

TIPS FROM OUR READERS

Use of extra-fine crosscut bur to produce horizontal texture in composite resin restorations



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Reproducing the developmental lobes and perikymata of the anterior teeth of young patients with composite resin restorations is a clinical challenge.¹⁻³ Different finishing and polishing systems and techniques are available, although a standard protocol is lacking. The selection of the correct instruments will depend on the position of the tooth and the type of surface to be reproduced. Multibladed and diamond rotary instruments and abrasive rubber points are commonly used for this procedure.⁴

A diamond rotary instrument is usually used to reproduce the perikymata in the labial surface of young patients. The horizontal texture of the natural young enamel surface is characterized by grooves and thin protrusions parallel to each other (Fig. 1), features that

limit the ability of a diamond rotary instrument to reproduce the perikymata.⁵ This article describes the use of an extra-fine crosscut bur to create grooves resembling the enamel surface. The crosscut characteristics of the blade edges are ideal for this application.

PROCEDURE

1. Complete the overall contour of the restoration and place a glyceride-based gel (power block; BM4) to block oxygen and enable optimal light polymerization. Then, make the occlusal adjustment with a multifluted finishing bur (9406FF; KG Sorensen).
2. Finish the restorations after 7 days. Start with definitive contouring by using abrasive disks (Sof-



Figure 1. Horizontal texture of enamel surface.

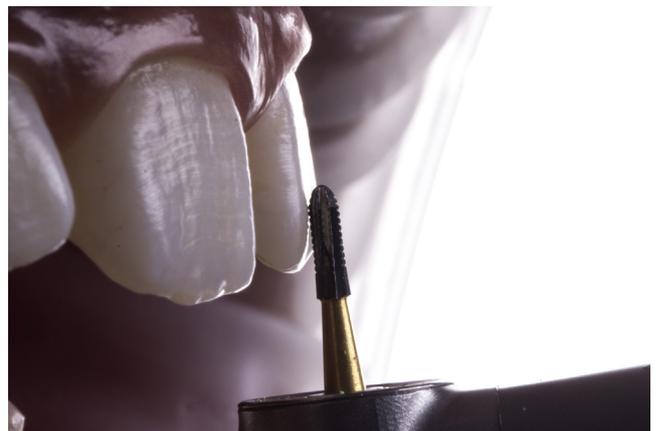


Figure 2. Use of extra-fine crosscut bur.

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Figure 3. Definitive restoration with simulated perikymata.

lex; 3M ESPE) to eliminate any excessive contour, define different planes of the labial surface, and adjust the tooth width and length.⁶

3. Use a fine-grit tapered diamond rotary instrument (2135F; KG Sorensen) for the vertical texture consisting of developmental grooves and lobes.
4. Use a coarse abrasive rubber point (Jiffy points; Ultradent Products, Inc) to eliminate scratches and obtain a smooth surface.
5. To mimick the perikymata, use an extra-fine cross-cut bur (TR-2T; Angelus Prima Dental) at a speed of 10 000 rpm (Fig. 2). The rotational direction of the bur should be contrary to the direction of its movement over the restoration surface.

6. Use a medium/fine grain abrasive rubber point (Jiffy points; Ultradent Products, Inc) under light pressure to soften the microtexture.⁷
7. Finish with a silicon polishing brush (Jiffy Composite Polishing Brush; Ultradent Products, Inc) and a rubber goat-hair brush (Jiffy Goat Hair Brush; Ultradent Products, Inc) impregnated with diamond paste (Diamond Polish Mint; Ultradent Products, Inc) (Fig. 3).

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