

EBOOKS

September 2019

COLOR AND LIGHT: DIRECT COMPOSITE ARTISTRY

COLOR DETERMINATION

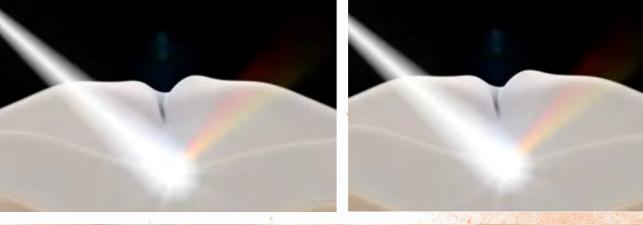
Color is nothing more than the wavelength of light that reaches our eyes, and human teeth fall exclusively in the red-to-yellow color space. There are two types of color-producing phenomena: chemical color or structural color.

Up to a year ago, resin composites were colored—or had their colors modified via the chemical process, using optical modifiers/pigments. These are metal oxide particles that provide the opacity or translucency needed to make the composites similar to the natural tooth shade.

Structural color means that the perceived color is generated by the interaction of light with the microscopic structure of the material. With objects that exhibit structural colors, light enters the surface of the object and different wavelengths are amplified or weakened through microscopic structures, usually only nanometers in size. The shape and exact size of these structures affect the wavelength of the light as it exits the material, exhibiting different colors.

A new composite resin now includes the ability to match tooth color by virtue of its optical structure—which means that the particles inside the matrix will reflect the same color as the surrounding tooth structure.

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NATURAL REFLECTIONS

With its Smart Chromatic Technology, OMNICHROMA is the first dental composite to utilize structural color as its main mechanism. As ambient light passes through the composite, the fillers generate red-to-yellow color, the natural colors of human teeth. This color combines with the reflected color of the surrounding tooth, creating the perfect shade match for any patient.

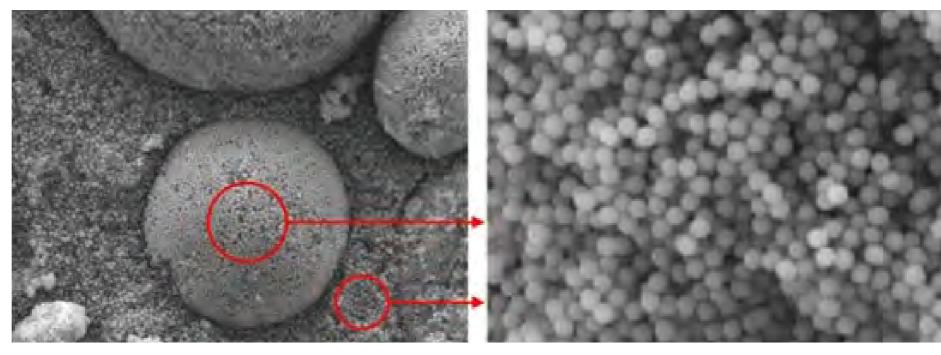
Wherever you place OMNICHROMA, if there's sufficient tooth structure surrounding the restoration, it will pick up those colors. And it will continue to match even as the patient's surrounding tooth changes shades. This provides more flexibility for patients who want to whiten their teeth.

THE IMPORTANCE OF UNIFORM PARTICLE SIZE

There's a critical relationship between structural color and particle size/shape of the filler. By having a set size of spherical fillers that are uniform in size and shape (exactly 260 nanometers), OMNICHROMA has a unique, intrinsic ability to match any adjacent tooth structure.

In addition, these even, regular particle sizes contribute to increased strength and a smooth, highly polished finish. This smooth surface prevents roughness and plucking that can cause a more rapid discoloration of resin material.

Finally, with a ratio of filler-to-matrix content in the range of over 80%, OMNICHROMA is a strong, long-lasting material, especially in the posterior.



SEM Image of OMNICHROMA at 5,000x Magnification

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SEM Image of OMNICHROMA at 20,000x Magnification

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CLASS II



Case images courtesy of James Chae, DDS, Diamond Bar, California

UNIVERSAL

OMNICHROMA follows a standard, easy-to-use procedure for most cases. While opaque-white before curing, the material becomes natural in appearance and matches the color of the surrounding tooth after light curing.

The same single shade of OMNICHROMA was used in all of these case images, demonstrating its ability to match every tooth shade with a single shade of composite.

CLASS IV



Case images courtesy of James Chae, DDS, Diamond Bar, California

Twenty-five doctors completed a total of 841 cases in examining OMNICHROMA:

92.7%*

rated it good or excellent for color matching.

*Data on file



Brian Gray, DDS, shares **A TRUE** his experience using Tokuyama's OMNICHROMA® with MATCH the host of Inside Dentistry's Product Talk, Mike DiTolla, DDS. WITH NO COMPROMISE



A composite that matches every patient's teeth with only one shade sounds too good to be true. "How many times during the past 4 decades have I heard companies say that they have a composite that does everything?" questions Brian Gray, DDS. "When Tokuyama stepped up with OMNICHROMA, of course I was skeptical, but I gladly took a look at it, and it delivered on the company's promises."



Preoperative photo of 20-year-old Class IV composite, revealing material shade mismatch with moderate wear and recurrent decay on tooth No. 9.



Final restoration utilizing OMNICHROMA. Note the natural blending and color match to the adjacent tooth structure (A superfine placement of Tokuyama Estelite Color [shade: White] was used to

Case images courtesy of Brian Gray, DDS, Washington, DC.



EVERY SHADE, ONE CHOICE

Combining innovative shade-matching ability with exceptional handling, polishability, and strength, OMNICHROMA is truly the next generation of universal composites.

FEATURES

Unprecedented color matching

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- Shade matches both before and after bleaching Simplified inventory management
- High polishability inherited from Estelite
- Excellent physical-mechanical properties inherited from Estelite

BENEFITS

- Streamlined restorative process
- Reduction of unused composite wastage
- Never short stocked on a shade



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Color and Light: Direct Composite Artistry

SEE IT IN ACTION CLICK HERE

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ABOUT THE COMPANY

Tokuyama Dental America is an award-winning Japanese manufacturer that is recognized for its quality and reliability. We are 100% committed to Innovating Tomorrow's Dentistry, Today[™]. It is our mission to listen to your needs, incorporate your voice into the development of top-quality dental products, and ensure our products meet the highest standards of the industry.

The preceding material was provided by the manufacturer. Statements and opinions are solely those of the manufacturer and not of the editors, publisher, or the Editorial Board of *Inside Dentistry*.

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THANK YOU TO OUR SPONSOR: TOKUYAMA DENTAL AMERICA

OMNICHROMA One-Shade Universal Composite

Why Are Thousands of Doctors Trusting OMNICHROMA?

"OMNICHROMA is GROUNDBREAKING-

a win-win for all offices. No need to stock 30 composite shades that expire and take up space. So economical and it works great!" -Dr. Peter Auster



Case image courtesy of Dr. Allan Mohr, Massapequa Park, NY



Innovated to color-match like you've never seen before, Tokuyama's unique dental composite matches every shade from A1 to D4 with just one shade of composite. By streamlining the restorative process, OMNICHROMA simplifies day-to-day dentistry and saves you time and money.

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ADDITIONAL RESOURCES



Looking to learn more? Read the full technical report here.



Learn more about Tokuyama Dental America and our other products here.