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Photos and recommended steps curtesy of Dentsply Sirona.

# WORKFLOW OVERVIEW

1

## APPOINTMENT ONE

- Evaluate the patient
- Capture the preliminary impression(s) using alginate or alginate substitute PVS material

### Laboratory STEP ONE

Fabricate the baseplate(s) and wax rim(s)

2

## APPOINTMENT TWO

- Border mold using PVS material
- Wash impression using PVS material
- Capture the plane of occlusion, lip support, vertical, and central incisor length
- Record measurement - "width on curve" or distance from distal-distal of canines and the midline
- Capture the bite registration
- Scan the bite registration and impression surfaces

### Laboratory STEP TWO

Design and print the try-in denture

3

## APPOINTMENT THREE

- Insert and evaluate the printed try-in
- Evaluate the vertical, occlusion, midline, tooth length and record adjustments as needed
- Evaluate the fit – take a wash impression if necessary
- Capture the try-in bite registration
- Scan the bite registration (and the impression if taken)
- Notate criteria for re-printing the try-in denture or printing the final denture:
  - If the changes exceed 4mm reprint the try-in with the new adjustments
  - If the changes are 4mm or less, print the final denture

### Laboratory STEP THREE

Design and fabricate the final digital denture

4

## APPOINTMENT FOUR

- Insert and evaluate the final denture
- Verify the fit, vertical, occlusion, midline, and tooth length

# CHAIRSIDE MATERIALS



Align•X™ Ultra Alginate Alternative Fast Set



Caulk® Tray Adhesive



Aquasil® Ultra+ Smart Wetting® Impression Material RIGID Fast Set



Aquasil® Ultra+ Smart Wetting® Impression Material LV Fast Set



Aquasil® Ultra+ Smart Wetting® Impression Material XLV Fast Set



Regisil® 2x™ Vinyl Polysiloxane Bite Registration Paste

# 1

## APPOINTMENT ONE

### *Evaluation & Preliminary Impressions*



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#### EVALUATE THE PATIENT

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#### MAKE THE PRELIMINARY IMPRESSION(S)

First, fit the full-arch impression tray(s) to the patient - adjust as necessary to prevent tissue contact. Apply a thin layer of an alginate tray adhesive to the impression tray(s). Capture overextended impression(s) using Align•X Ultra Alginate Alternative Fast Set.

**The Maxillary Impression** must capture the entire vestibule and cover the tuberosities. Ensure the incisive papilla is visible.

**The Mandibular Impression** must capture the entire vestibule and cover the retromolar pads.



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#### EVALUATE THE IMPRESSION(S)

Evaluate the impression(s) ensuring thorough capture and visibility of all landmarks.

Follow proper disinfection protocols and send the impression(s) to the lab.

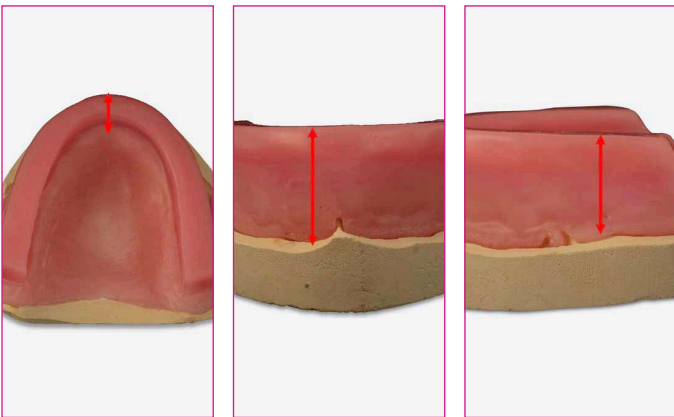


# Laboratory STEP ONE



## MODEL FABRICATION

- The lab pours alginate impression model(s).



