Vericore Zirconia
Color Guide
Using Origin® Chroma™ Full Contour Coloring Liquid
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This zirconia color guide is intended to illustrate an easy – almost paint-by-numbers – approach to creating vital-looking monolithic zirconia restorations by using certain coloring liquids in specific areas. Whip Mix Vericore zirconia materials have all been qualified to work especially well with this technique.

The guide is separated into 3 sections: posterior crown, anterior crown and 3-unit bridge. Each of the three configurations uses a slightly different approach for achieving a natural-looking shade.

The technique was developed by Al Fillastre, CDT and recommendations for specific material brands are the result of his personal experience.

In this guide, we have chosen to use Origin® Chroma™ Coloring Liquids to shade Vericore zirconia. You may use other coloring materials with minor modifications to the technique. This illustrated technique is only one of several approaches you can use to accurately shade your zirconia restorations. It can be used for any level of laboratory production because of its simplicity, speed and excellent results.

Origin® Chroma™ Coloring Liquids are available from B & D Dental Corporation in several versions and within each version, three different chroma strength levels (60% Slightly Strong, 70% Standard and 80% Slightly Light). We are using Origin® the Live Full Contour version 6.0

The following describes Vericore zirconia materials.

**VERICORE ZR HT** is the ideal material to use in a posterior application due to its extremely high strength (1255 MPa) and natural appearance. It may be made as a substructure and veneered with porcelain or designed and milled as a full-contour, monolithic crown or bridge.

**VERICORE ZR HTX** is perfect for a full contour anterior crown or short bridge. It mirrors the translucency of lithium disilicate, but with a higher flexural strength (670 MPa). Create a beautiful monolithic restoration and make the patient very happy.

**VERICORE ZR PRO** might be the one zirconia material you use for almost everything. Its natural, vital esthetic appearance combines with very high flexural strength of up to 1140 MPa to make it ideal for most applications.

The uncolored **VERICORE** discs need to be shaded using a liquid colorant applied before sintering. There are many coloring systems available, but no one solution looks the same on every zirconia. Each zirconia material yields its own specific appearance, based upon its rate of absorption, its density and its chemistry with the varied coloring agents.
PLEASE READ

For the Base Shade:

For **ZR PRO**, use the 70% strength diluted (5cc liquid to 1cc distilled water).

For **HTX**, use the 70% strength straight (no dilution necessary).

For **HT**, use the 70% strength diluted (4cc liquid to 2cc distilled water) or use the 80% straight.

Place the liquids in marked plastic airtight containers. This will make each of the liquids identifiable and distinguishable from the others.

**Tip:** To distinguish each color on the crown/bridge, use a different color food coloring for each liquid. The number of drops determines color intensity.

For an A2 Shade

Place the following liquids mixed to previous ratios in the airtight containers:

- A2, used for primary crown chroma
- A3, applied to the cervical, interproximal and under pontics
- A3.5 or A4 for occlusal grooves and lingual fossae
- A Mid-range Incisal mix, i.e. 1.5 or 2.0

For other shades, follow the same technique, but substitute the A2 with the desired shade, and use the appropriate higher chroma shades where indicated.
Posterior Crown Coloring Technique – Shade A2

Always clean and blot your brush and containers before changing to a different liquid. **IMPORTANT:** Do not let any metal touch the liquid (i.e., brush ferrule).

Apply one shade higher in chroma (in this case the A3 liquid) around the margin (cervical) area inside and outside of the crown.

Brush on the more chromatic shade (example: A3) to occlusal grooves and lingual fossae.

Apply the Base shade (A2) in a lateral segmental approach up the middle of the cusps from cervical to incisal.
For the incisal area, a good incisal color can be reached by combining the following: (ratio) mix 3cc of the Origin® Incisal Liquid 1.5 with 1 drop of 3M Lava Plus Grey Effect Liquid.

**Tip:** For darker incisals (A3, A3.5, A4, B3, B4, etc.), use 2 drops of Grey Incisal in 3cc Origin® Chroma™ Incisal Coloring Liquid. For lighter shades (i.e. Bleach, A1, B1, C1, D2), use Incisal 1.5 straight.

