



USE OF POLYVINYL SILOXANE MATERIAL FOR AN ALTERED CAST IMPRESSION TRAY

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The altered (corrected) cast impression technique is commonly used in the distal extension of partial removable dental prostheses to provide the optimal tissue support for the denture base.¹ After the framework is fitted intraorally, tray material is attached to the framework before making the impression.^{2,3} Different materials, such as autopolymerizing acrylic resin and visible light-polymerizing resin, have been suggested for this procedure.²⁻⁵ Some clinicians have used a prefabricated impression tray to facilitate the procedures^{4,5}; this may be a waste, however, if the framework does not fit. Fabricating a tray on the framework requires elimination of undercuts with wax on the cast to prevent the tray material from locking onto the cast. Excessive block-out material may cause incomplete seating of the framework and will affect the accuracy of the impression. The use of acrylic resin or composite resin at the framework evaluation

appointment also requires additional time and effort. This report presents a simple technique for fabricating the tray with a polyvinyl siloxane occlusal registration material, which is sufficiently stiff to serve as the impression tray on the framework and circumvents the need for elimination of undercuts with wax on the definitive cast.

PROCEDURE

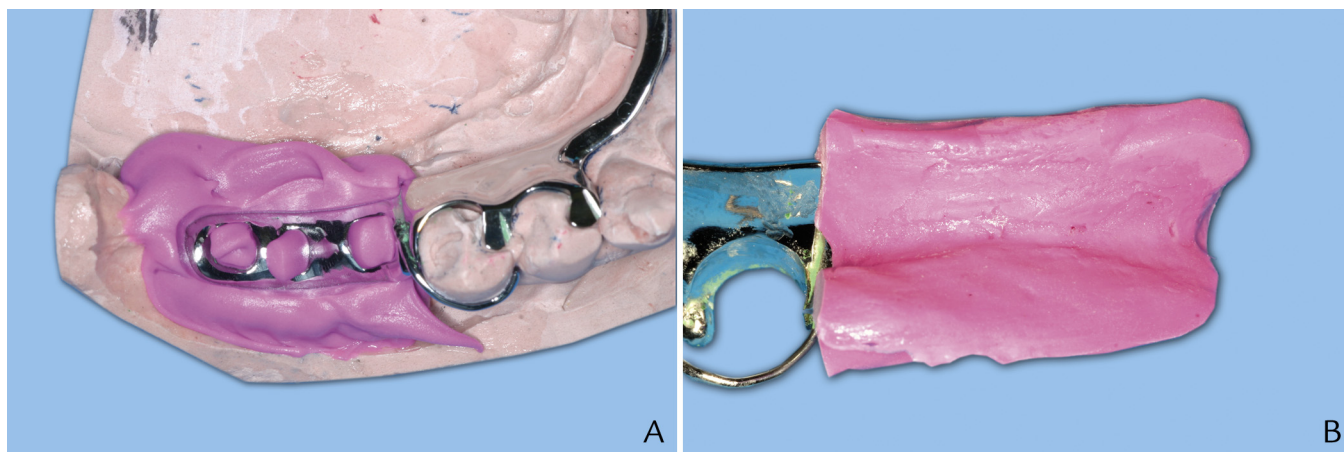
1. Paint a layer of lubricant (Vaseline; Chesebrough-Ponds USA Co) on the distal extension area of the definitive cast.
2. Inject a polyvinyl siloxane occlusal registration material (Regisil PB; Dentsply Caulk) on to the lubricated area.
3. Place the framework on the cast (Fig. 1A) and add additional registration material to cover the minor connector of the framework.

4. After the material polymerizes, trim the occlusal registration material to the optimal extension for a silicone tray on the minor connector of the metal framework. Relieve the impression surface with a sharp instrument (no. 25 blade; Rugby Lab Inc) (Fig. 1B).

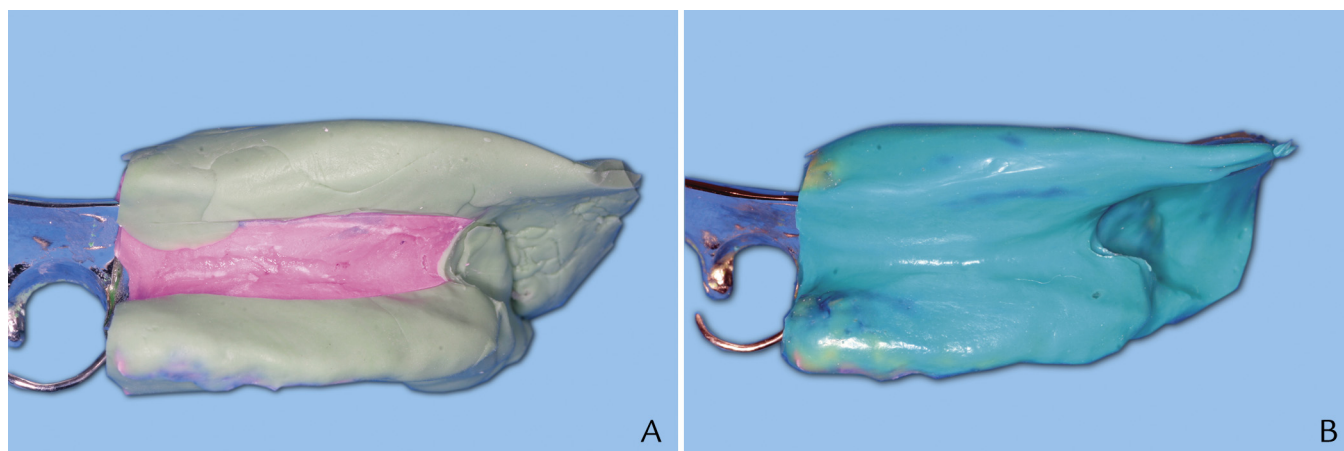
5. Paint the border of the silicone tray with tray adhesive (Tray Adhesive; Dentsply Caulk). Load a high viscosity polyvinyl siloxane impression material (Aquasil Heavy; Dentsply Caulk) on the border of the silicone tray and perform the border molding procedures.

6. After the impression material polymerizes, trim the impression material to the proximal plate (Fig. 2A). Paint the tray adhesive, load a low viscosity polyvinyl siloxane impression material (Aquasil Ultra LV; Dentsply Caulk) onto the silicone tray, and perform a wash impression (Fig. 2B).

7. Examine carefully to establish whether there is any heavy contact from



1 A, Framework on polyvinyl siloxane registration material. B, Silicone tray on minor connector of framework.



2 A, Border molding material on silicone tray. B, Wash impression on silicone tray.

the silicone tray. Relieve the heavy contact area and repeat step 6 if necessary.

8. Correct the distal extension area of the stone cast with the conventional technique^{2,3} or make a new impression with the framework in place.^{6,7}

9. After the fabrication of the new distal extension area, place the framework on the cast and create a new tissue stop with an autopolymerizing acrylic resin.

10. Position the teeth and proceed to the tooth evaluation procedure.

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