Essential Pink Porcelain for Esthetics

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Introduction

Imitating pink tissue color is essential for the best natural esthetics when it comes to cosmetic restorations. Often, this step is neglected because the technician fabricating the case does not realize his options. But, in the author’s opinion, the creativity that goes into this step cannot be underestimated. Our case study will explore not only the esthetics of this case, but also the importance of pink tissue design.

The patient is a 30 year old male with previous dentition problems. The dentist placed custom abutments on teeth numbers 8 and 9, and selected white precious metal for the restorations due to the patient’s heavy bite, leading to possible occlusion problems otherwise.

Case Study

Figure 1 shows a retracted view of the temporary crowns. They provided an excellent guide for value and hue consideration, as well as the size of the final restorations. The color needed correcting, as it was too grey and slightly yellow to match with the adjacent teeth. It can also be noted that the gum line for tooth #9 was too high when compared to the adjacent teeth. Before the porcelain build-up, the author checked the color of the adjacent teeth during a custom shading appointment, as well as the tissue color (Figure 2). It was noted to be red and pink with a greyish tone all combined. While checking the shade, the author noted a horizontal line in the gingival 1/3 and translucency in the incisal 1/3 (Figure 3). After the first B1 dentin application to the restoration (Figure 4), the author tried it in the mouth and noted that the value was too high.

For the internal color formula, he added pink, grey, white and yellow colors (Figure 5) using GC Initial Lustre Paste. For a greater mamelon effect in the incisal 1/3, he applied Lustre Paste in a B color.
with attention to the gingival and incisal, as well as the body (Figure 6) area. After firing at 820 degrees C, we can see a decrease in color value and increased modification (Figure 7). In figure 8, the author next applied Enamel 59 and a transneutral color. The next application involved tissue colors, which the author designed to ensure that the gum line across tooth #8 would match with that of tooth #9 (Figure 9). The colors he used are GUMC and GM36 (Figure 10), a modifier. The margin level was intentional, as he was trying to create a more esthetically pleasing appearance to the patient’s smile. In figure 11, he layered an application of Clear Florescence over the other porcelain colors. Before firing, the restorations had this appearance (Figure 12). After firing, at 890 degrees C, this was their appearance (Figure 13).
Fig. 11: Apply CLF
Fig. 12: Before firing
Fig. 13: After firing
Fig. 14: Create lobe and surface texture
Fig. 15: Increase gingival color
Fig. 16: Final mirrored image
Fig. 17: Try-in #9
Fig. 18: Try-in both
Fig. 19: Front view
Fig. 20: Smile view

To create lobe design and surface texture, the author used yellow, red and black markings on the restorations so that he would know where to apply his cuts to the surface (Figure 14). In the bisque bake stage, the gingival color is stained in the 1/3, for a try-in in the mouth (Figure 15). Restoration for number 9 had not yet been glazed in this photograph.

In the final mirrored view, after glazing number 9, the restorations have this appearance: orange/brown in the gingival, with a white stain in the body 1/3 to create horizontal lines, and a light orange color for the mamelon. The gum color is pink with translucency color added to the tissue area, as well (Figure 16). In the following upside down view, tooth #9 is tried
in the mouth (Figure 17). Next, both restorations were tried in to evaluate the balance between teeth numbers 7 and 10 (Figure 18). It was noted that there was harmony of color, value, translucency, stain and pink tissue color. Immediately after insertion, a front view image was taken, noting that number 9 matched number 8, and that number 10 was shorter in length, slightly protruding (Figure 19).

A smile view follows (Figure 20), with a right side view (Figure 21) and a left side view (Figure 22) next. In the natural smile (Figure 23), we can see the subtle white calcification definition and again in figure 24. Figures 25 and 26 offer a protrusion view, with the patient’s beautiful smile defined.

**Conclusion**

In order to make the final esthetic restoration for a case such as this one, we must have an understanding of tissue color. The incisal edge area, the mesial/distal width and the gingival 1/3 all delegate the color direction for the restoration. Photos are important during this step because the more information we can provide each other with during the fabrication process, the more accurate and natural the restorations will look in the patient’s mouth. The case results were excellent, and both the clinician and patient were very pleased.

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**About the author**

**Luke S. Kahng** is one of the world’s finest and most accomplished lab technicians, specializing in high-end ceramic restorations. Luke has served on several major dental journal boards as a contributing member.

Luke invented the Chairside Shade Guide - Volumes 1 and 2 and then expanded the breakthrough to a unique ceramic shade guide system named the Seasons of Life Selection. These valuable tools are used daily on a worldwide basis.

Luke is owner and President of his own lab, LSK121 Oral Prosthetics, one of the largest dental laboratories in the country, located in Naperville, IL.

He has published over 100 articles in major national dental publications. Additionally, Luke has authored several books, including Anatomy from Nature, The Aesthetic Guide Book, Smile Selection Plus CS3 Clinical Cases, and The Kaleidoscope Wax-Up Book. These books have been distributed throughout the world as must-haves for Dentists eager to gain more knowledge in their industry.