

# VIDENT™

## Dental Technology Update



Winter 2006 • Volume 1

**Benefits of the VITA  
3D-Master® Shade System**

**The VITA® VM Family of Porcelains**

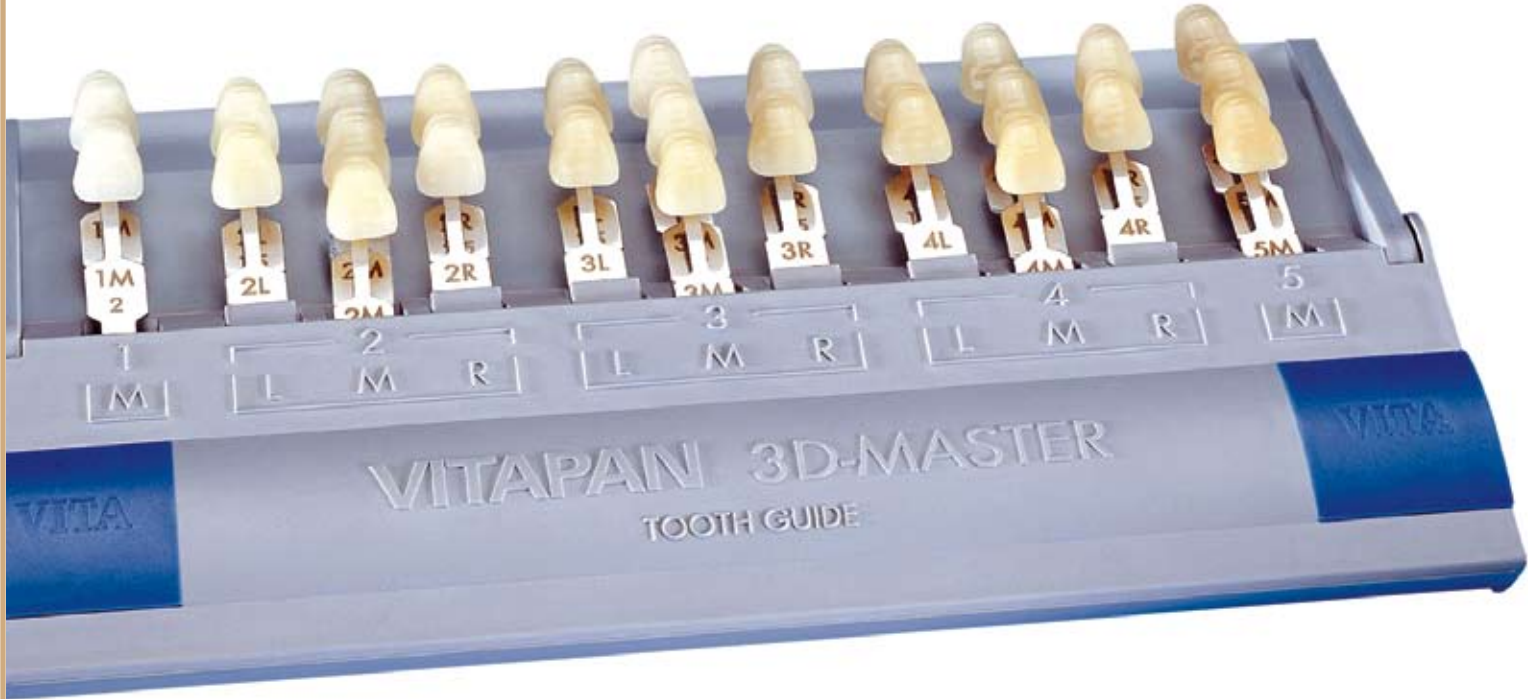
**Enhanced esthetic for partials and  
complete dentures**

**VIDENT™**

3150 E. Birch Street  
Brea, CA 92821



# VITA 3D-Master Shade System, Benefits For Laboratory Fabrication And Quality Control



The VITA 3D-Master Shade system is much more than just an improvement over the original VITA Classical shade guide.

