

# **Alginate Impressions and Diagnostic Casts for Dentate Dentoforms**

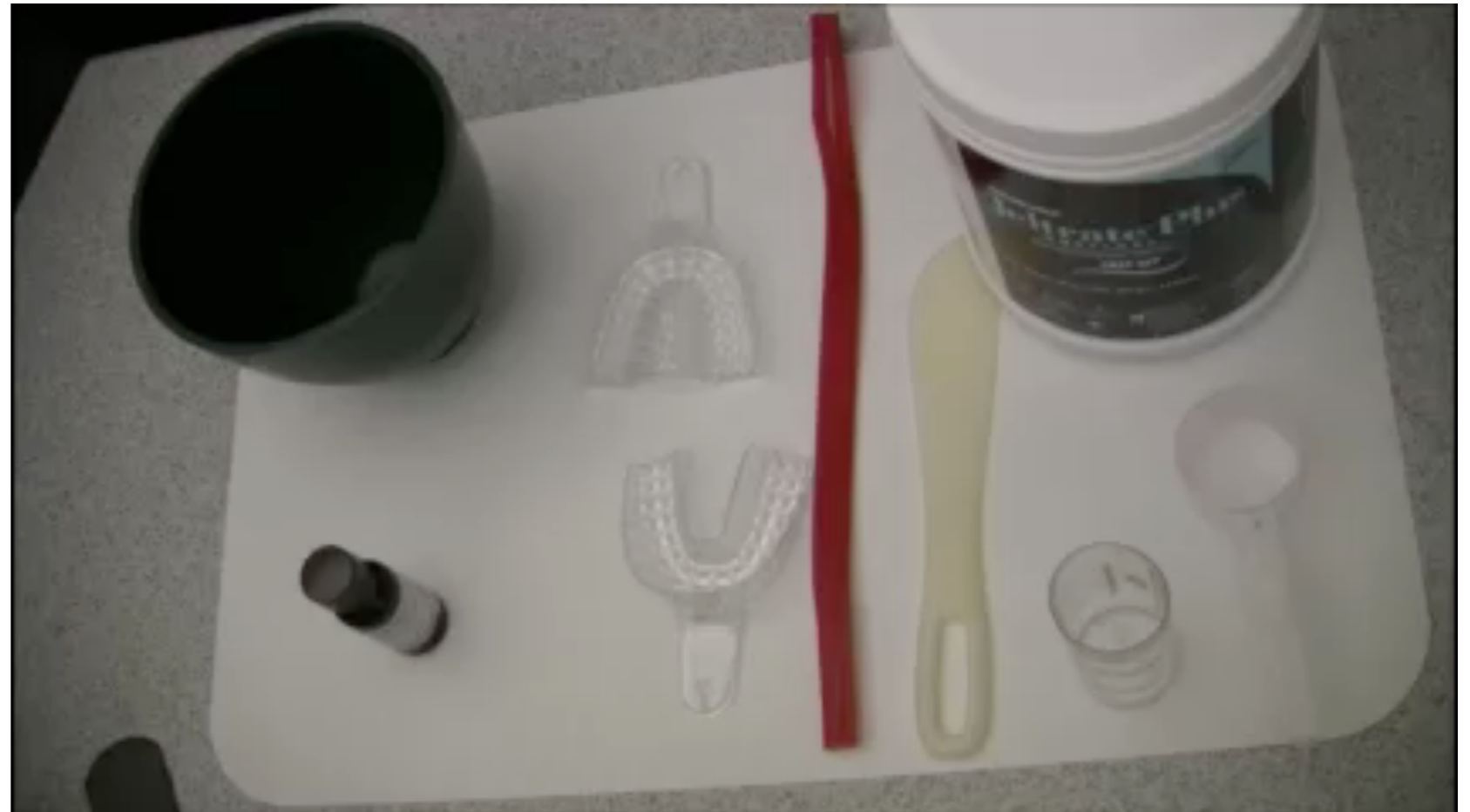
# Armamentarium

- Water measure
- Dental stone
- brush
- spatula
- Vacuum-mixer
- plastic sheet



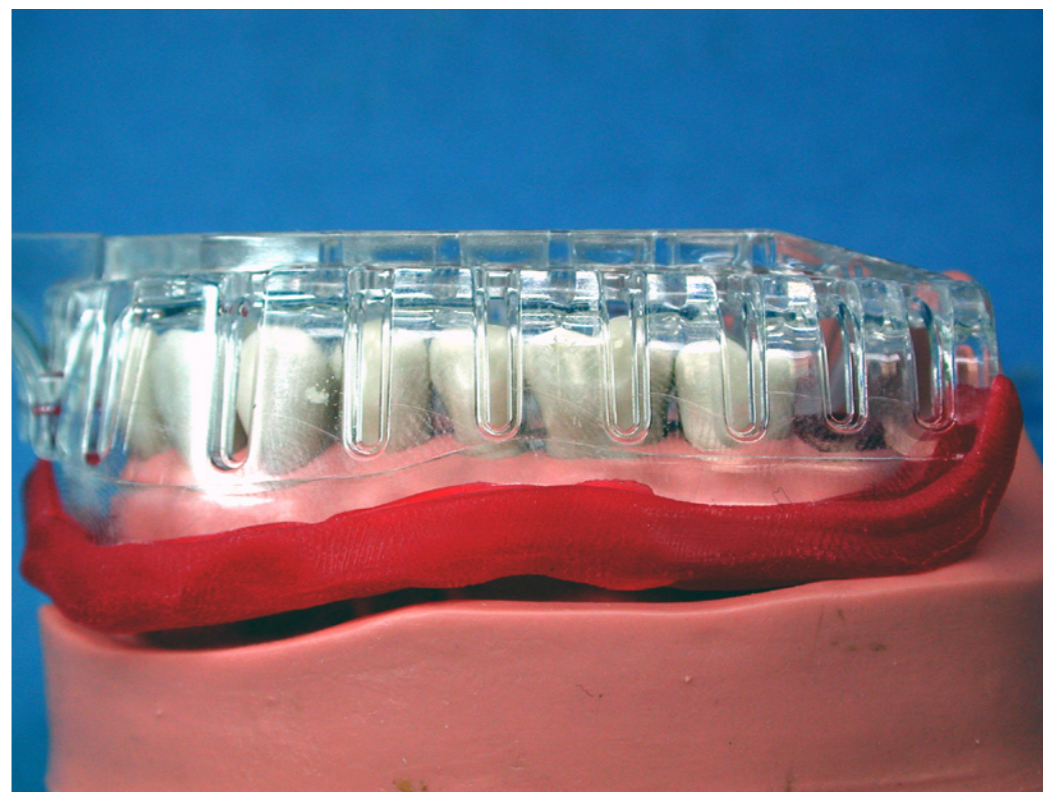
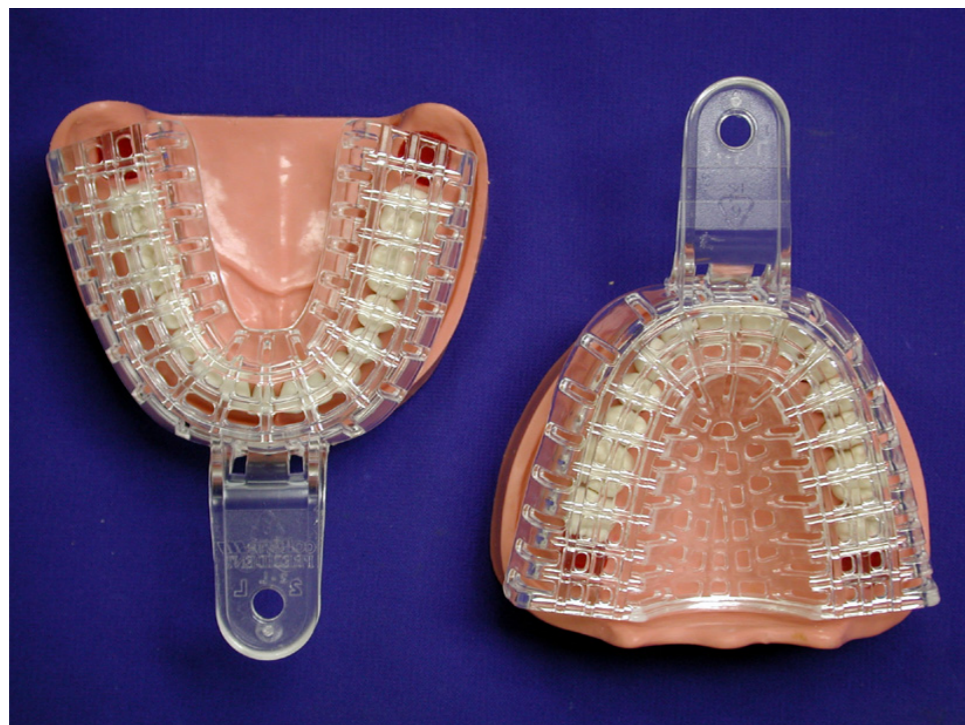
# Armamentarium

