

Shade Verification Protocol

Terminology of color:

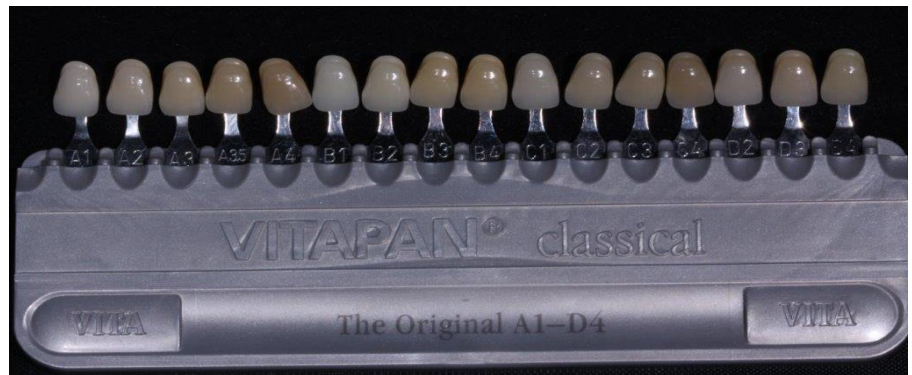
- 1) Value (brightness) - Refers to the brightness of a color related to a scale from white to black. High value is bright white while the low value is dark gray.
- 2) Hue (color) - Refers to the specific color (brown, yellow, gray or red)
- 3) Chroma (saturation) - The intensity of strength of a given color (hue)

Two Vita-Lumin shade guides are recommended: (third is optional)

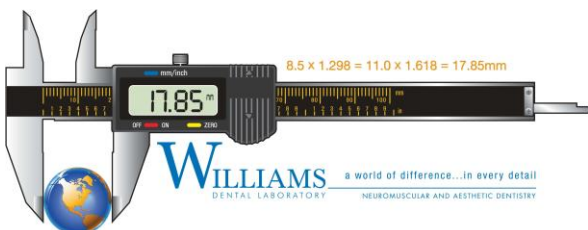
- 1) The first guide should have the tabs arranged according to brightness (value). The recommended order for your "value guide" is
B-1, A-1, B-2, D-2,
A-2, C-1, C-2, D-4, A-3, D-3, B-3, A-3.5,
B-4, C-3, A-4 and C-4



- 2) The second shade guide should be arranged by color (hue) groups. The order for your "hue guide" is:
Reddish-Brown A-1, A-2, A-3, A-3.5, A-4
Reddish-Yellow D-2, D-3, D-4
Gray C-1, C-2, C-3, C-4
Reddish-Gray B-1, B-2, B-3, B-4



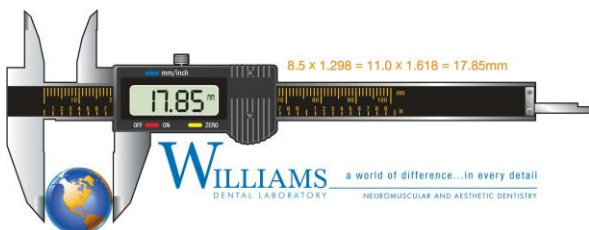
- 3) The third guide should also be arranged in the same color (hue) groups of A, D, C and B. However, this guide should have the necks of the tabs removed. This "modified hue" guide eliminates the heavy extrinsic coloring that some tabs have at the cervical which can be an unwanted influence during your shade selection.



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Tips for Shade Selection

- 1) Have the patient remove lipstick or bright make-up if any.
- 2) If the patient is wearing bright-colored clothing, it is a good idea to drape the patient with a neutral-colored (gray) bib.
- 3) Make the shade selection at the beginning of the appointment before the tooth becomes dehydrated and your eyes become fatigued from the other procedures.
- 4) The canines are a good reference point in selecting a shade (Chroma only) because they have the highest Chroma (intensity) of the dominant hue (color) of the teeth.
- 5) First impressions are the most accurate in shade selection. (go fast) Squint eyes and choose value with value arrangement.
- 6) Make your final shade selection after comparing your shade selections with those of another team member. This works to double check these very subjective measurements.
- 7) When taking shades and making shade selections and comparisons, **ONLY** view the tabs for 7 seconds at a time to avoid fatiguing of the cones of the retina. It is recommended to gaze at the neutral gray patient drape or to look away at a wall between each 7-second shade evaluation will reset the focus of your eyes.
- 8) Compare your shade selection under varying conditions such as with lip retraction versus lip down and when the patient moves their head in different directions or lighting angles.
- 9) Many doctors feel that selecting a shade of slightly lower value from the adjacent teeth help the porcelain “blend” nicely with the patient’s natural dentition. HT or MT or LT ingot or block?



Procedure

- 1) Always select the value reading first. This is the most important dimension in shade matching with ceramic restorations. By using your value guide (with the tabs arranged in brightness order) place the shade tabs in the same plane as the tooth you are trying to match. Start off by moving the shade guide across that plane until the right value is selected. Do this while squinting your eyes. If there is no difference seen between the tooth and the tab, the value reading will be matched.
- 2) Now that the value reading has been taken, use your hue guide (arranged in color group order) to select the color reading. Many people feel that if the patient's teeth have a "warm shade" they are likely in the A and B ranges. Conversely, if the patient presents a "cool shade", you should begin by starting with the C and D hues. Rapidly scan the shades and by the process of elimination determine which tab matches the closest. If you have selected two different tabs, use your modified hue guide (with no neck) to select the closest color match.
- 3) While holding the shade tab in the same plane as the natural teeth, evaluate their surface texture (roughness) and glaze (shine) as compared with that of the tab.
- 4) Once the value and basic shade is found, evaluate characteristics of entire tooth and translucencies of incisal layer.
- 5) Take a dentin shade (stump or prep) if you are doing an all-ceramic restoration. (This is critical in picking proper Block for milling and ingot for pressing)

Any additional notes will always be helpful! High-resolution photography is a HUGE help as well.



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