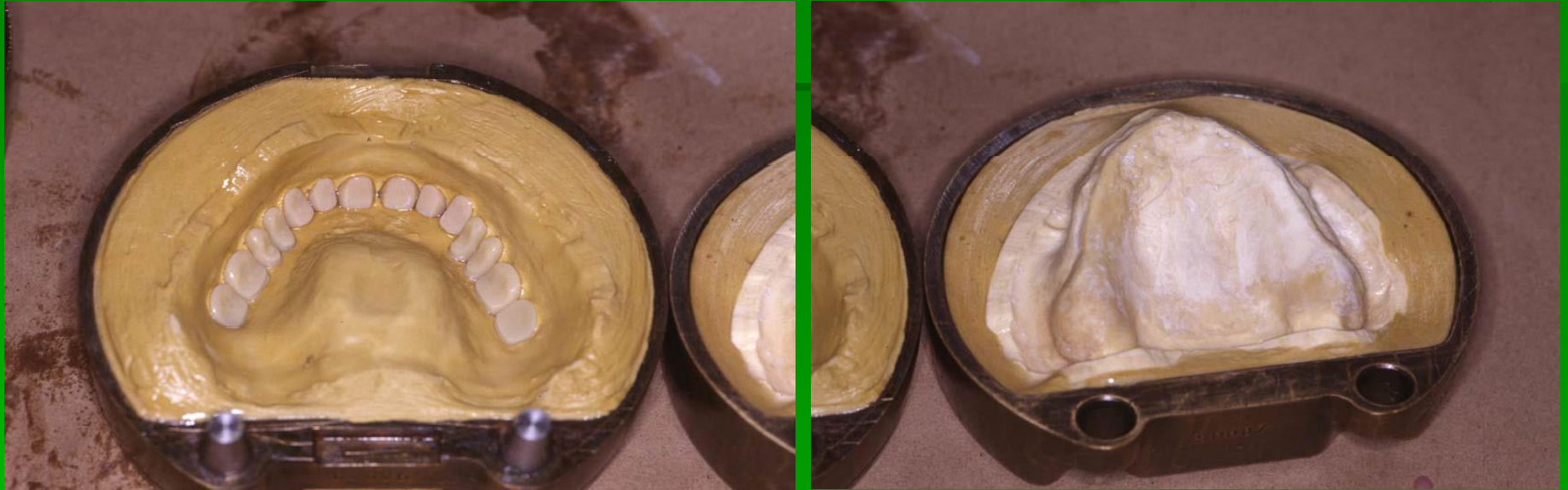
Remove stone from metal surface to allow metal to metal contact during closure