- Alginate (Jeltrate®): Fast set
- Alginate scoop
- Alginate water measure
- Mixing spatula
- Rope wax
- Impression tray
- Mixing bowl
- Tray adhesive
- Dentate dentoform
- Paper cups

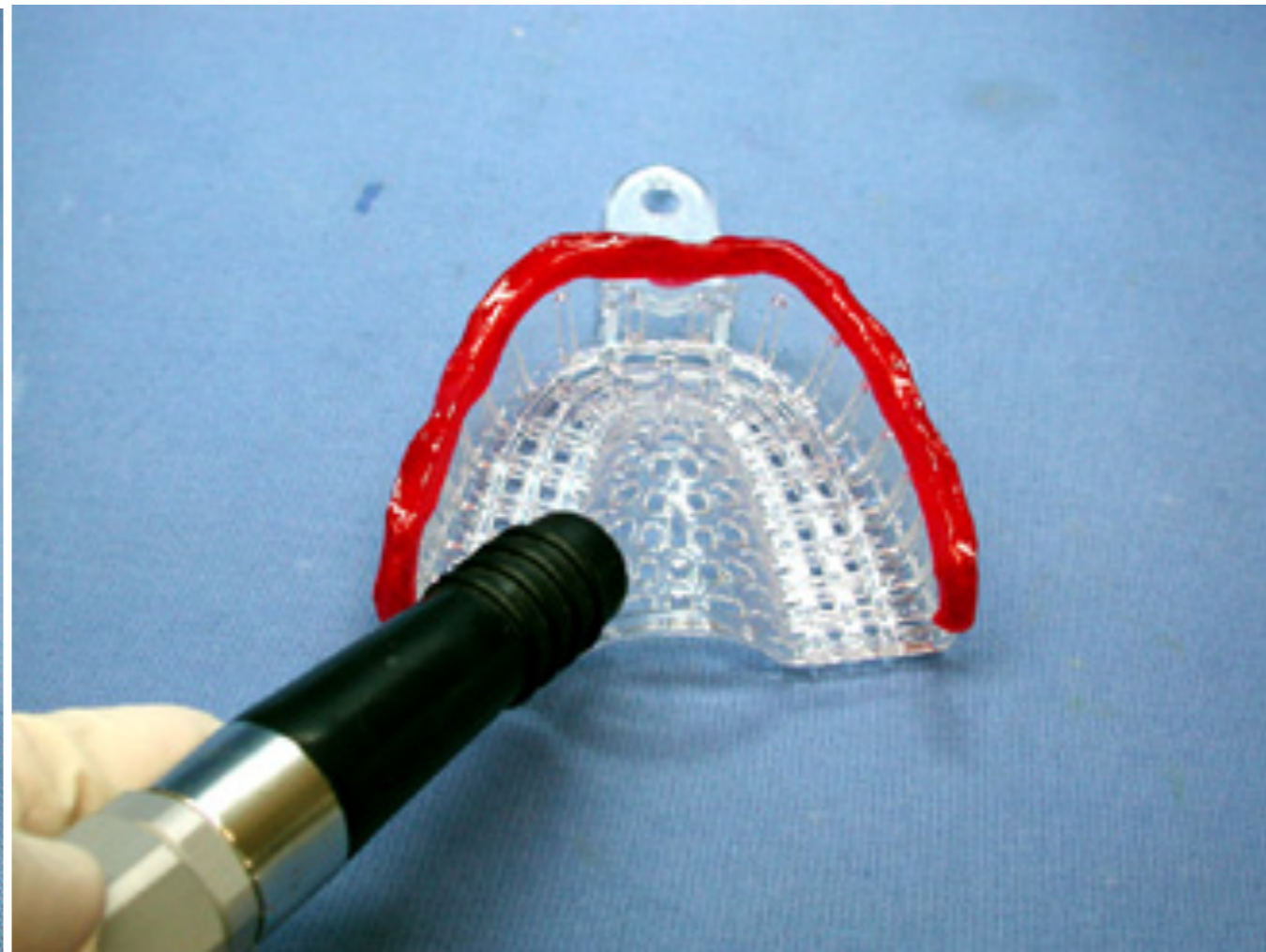
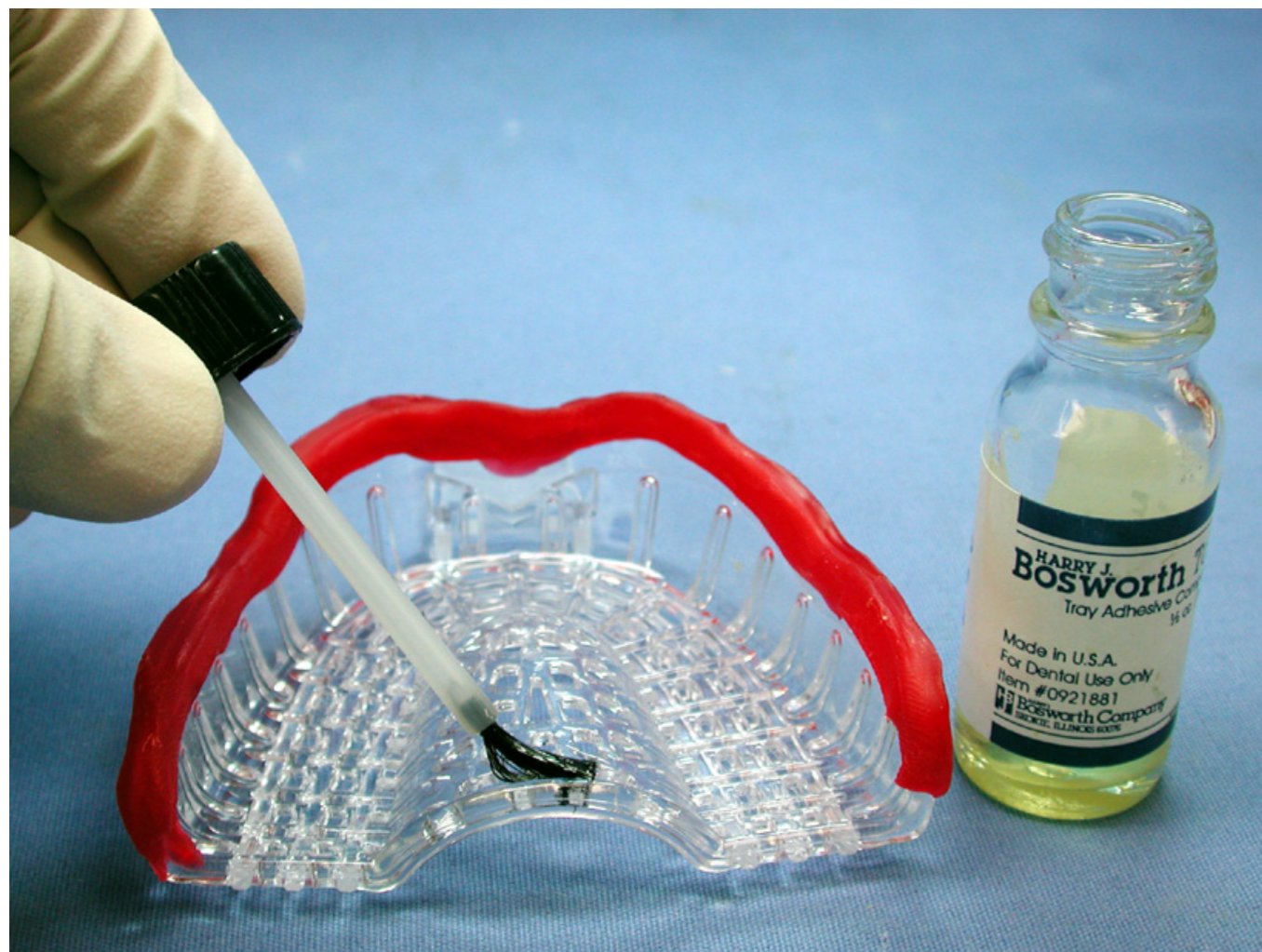