Imagine a system where dentists can choose a patient's shade consistently by first selecting the tooth's 'lightness', then its 'saturation', and then its 'hue'.

The consistency achieved with this system has a major clinical benefit: shade selection offering repeatability with exact communication to the laboratory, ultimately resulting in improved patient case acceptance.

## CROWN ON TOOTH # 8 In-Ceram® crown (inLab® milled) veneered with VITAVM®7



Mesial of tooth # 9 restored in office with Vident 3D-Direct composite. Dentistry and images courtesy of Dr. T. Snyder, crown by M. Baker CDT

## LABORATORY BENEFITS OF USING VITA 3D-MASTER SHADED CERAMICS

Want to put an end to surface staining to reduce the lightness in PFMs, or having to put back missing hue or saturation? Here are a few of the laboratory fabrication benefits you can expect when using genuine VITA 3D-Master ceramics:

- Results are more harmonious and consistent than the original VITA Classical and other shade systems.
- New VM materials do not have traditional opaque dentines; instead they offer Base Dentines that are densely saturated and individually shade-matched chromatic Dentines. These Base Dentines are perfect for use in limited space buildups or as a sub-dentine to enhance the illusion of depth and shade when combined with the new VM dentines.

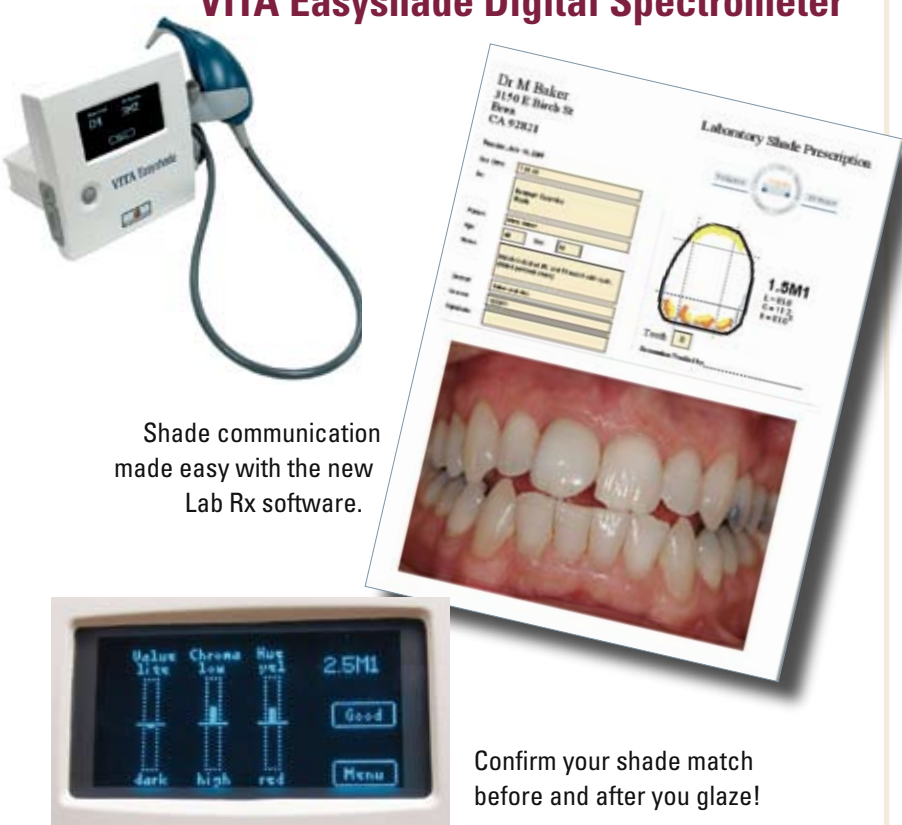


In addition to the ease of application and overall enhanced clarity of VITAVM porcelains, shade matching concerns have become a thing of the past.