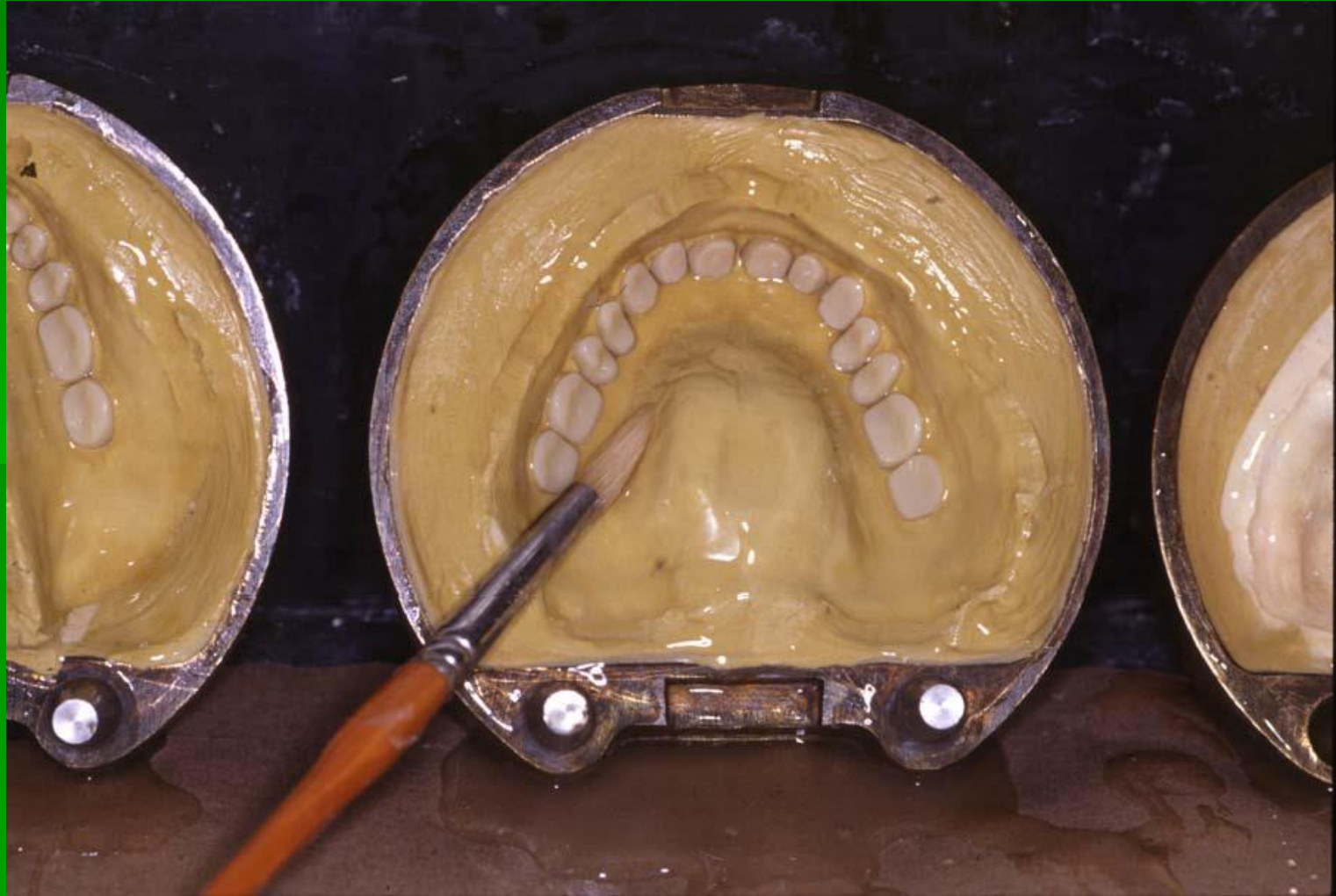
Scrub with denture brush to remove small stone particles, wax, and remaining impression material. Re-rinse with clean water



Clean, HOT flasks, ready for separator application



**Paint separator on thick and when flasks are very hot.
Keep separating media out of the artificial teeth**





Stand up flasks and allow excess separator to drain and evaporate.



When separator has dried, additional retention can be added by drilling diatorics in acrylic teeth with #4 round bur. Aim for cusps to avoid drilling all the way through the teeth. Remove shavings with air.

3- Mixing

The ratio of powder to liquid is important since it controls the workability of the mix as well as the dimensional changes on setting.

The mixing should be done in a clean jar which should be covered to prevent evaporation of the monomer.