# Impression Tray

- A device that is used to **carry**, **confine**, and **control** impression material while making an impression
- Largest tray that will fit comfortably in the patient mouth is selected (oversized)
- Rigid
- Stock tray vs. custom tray



# Tac - tray adhesive



# Jeltrate® Plus Fast Set Alginate

- Mixing time: 45 sec
- Total working time: 1 min 30 sec
- Initial setting time: 1 min 45 sec
- Setting time: 2 min 30 sec

(based on water temperature at 23°)

## Step 1: Fluff the alginate powder



Step 2: Scoop some alginate powder



Step 3: Tap (lightly) to remove voids (do NOT pack powder)



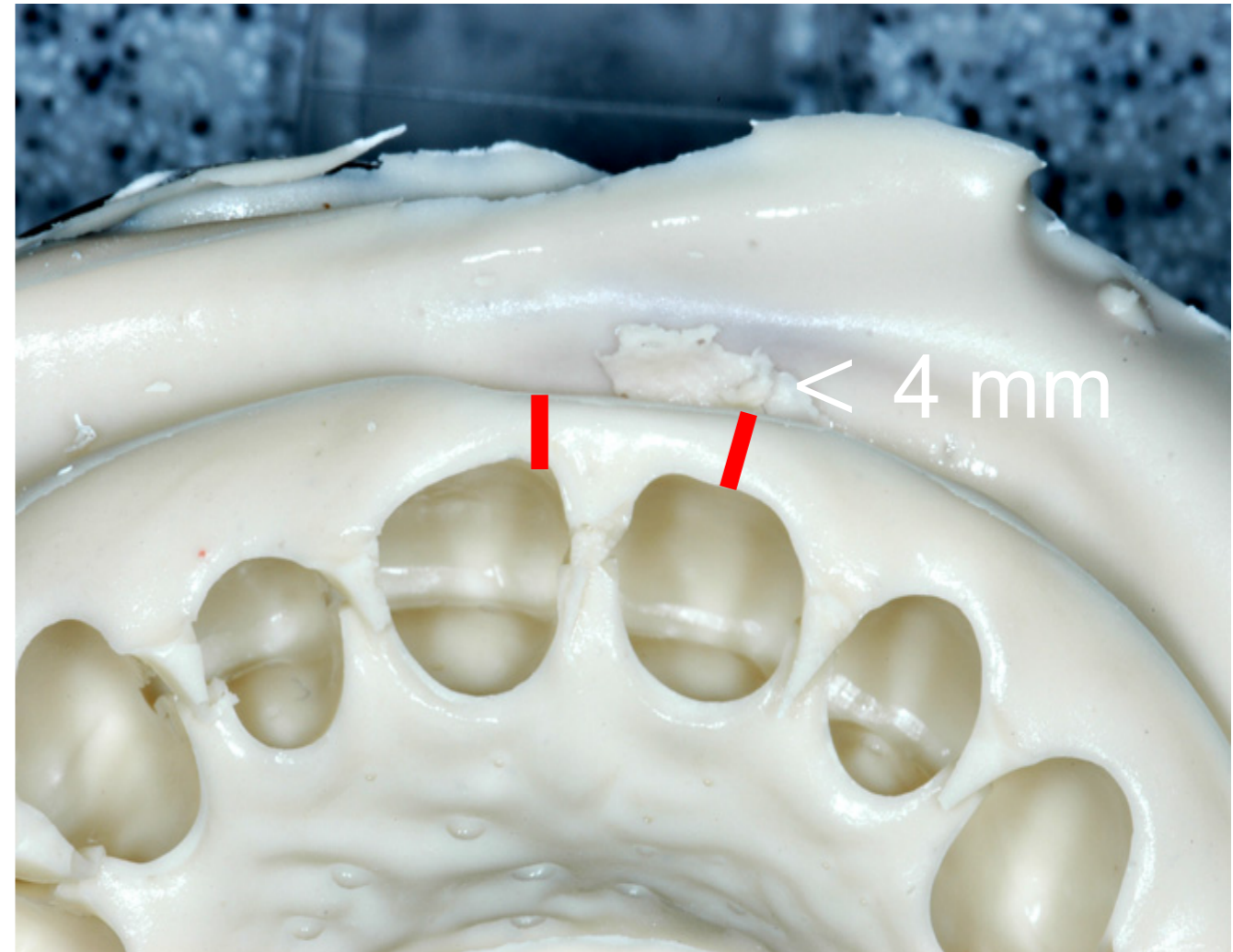
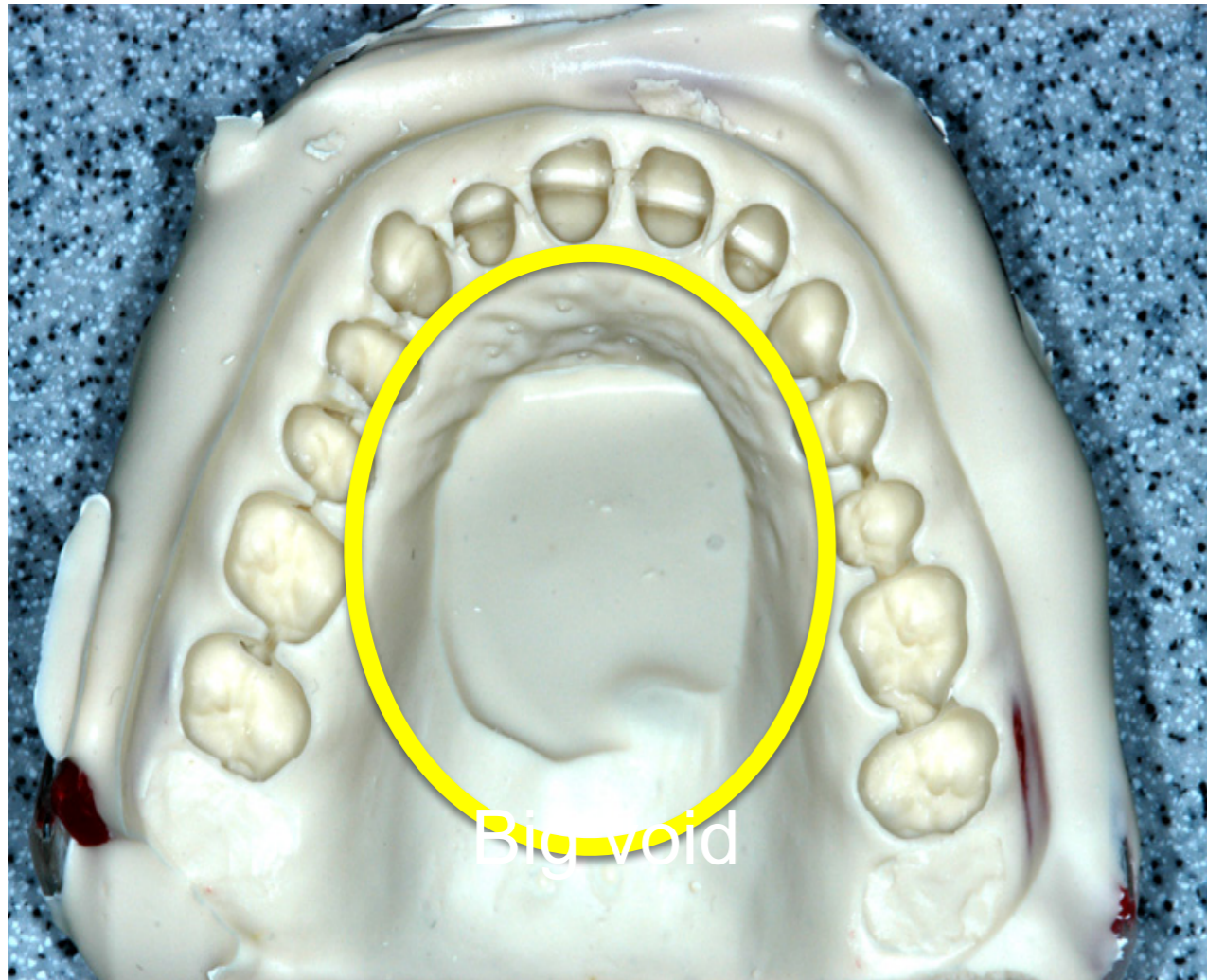
Step 4: Level to powder with spatula



