Morphologic Custom Shade Guide Fabricated with Feldspathic Ceramic

Seok-Hwan Cho
Marquette University, seokhwan.cho@marquette.edu

William W. Nagy
Texas A&M Health Science Center

Accepted version. *The Journal of Prosthetic Dentistry*, Vol. 113, No. 6 (June 2015): 660-661. DOI. © 2015 Editorial Council for the Journal of Prosthetic Dentistry. Used with permission. NOTICE: this is the author’s version of a work that was accepted for publication in *The Journal of Prosthetic Dentistry*. Changes resulting from the publishing process, such as peer review, editing, corrections, structural formatting, and other quality control mechanisms may not be reflected in this document. Changes may have been made to this work since it was submitted for publication. A definitive version was subsequently published in *The Journal of Prosthetic Dentistry*, Vol. 113, No. 6 (June 2015): 660-661. DOI.
Morphologic Custom Shade Guide
Fabricated with Feldspathic Ceramic

Presented as A Table Clinic at The 39th Annual Session of the American College of Prosthodontists, San Diego, Calif, November 2009.

Seok-Hwan Cho  
School of Dentistry, Marquette University  
Milwaukee, WI

William W. Nagy  
Department of Restorative Sciences, Baylor College of Dentistry,  
Texas A&M Health Science Center,  
Dallas, Texas

Clinicians have successfully used commercial shade guides for many years. However, many studies have demonstrated the inadequacies of the existing shade guides: shade variations exist between different batches of porcelain from the same manufacturer, and the thickness of the shade guide tooth is different from the real tooth or may not have the correct core or backing.\textsuperscript{1, 2} and \textsuperscript{3} In addition, the actual porcelains may not match the shade guides’ tabs.\textsuperscript{4}
One answer to these problems is to fabricate a customized shade guide from the actual ceramic materials. However, most customized tabs do not resemble the tooth morphology. Reed indicated the significance of the geometric design of a tab for shade matching. Thus, the purpose of this article was to demonstrate how to fabricate a morphologically correct custom shade guide.

**Procedure**

1. Make an irreversible hydrocolloid impression (Jeltrate Plus; Dentsply Caulk) of an ivorine maxillary right central incisor tooth (dental study model; Nissin Dental Products Inc) for duplication. Then, inject polyvinyl siloxane (PVS) impression material (Aquasil Ultra Smart Wetting XLV; Dentsply Intl) into the irreversible hydrocolloid impression to duplicate the PVS tooth.

2. Make small, phosphate-bonded refractory die material (12×12×6-mm G-Cera Orbit Vest; GC America) trays that have indentations inside for retention (Fig. 1A).

3. Squeeze auxiliary firing pastes (IPS Object Fix putty; Ivoclar Vivadent) on the refractory tray. Then press the duplicated PVS tooth onto the firing pastes to form the intaglio of the tooth (Fig. 1B). Remove the silicone tooth gently (Fig. 1C).

4. Place the refractory tray in a microwave (model RMW733, 0.7 cu ft; RCA Co) for 30 seconds to harden the firing paste.

5. Apply feldspathic porcelain to the intaglio area of the firing paste on the refractory tray and fire it in a porcelain oven (Pro 100;...
Whip Mix Corp). After glazing, finishing, and polishing, holders can be made (Fig. 2).

**Figure 2.** Morphologic custom shade guide of Vita Omega 900.

**References**


Corresponding author: Dr Seok-Hwan Cho, Marquette University School of Dentistry, PO Box 1881, Milwaukee, WI 53201-1881