

Lucitone Digital Print Denture

Reference Denture Clinical Workflow



Uniting the latest 3D printing technology from Carbon® with the proven performance of Dentsply Sirona, Lucitone Digital Print Dentures are made with premium materials that deliver unprecedented strength, esthetics, and function for the patient.

- Lucitone Digital Print™ 3D Denture Resin exceeds ISO high impact standards.
- IPN 3D™ Digital Denture Teeth deliver exceptional wear resistance and excellent stain resistance.
- Features BAM! (Body Activated Material), a smart polymer technology, that responds to body temperature, increasing work of fracture two-fold to resist breakage.

A “Reference Denture” is an existing denture that is worn by the patient that will be used as a template for constructing a new prosthesis.

Workflow Overview: Total Estimated Time (Impression + Records) = 15 minutes

- Clinical evaluation of patient and existing prosthesis
- Removal of any existing liners and adhesives (from both the prosthesis and the patient)
- Border molding using VPS material
- Wash impression using VPS material
- Bite registration using VPS material
- Measurement recording (“width on curve” or distance from distal-distal of existing canines and central incisor length)
- Notation of any discrepancies (midline correction) or changes (increase/decrease central incisor length)
- Scanning of bite registration and impression surfaces
- Cleaning and return of reference denture to patient

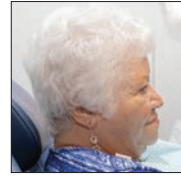
Note: Never modify a patient’s existing denture

Reference Denture Workflow

1. Clinical Assessment



- Midline of reference denture true (or several mm close to true) to midline of face.
- Incisal length is adequate.



- Occlusion is worn and upper lip fullness could be improved, but adequate to be used as a reference denture.



- Occlusion is worn but still adequate to obtain accurate bite registration.
- Base and teeth are intact. Borders are well-extended (not excessively short).



- Base covers tuberosities.



- Occlusion is worn but still adequate to obtain accurate bite registration.
- Base and teeth are intact.



- Borders are well-extended (not excessively short).
- Base covers retromolar pads.
- Base will need to be cleaned prior to impression.

Criteria For an Acceptable Reference Denture

- Prosthesis should be intact (not broken, chipped, missing teeth etc).
- Normal occlusal wear is acceptable, but avoid using an excessively worn prosthesis.
- Prosthesis should exhibit a generally acceptable plane of occlusion, Camper's plane etc.
- Borders should be well extended and not excessively (>5mm) short.
- Base should be stable and free from excessive rocking.
- Mandibular prosthesis should cover the retromolar pads.
- Maxillary prosthesis should cover the tuberosities.
- Midline should be acceptable.
- Prosthesis and patient should be cleaned of any denture adhesives prior to starting.

Recommended Materials:

- Aquasil® Ultra+ Smart Wetting® Impression Material: Rigid Fast Set and Low Viscosity
- Regisil® 2x Bite Registration
- Caulk® Tray Adhesive
- A timer

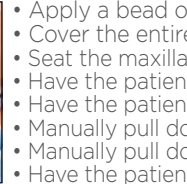
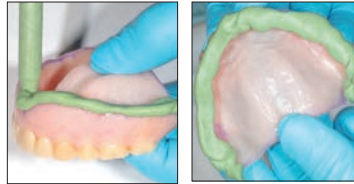
Maxillary Denture

2. Apply Tray Adhesive

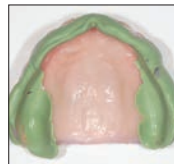


- Using a disposable applicator, apply a thin layer of tray adhesive to the borders.
- Extend the Caulk® Tray Adhesive to the cameo surface of the borders.
- The tray adhesive should be in a thin, even layer, free from pooling.
- Gentle application of compressed air can be used to help evaporate the solvent.
- Apply Aquasil® Ultra+ Smart Wetting® Impression Material within 30 minutes of application of the tray adhesive.

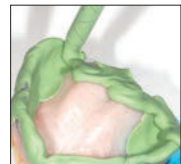
3. Border Mold



- Apply a bead of Aquasil® Ultra+ Rigid Fast Set to the denture borders.
- Cover the entire border leaving the posterior uncovered.
- Seat the maxillary denture and firmly hold mid-palate with a finger.
- Have the patient open and close to record the coronoid process.
- Have the patient move the mandible side to side.
- Manually pull down the left and right cheeks to record the border rolls.
- Manually pull down the upper lip to record the anterior border.
- Have the patient pucker their lips and hold for a few moments to capture the motion of orbicularis oris.
- Keep the denture firmly seated on the aveolus until fully set (2:30 from start of mix).



