

Taking an Accurate Shade

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#1

Selecting the appropriate shade can be tricky. Accuracy in this task is vital to getting predictable results. First, you have to know what the patient expects, and furnish every option toward the patient's cosmetic goals. Bleaching, for instance, is often overlooked, and presents a problem when the patient opts for bleaching after restoration is completed. If bleaching precedes restoration, it's important that the process must be completed at least two weeks before the shade is taken. The patient must also understand that future efforts to bleach to a brighter shade won't affect restorations.

#2

Having the appropriate equipment is essential to taking an accurate shade. The list should include a collection of shade-guides from various manufacturers that not only provide a selection of colours, but also a variety of designs, i.e. dentin-enamel proportions.

The next criterion is identifying the spot in the dental office with the optimum lighting. If there aren't any external windows to allow natural sunlight, then colour corrected light bulbs, which emit the same UV spectrum as natural light, will be the next best thing. One of the most common errors committed at the dental office is taking the shade of a patient reclined in the dental chair. The problem is that when we view each other in our daily lives we are standing vertical with any light source coming at us from above. When you change the light source to horizontal, our teeth appear to change as the refractive index is different; therefore, if you take a shade with the patient reclined you will record an incorrect shade. Once the ideal location is established for shade taking, always place yourself between the patient and the light source, but never in direct sunlight.

It is also important to cover any bright shirt or blouse with a neutral coloured bib and have female patients remove their lipstick, as these will influence your perception of the colour

#3

Begin the selection process by first dealing with the colour **VALUE**. Value refers to the brightness or greyness of a shade but with no regard to the colour itself. If you consider a cloud, for example, it has many variations of white and grey. Up close it is all one colour but from a distance and depending on the light intensity and the density of the water vapour you see variations in its value. Value in dental shades is commonly mis-recorded and accounts for 90% of all shade-related remakes. In difficult cases where you are uncertain of the value group you can hold both choices together at the teeth and your eye will immediately choose the closer one. If you cannot be sure always err on the bright side as restorations can almost always be toned down whereas too grey selections can almost never be brightened. The Vita 3-D Master shade guide from Vident is an excellent tool for selecting value; the tabs are systematically arranged from left to right in five value groups.

It is also important to note that most shade guides are made from plastics, acrylics, etc. They react differently to light sources compared to that of enamel. It is therefore paramount that the shade tab be held at such an angle that it mimics the precise inclination and position of the tooth you are recording. Slight changes in labial or lingual placement will result in brighter or greyer interpretations that may not be duplicated at the lab.

#4

Once the value has been recorded, move on to the colour **CHROMA**. Chroma refers to colour saturation. Again, with no regard to the type of colour, how much of it is there?

If you consider three glasses each half full with orange juice. To the first glass add as much water. In the second glass add half as much water. In the third glass leave just orange juice. Observing them you will note that although the colour has not changed there are visible differences between the shades of orange juice in each glass. It is these differences that we call

chromatic changes. Subtleties in chromatic change specifically relating to the shade tab you have chosen are important to mention

#5

Finally the last component of the shade is the colour **HUE**. Hue is typically what we have always rushed to record. It is the actual family or group of colour. Red, A2, yellow, 210, etc. Please note that all shade guides on the market are great products when they have the correct shade. Never feel that you may only use a particular shade guide when you are prescribing its associated product. Having a minimum of four or five different types of shade guides provides the best chance at selecting an accurate shade; the varying degrees of dentin-enamel proportions helps to communicate tooth design as well.

The key boils down to one simple reminder; ' If you say the shade is A2, be prepared to receive a restoration that not only is the same shade as A2 but will appear exactly like the A2 shade tab.

In the event that a shade has not been recorded allow as much time to elapse to re-hydrate teeth before recording the shade or have the patient return the following day.

When restoring laminates and crowns side-by-side where possible bond veneers first as their substructure more easily affects their final colour. Wait a day or two to allow the colour to settle, adjust the crown(s) accordingly and insert them.

Remember to glance then look away when taking a shade, if you stare for too long, your eyes will allow colour differences to fade thus potentially recording an incorrect shade.

As most restorations are hand made please provide as detailed a prescription as the restoration you expect to receive.

The following list of shade guides will provide you with a starting chance at recording an accurate shade as well as their quantity of enamel-dentin:

Ultimate Bleach Guide.....ULTIMATE.....bleach shades

Chromascope.....IVOCLAR.....less enamel

3-D Master.....VIDENT.....less enamel

SR-Vivadent PE.....IVOCLAR.....mostly enamel

Vita Classic.....VIDENT.....medium enamel

Bioform.....DENTSPLY.....less enamel

Bioblend.....DENTSPLY..... medium enamel