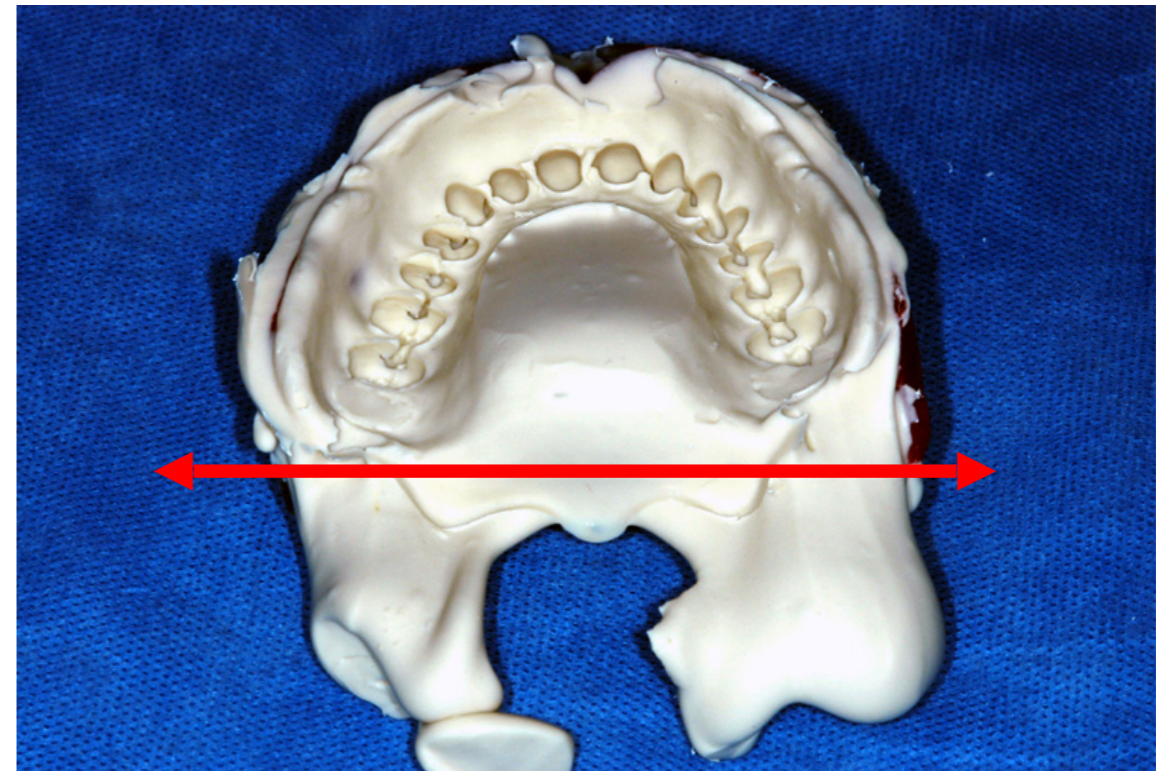
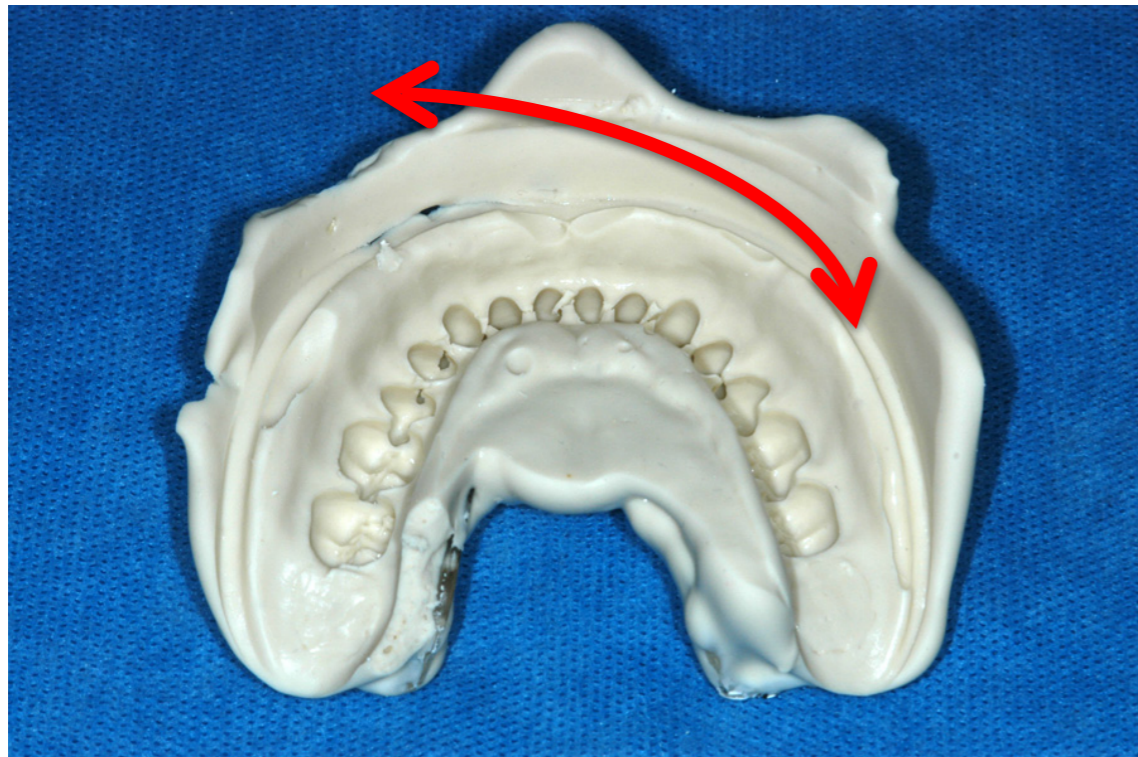
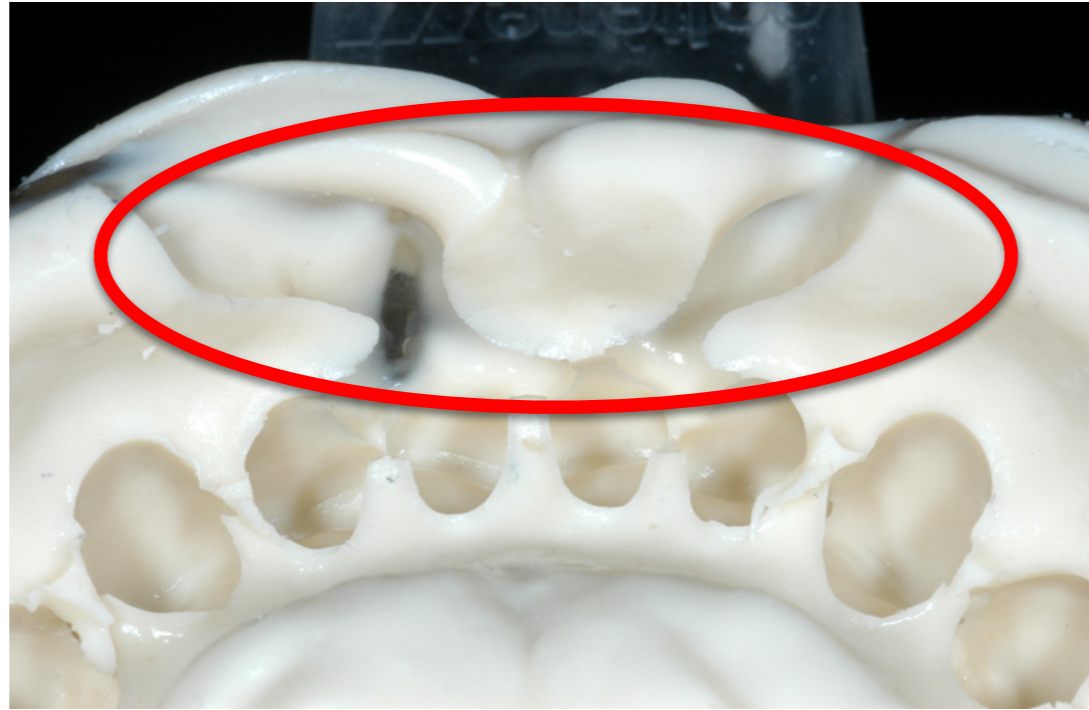
- 4 scoops + 4 measures of water (23°C)\*
- Pour water into a dry bowl first, then add powder
- Wet all powder then press material against bowl
- Working time: 1 min until creamy mix
- Load alginate into tray and insert tray into mouth
- Hold immovable 3 min after stickiness vanishes
- Break seal and “snap” impression out of mouth
- Rinse and pour immediately (within 12 minutes)
- Wrap impression in wet towel and store in a humidor (zip-lock bag) if pouring later

