

## dd BASIC TECHNIQUE

# A Simplified Mamelon Technique

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There are many factors that make up a beautiful tooth. Contour, color, characterizations and surface texture are a few that we attempt to mimic in our restorations to recreate what is naturally occurring. What seems to exist so easily in nature, quite often is a challenge for us in our daily work.

One of the areas that frustrates many technicians is creating lifelike mamelon structures. Like many of the other aspects of crown fabrication, creating these internal structures can either be an exercise in frustration or a highly rewarding endeavor when the desired outcome

is achieved.

The following steps are a revisitation of a simplified technique originally introduced by Mr. Yamamoto in the 70's. This technique is simple and effective in reproducing believable mamelon structures. With a little practice, this technique



Fig. 1  
Natural tooth  
exhibiting mamelon  
structures



Fig. 2  
Traditional  
crowns,  
no mamelons

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Fig. 3 Begin by opaquing copings. Modify incisal with violet opaque



Fig. 4 Full contour buildup in dentin



Fig. 5 Incisal cutback approximately 1.5 mm



Fig. 6 & 7 Proximal cutback

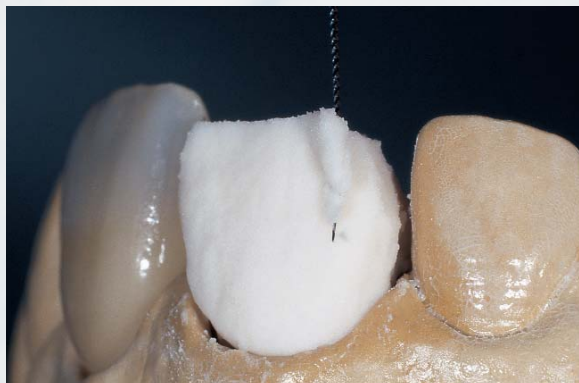


Fig. 8 Cutback the labial incisal 2/3

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Fig. 10 Restore full incisal and proximal length with enamel. The enamels used here will affect the amount of translucency desired



Fig. 9 Smooth sharp junctions of cutback areas



Fig. 11 & 12  
Smooth enamel junction into dentin.  
Note position of buildup compared to adjacent tooth



Fig. 13, 14 & 15  
With an instrument, make a vertical cut into the buildup,  
stopping at the edge of the coping



can be performed



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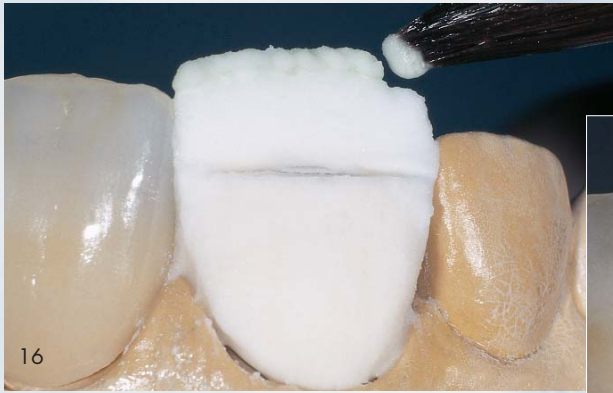


Fig. 16 Extend incisal edge 1 mm with dentin A2 to create a halo



Fig. 17 Moisten buildup with glaze medium. Mix mamelon material with glaze medium and apply to buildup with stain brush. Carefully smooth and feather mamelon material to soften borders



Fig. 18, 19, 20, 21  
Layer dentin into mamelons. Do not cover the full length—this only serves to create a smooth transition from dentin to mamelon structures. Keep buildup moist with glaze medium. Ensure proper alignment with adjacent teeth.



Fig. 22  
Add translucent material to create depth and contrast between mamelons

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Fig. 23, 24, 25 Layer enamels over buildup to restore labial contour. Overbuild slightly to compensate for shrinkage. This layer acts as a filter for how much of the mamelons will be seen.



Fig. 26 & 27 Appearance after firing. Note texture of correctly fired porcelain



Fig. 29 Correction result



Fig. 28 Correction buildup



Fig. 31 Restorations #8, 9 exhibiting mamelon structure.



Fig. 30 Finished crown with mamelon structure

The author would like to thank James Cowherd and Dr. Peter Wohrle for their help in producing this article. □

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quickly and routinely in our everyday work. The results will profoundly raise the esthetic qualities of a simple ceramic build up.