Apply the incisal liquid only to the occlusal ridges.

Apply the Incisal liquid on the outer surfaces of the crown, but skip over the previously applied shade segments. You can also apply a second coat in the same places if you want more translucency.
Apply a second coat of Incisal to all occlusal ridges (avoid occlusal grooves), but this time cover the lateral segmental stripes on the outer surfaces. Don’t make the line even. Stagger the length of the incisal coverage to make it more natural.

This is an opportunity to break up the light even more by adding a darker or lighter incisal liquid on cusp tips, all ridges, marginal ridges or wherever extra translucency might add more realism.

To create depth and realism, add darker liquid colorants (generally one or two shades darker than the base shade) to pits, fissures, and secondary grooves, by dipping the brush tip only and allowing the liquid to flow into the uncolored areas left on the occlusal surface. The colorants can be mixed with intensive modifiers for an even more dramatic effect, if desired. Adding these colors to create realism takes only about 2 minutes.

**TIP:** Do not let the crown dry out. If you have to leave your zirconia in the middle of coloring for more than a few minutes, it is recommended that you re-moisten the areas you colored using distilled water.
Use a plastic tweezer to hold the crown and fully immerse it in the base shade mixture for only 5 seconds. Additional time is un-necessary and may cause shading problems in thicker areas, especially bridge pontics.

Using canned air, blow dry the coloring agent. (Compressed air may contain oils. Do not use.)

The crown is ready for sintering.

Sinter at 1500°C and follow Vericore Zirconia Sintering instructions.
Polish with flour of pumice for final result with natural esthetics. Units may also be glazed, if desired.
Anterior Crown Coloring Technique – Shade A2

Apply one shade higher in chroma (in this case the A3 liquid) around the margin (cervical) area inside and outside of the crown.

Apply one shade higher in chroma (in this case the A3 liquid) to the lingual fossa area.

Apply the mixed Base shade (A2) between the developmental lobes. Lateral segmental technique pictured.

Apply the Incisal but avoid applying over the lateral segmental coloring on the first coat.
Apply Incisal coloring to marginal ridges and the lingual. Do not apply over the colored lingual fossa.

Apply a second coat of Incisal, but this time cover the lateral segmental stripes. Don’t make the line even. Stagger the length of the incisal coverage to make it more natural.

Apply a second coat of incisal.

Use a plastic tweezer to hold the crown and fully immerse it in the base shade mixture for only 5 seconds. Additional time is not necessary and may cause shading problems in thicker areas.
Using canned air, blow dry the coloring agent.

Sinter at 1500°C and follow Vericore Zirconia Sintering instructions.

Final result. Vericore Zirconia polished with flour of pumice and a rag wheel. Restorations may also be glazed, if desired.
Vericore Bridge Coloring Technique – Shade A2

Using a shade that is higher in chroma than the base shade, apply VERY LIBERALLY to the tissue side of the pontic... 3 OR 4 COATS!

Apply the same high chroma colorant to the facial and lingual embrasures.

Continue to apply the high chroma colorant around the margins.

Add the high chroma colorant to the inside of the margins...
...and to the underside of the pontic.

Using the regular body shade, place stripes in a lateral segmental arrangement.

Next, apply the Incisal, but do not cover the areas where you already applied the shaded colorant.

Next, apply Incisal coloring to marginal ridges and the lingual incisal area. Do not apply over the colored lingual fossa.
Now, apply a second coat of the Incisal over the lateral segmental stripes (where appropriate for incisal).

Use a plastic tweezer to hold the bridge and fully immerse it in the base shade mixture for only 5 seconds. Additional time may cause shading problems, especially in bridge pontic areas.

Using canned air, blow dry the coloring agent.

Ready for Sintering!
Sinter at 1500°C and follow Vericore Zirconia Sintering instructions.

Vericore Zirconia bridge hand polished using flour of pumice and a rag wheel. Bridge may also be glazed, if desired.