Shading technique in direct aesthetic restorations

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Natural teeth are complex in structure and difficult to imitate because many colours are distributed through the enamel and dentin. The structural components of teeth — enamel, dentin and pulp — have different characteristics that greatly influence their optical properties. It is well accepted that the colour of a tooth is basically determined by its dentin component.

Dentin represents the opaque and complex core — rich in hue, chroma and fluorescence — and is covered by an enamel shell, which is translucent and opalescent. This diversity and the alteration between enamel and dentin explain the unique and individual nature of the appearance of a natural tooth. The opaque material (similar to dentin) has been described as "double-effect layer." Clinically, it is important to have a detailed examination of colour, opacity, translucency, texture, surface gloss and presence of any special characterisation such as hypocalcification, stain crack, etc., of the tooth in need of restoration. The detailed study of these components and colour mapping are quite helpful in choosing the appropriate restorative materials and shading technique.

There are two shading techniques commonly used in direct aesthetic restorations: the blended shading technique and the layered shading technique.

**Blended shading technique**

In this shading technique, also known as traditional shading method, the result achieved by applying clear and translucent material (similar to enamel) over a saturated and opaque material (similar to dentin) has been described as "double-effect layer."