



FIBER FORCE Step by Step Instructions:

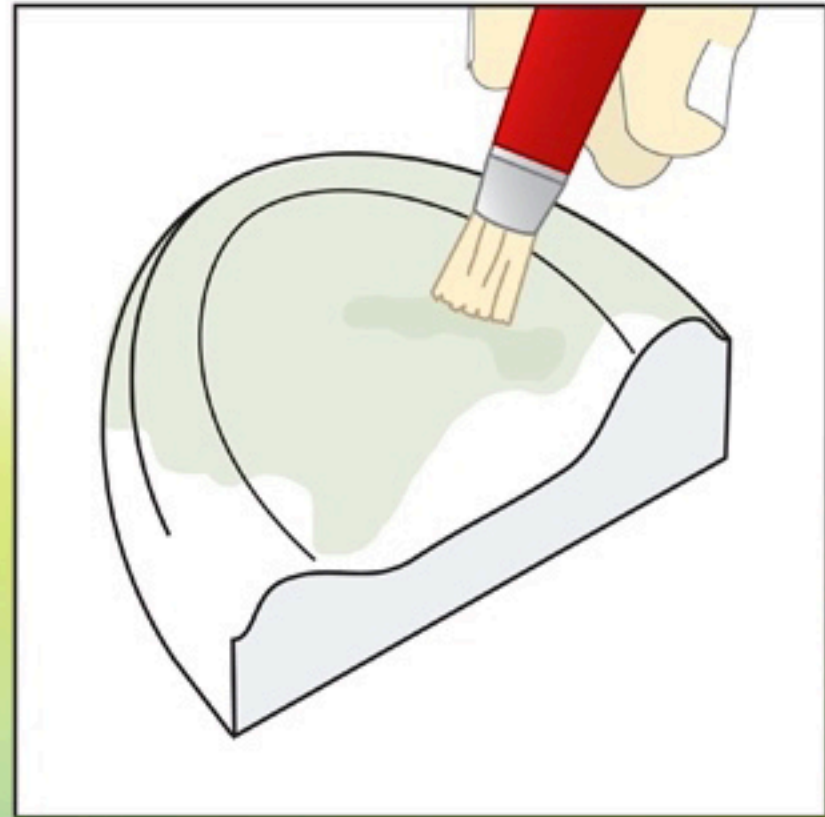
Mesh Framework/Matrix Fabrication:
- Injection Technique



A. Final Working Model Preparation

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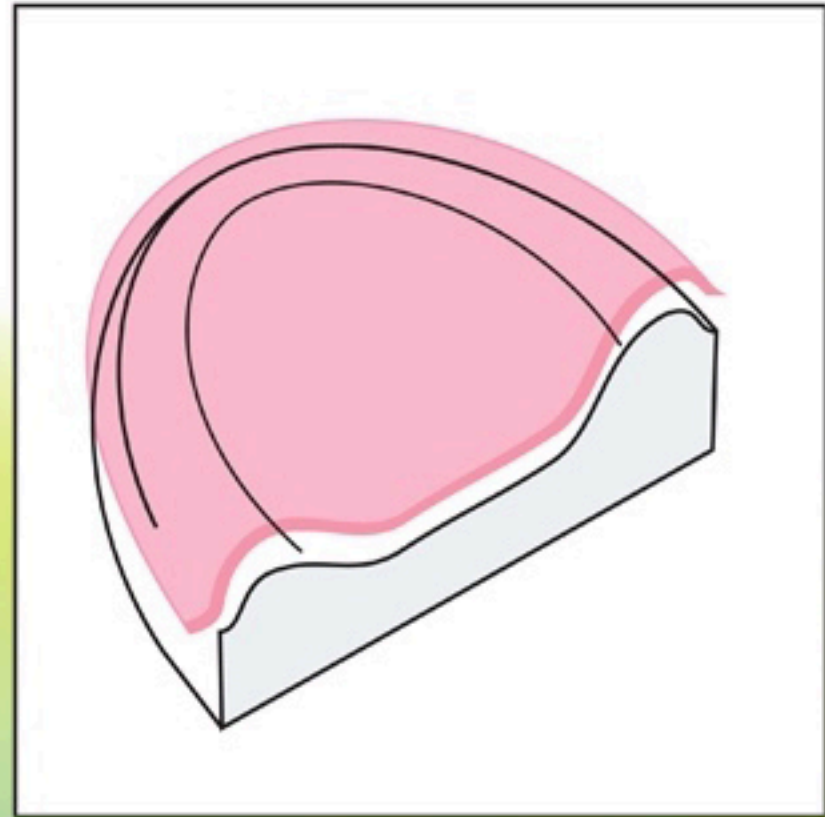
1. Cover the final working model with separator.



A. Final Working Model Preparation

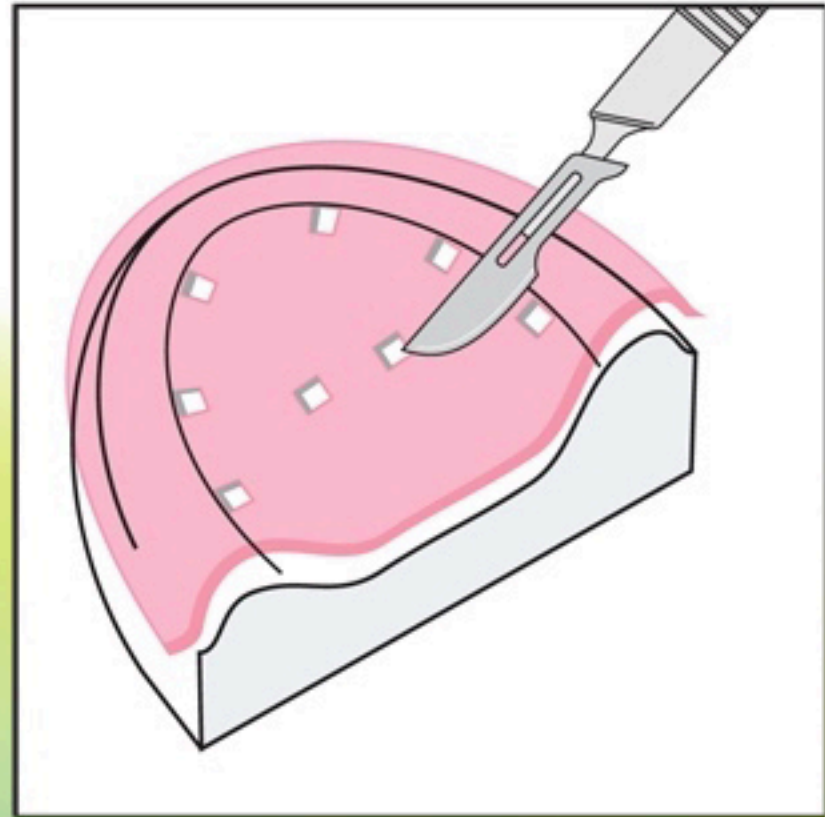
2. Warm or heat a sheet of thin wax (0.5mm) and cover the model with the layer of wax spacer.

Only a thin layer is required, and too great a thickness may impact the fit quality of the final cured framework/ matrix.