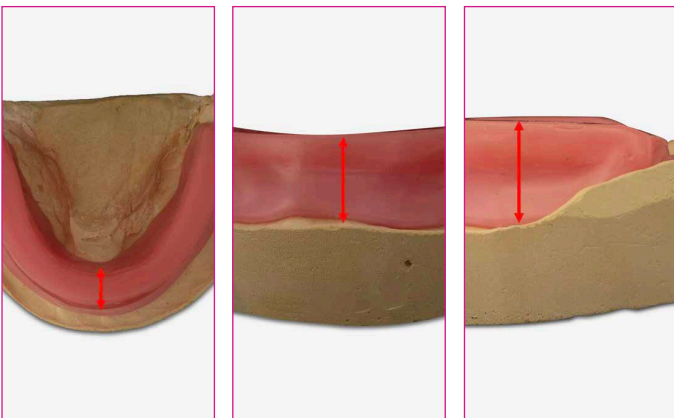
## WAX RIM FABRICATION

Next, the lab fabricates the stabilized baseplate(s) with occlusal wax rim(s) per the following parameters:

### Maxillary Arch

- Width of the incisal edge: **3-4mm**.
- Height of the facial: **22mm** at the deepest section of the peripheral roll (usually on either side of the papilla).
- Height of the posterior rim: **18mm** around the location of the first molar.

The baseplate is now ready for use as a final impression tray.



### Mandibular Arch

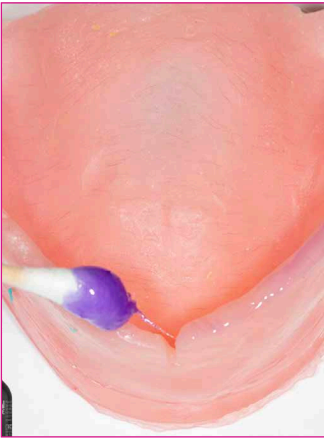
- Width of the incisal edge: **3-4mm**.
- Height of the facial: **18mm** around the deepest section of the peripheral roll.
- Height of the posterior rim: **18mm** around the location of the first molar.

Adjustment of the mandibular rim to extend 2/3 of the way up the retromolar pad area posteriorly.

The baseplate is now ready for use as a final impression tray.

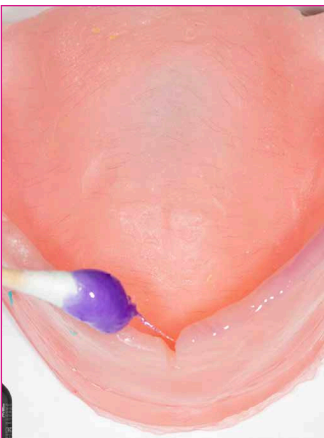
## 2

## APPOINTMENT TWO

*Final Impressions & Records***ASSESS & ADJUST THE WAX RIMS**

Prior to the placement in the patient's mouth, follow proper disinfection protocols. Place the maxillary/mandibular baseplate with the wax rim in the patient's mouth - one arch at a time. Adjust the rim(s) for the Vertical Dimension of Occlusion (VDO), as close as possible. Heat a spatula and melt the wax rim(s) as needed. The final VDO adjustment will occur after impressing.

The adjusted maxillary/mandibular baseplate with the wax rims is now ready for use as a final impression tray.

**APPLY TRAY ADHESIVE**

Apply a thin layer of Caulk Tray Adhesive to the borders using a disposable applicator - extend the tray adhesive to the cameo surface. The tray adhesive should be in a thin, even layer, free from pooling.

Use a gentle application of compressed air to help evaporate the solvent, as necessary.