VITA 3D-Master shaded materials provide previously unobtainable control of the three dimensions of color: Lightness (Value), Chroma (Saturation intensity) and Hue (Yellow-Red). These are created through strict manufacturing quality control right from ceramic production through to completed laboratory fabrications.

Alternative shade systems may exhibit color matches at their initial buildup thicknesses, but often lose their Chroma and Hue intensity when reduced to match the surrounding dentition. Alternately, excessive dentine thicknesses or different opacous dentine thicknesses may not match your case expectations and appear non-vital.

## Laboratory Quality Control Enters The Computer Age: VITA Easyshade Digital Spectrometer



Shade communication made easy with the new Lab Rx software.

Confirm your shade match before and after you glaze!

The VITA Easyshade digital shade measurement device is a highly useful tool for the ceramist, as it defines how the desired shade is developing between biscuit firings, regardless if the crown is wet or dry. This approach assures that the final success of the shade will exhibit color from within, rather than a stained external surface. The Easyshade offers technicians an unbiased view of quality control procedures.

Try the VITA 3D-Master family of VM (Veneer Materials) ceramic products and experience the difference.

## IN-OFFICE SHADE-TAKING WITH THE VITA 3D-MASTER SHADE GUIDE



- Determine The Lightness Level (Value)**
- Hold shade guide to patient's mouth at arms length
  - Start with darkest group moving right to left
  - Select Value group 1, 2, 3, 4, or 5



### Alternative Method For Determining Lightness Level (Step 1):

- Remove all tabs except the middle "M" tabs
- Select Value group (Pictured with bleach "0" tabs)



### Select The Chroma

- From your selected Value group, remove the middle tab (M) and spread the samples out like a fan
- Select one of the three shade samples to determine Chroma



### Determine The Hue

- Check whether the natural tooth is more yellowish or more reddish than the shade sample selected.



### Final Shade!



# The VITAVM<sup>®</sup> FAMILY



## VITAYZ and VITAVM<sup>®</sup>9

### The Ultimate Combination for the Ultimate Restoration

Every so often a development in dental ceramics comes along that propels the industry to new heights – and the combination of VITA<sup>®</sup>YZ Cubes for CEREC and VITAVM<sup>®</sup>9 Veneering porcelain is the latest. This truly revolutionary combination combines the extraordinary strength of yttrium-stabilized zirconia with the stunning natural beauty of VITAVM<sup>®</sup>9 porcelain.

Zirconia substructures require a ceramic with matched expansion that complements the extraordinary strength of the substrate. VITAVM<sup>®</sup>9 provides compatibility, strength and truly natural esthetics. VITA's In-Ceram YZ, 3M's LAVA, Nobel Biocare's Procera Allzircon, Ceramco's CERCON and others share something in common\* . . . thousands of restorations made with VITAVM<sup>®</sup>9. Dentists everywhere who are prescribing Zirconia for strength are demanding VM<sup>®</sup>9 be used as the veneering porcelain.

**Why VITAVM<sup>®</sup>9?** This extraordinary material offers the ceramist, the dentist and their patients truly outstanding benefits. VM<sup>®</sup>9 exhibits outstanding physical properties, and, like the other VM<sup>®</sup> family ceramics, produces clinical wear characteristics that mimic those of enamel<sup>1</sup>.

- **VM<sup>®</sup>9 is extraordinarily kind to antagonistic dentition (low abrasiveness).**
- **VM<sup>®</sup>9 offers optimum firing stability, preserving shades and morphology even after several firings.**
- **VM<sup>®</sup>9 produces the most life-like results possible in a dental porcelain today.**
- **VM<sup>®</sup>9 uses the proven shade matching capability of the 3D-Master shade system.**
- **VM<sup>®</sup>9 offers higher flexural strength**

Even the esthetic build-up techniques, shared with VITA's other VM porcelains, have been improved over historical systems by introducing a simpler, more logical approach to shading/layering. The results are truly excellent.