\* 4 scoops for maxillary and 3 scoops for mandibular

# Voids



# Voids



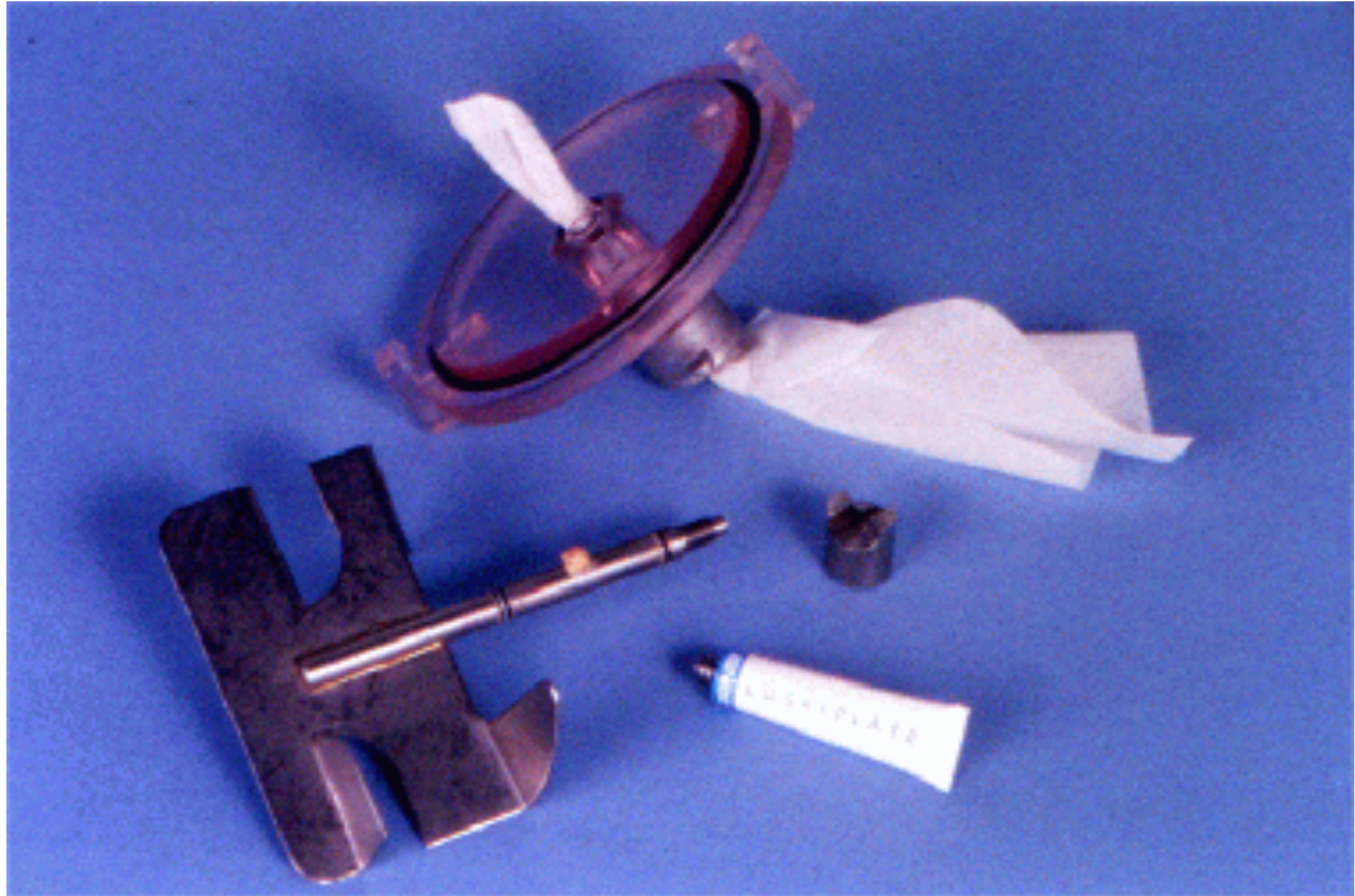


# Tips for proper use when working with Gypsum.



1. Bowls & spatulas should be clean! Sediments on the bowl can absorb water and compromise your W/P ratio.
2. Sediments can scratch the lining of the bowls making it difficult to clean.