- Complete border molding. **Note:** minor show-through of base is acceptable in the reference denture procedure.



- Apply a bead of Aquasil® Ultra+ Rigid Fast Set to the posterior of the denture and re-seat until set to capture the posterior border.



- Complete border molding and posterior seal.



- Trim excess material from the cameo surface, maintaining the border roll.

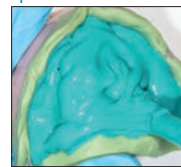


- Final border molding.

4. Low Viscosity Impression



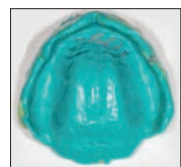
- Apply tray adhesive to exposed acrylic.



- Apply Aquasil® Ultra+ LV (Low Viscosity) to the intaglio surface of the denture.



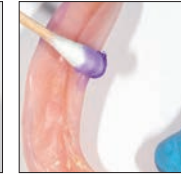
- Firmly re-seat the denture and repeat the border molding movements.
- Keep denture seated until material is set.



- Final complete maxillary impression. **Note:** well formed borders and complete capture of anatomic details.

Mandibular Denture

5. Apply Tray Adhesive



- Using a disposable applicator, apply a thin layer of tray adhesive to the borders and intaglio surface.
- Extend the Caulk® Tray Adhesive to the cameo surface of the borders.
- The tray adhesive should be in a thin, even layer, free from pooling.
- Gentle application of compressed air can be used to help evaporate the solvent.
- Apply Aquasil® Ultra+ Smart Wetting® Impression Material within 30 minutes of application of the tray adhesive.

6. Border Mold



- Apply a bead of Aquasil® Ultra+ Rigid Fast Set to the denture borders.
- Seat the mandibular denture and firmly hold over the posterior teeth.
- Have the patient pucker their lips and hold for a few moments to capture the motion of orbicularis oris.
- Have the patient lick their lips, then move the tongue from side to side.
- Have patient stick the tongue straight out.
- Manually pull down the left and right cheeks to record the border rolls.



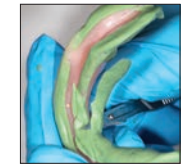
- Manually pull up the lip to manually record the anterior border.



- Keep the denture firmly seated on the aveolus until fully set (2:30 from start of mix).



- Complete mandibular border molding.



- Trim excess material from the cameo and intaglio surface, maintaining the border roll.

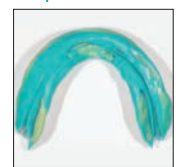


- Final border molding.

7. Low Viscosity Impression

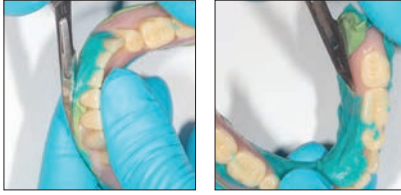


- Apply tray adhesive to exposed acrylic.



- Apply Aquasil® Ultra+ LV (Low Viscosity) to the intaglio surface of the denture.
- Final complete mandibular impression.

8. Trim Excess Prior to Bite Registration



- Using a sharp knife, remove excess wash material from the cameo surface. Ensure impression material is removed from the tooth surfaces.
 - Trim excess material from the cameo surface of the maxillary tuberosity area and the heel area of the mandibular denture.
- Note:** these steps are important to ensure proper scanning of the cameo surface of the denture.

9. Take Bite Registration Record



- Work with the patient to establish a repeatable centric closure. It should be noted that a patient with a worn existing occlusion may need several tries before establishing a repeatable closure.
- Apply Regisil® 2x Bite Registration to the occlusal surfaces of the mandibular teeth.
- Close the patient into the practiced centric closure.
- Verify the patient has closed as intended and allow the material to set (1:30 from start of mix).

10. Verify Bite Registration Record



- Check for complete posterior clearance and complete seating of teeth into record on both sides.
- Note:** Excess registration material will be trimmed to visualize interocclusal registration and teeth prior to scanning.

Visit dentsplysirona.com/lucitonedigitalprint to learn more.

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