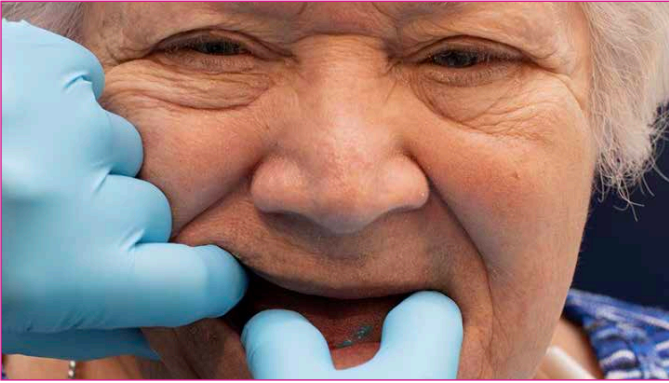
**Apply Aquasil Ultra+ Smart Wetting Impression Material within 30 minutes of tray adhesive application.**

**BORDER MOLD**

Apply a bead of Aquasil Ultra+ Smart Wetting Impression Material RIGID Fast Set to the maxillary/mandibular baseplate(s) covering all borders including the posterior.

**Aquasil Ultra+ has a bench working time of 60 seconds.**

- Total set time is 2 minutes 30 seconds (2:30).
- Use a timer for time adherence.

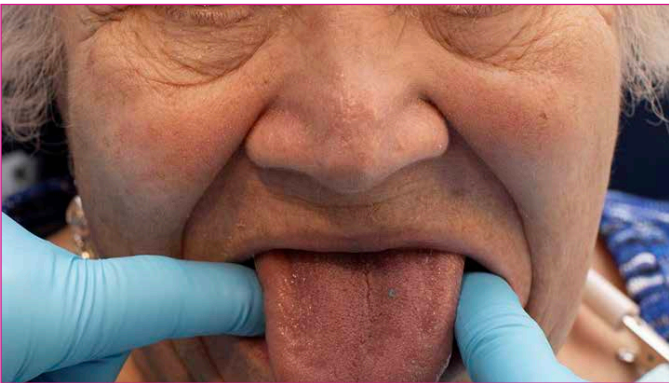



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### SEAT THE MAXILLARY/MANDIBULAR BASEPLATE(S).

**Provide patient instruction to complete the following steps:**

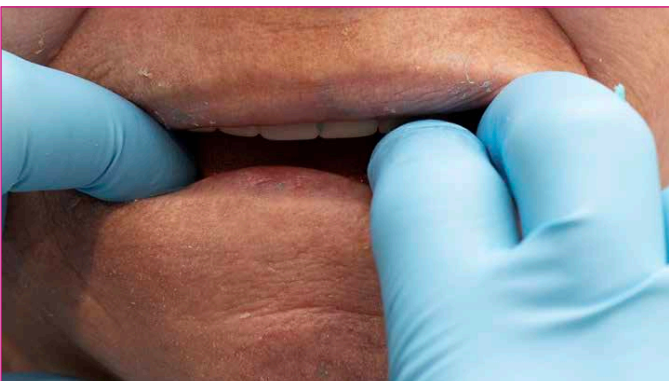
- Have the patient pucker their lips and hold for a few moments to capture the motion of the orbicularis oris.



- 
- Have the patient lick their lips, then move the tongue from side to side.
  - Have the patient stick their tongue straight out.



- 
- Pull down the left and right cheeks to record the border rolls.
  - Pull up the lip to record the anterior border.

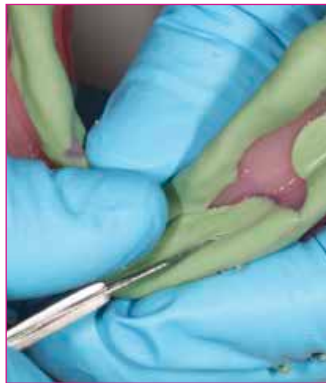


- 
- Keep the baseplate(s) firmly seated on the alveolus until fully set: **2 minutes 30 seconds** from the start of the mix.
  - Remove the baseplate(s) once fully set.



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Complete border molding and posterior seal shown.



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Trim excess material from the cameo surface(s) maintaining the border roll.



