

TIPS FROM OUR READERS

Aluminum barrier laminate or plastic tube as a dispenser for modeling plastic impression compound for border molding



Jitendra J. Mete, MDS,^a Vilas L. Rajguru, MDS,^b and Shankar P. Dange, MDS^c

Modeling plastic impression compound (MPIC) is a thermoplastic dental impression material composed of wax, rosin, resins, and colorants.¹ Conventionally, type 1 MPIC sticks are used for border molding by softening them directly over a flame, which is both messy and time consuming.^{2,3}

A technique for softening and dispensing MPIC with a disposable syringe has been described.⁴ However, a failure to maintain steady and even pressure while dispensing MPIC from a syringe results in an uneven thickness of the MPIC. Also, the amount of material softened in a single syringe is not sufficient for 1- or 2-step border molding.⁵ In contrast, dispensing an even thickness of softened MPIC from a collapsible tube by squeezing between 2 fingers is easy and convenient. Also, the amount of MPIC required for 1- or 2-step border molding can be softened and dispensed by using a single collapsible tube.

Aluminum barrier laminate (ABL) and plastic tubes commonly used for packaging toothpaste provide precise dispensing of the MPIC. MPIC can be uniformly softened and dispensed from an ABL or plastic tube as described in the following technique.

PROCEDURE

1. Select an ABL or plastic tube with a nozzle orifice diameter of approximately 3 to 4 mm that has been used to package 13 g of toothpaste (Colgate Palmolive Co).
2. Make an opening at the base of the tube with a sharp cutter and clean the tube with soap, water, and gauze.

3. Dry the tube with an air syringe.
4. Break an MPIC stick (DPI Pinnacle; Bombay Burmah Trading Corp) into small pieces with pliers.
5. Load the tube with small pieces of MPIC through the opening at the base (Fig. 1A).
6. Fold 5 mm of the tube base and staple it to close the opening (Fig. 1B).
7. Hold the tube with cotton pliers, cap side down, in a temperature-controlled water bath at 60°C until the material becomes sufficiently soft and flowable.
8. Remove the cap and apply the softened MPIC to the tray borders by squeezing the tube from the base (Fig. 2).



Figure 1. A, Toothpaste tube loaded with small pieces of modeling plastic impression compound through opening at base of tube. B, Opening at base folded and stapled closed.

^aAssociate Professor, Department of Prosthodontics, Government Dental College, Aurangabad, Maharashtra, India.

^bAssociate Professor, Department of Prosthodontics, Government Dental College, Aurangabad, Maharashtra, India.

^cDean and Professor, Department of Prosthodontics, Government Dental College, Aurangabad, Maharashtra, India.



Figure 2. Even thickness of modeling plastic impression compound applied over tray border by squeezing tube.

9. Perform the border molding on 2 or more regions depending on convenience and expertise.

10. Follow proper infection control procedures for the water bath, and to prevent cross-infection, do not reuse the tubes.

REFERENCES

1. The glossary of prosthodontic terms: ninth edition. *J Prosthet Dent* 2017;117(5 suppl):e1-105.
2. Zarb GA, Hobkirk JA, Eckert SE, Jacob RF. Prosthodontic treatment for edentulous patients. 13th ed. St Louis: Mosby/Elsevier; 2013. p. 124-5.
3. Piñeyro A, Wadhvani C. Temperature modification of a hot glue gun for use with modeling plastic impression compound. *J Prosthet Dent* 2009;101:415-6.
4. Lipkin LS. An alternative method of border molding. *J Prosthet Dent* 1988;60:399.
5. Park C, Yang HS, Lim HP, Yun KD, Oh GJ, Park SW. A new fast and simple border molding process for complete dentures using a compound stick gun. *Int J Prosthodont* 2016;29:559-60.

Corresponding author:

Dr Jitendra J. Mete
 Department of Prosthodontics
 Government Dental College
 Aurangabad, Maharashtra
 INDIA
 Email: jeetendra1685@gmail.com

Copyright © 2017 by the Editorial Council for *The Journal of Prosthetic Dentistry*.