Shade matching a color graduation

Creating a custom shade for patients with unique color graduation from the central to the pre-molar dentition by externally applying One Body color with extra Lustre Paste.

By Luke S. Kahng, CDT

The male patient in our case study is in his mid-50s and presented at the laboratory for a custom shade match on canine tooth No. 6 with dark color at the gingival level that was rather challenging to re-create. There was also a color graduation from the central to the pre-molar dentition which was, to me, unique and most interesting to study. It was not something I had come across before in case presentations. Because the matching process was involved, I had to call upon all of my previous experience to provide a harmonious case outcome.

The majority of the time, patients do not present with the same coloring. There will be differences compared to the adjacent dentition, but often with the same translucency and transparency. Depth of color will be the major distinguishing factor a technician will have to determine as he works to match a patient’s natural dentition in his restorations. One of the most important measurements you will...
take is the value of the teeth. Is it high or low? Value was one of the biggest differences between the teeth in this patient’s mouth. To compensate, a technician has to carefully choose materials to match the adjacent teeth color. And what about crack lines? That color can be anywhere from reddish brown to opal blue in tone, as it was in this case, with low value.

This article illustrates an approach to creating canine color using One Body color with extra Lustre Paste, applied externally. Care will be taken to demonstrate steps I took as I worked to match the patient’s adjacent teeth.

CASE STUDY
In Fig. 1, we see one porcelain color build-up using GC Initial IQ One Body Lustre Paste with three colors in the A range, enamel and dentin already pre-mixed.

In the mouth, I applied Lustre Paste to the gingival area first (Fig. 7), with more color to the body and incisal area, as well (Fig. 8). I next created a transparency illusion in the mesial corner as compared to the adjacent teeth (Fig. 9). There was a noted white halo and crack line in the patient’s natural dentition that he mimicked (Fig. 10) while continuing to use Lustre Paste application.

03 After removing the restoration from the patient’s mouth, I modified the color and placed it in the oven (Fig. 11). Note the detailed color, divided between the mesial and distal corner color, and the body and incisal 1/3. The Lustre Paste color application was applied in 4 to 5 segments and baked at 810°C (Fig. 12).

04 In a different view, the restoration was again tried in the mouth to check the color blending (Fig. 13). Two side view shots (Figs. 14, 15) taken upon immediate insertion show a nearly perfect color match with an extremely happy patient looking on.

CONCLUSION
As dental technicians, we all know porcelain has traditionally been layered on to a restoration with segmented porcelain build-up. I am here trying to create the same effect with external Lustre Paste and demonstrate to colleagues a technique that is less time-consuming while producing the same, if not better, results. Patients and clinicians alike are happy with this method because there are fewer back and forth trips to the lab and more efficiency because of that.

ABOUT THE AUTHOR
An accomplished dental technician with more than 20 years of experience, Luke S. Kahng, CDT, is the founder and owner of LSK121 Oral Prosthetics, a dental laboratory in Naperville, Ill. He has published more than 85 articles in dental journals, and his lectures have taken him across the United States and internationally. He is the creator of the Chair Side Shade Guide Seasons of Life, 3.0, 4.0, 5.0, 6.0 and 7.0 ceramic shade tabs, which were invented to facilitate effective communication regarding color between doctors, patients and technicians.