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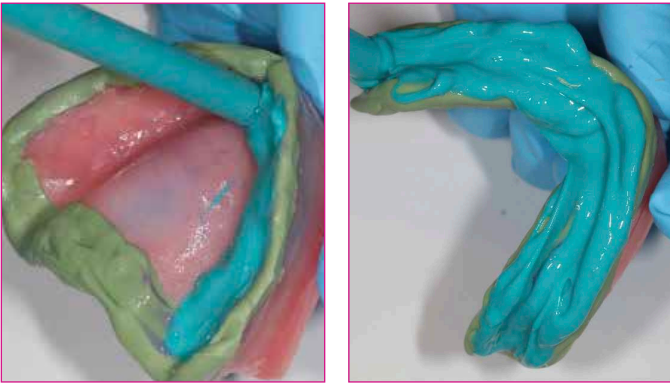
Final border molding shown.



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**LV (LOW VISCOSITY) IMPRESSION**

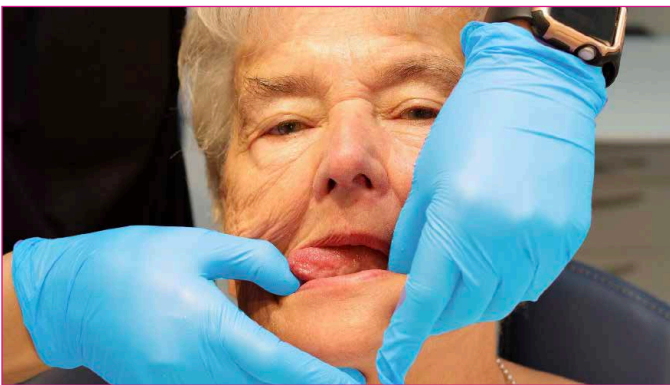
Apply Caulk Tray Adhesive to the baseplate(s).



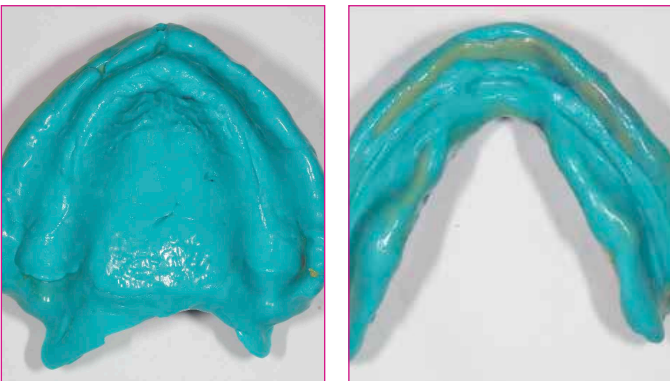
Apply Aquasil Ultra+ Smart Wetting Impression Material LV Fast Set to the intaglio surface of the maxillary/mandibular baseplate(s).

**Aquasil Ultra+ has a bench working time of 60 seconds.**

- Total set time is 2 minutes 30 seconds (2:30).
- Use a timer for time adherence. the patient pucker their lips and hold for a few moments to capture the motion of the orbicularis oris.



Firmly re-seat the baseplate(s) and repeat the border molding movements. Maintain baseplate seating until the material sets.



A final maxillary and mandibular impression are shown. Note the well-formed borders and the complete capture of the anatomical landmarks.



#### PLANE OF OCCLUSION ADJUSTMENT

Re-insert the impressed maxillary/mandibular baseplate(s) and wax rim(s).