**The Basic layering technique consists of just two porcelains** – Base Dentine and Enamel. It is ideal in the situation where the wall thickness is thin (between 0.5mm and 0.8mm). The more intensive shade effect of the Base Dentin allows the liberal use of VM9 Enamel porcelains, producing a very natural-looking restoration. For certain situations, where room is not a problem, a ceramist may opt for the three-porcelain build-up (Build-up Technique), which includes Base Dentine, Dentine and Enamel. This technique allows for a reduced, yet more

individual application of VM9 Enamels, due to the light modification characteristics created by the combination of the shade-carrying Base Dentin and the more translucent Dentine.

As with all VITA porcelain systems, there is a full, comprehensive line of Effect Powders. These include Chroma Plus, Effect Liners, multiple Enamel shades, Mamelon, Gingiva, Effect Pearl and Opal Translucent powders, which enable ceramists with any level of experience to create the most natural-looking restorations possible.

1 Zirconia Based Ceramics: Material Properties, Esthetics and Layering Techniques of a New Veneering Porcelain, VM9, QDT 2003, McLaren, E., Giordano, R.

#### VM<sup>®</sup>9 Is The Result Of Years Of Research Raising The Bar For Ceramists And Dentists Everywhere.

##### Here is what discerning ceramists are saying about it:

"The VM9 material for Zirconia frameworks layers in a very similar manner as the VM7 material for alumina frameworks. The colors are essentially the same. This is a huge benefit to be able to work with multiple materials for the different core systems using the same techniques, thus the learning curve to use VM9 is short."

**Ed McLaren, D.D.S.**  
Director, UCLA Center for Esthetic Dentistry, Los Angeles, CA

"VM9 is truly an enhancement in porcelain. The handling characteristics and the true color - directly out of the bottle - makes this porcelain a pleasure to use."

**Brad Slominski**  
Denta Crafters, Marshfield, WI

"VM9 is the benchmark in shade accuracy that all other ceramic systems will be compared to."

**Ken Chizick, RDT, CDT**  
University of Manitoba, Canada

"VM9, like VM7, is a fine particle porcelain designed to improve wear kindness, stability during firing and mechanical properties resulting in an enhanced clinical result."

**Dr. Russell Giordano, D.M.D., D.M.Sc.**  
Director of Biomaterials  
Boston University

"We love VM9 porcelain with our Procera and Cercon substructures, particularly when prescribed in the VITA 3D Master Shades. The extremely bright, high value cores

are often a challenge when working on darker shades or when there is minimal reduction, and we have found the Effect Bonders to work especially well in these cases. We find more and more of our outsourcing customers are requesting VM9 porcelain to finish their zirconia restorations."

**Mark Jackson**  
Precision Ceramics, Montclair, CA

"I really enjoy using VM9 because it adds a lot of versatility to what I can offer my accounts. It's got the same great technical and clinical attributes of VM7 so it enables me to systematize my porcelain product offering."

**Ed Flocken, CDT**  
Flocken Dental Lab.  
Hendersonville, NC

**inVizion**<sup>™</sup>  
A VITA ALL-CERAMIC RESTORATION



## Always strong, always beautiful all-ceramics



Ceramics and dentistry by Dr. Ed McLaren

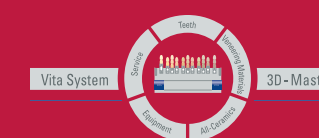
inVizion all-ceramic restorations milled on the Sirona inLab<sup>®</sup> system combine the incredible strength of VITA YZ ceramic with the highly esthetic properties of VITAVM<sup>®</sup>9 all-ceramic porcelain. VITA YZ (yttrium stabilized zirconium oxide) is among the strongest all-ceramic dental

material available and boasts an incredible 900+ MPa flexural strength. This biocompatible restoration is available in 29 primary VITA 3D-Master<sup>®</sup> shades as well as 52 intermediate shades. Call or visit our web site for the name of an inVizion certified lab near you.