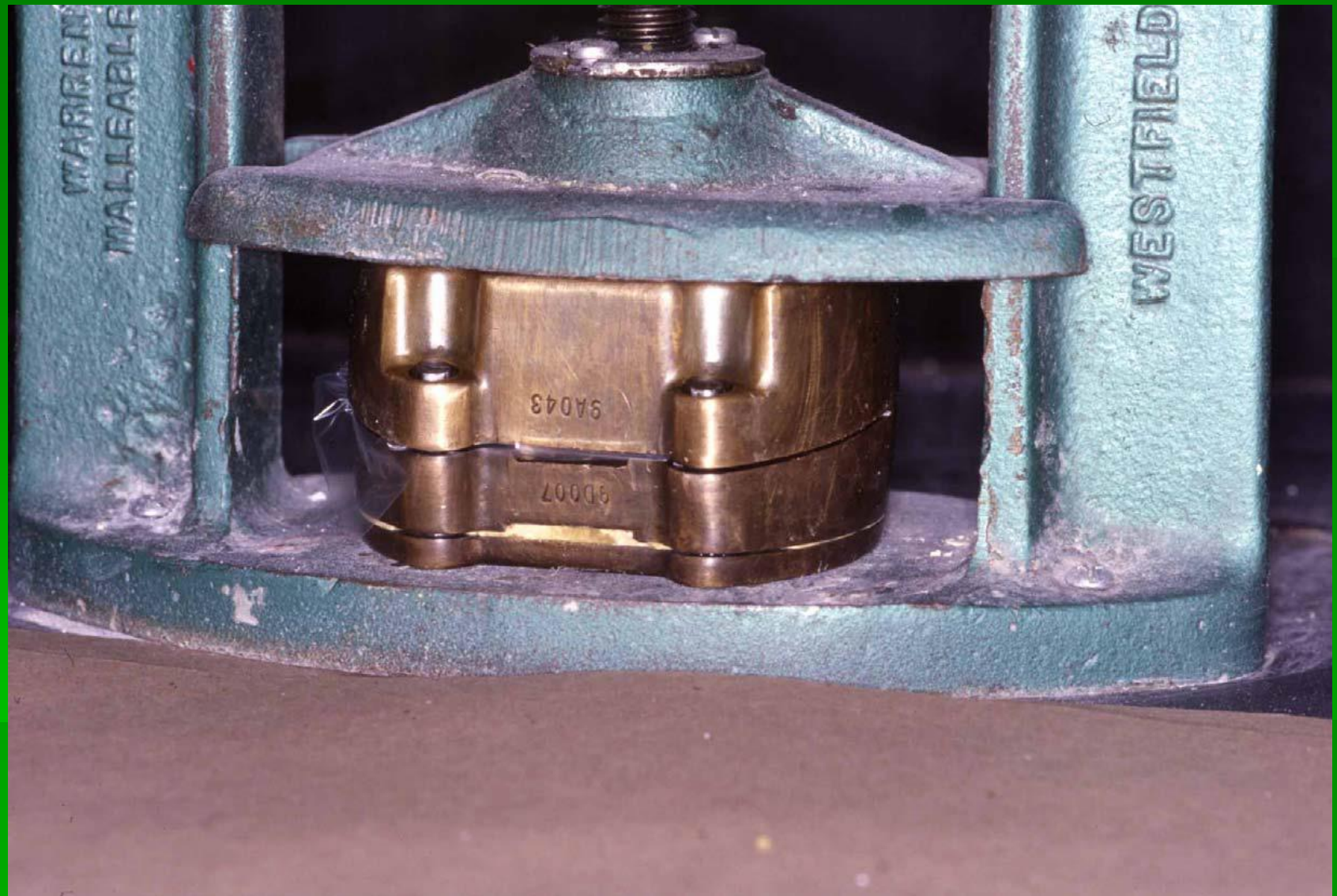
4- Pacing

It should be done when the mixture reaches dough stage.





**Divide acrylic in half and place in tooth portion of flasks.
To trial pack, cover with plastic sheet before closing flasks so
flasks can be re-opened to add acrylic, remove flash or insert**



Place flasks together and press to remove excess acrylic.

