

Alternative processing technique for MDX4-4210

Stephen G. Alfano, DDS, LCDR, USNR,^a and Robert M. Taft, DDS, CAPT, USN^b

Naval Medical Center Portsmouth, Portsmouth, Va., and Naval Hospital, San Diego, Calif.

This article presents a tip on processing MDX4-4210 (Dow Corning Corp, Midland, Mich.) to create a smooth, nonporous tissue surface that can easily be kept clean by the patient. Udagama¹ has recommended lining the prosthesis with a sheet of urethane. Although this technique is acceptable, it requires a considerable percentage of the final mixture to be Medical Adhesive Silicone Type A (Dow Corning Corp). The technique presented uses MDX4-4210 exclusively, providing a nonporous tissue surface without the polyurethane lining.

TECHNIQUE

1. Make an irreversible hydrocolloid impression of the master cast. Place 22-gauge orthodontic wire that has been lubricated with petrolatum into the impression, and box the impression. Pour the impression with improved dental stone to form a perforated cast.
2. Wax the prosthesis, and fabricate a 2- or 3-piece mold for processing. Boil out the wax, and clean the mold with detergent. Let the mold dry.
3. Cut a sheet of polyurethane, and place it in a vacuum former. Clean the sheet with acetone.
4. Heat the polyurethane sheet, and form it over the perforated master cast (Fig. 1).
5. Mix MDX4-4210 with the appropriate pigments and catalyst, and de-air it. Fill the mold while the vacuum is on, and secure the mold with heavy duty rubber bands. Place the mold in an oven preheated to 100°F, and slowly raise the heat to 212°F. Hold at the upper temperature for 20 minutes.
6. Remove the mold, and let it cool. Deflask the prosthesis, and peel the polyurethane sheet from its tissue surface (Fig. 2).

SUMMARY

The technique described allows for rapid processing and results in a smooth, nonporous tissue surface that may provide better resistance to aggressive cleaning and to debris accumulation.

The views expressed in this article are those of the authors and do not necessarily reflect the official policy or position of the Department of the Navy, Department of Defense, or the US government.

^aStaff, Dental Department, Naval Medical Center Portsmouth.

^bStaff, Dental Department, Naval Hospital, San Diego.

J Prosthet Dent 2001;86:327.



Fig. 1. Polyurethane sheet vacuum formed over perforated cast.

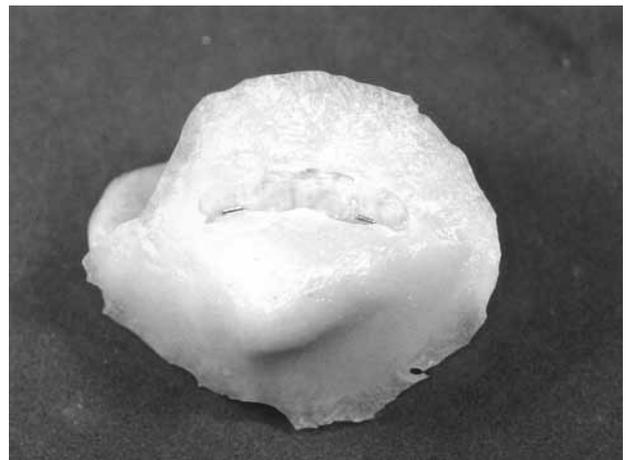


Fig. 2. Tissue surface of final prosthesis.

REFERENCE

1. Udagama A. Urethane-lined silicone facial prostheses. J Prosthet Dent 1987;58:351-4.

Reprint requests to:

DR STEPHEN G. ALFANO

STAFF, DENTAL DEPARTMENT

NAVAL MEDICAL CENTER PORTSMOUTH

620 JOHN PAUL JONES CIRCLE

PORTSMOUTH, VA 23708-2197

E-MAIL: sgalfano@pnh10.med.navy.mil

10/1/116017

doi:10.1067/mpd.2001.116017