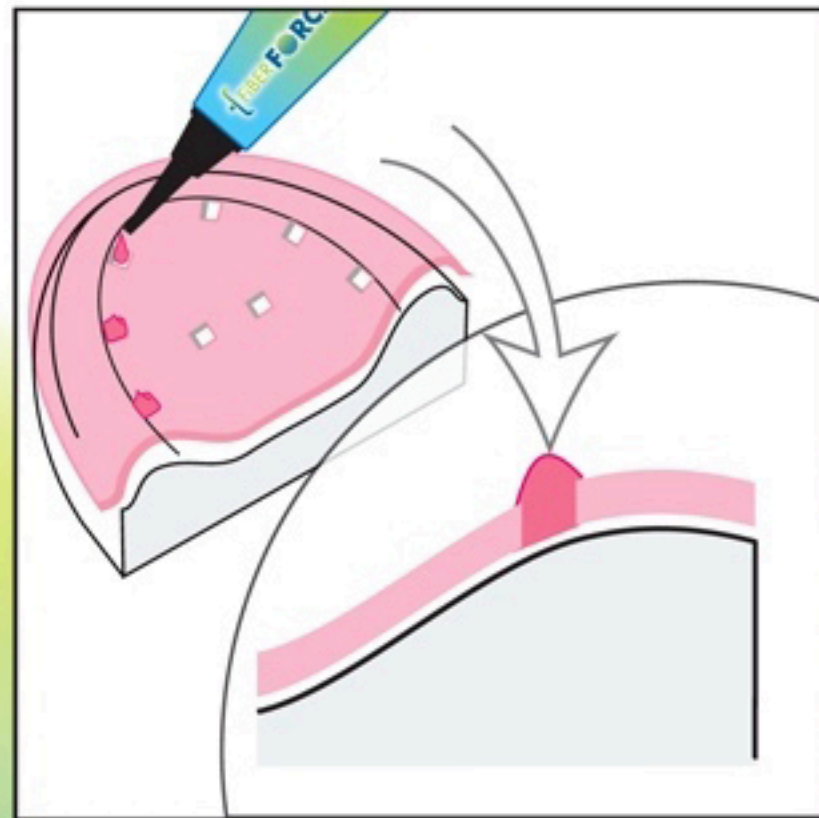
A. Final Working Model Preparation

3. Cut rectangular holes in the wax throughout the palate and/or arch as the case may be.



A. Final Working Model Preparation

4. Using the FIBER FORCE pink light cure resin, or a self cure repair acrylic, fill the holes in the wax, creating small buttons or stops.



A. Final Working Model Preparation

4. *These will maintain the space between the mesh matrix and the model when ultimately placed back on the model for final processing.*

Light Cure for 10 to 20 seconds to maintain stop integrity.





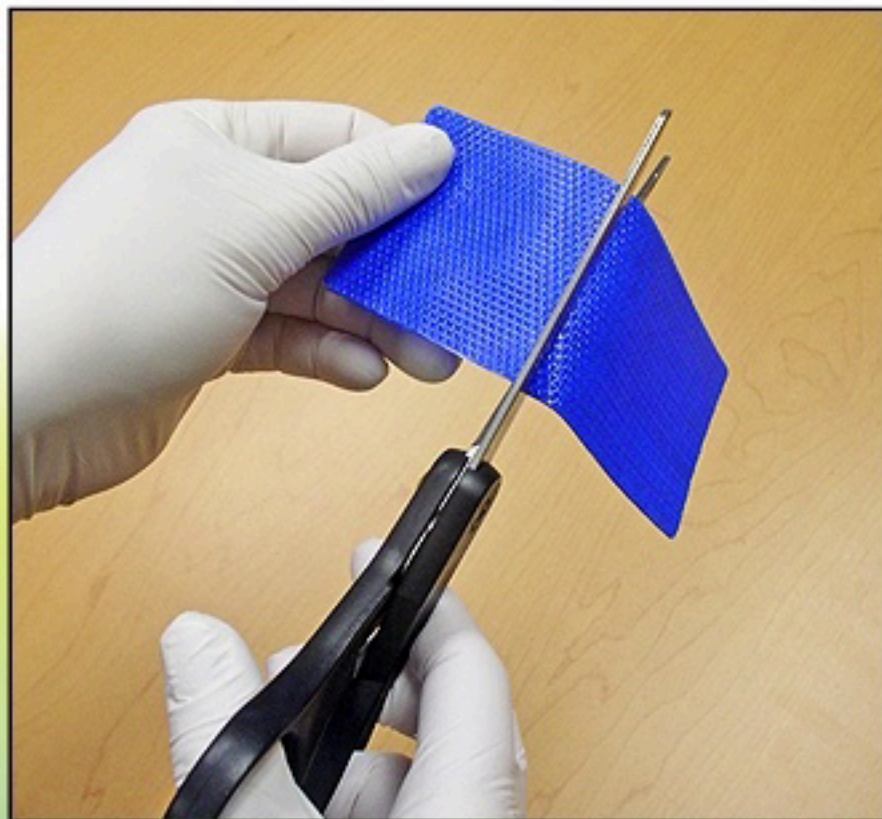
B. FIBER FORCE Mesh Framework/ Matrix Shaping

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- *It is recommended that direct lighting be kept to a minimum during this phase as the FIBER FORCE mesh is light sensitive and can cure prematurely if exposed to light for too long.*
- *The steps in Section B should be completed within two minutes to avoid premature curing.*
- *If the process is interrupted cover the model/mesh completely until you can resume.*

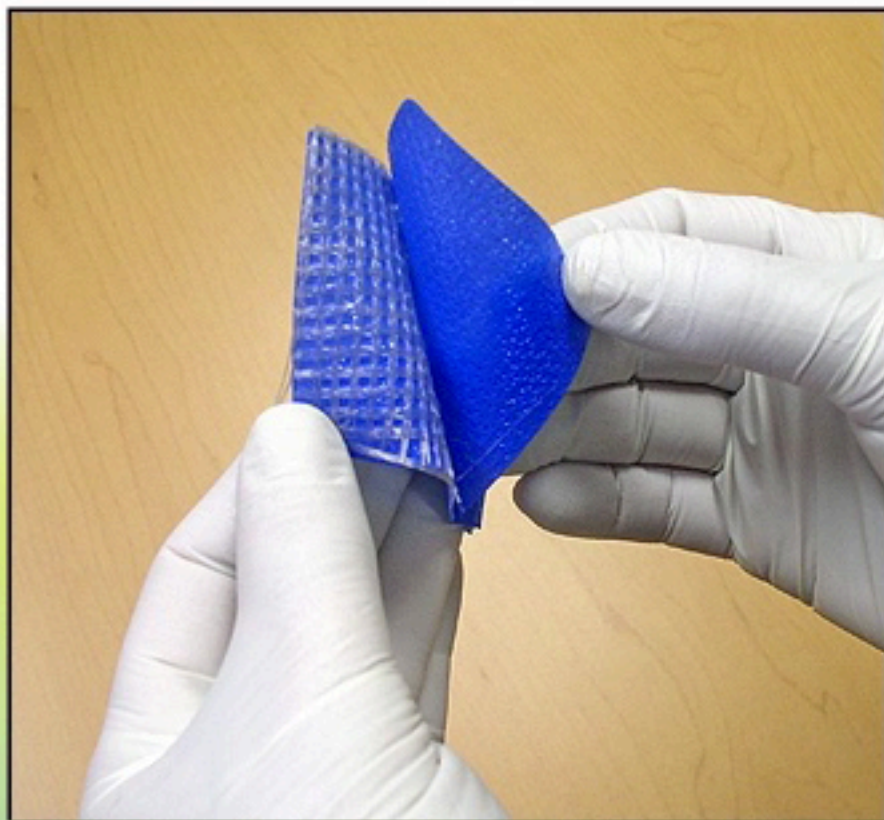
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1. Wearing powder free gloves and using scissors, cut the quantity of material required from the sheet of mesh fibers.