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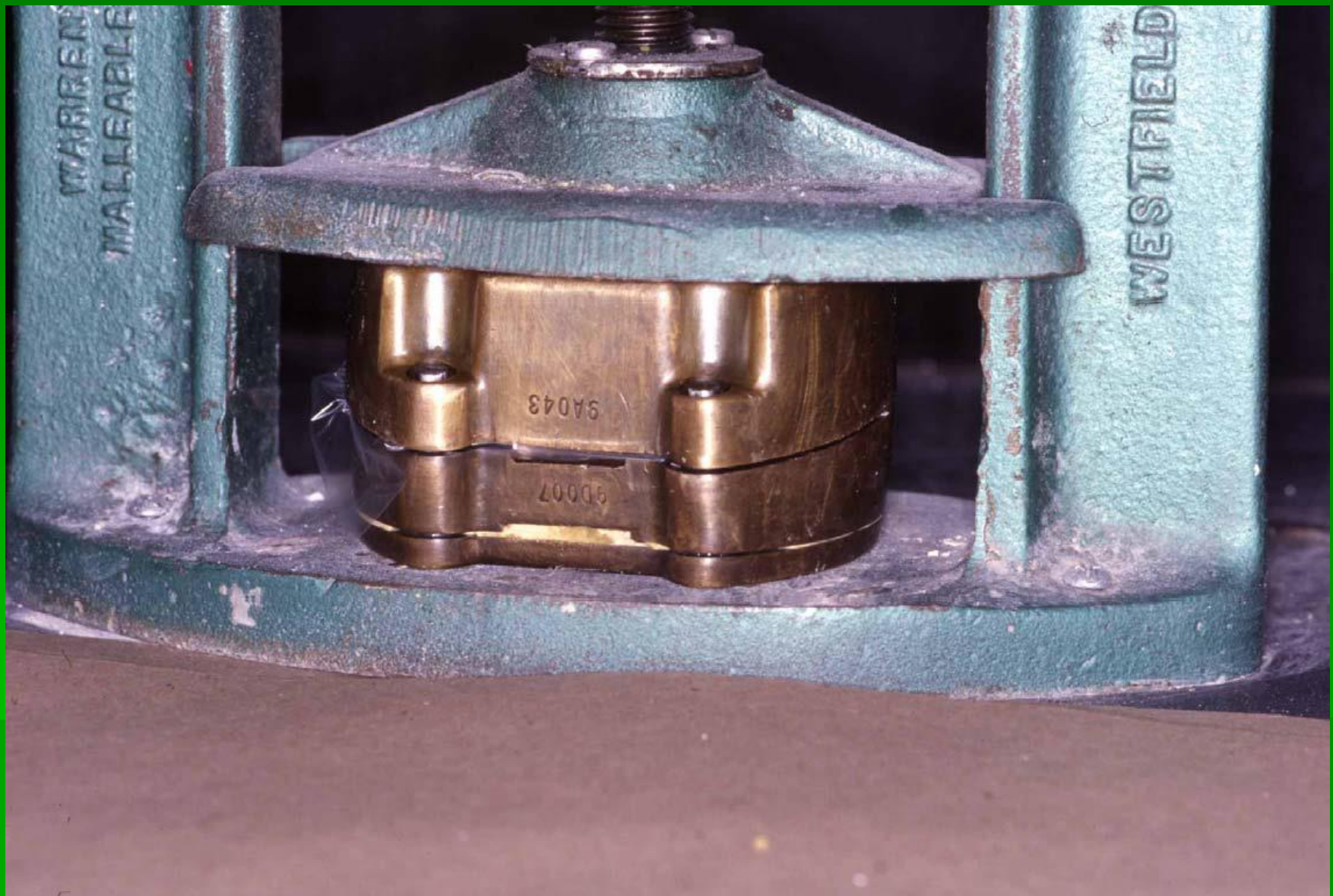
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If trial packing, separate flasks and check for acrylic flash. If none present, add additional acrylic.







Final closure of flask. Plastic sheet has been removed.

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Transfer flasks to compress and tighten completely. If processing only one denture, use an empty flask.

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5- Curing

Types of curing cycles for heat cure acrylic:

- 1- Short curing cycle .**
- 2- Long curing cycle .**

Short curing cycle:

The denture is placed in water at room temperature and the curing temperature is programmed to 74 °C for one and half hour followed by 100 °C for one hour.



Long curing cycle:

