



Technical Bulletin

Digital Shade Taking

Communicating tooth shade has always been a challenging task. Ambient lighting, lipstick, clothing and hydration all effect the ability of the person taking the shade. Everyone has different abilities to discern the subtle colors in a tooth.

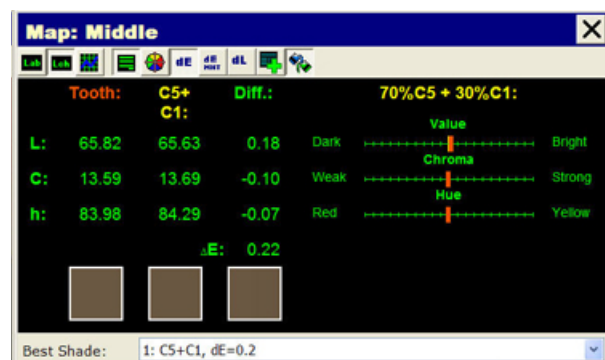
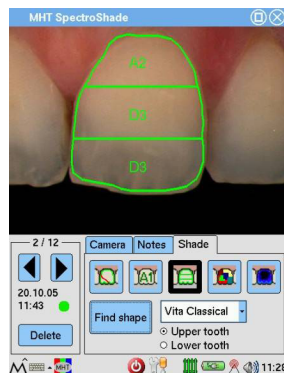
For many years, experts have been searching for a tool that can read the shade of the tooth and eliminate this manual task. Only recently has technology given us an incredible solution.

SpectroShade™

In 1995, Markus Berner, a Swiss engineer based in Zurich, Switzerland joined with Carlo Gobbetti, an Italian businessman and entrepreneur, to form Medical High Technology (MHT). Their mission was to develop a revolutionary new device to accurately and consistently measure the color parameters of teeth, and compare them with existing shade standards.

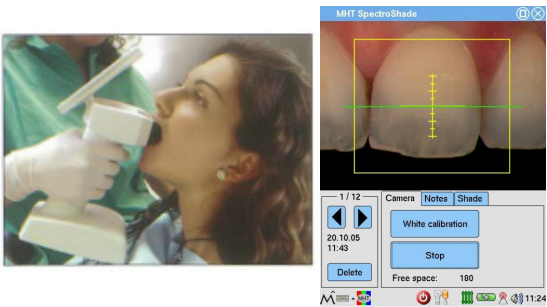
In 2006, MHT developed the "Micro" version of the SpectroShade™. Now that the device is portable, the shade can be read directly from the screen! This allows the user to instantly and confidently determine the correct shade.

The science behind the SpectroShade is the Spectrophotometer. The technology is superior because it actually measures the wavelength of the light. It then compares the difference in hue, chroma and value to the shade guide chosen, enabling it to pick the shade with the smallest delta.

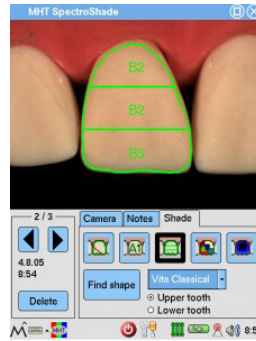


How to Use

One of the advantages of the SpectroShade is simplicity: *Take the Picture, Read the shade & Fill out the Rx.* Software is also included to upload the images and record the shades for future use, if so desired.



1 - Take the Picture



2 - Read the Shade



3 - Fill out the Rx

Reviews and Studies

Numerous studies and reviews have determined the validity and accuracy of the SpectroShade. I urge you to read the review by Dr. Reinitz to get a practical viewpoint.

Publication: Journal of Dental Research, 2002 Volume 81: pages 578-582

Link: <http://jdr.iadrjournals.org/cgi/content/abstract/81/8/578>

Title: Visual and Spectrophotometric Shade Analysis of Human Teeth

Authors: S. Paul, A. Peter, N. Pietrobon, and C.H.F. Hammerle

Clinic of Fixed and Removable Prosthodontics and Dental Material Sciences, Center for Dental and Oral Medicine, University of Zürich, Plattenstrasse 11, 8028 Zurich, Switzerland

Conclusion: The results suggest that spectrophotometric shade analysis is more accurate and more reproducible compared with human shade assessment.

Publication: IADR 2003 Conference

Link: http://iadr.confex.com/iadr/2003Goteborg/techprogram/abstract_35028.htm

Title: Clinical Comparison of Conventional vs. Spectrophotometric Shade Matching for Crowns

Authors: S. PAUL, A. PETER, R. JUNG, C. RAMEL, F. WETTSTEIN, V. GOH, A. HAGMANN, and C.H.F. HAMMERLE, University of Zurich, Switzerland

Conclusion: Spectrophotometric shade matching could be used efficiently by graduate students for fabrication of PFM restorations.

Publication: Dental Compare website

Link: <http://www.dentalcompare.com/review.asp?rid=16>

Title: SpectroShade Review

Authors: Richard J. Reinitz, DDS, MBA

Conclusion: The gold standard by which other systems should be judged and indispensable for cosmetic dentistry.