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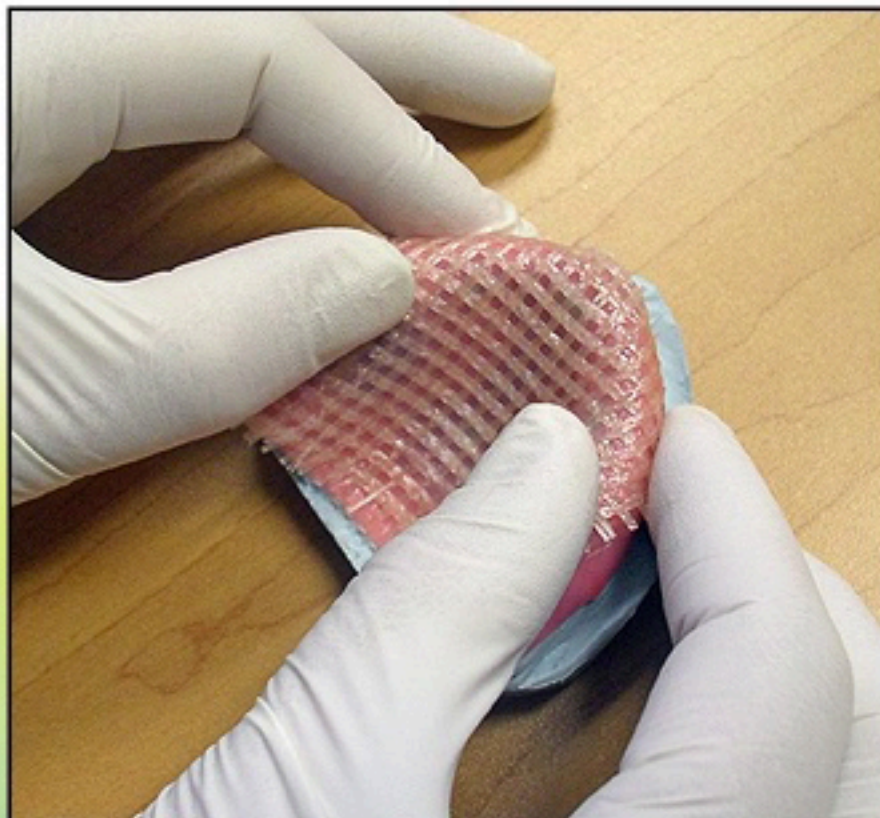
2. Remove the blue protective coverings on both sides.



B. FIBER FORCE Mesh Framework/Matrix Shaping

3. Press or shape the mesh into place on the model, ensuring that the material is moulded intimately onto the wax and to the model.

Any material that extends beyond the final intended anatomical areas can easily be trimmed after curing.





C. Vacuum Moulding Using EZ VAC

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Following the vacuum process as outlined will:

- *ensure that the mesh matrix is adapted perfectly to the model; which will guarantee the matrix is easily and accurately integrated into the acrylic at final processing;*
- *eliminate the oxygen inhibited layer in the resin, ensuring all the resin is cured;*
- *ensure the matrix does not warp or deform when being cured. It is recommended that the EZ VAC unit be prepared for use before Step A to ensure minimal exposure time of the mesh fibres to ambient light.*

C. Vacuum Moulding Using EZ VAC

1. Ensure acrylic beads are placed inside the main compartment of the EZ VAC.

*This part is call
"the Chamber"*



C. Vacuum Moulding Using EZ VAC

2. Position the model inside the unit, preferably below the top rim of the chamber.

If the model extends above the top rim please ensure the silicone gasket remains in close contact with the model.



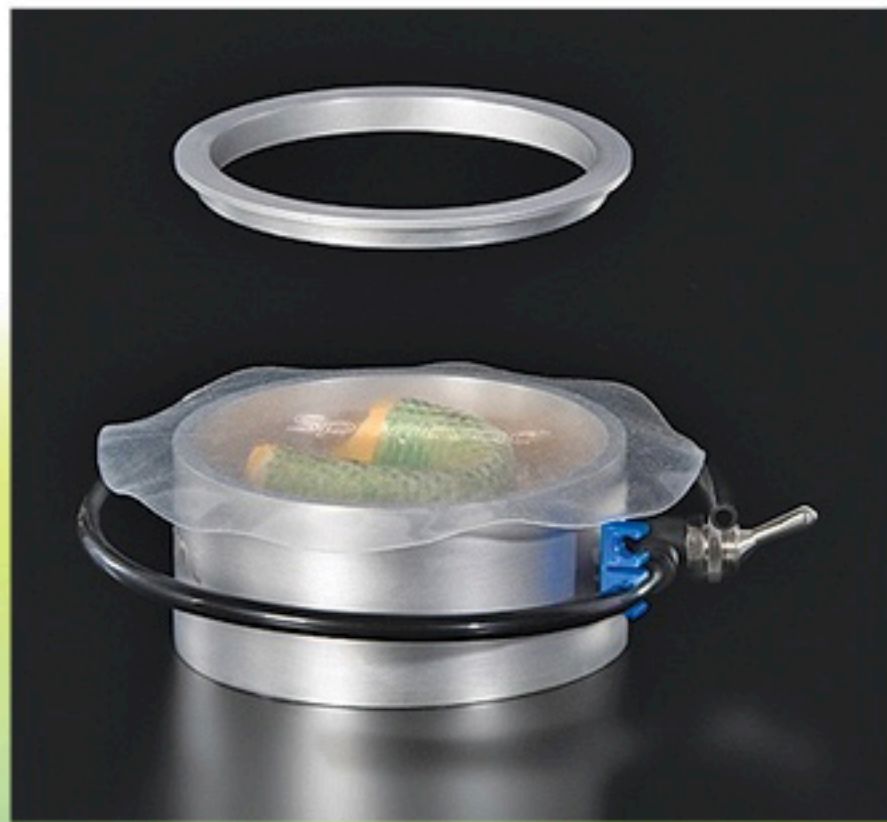
C. Vacuum Moulding Using EZ VAC

3. Place the reusable silicone gasket over the top of the main compartment.



C. Vacuum Moulding Using EZ VAC

4. Place the metal o-ring firmly into place, sealing the compartment.



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5. Insert the free end of the black tubing attached to the main body of the EZ VAC into the hand pump.



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6. Make sure the air valve switch is in the open position.

If the gasket does not descend it may be because the air valve is in the closed position. To open, move the switch at the opposite side.



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7. Pull on the air pump, pulling the silicone gasket down completely and firmly over the model.