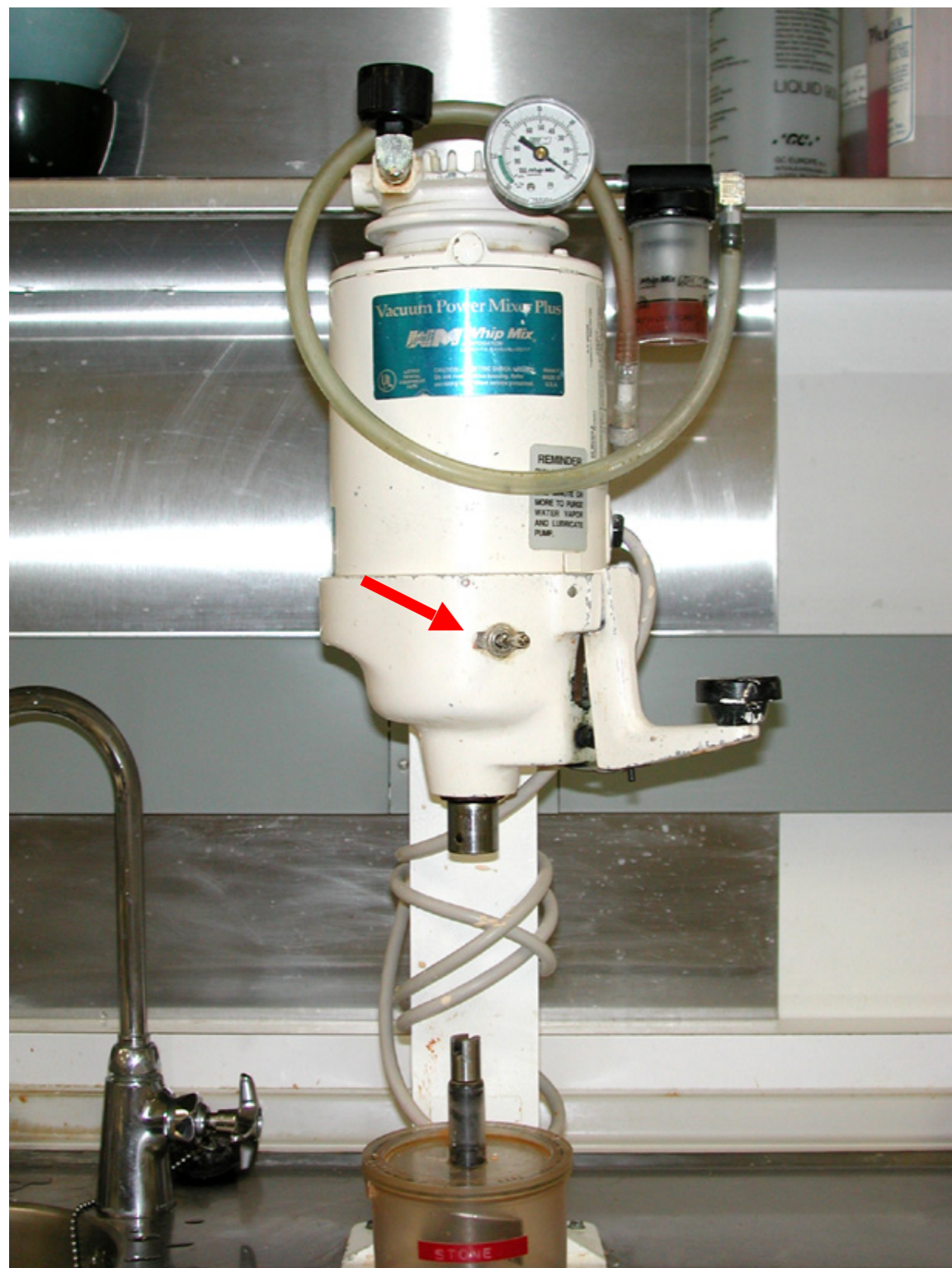
Clean and remove debris to ensure smooth movement in mixing process.



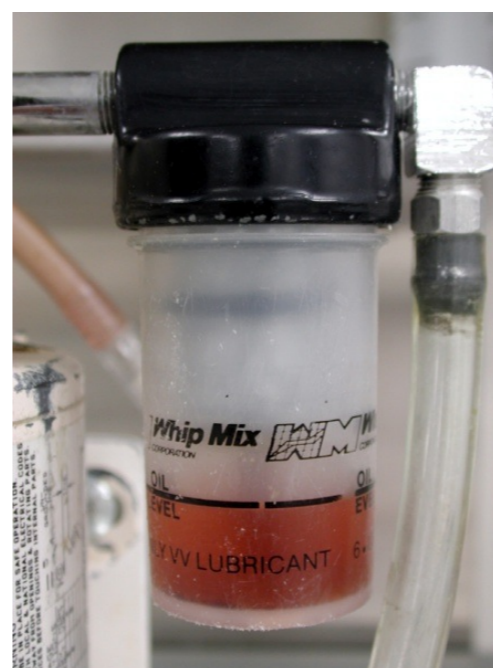
# Type III improved dental stone

- Setting expansion: 0.12%
- Water/powder ratio: 40m./140gm
- Water first then powder
- Hand mix 10-15 sec
- Vacuum mix 20-30 sec
- Working time 6-8 min
- Separation: 45 min