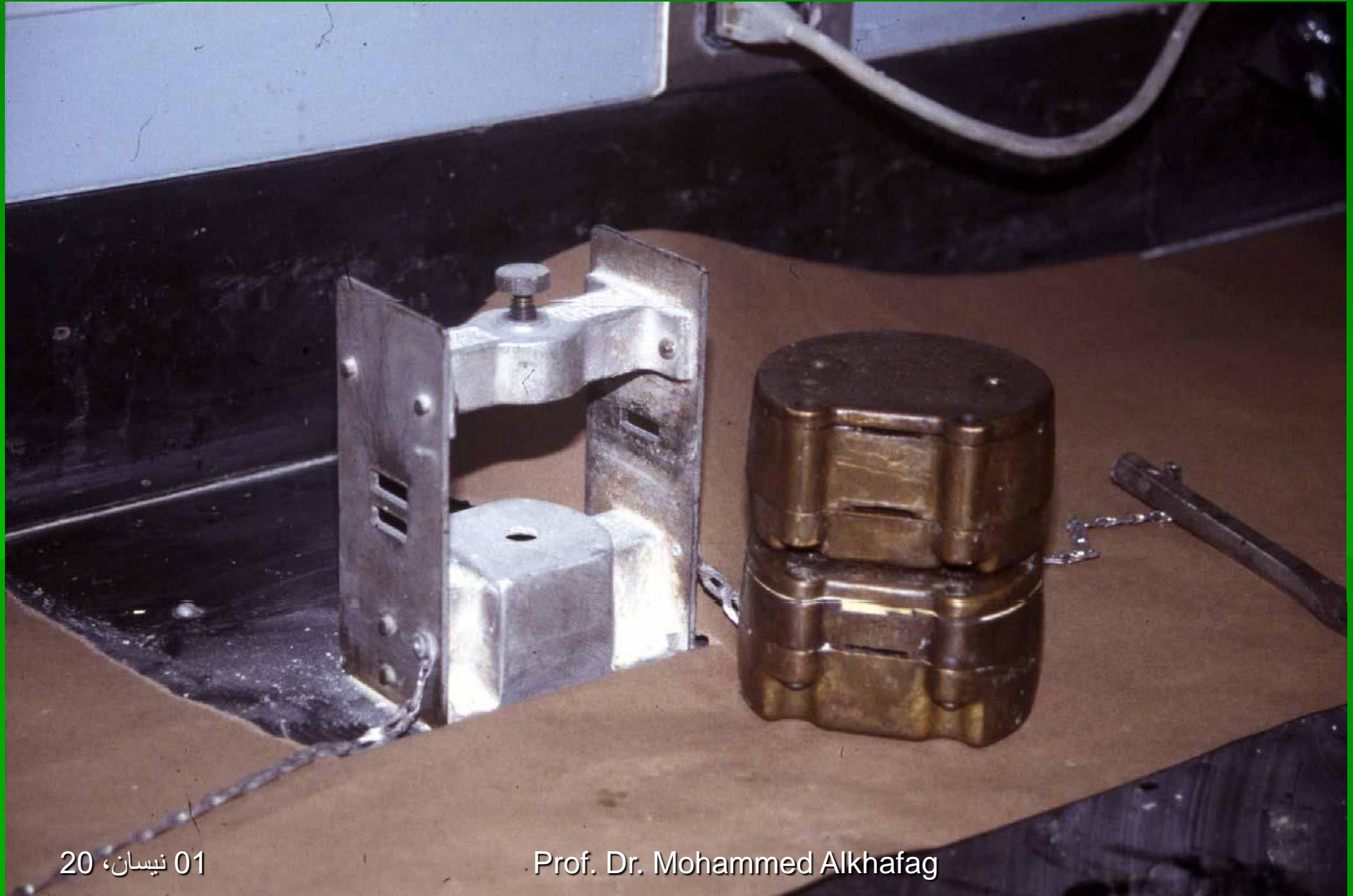
- The curing temperature is programmed to 100 °C for 8 hours.
- Polymerization can occur at any temperature but it is very slow at temperature below 70 °C, *the best curing cycle is the long curing cycle* because most of the conversion of monomer to polymer occurs during the period at 70 °C and during this time the dough itself may approach 100 °C because the polymerization reaction exothermic.