Five to six pulls on the pump handle.



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7. When the gasket is in place, move the switch to the closed position to maintain the vacuum during the curing stage.



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7. In some cases, especially with mandibular models, it may be necessary to gently push down on the silicone matrix while pumping, pushing excess air out of the unit, to ensure that it adapts completely to the model. When doing so avoid pressing with the nails of the fingers as this may rupture the gasket.

If the unit does not hold a vacuum please see the troubleshooting section.

C. Vacuum Moulding Using EZ VAC

8. Remove the black air tubing from the hand pump by first pulling down on the blue ring at the very tip of the hand pump then pulling the tubing out.



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9. Wrap the black air tubing around the body of the EZ VAC and attach it into place using the blue connector.



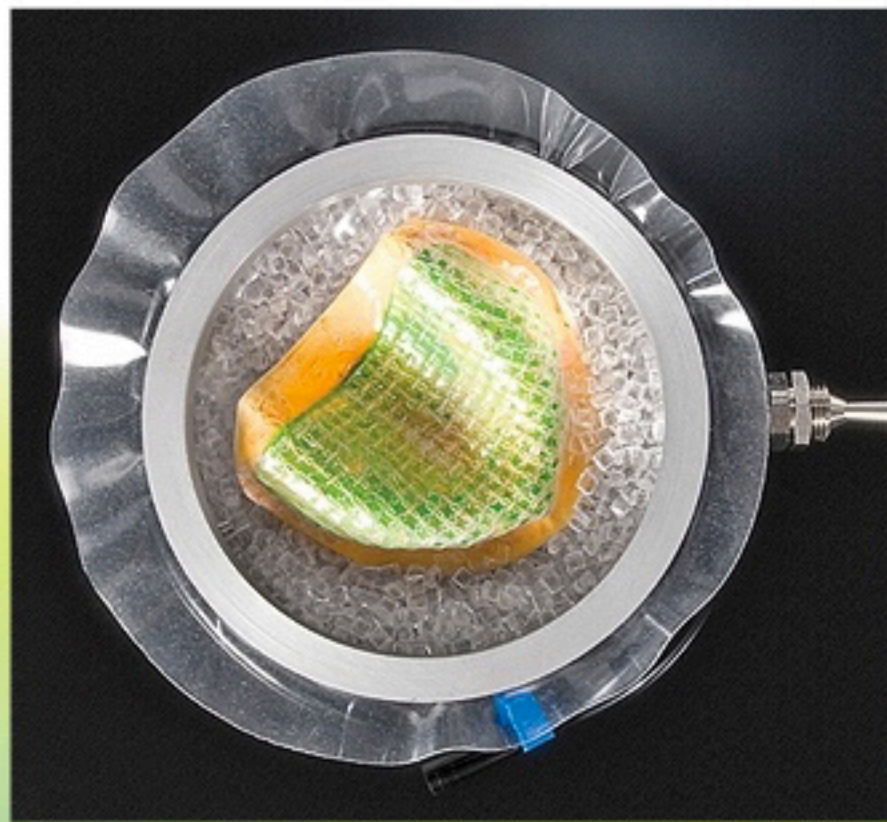
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D. Curing of Mesh Matrix

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- *Several brands of light curing units will accept the EZ VAC unit, such as the Dentsply Triad and Keystone ProCure units.*
- *Please verify before first use that the EZ VAC unit will fit inside the light curing unit on hand.*
- *Curing time will vary slightly depending on the unit used – see the written instructions provided with the FIBER FORCE mesh for a listing of recommended curing times.*

D. Curing of Mesh Matrix

1. Place the EZ VAC inside the light curing unit.



D. Curing of Mesh Matrix

2. Turn on the light curing unit for the recommended period of time.

Usually 45-120 seconds.



D. Curing of Mesh Matrix

3. When curing is completed turn off the light curing unit and remove the EZ VAC.





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- 1.** Release the vacuum by moving the valve switch to the open position.



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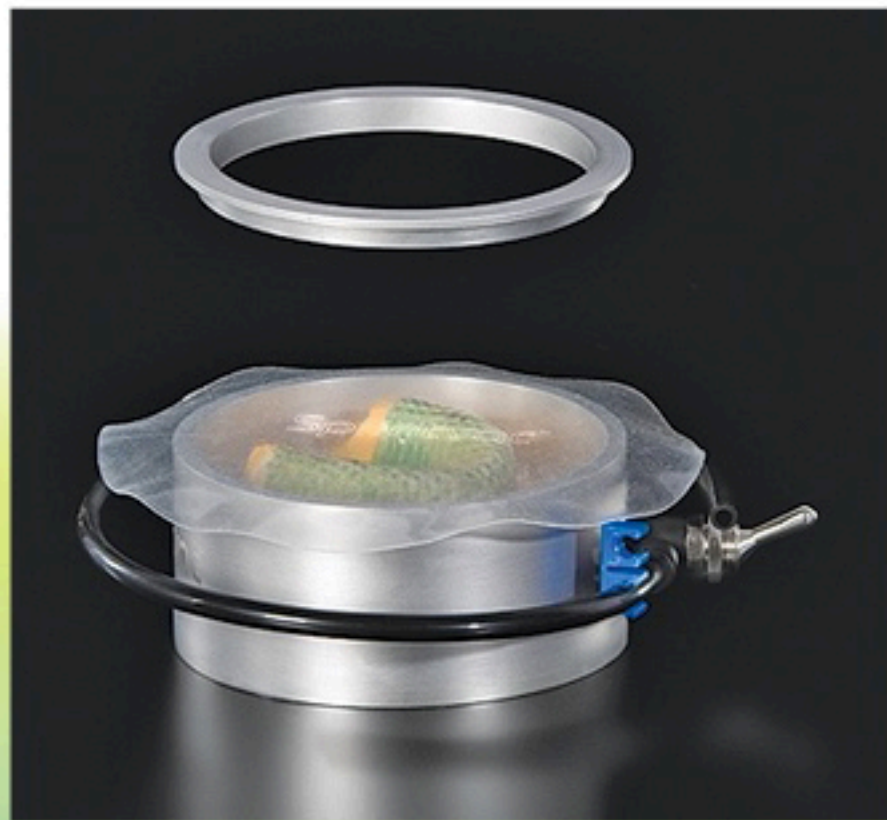
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2. Remove the metal o-ring, and the reusable silicone gasket.



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3. Remove the model from the EZ VAC unit.