**800-828-3839**

**800-263-4778 in Canada • www.vident.com**

**VITA**<sup>®</sup>



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# Enhanced Aesthetics

## FOR PARTIAL AND FULL DENTURES



### Why customize prefabricated teeth?

Patients have increasingly come to expect the same high esthetics from their partial and full dentures that are typically found in all-ceramic restorations.

#### VITA PHYSIODENS® Anteriors

As an element of dental restorations, VITA PHYSIODENS denture teeth fulfill the high demand for esthetics. If additional customizing of the acrylic teeth is desired, or if adaptation to the residual teeth is required for a partial restoration, patient specific aesthetics can be achieved through simple and easily reproducible characterization.



The lifelike surface structure and natural shape of VITA Physiodens provide the perfect palette for patient-specific restorations. Additionally, the natural designs allow closure of interdental spaces.

## How do you proceed when you intend to customize acrylic teeth ?



(Fig.1)



(Fig.2)



(Fig.3)



(Fig.4)

### Customization in the incisal and neck area can be successfully completed in a short work time:

Lingual reduction of the VITA PHYSIODENS anterior is required for customization in the incisal area. In this way the structure of the labial surface is retained – subsequent, time-consuming contouring of a natural surface relief can be omitted. However, it must be kept in mind that if the remaining layer thickness decreases, the intensity of the materials which are subsequently layered will increase.

Adequate grinding of marginal areas (Fig.2) is required for smooth transition between VITA PHYSIODENS acrylic teeth and the light-curing microparticle composite VITAVMLC. To prepare the acrylic teeth for optimum bonding, tungsten carbide burs should be used as grinding tools.

The desired reduction is performed in the cervical area without altering the tooth shape. (Fig.3)

The ground surface is cleaned carefully and wetted with VITAVMLC MODELLING LIQUID. (Fig.4)

**The completed restoration**  
VITAPAN teeth can be customized in accordance with the processing method described above.

Depending on which type of customization is to be achieved, the suitable shade is layered in (Fig.5): for this purpose ten different VITAVMLC PAINT materials are available; additionally, VITA Akzent powder can be mixed with VITAVMLC WINDOW and applied to selected points. Intermediate polymerizing needs to be carried out in order to fix the materials.

To ensure perfect application, a thin layer of VITAVMLC WINDOW is applied. The tooth is built up with VITAVMLC ENAMEL, EFFECT ENAMEL or NEUTRAL materials (Fig.6) – BASE DENTINE or EFFECT LINER materials in the cervical area – and polymerized. In case of a layer thickness of more than 2 mm, end polymerization must be carried out; afterwards layering can be continued if the dispersive layer is preserved.

After the end polymerization, the restoration is finished using suitable abrasive tools and polished. (Fig.7)

**Note:** VITAVMLC PAINT and mixtures of VITAVMLC WINDOW and VITA Akzent should not be placed on the surface and need to be completely coated with VITAVMLC dentin or enamel materials. When applying the material, air inclusions must be avoided. For information on polymerizing and hazard information refer to the working instructions 1200E available from Vident.



(Fig.5)



(Fig.6)



(Fig.7)





# ARCON™

## PLASTER-LESS ARTICULATOR

**Mount cases in less than two minutes with no plaster, no gluing and no mess!**

Vident's Arcon Plaster-less Articulator offers many of the advantages of expensive, heavy, semi-adjustable articulators, including true lateral and protrusive excursions and overall natural condyle movement. What makes the Arcon Articulator unique is that it uses no plaster to articulate models. Even tall models, up to 40mm, can be articulated and are ready to use in just two minutes.

Unique formers are used to create clean, uniform models which are mounted and tightened onto the articulator frame using a special nut. Consistent positioning allows technicians and dentists to move cases from one articulator to another without compromising position or accuracy. Remounting is quick, easy and exact.