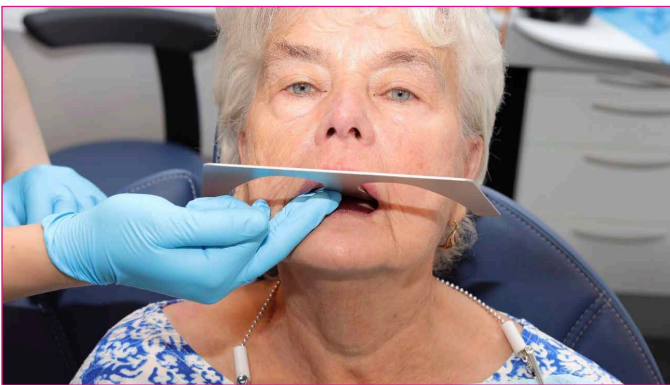
## 2

# APPOINTMENT TWO *Continued...*



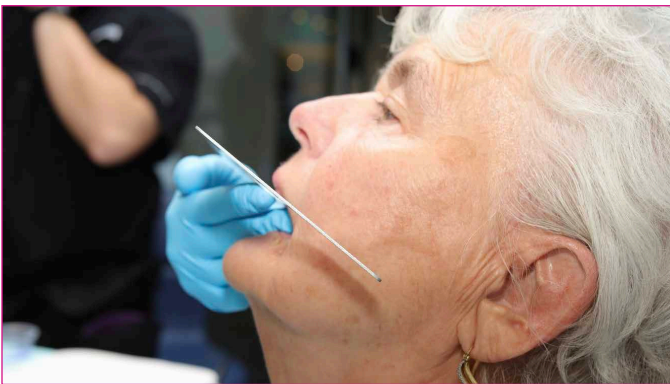
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Check the plane of occlusion using a device such as an occlusal plane plate.



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Adjust the rim to be level with the interpupillary line.



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Adjust for Camper's plane.



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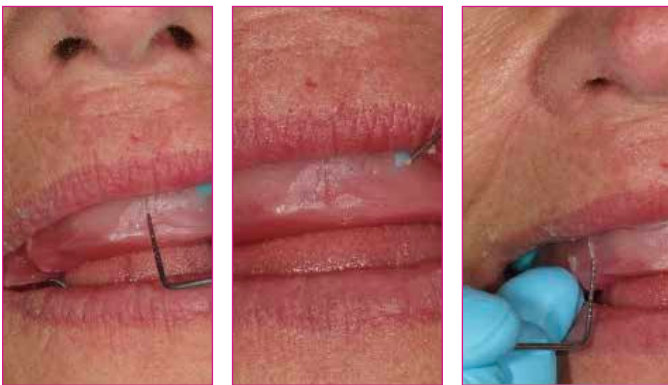
### INCISAL EDGE AT REPOSE ADJUSTMENT

Measure the wax rim display while the patient's lip is relaxed (at repose).




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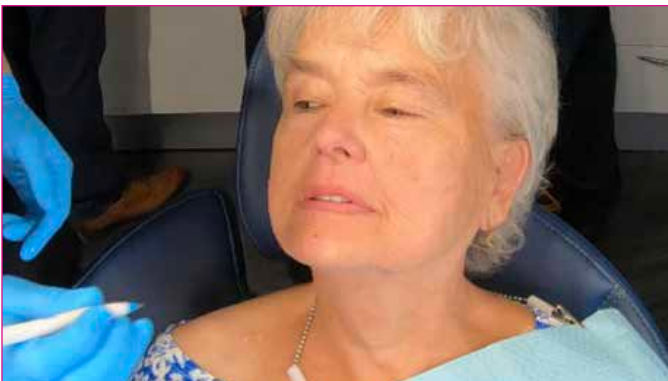
Adjust the rim for the desired length of the anterior tooth display.




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#### RECORDS

- Mark the midline
- Mark the high smile line
- Mark the distal position of the canines




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Insert the baseplate(s) and ask the patient to close lightly into centric.

Place a mark on the patient's nose and chin to establish the Vertical Dimension of Occlusion (VDO).