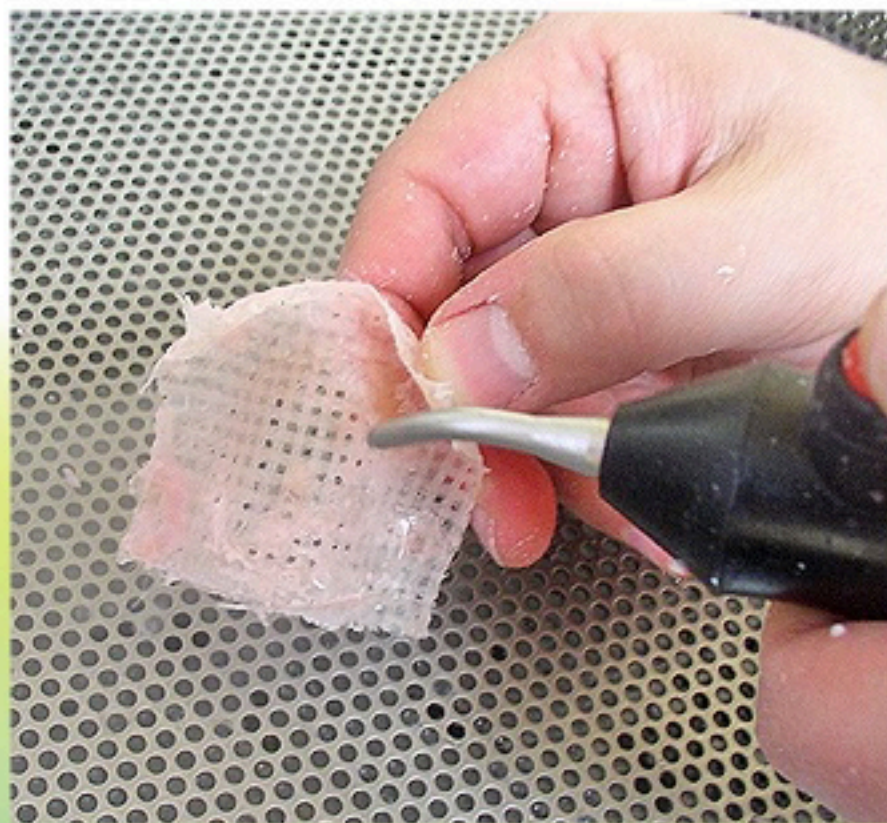
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4. Using your preferred method, remove all wax from the mesh matrix.



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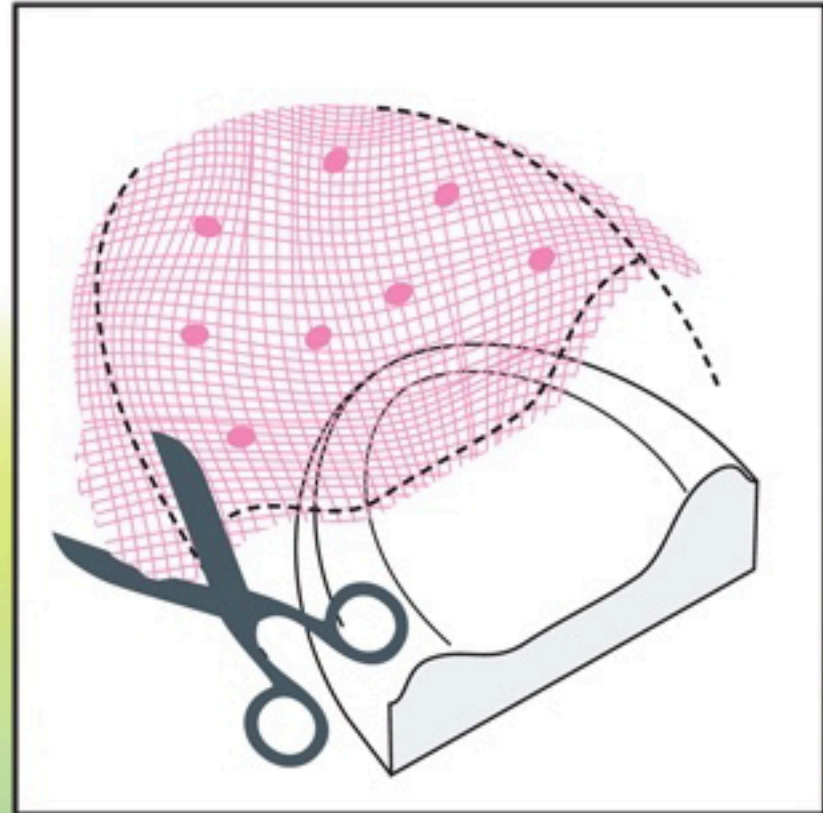
4. *Ensure that both sides of the matrix are free of wax.*



E. Final Preparation of the Mesh Framework/Matrix

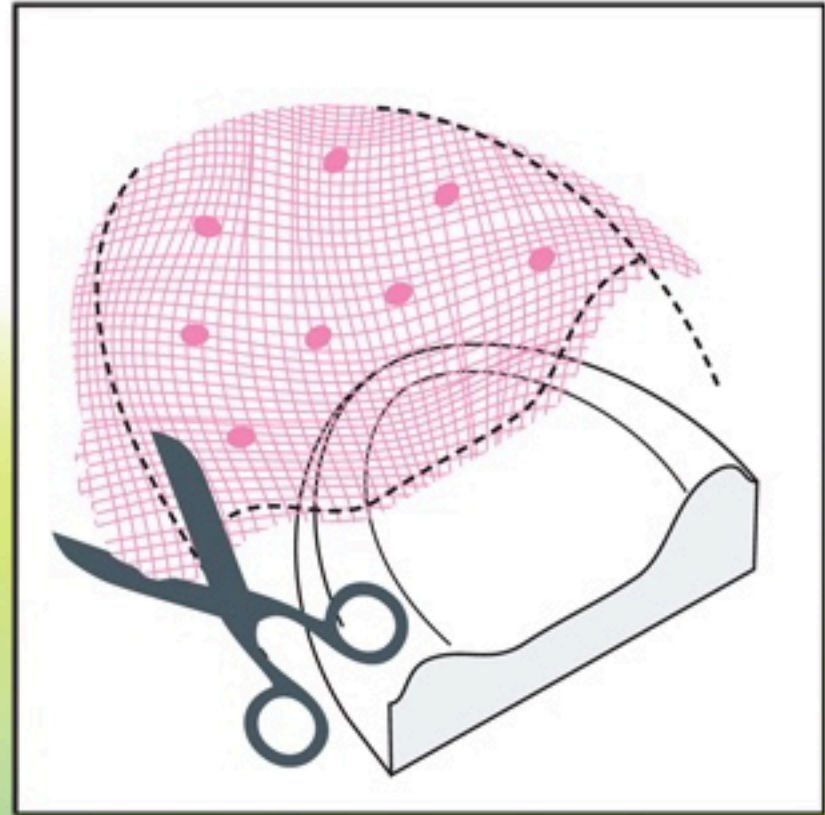
5. Using scissors trim the mesh matrix to the final desired shape and size.

Extending the framework to the buccal side of the ridge may impact esthetics depending on the thickness of acrylic.