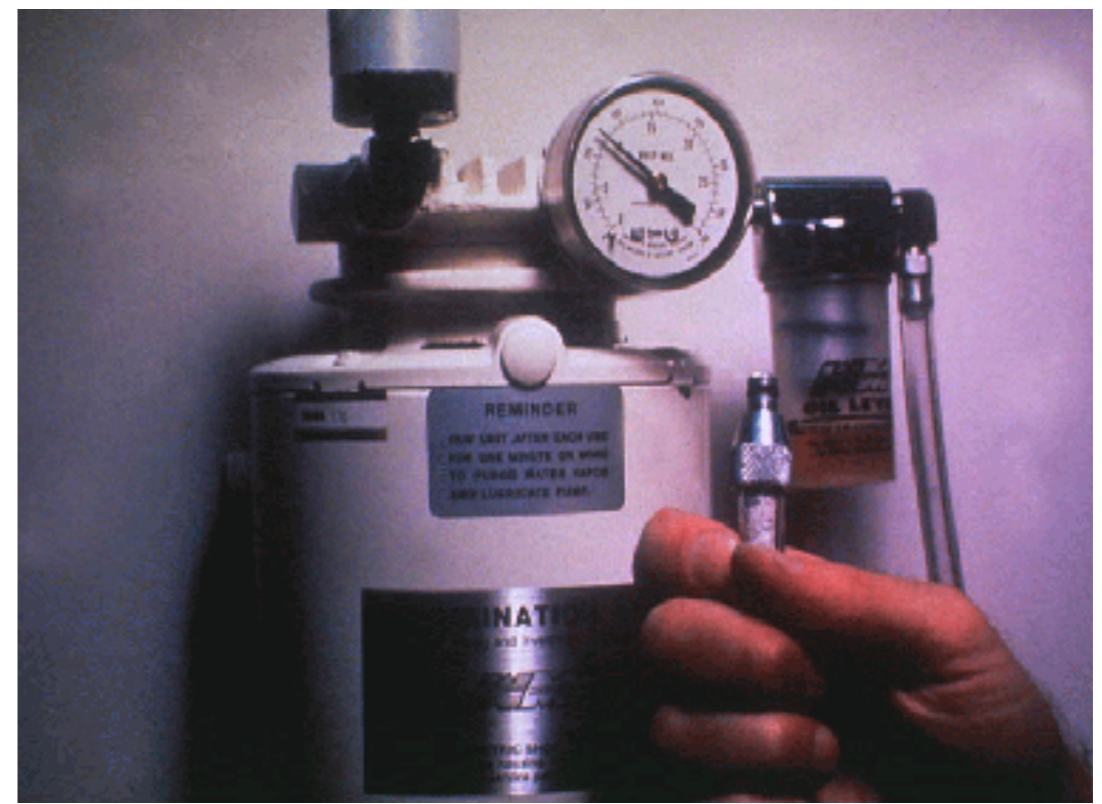




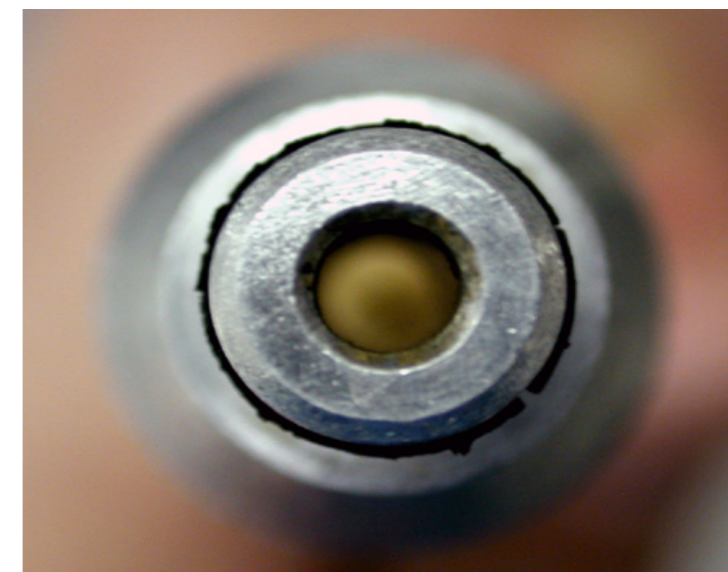
**REMINDER**  
RUN UNIT AFTER  
EACH USE FOR  
ONE MINUTE OR  
MORE TO PURGE  
WATER VAPOR  
AND LUBRICATE  
PUMP.



# Check to ensure vacuum mixer is drawing correct vacuum.



27 to 28 psi



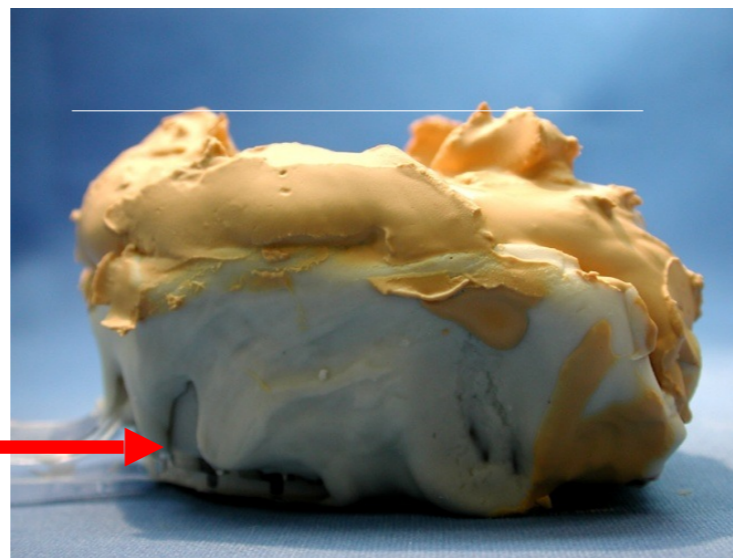


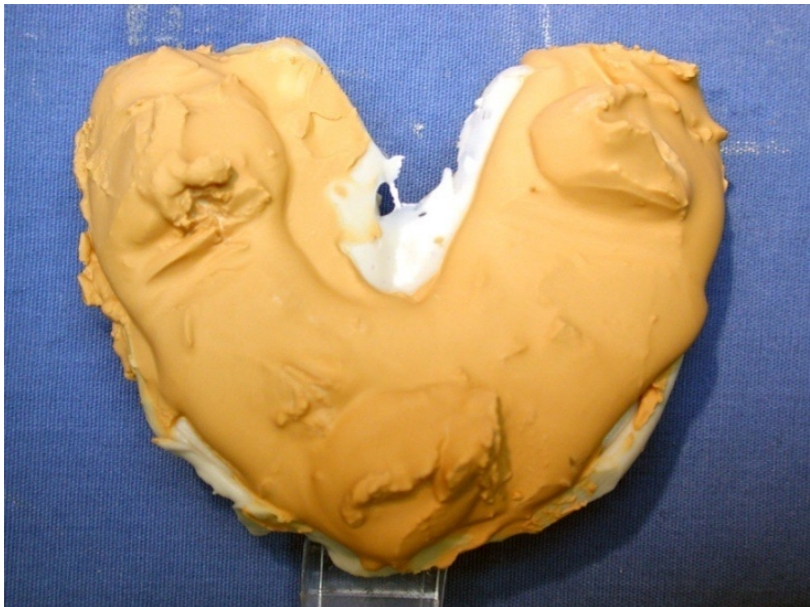
Vacuum mix 20 - 30 sec

Connect mixing bowl to vacuum mixer



# Double pour technique





# Tips for proper use when working with Gypsum

Removing the cast.

