

Step-by-step guide to shade matching



Tips & Tricks

Shade selection guides:

- Vita
- Vita 3-D
- Chromoscope
- Bleached guides
- e.Max shade guide

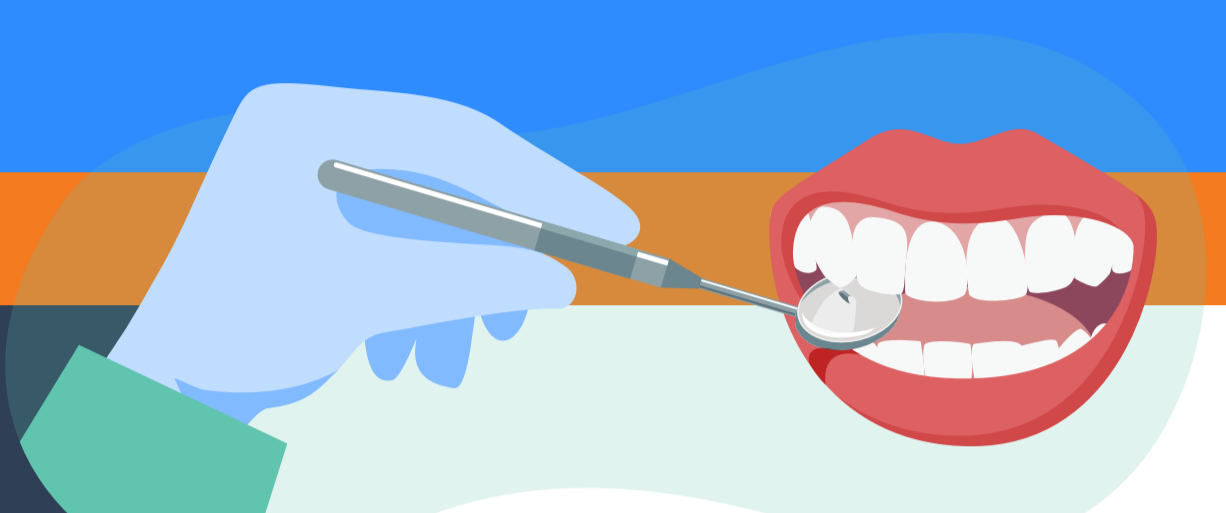
Always remember:

- View the patient at eye level
- Shade determination should be made at the beginning of the appointment
- Make a decision as quickly as possible

The Environment

How to maximize color accuracy

From floor to ceiling, the entire room or setting should have a **neutral light gray background**, not white. A patient's lipstick, clothing, and clinical drape also can adversely affect color perception.



- » If needed, use a blue bib to relax your eyes
- » Teeth should be clean (have patient remove lipstick and brush teeth)
- » No bright colors in the immediate field of view
- » Wear neutral-colored gloves
- » Subdued wall colors if possible (preferably greyish to slate blue)

Light Source

The light source will dramatically affect shade.

The operatory light should not be pointed directly at the patient.

- Indirect lighting with fluorescent bulbs at 5500 Kelvin color temperature
- Color corrected with a full visible spectrum range
- Enough intensity to eliminate ambient light, but not so strong as to mask the color differences
- Pleasant to the eye to deter fatigue
- Consistent in that it does not change depending on the time of day or location



Key aspects of ideal light for shade matching



Photographs

Follow these steps for optimal results

- 1 Always have a shade tab in the photo so the technician can compare the difference in the Value and Chroma and make the needed adjustments.
- 2 Use a camera with a macro lens and ring flash. This will allow you to get a closer and more detailed photo without having the flash alter the shade.
- 3 If your camera doesn't have a ring flash, have the patient sit up with their chin slightly tucked in. This will help keep the flash from reflecting in the picture.
- 4 Use a room with some natural light if possible and avoid pointing any light directly toward the patient.
- 5 It is essential that color selection is done when the patient is first seated in the dental chair as Chroma and Value can change due to minor dehydration.

Photographs are not accurate or sufficient in color replication, but they can be useful for determining gradation and characterization.

Chroma

The purity of a color

- High chroma colors look rich and full.
- Low chroma colors look dull and grayish.
- Sometimes chroma is called **saturation**.

Value

Value, or lightness, varies vertically along the color solid

- Ranges from black (value 0) at the bottom, to white (value 10) at the top.
- Neutral grays lie along the vertical axis between black and white.

Color Perception

Types of color blindness

Color perception varies from fractionally to drastically by individual depending on their vision.

Fact!

Women are far less likely (.5%) to be color blind than men (8%).

Doctors and technicians should take a color vision deficiency test such as Ishihara or Farnworth Lantern annually as vision can change.



NORMAL VISION

DEUTERANOPIA

TRITANOPIA

PROTANOPIA