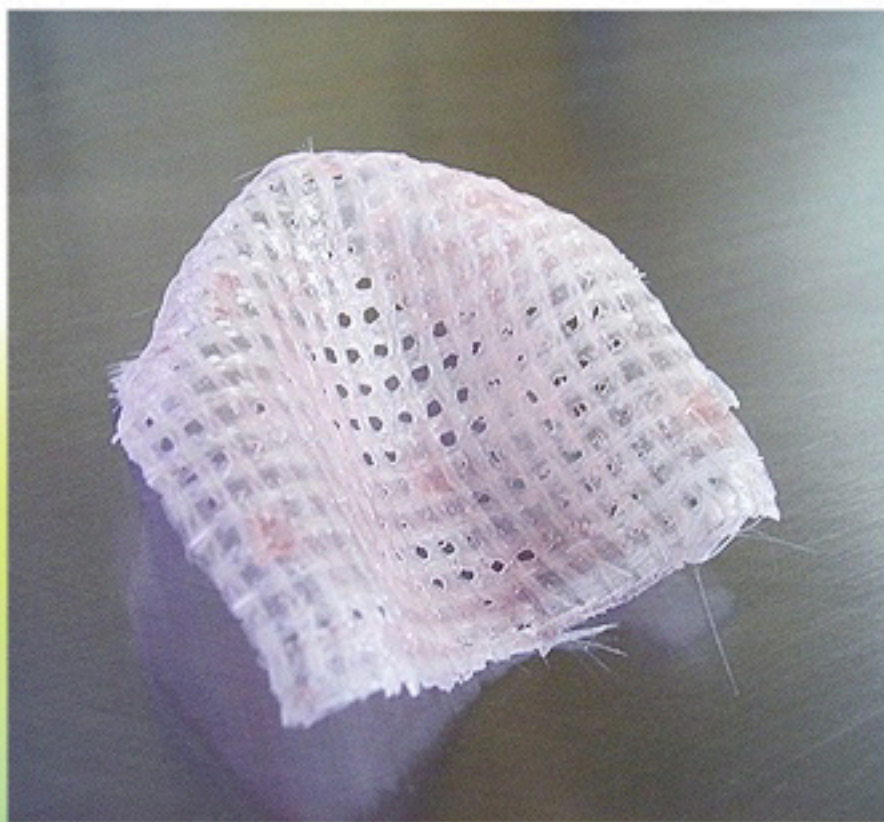
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5. *Please note that the final cured mesh framework/matrix will be flexible and should not feel rigid like a cast metal framework.*



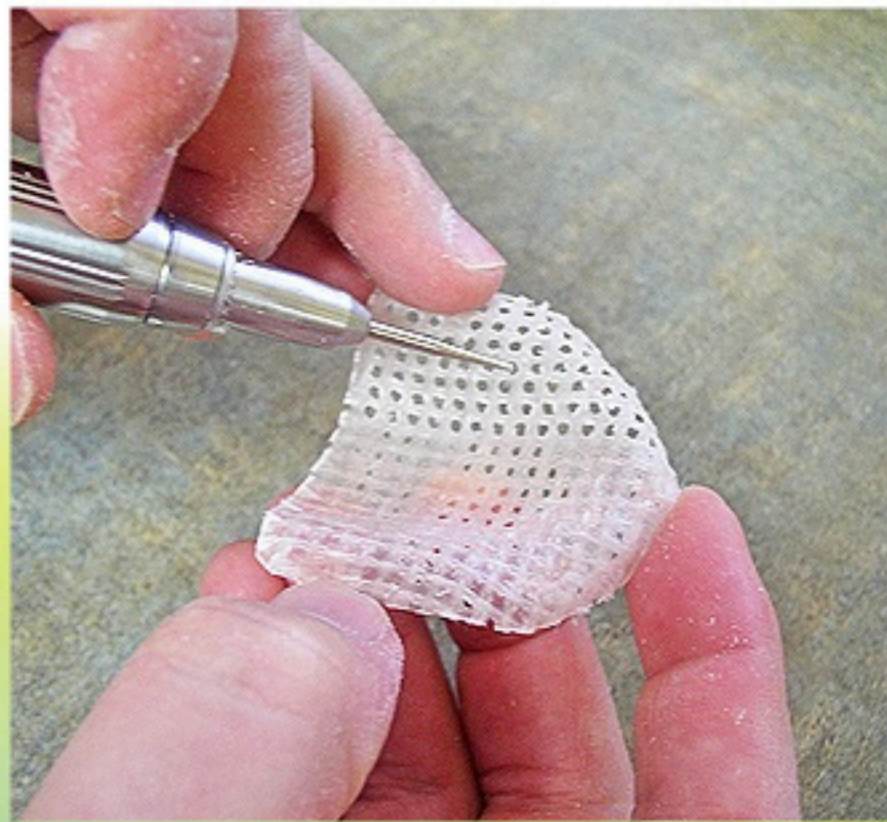
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6. During the curing process a thin layer of resin or “flash” will have cured in the open spaces in between the actual mesh matrix fibers. This layer must be removed to ensure that the denture acrylic will flow through the matrix.



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6. Using a round bur, remove the thin resin layer or “flash”, being careful not to contact and damage the fiber matrix.