In addition to replicating natural condylar movements, the Arcon Plaster-less Articulator can be used with a special incisal table and guide pin to regulate incisal guidance.

**VIDENT RAISES THE BAR ON MODEL ARTICULATION!**



- Eliminates the time and mess of working with plaster
- True lateral movement replicates natural condylar movement
- Fits models up to 40mm in height
- Model formers for clean and uniform models
- Move cases from one articulator to another with the same results
- Quick and easy to remount
- Can be used with or without incisal guide pin and table

**To learn more about how the Arcon Plaster-less Articulator can help your lab's accuracy and production**

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**inLab®**  
**TRAINING COURSE**

Since the introduction of the Sirona inLab® in 2002, Vident's Technical Trainers have taught over 80 hands on inLab courses.

These courses have certified over 800 dental technicians and dentists in the application of digital dentistry and the proper fabrication of all-ceramic restorations.

**The experience of our technical training staff with the inLab software is unsurpassed**, and their knowledge of the software, stemming from daily use over the years, adds a quality to your training that is highly practical and insightful.

We were there with Sirona when inLab was introduced, designing the best training experience possible, and as the software and materials continue to improve, we continually adapt our training to incorporate the latest in high technology, assuring you an extremely thorough, high-tech educational experience.

Back in the office, you will be able to quickly apply your experience, comfortable in the fact that **we are here to offer you experienced technical support every day.**

Our technical support staff boasts over 100 years of combined dental laboratory experience, ensuring that no matter what your need or how intricate your question, we'll be able to help. Quickly.



Meet Our Team of Experienced inlab Trainers

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Guess Who's Been Milling Around for 20 Years?

At VITA®, we're proud to have been with CEREC® from the start

Sirona and VITA have been partners in CAD/CAM technology for more than 20 years. The relationship began on September 25, 1985 with the first treatment of a patient with the Sirona system using Vitablocs®. Since the birth of CEREC, millions of successful restorations have been placed worldwide and CEREC and VITA have been proven as the CAD/CAM system and material of choice for precise, predictable, esthetic results.

Call today and benefit from one of the most tried-  
and-true relationships in the history of dentistry.

Happy Birthday, CEREC and VITA!

**1987**  
CEREC 1 is introduced (chief indication: single and dual-surface inlays; material: VITABLOCS®)

**1988**  
VITA introduces CEREC VITABLOCS®

**1989**  
VITA partners with MIT to develop VITABLOCS Mark II

**1990**  
International CEREC Symposium at the University of Zurich

**1991**  
Hydraulic machining drive replaced with electronically controlled motor

**1992**  
VITA introduces first CAD/CAM specific bloc, CEREC VITABLOCS Mark II at IDS in Cologne

**1993**  
VITA introduces glazing furnace for CEREC restorations

**1994**  
CEREC 2 introduced

**1995**  
VITA develops nano-technology for wear-kind porcelains

**1996**  
VITA AKZENT STAINS with ultra-fine grain size for enhanced esthetic results

**1997**  
CROWN 1.0 program for producing full-ceramic posterior crowns  
  
VITA introduces In-Ceram Alumina and Spinell blanks

**1998**  
CROWN 1.1 program for producing posterior and anterior restorations  
  
VITA introduces Esthetic Line VITABLOCS

**1999**  
VITA In-Ceram Zirconia blanks for crowns

**2000**  
CEREC 3 introduced

**2001**  
VITA In-Ceram Alumina and Zirconia blanks for bridges

**2002**  
More than 2,500 CEREC users in USA and over 5,000,000 CEREC restorations worldwide

**2003**  
VITABLOCS TriLux Tri-shaded milling blocs  
  
CEREC 3D introduced

**2004**  
9,000,000 restorations and counting

**2005**  
Over 5,000 CEREC users in USA  
  
Vident introduces inVizion™

**2006**  
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