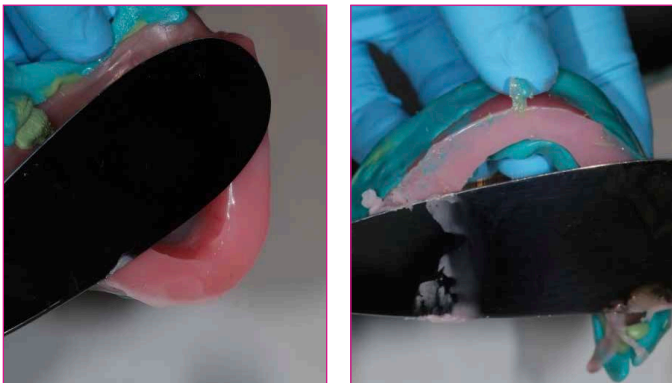

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Using a ruler, take measurements of the markings on the patient's nose and chin.

Determine if the VDO requires opening.

## 2

# APPOINTMENT TWO *Continued...*



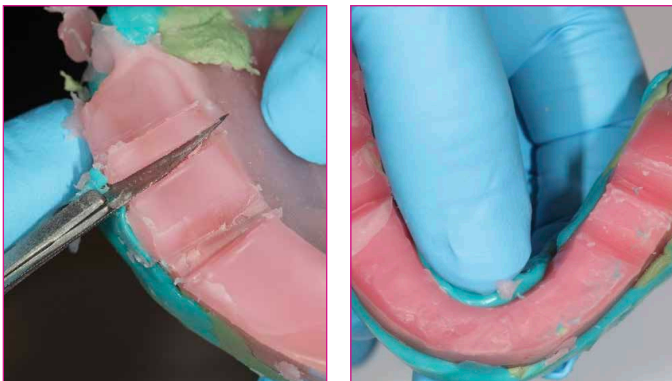
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To adjust the VDO, first adjust the maxillary rim and then the mandibular rim as applicable.



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Reinsert the wax rim(s) and verify the intended VDO measurements.



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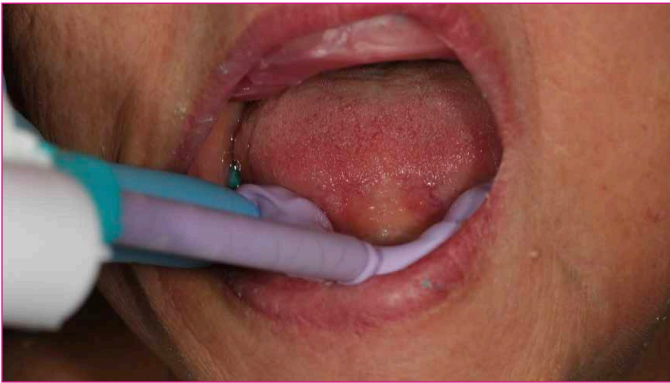
### BITE REGISTRATION PREPARATION

Notch the maxillary and mandibular rim(s) as shown.



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Side profile view of the notch shown.



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### BITE REGISTRATION RECORD

Work with the patient to establish a repeatable centric closure. Then apply Regisil 2x Vinyl Polysiloxane Bite Registration Paste to the occlusal surfaces of the bite rim.

Close the patient into the practiced centric closure. Verify proper closure and allow the material to set: **1 minute 30 seconds from the start of the mix.**



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### BITE REGISTRATION VERIFICATION

Check for complete posterior clearance and complete seating of the bite rim(s) into the registration material on both sides.

Note: For a single arch, ensure the teeth completely seat with the opposing bite rim.



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Prior to scanning, trim the excess registration material to visualize the interocclusal registration and the record markings. Follow proper disinfection protocols and send the impression(s) to the lab.

## Laboratory STEP TWO



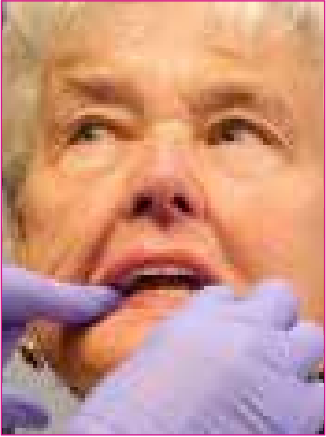
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### THE LAB DESIGNS AND PRINTS THE TRY-IN DENTURE ARCH(ES).