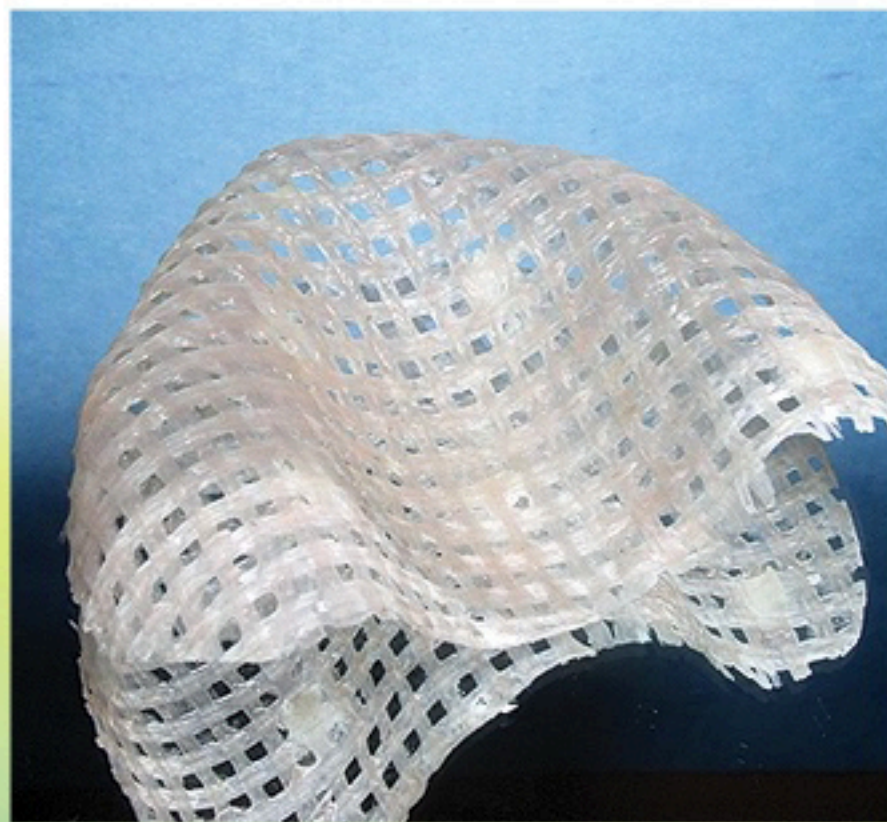




F. Incorporation of the Framework into the Denture

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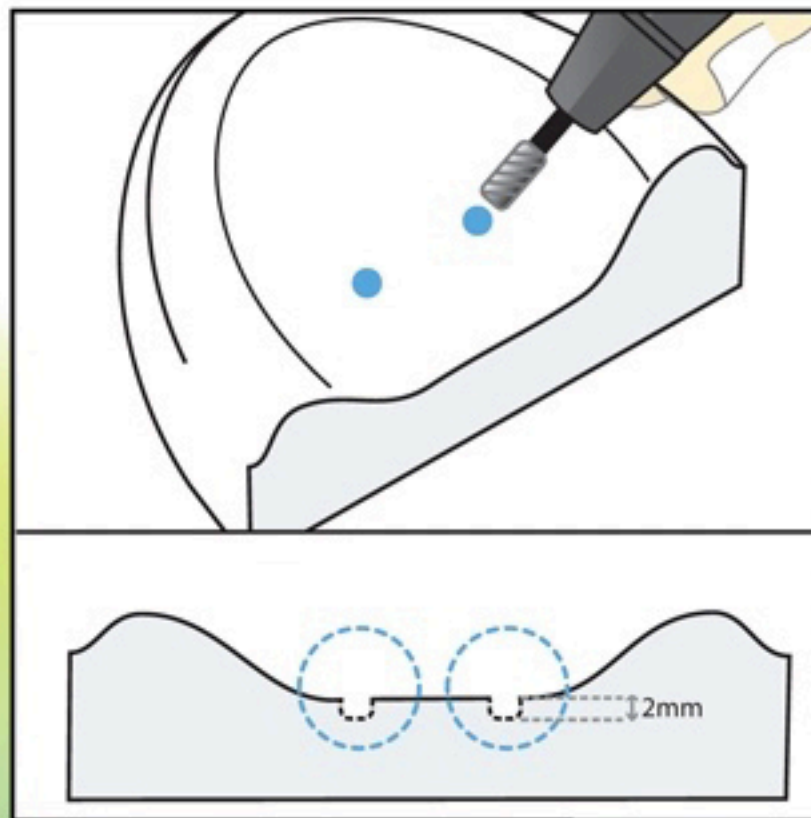
The fiber framework/matrix is now ready to be incorporated into the denture at the acrylic processing stage of fabrication.



F. Incorporation of the Framework into the Denture

1. Pick up the model, and drill two small anchor holes into the model.

About 2mm deep.



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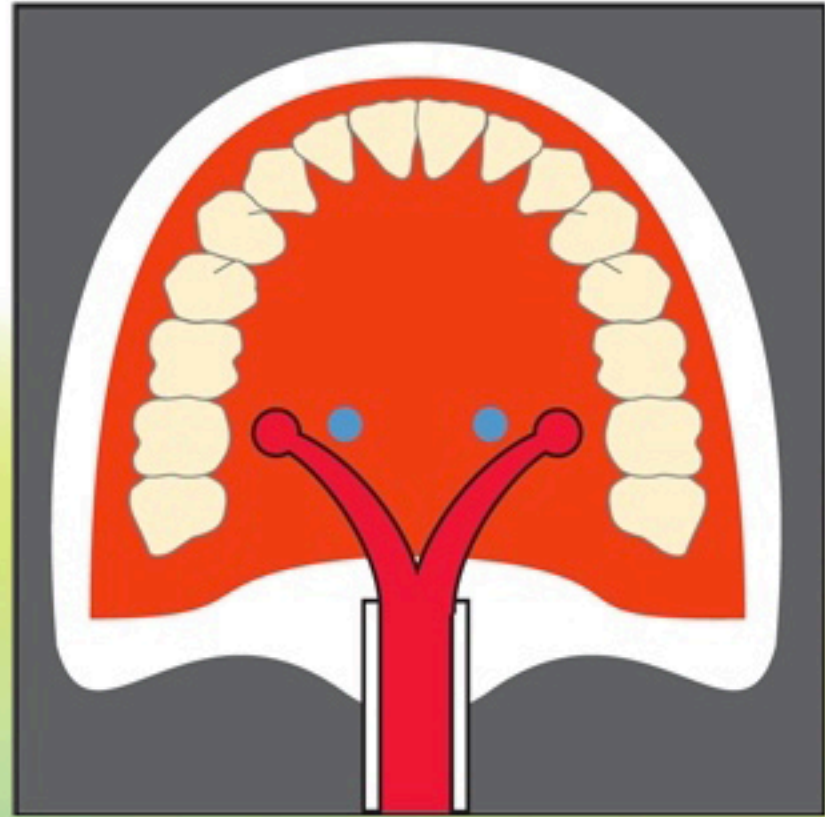
2. Apply a coat of wax separator using your usual technique.

Let it dry completely.



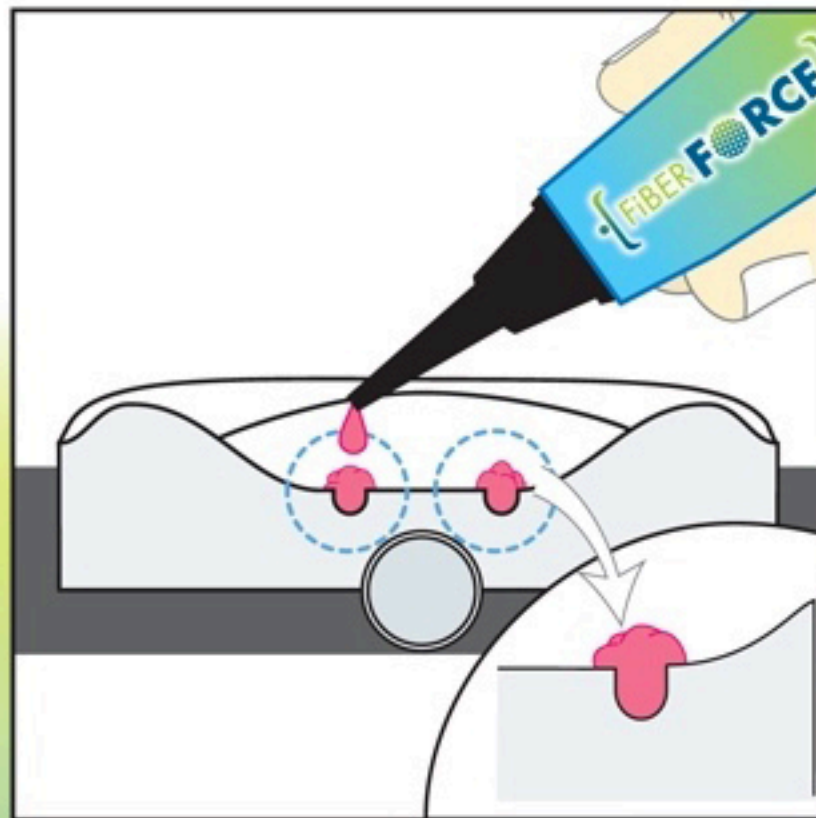
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3. Apply wax to the model using your usual technique. Place 2 injection sites next to the anchor holes. Continue flasking procedure as usual.