Long curing cycle:

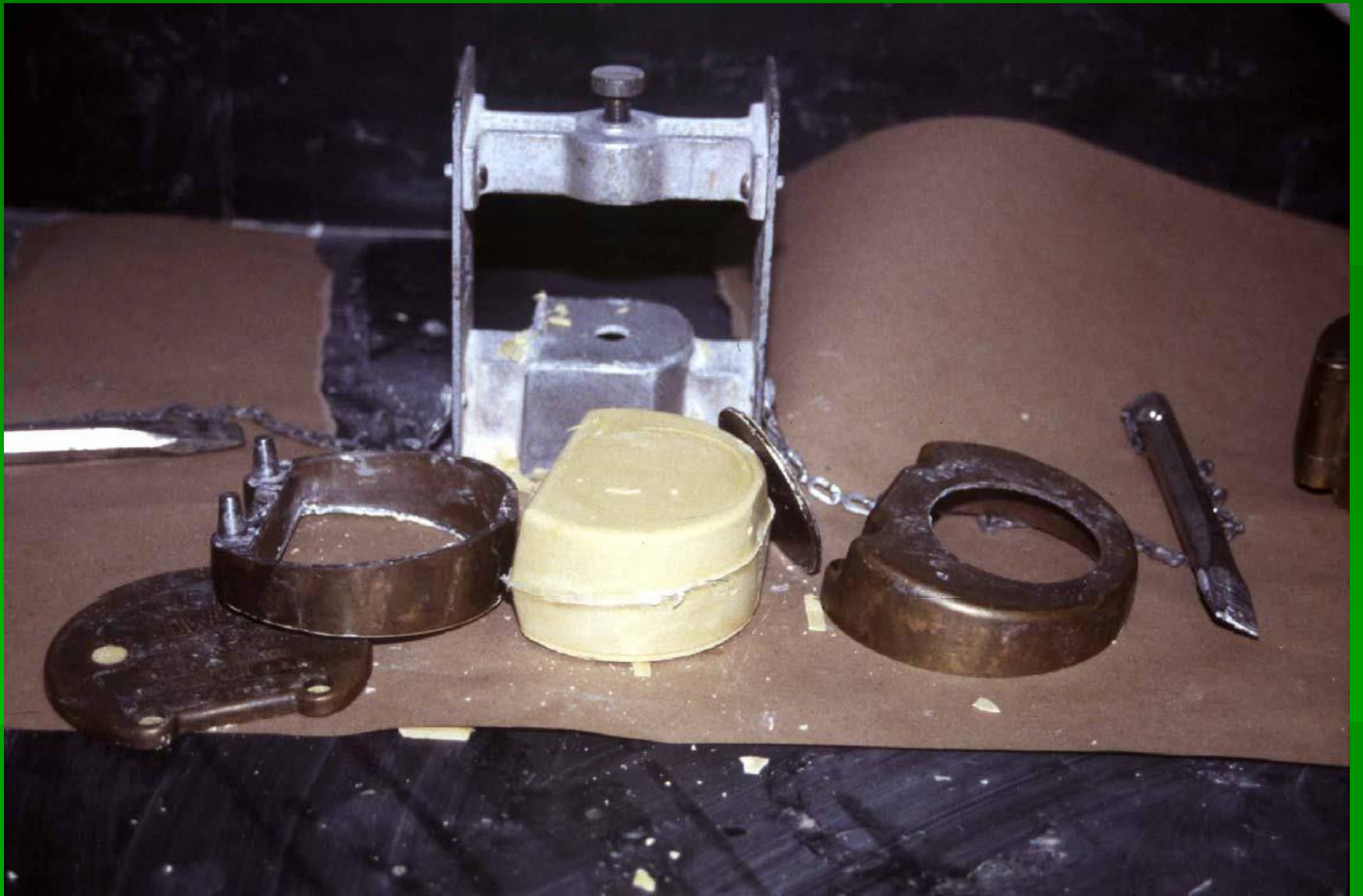
- The monomer boils at 100.3°C so the dough must be kept below this temperature to avoid boiling of the monomer; on the other hand rapid curing cycle usually results in some gaseous porosity.

6- Deflasking

Cured dentures ready for ejection from flasks using flask ejector







Laboratory remount

The incisal pin discrepancy should be noted.

- If the discrepancy is less than 2mm, it is acceptable.
- If the discrepancy is between 2-5 mm, occlusal correction can be accomplished.
- If the discrepancy is more than 5mm, the entire treatment should be repeated



7) Shaping and Polishing





Store processed dentures in water!!!



Thank you for listening