The Lucitone Digital Print Denture System utilizes a printed, monolithic try-in for the clinical evaluation of fit, function and esthetics.

## 3

## APPOINTMENT THREE

*Try-In Evaluation*

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Disinfect the try-in denture arch(es) prior to placement in the patient's mouth. Seat the try-in arch(es) in the patient's mouth. Assess the fit, function and esthetics with the patient.



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#### EVALUATE AND DOCUMENT ADJUSTMENTS

First, use articulating paper to identify any high spots on the posterior teeth.



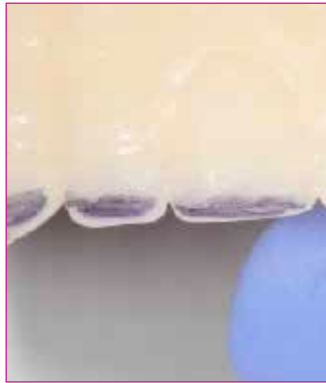
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Next, evaluate the following:

- Midline
- Incisal-edge position
- High smile line
- Determine if a cant exists

Remove the arch(es) from the patient's mouth. Use a marker or a bur to notate changes directly on the try-in arch(es).

## 3

APPOINTMENT THREE *Continued...*


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Ensure the adjustment areas are clearly marked on the try-in arch(es).




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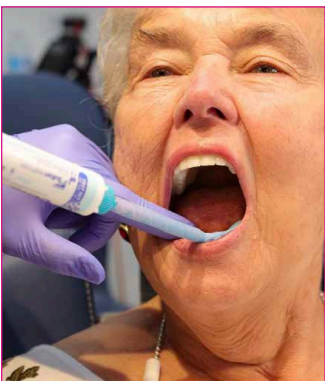
Use a carbide bur to adjust the try-in arch(es) and then clean the arch(es) to remove the debris. Reinsert the try-in arch(es) to check for proper occlusion. Repeat the adjustment steps as necessary to achieve proper occlusion.




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If the fit of the try-in is not secure, use Aquasil Ultra+ Smart Wetting Impression Material XLV Fast Set to complete a wash impression, as shown.

If the fit is secure, move to the bite registration step.




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To record bite adjustments take a new bite registration - see page 12 for step-by-step details.

Follow proper disinfection protocols and send the try-in arch(es) to the Lab for final denture fabrication.

# Laboratory STEP THREE



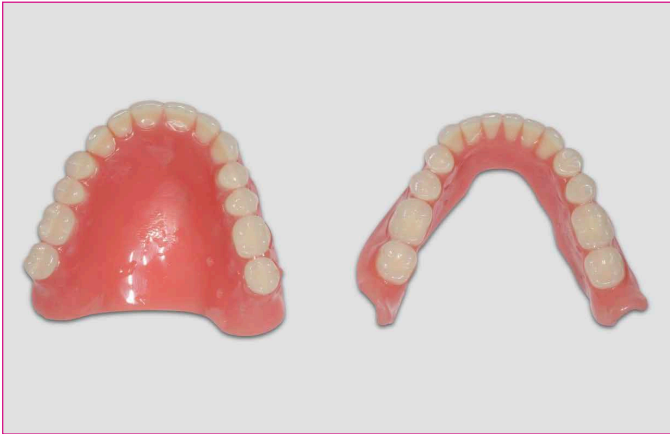
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THE LAB DESIGNS, FABRICATES, AND ASSEMBLES THE FINAL DENTURE ARCH(ES).



## 4

## APPOINTMENT FOUR

*Final Placement & Evaluation*

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Disinfect the denture arch(es) prior to placement in the patient's mouth.



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Seat the denture arch(es) and evaluate the fit, function and esthetics.



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Make spot adjustments to the occlusion, as necessary.  
Reseat the denture arch(es) and verify the adjustments.  
Confirm patient acceptance.