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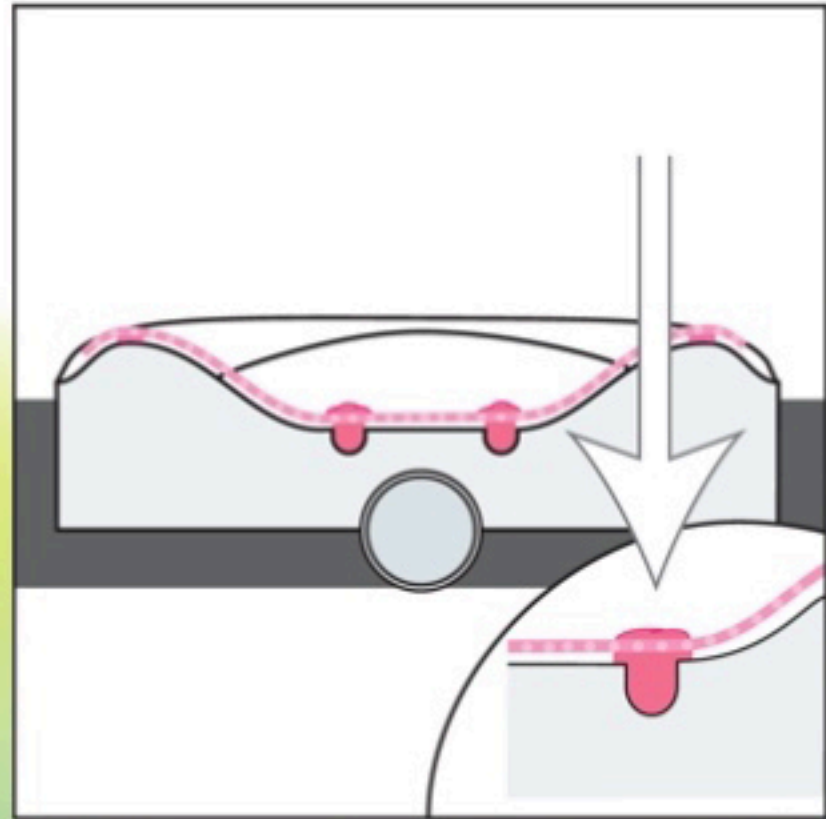
4. Before closing the flask, overfill in the anchor holes with Pink FIBER FORCE resin to ensure an excess.



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5. Place the FIBER FORCE mesh over the plaster model and in contact with the resin in the anchor holes; this must locally coat the mesh.

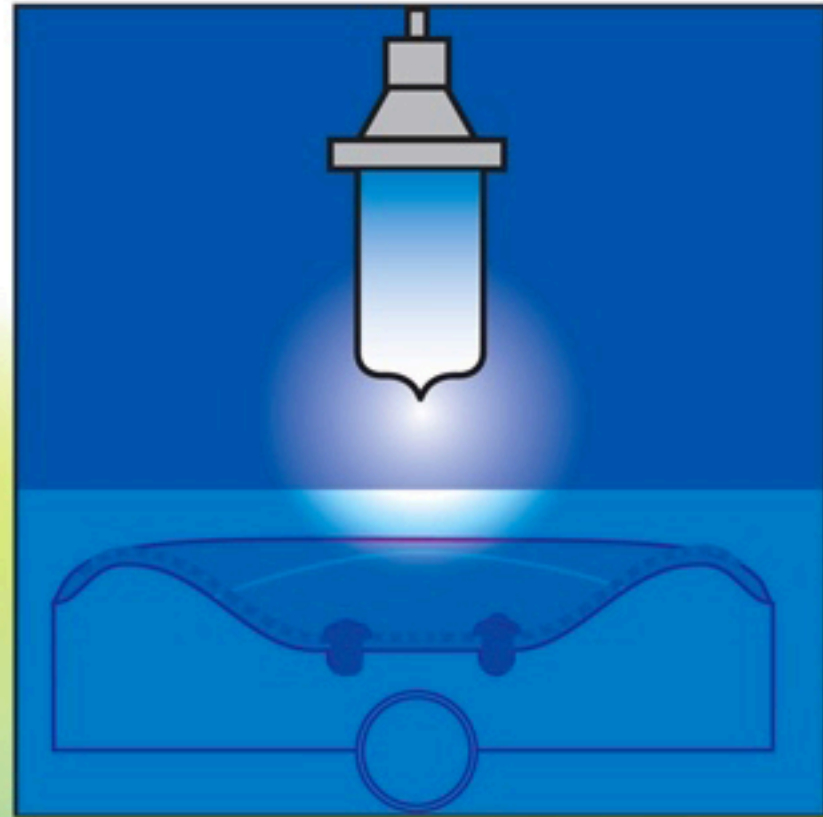
As necessary add a few drops of resin over the mesh.



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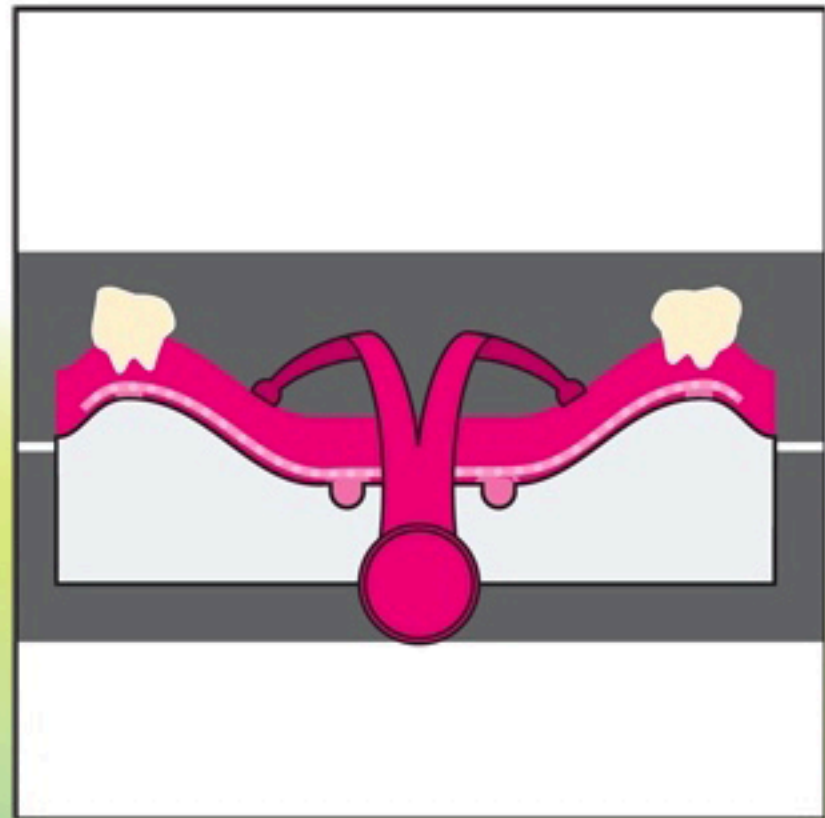
6. Light cure the FIBER FORCE resin in a light curing unit, respecting the times indicated below.

The mesh is now anchored to the plaster model.



F. Incorporation of the Framework into the Denture

7. Start the injection process with your usual methyl methacrylate resin, as per manufacturer's instructions.



F. Incorporation of the Framework into the Denture

8. Finish the denture as per your usual process. The FIBER FORCE mesh must remain completely within the resin.

FIBER FORCE dentures can be made very thin (approx 2.5mm). In these cases, the mesh will be visible.



F. Incorporation of the Framework into the Denture

8. However the *FIBER FORCE* mesh is invisible in a standard thickness denture.