Wait at least 45 minutes after pouring the impression before removing the cast.

Note: Always follow manufacturer's direction for all impression materials.

# Trimming casts

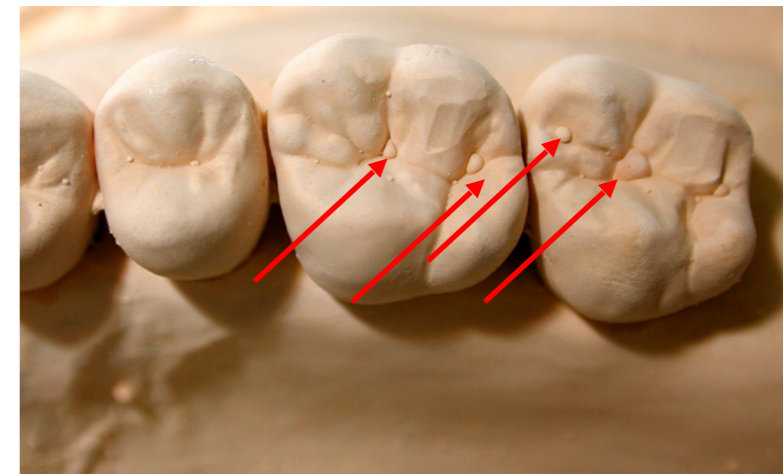
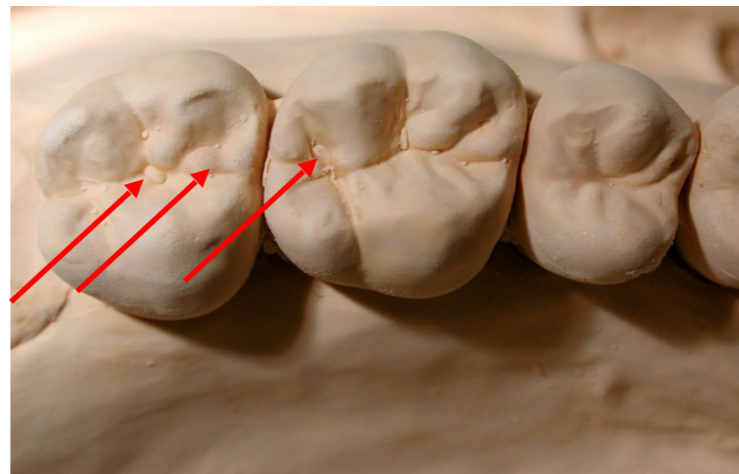
If possible, wait a minimum of two hours after pouring the impression before preparing and trimming the casts.



Soak casts for 5 minutes in clear slurry water before using cast trimmer

# Cast Trimming

- Wet trimming: use wet trimmer, soak cast in clear slurry water 5 min before trimming
- Dry trimming: use dry trimmer; wait 24 hours
- No need for land area for fixed casts
- “Cast prophylaxis”





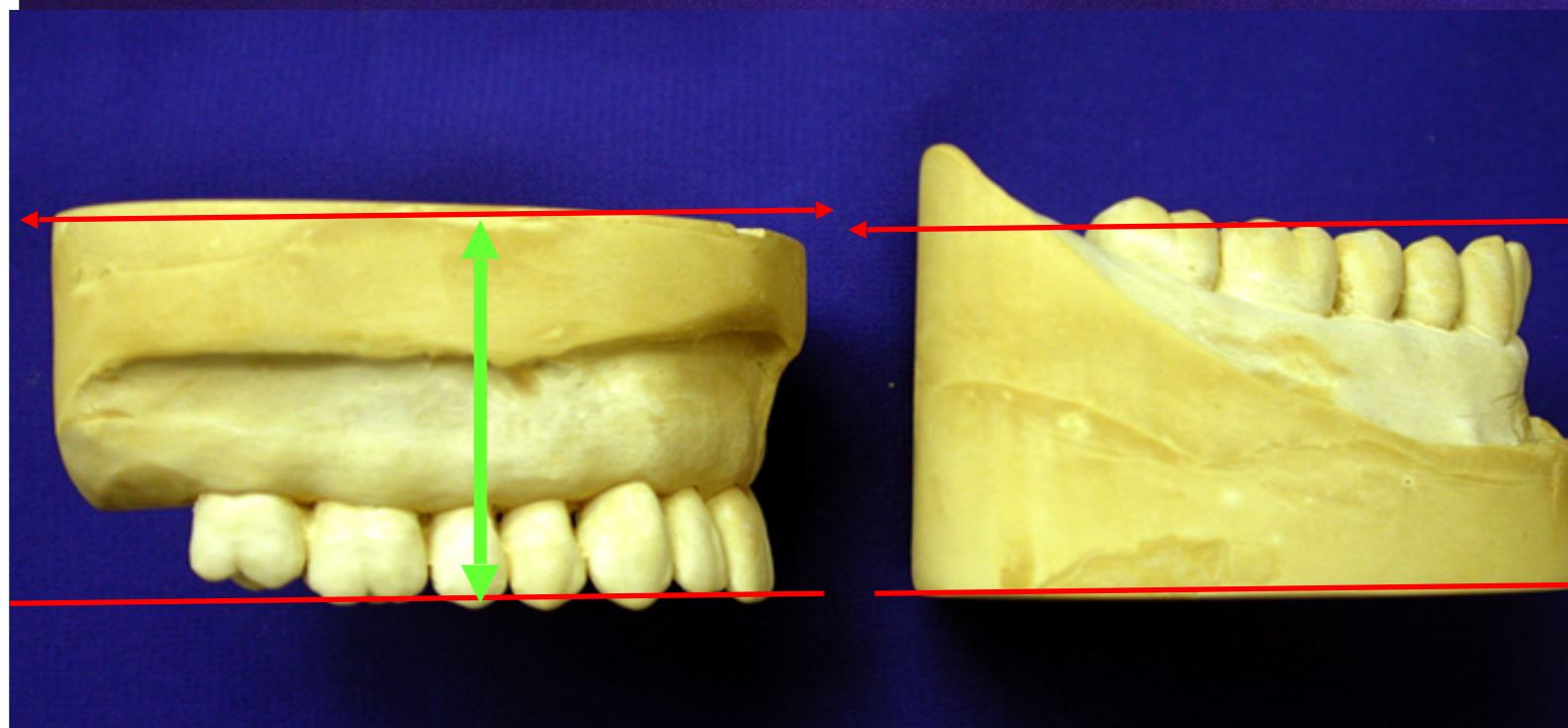
## Land area:

- The portion of a dental cast that extends beyond the impression's replica surface laterally that defines the area between the end of the replica's surface and the cast

(The Glossary of Prosthodontic Terms; 8th ed, 2005)



15mm in  
thinnest  
part



level with  
occlusal  
plane

