

TIPS FROM OUR READERS

A straightforward technique for avoiding the need for a prototype when fabricating monolithic prostheses



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Intraoral scanners allow the digital scan to be sent immediately to the dental laboratory to manufacture cast-free monolithic prostheses.¹ Making a prototype to minimize the risk of damaging the prosthesis during occlusal adjustment is advised when fabricating monolithic prostheses.^{2,3} This article shows a straightforward technique for avoiding the need for a prototype evaluation appointment by scanning the occlusion designed by the clinician for the interim prosthesis on the same day as tooth preparation. The interim prosthesis for scanning should reproduce the anatomy of the desired definitive prosthesis obtained from a conventional or digital waxing or the relining of a previously made interim prosthesis. A previous waxing or the relining of a previously made interim restoration is recommended in any clinical situation in which a chairside interim prosthesis might not be

easy to fabricate, such as for patients with poorly restored teeth or with open proximal contacts.

TECHNIQUE

1. Prepare the abutment teeth. Make sure that the finish line is visible and that all the preparations are rounded and polished.
2. Fabricate an interim prosthesis with autopolymerizing composite resin (Protemp 4; 3M ESPE Corp) and a silicone index or a splint obtained from the initial situation or the previous waxing or with the relining of a previously made interim prosthesis. This previously made interim prosthesis can be correctly positioned in the patient with a silicone positioning index or with extensions in the design of the interim prosthesis that fit on the occlusal or



Figure 1. Interim prosthesis made with autopolymerizing composite resin with occlusion adjusted.

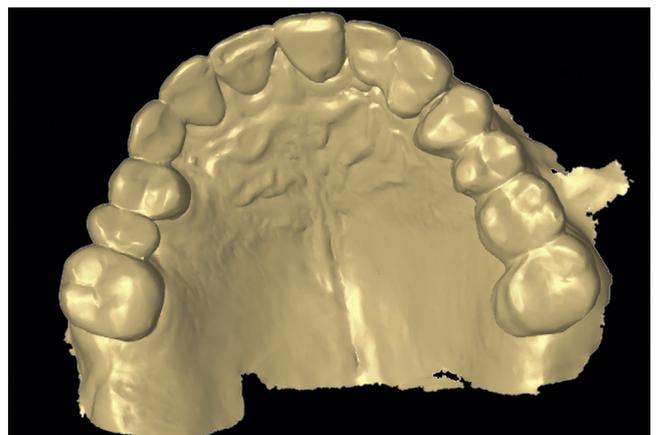


Figure 2. Digital scan of interim prosthesis.

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lingual surfaces of adjacent teeth.⁴ These extensions should be removed with a fine disk or rotary instrument after the relining process.

3. Adjust the occlusion of the interim prosthesis carefully (Fig. 1), and evaluate the thickness of the finished interim prosthesis with calipers (Caliper Iwanson for metal; Carl Martin GmbH).
4. Carry out digital scans (TRIOS 3; 3Shape A/S) of the tooth preparations with displacement cord if necessary and of the interim prosthesis (Fig. 2). In addition, scan the opposing arch and occlusal relationship. Finally, select the tooth color.

The dental laboratory will then have the digital scan of the prepared abutment teeth and the interim prosthesis so that they can design a monolithic prosthesis correctly adjusted to the prepared finish line and achieve the occlusion designed by the clinician for the interim prosthesis. No prototype evaluation appointment will be needed, thus enhancing patient satisfaction and clinical efficiency.

REFERENCES

1. Beretta M, Poli PP, Tansella S, Aguzzi M, Meoli A, Maiorana C. Cast-free digital workflow for implant-supported rehabilitation in a completely edentulous patient: a clinical report. *J Prosthet Dent* 2021;125:197-203.
2. Papaspyridakos P, Chen YW, Gonzalez-Gusmao I, Att W. Complete digital workflow in prosthesis prototype fabrication for complete arch implant rehabilitation: a technique. *J Prosthet Dent* 2019;122:189-92.
3. Cha MS, Huh YH, Cho LR, Park CJ. A comparative study of the wear of dental alloys against monolithic zirconia. *J Prosthet Dent* 2020;123:866-73.
4. Oh KC, Jeon C, Park JM, Shim JS. Digital workflow to provide an immediate interim restoration after single-implant placement by using a surgical guide and a matrix-positioning device. *J Prosthet Dent* 2019;121:17-21.

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