VITABLOCS®

Proven a million times over

VITA shade determination | VITA shade communication | VITA shade reproduction | VITA shade control

Date of issue: 10.19

VITA – perfect match.

VITA

VITA CAD/CAM MATERIALS – for ideal solutions. Proven a million times over.

CONCEPT AND BENEFITS

VITABLOCS® are feldspar ceramic blanks for resistant, highly esthetic restorations and are clinically proven a million times over. Read more about the optical properties and clinical long-term stability on the following pages.

VITABLOCS® – RELIABLE, HIGHLY ESTHETIC AND COST-EFFECTIVE

What?

- tooth-colored feldspar ceramic blanks for unsurpassed integration of the shade, proven a million times over

What for?

- ideal solutions for esthetic reconstructions of minor defects and for highly esthetic restorations in the visible region

With what?

- VITABLOCS blanks are available in the following versions
  - monochromatic, tooth-colored: VITABLOCS Mark II
  - polychromatic, tooth-colored: VITABLOCS TriLuxe forte/RealLife

PROVEN A MILLION TIMES OVER. BRILLIANT PLAY OF SHADE AND LIGHT

VITABLOCS® Mark II

- monochromatic, tooth-colored feldspar blanks for small, defect-oriented restorations with shades that match those of residual teeth

VITABLOCS TriLuxe forte®

- polychromatic, tooth-colored feldspar blanks with integrated four-layer shade gradient to reproduce the natural play of colors in the esthetic region

VITABLOCS RealLife®

- polychromatic, tooth-colored feldspar blanks with integrated 3D-layer structure to reproduce the natural shade gradient in the anterior region

THE ADVANTAGES

Reliable

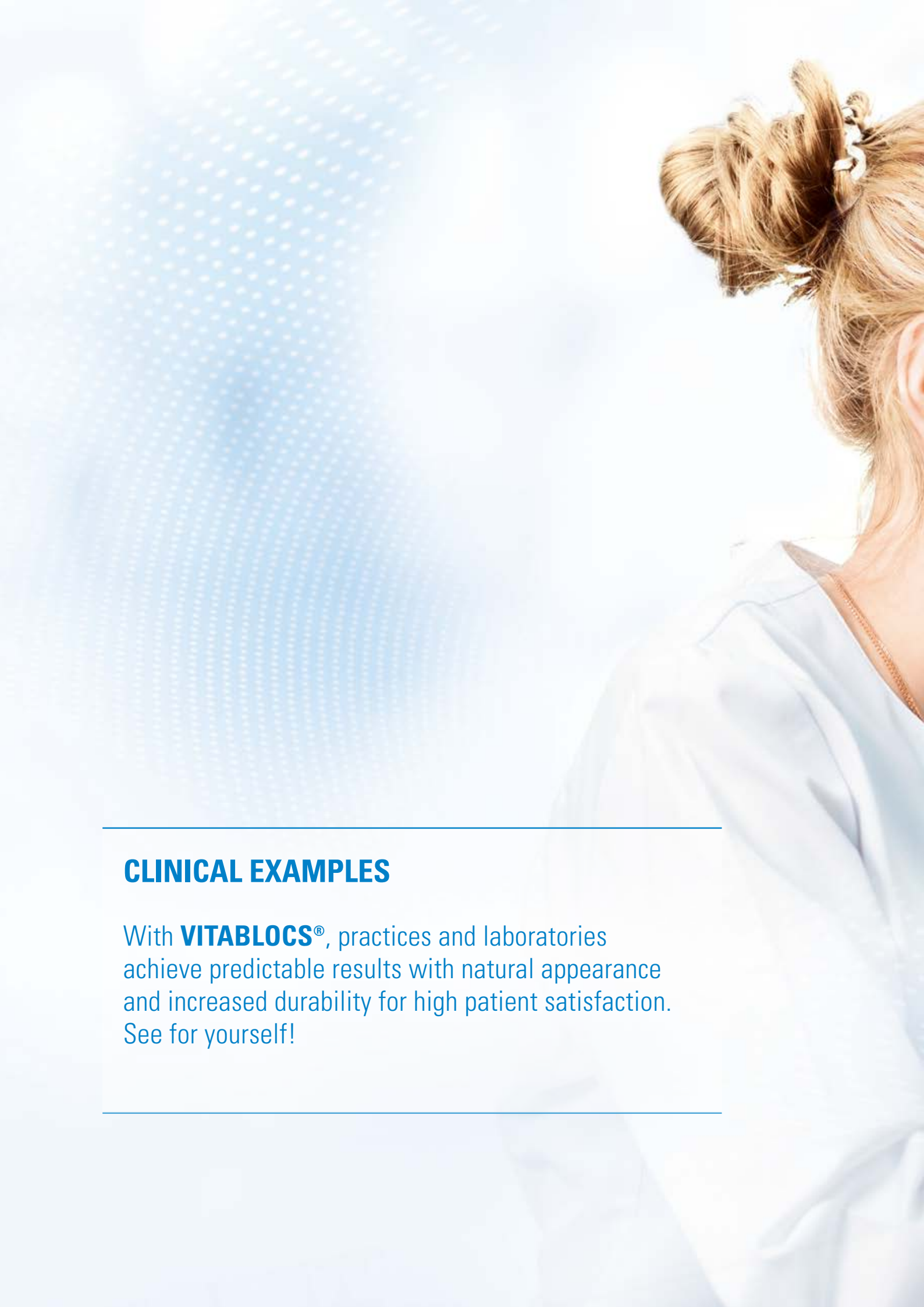
- fabricating reliable restorations,
  thanks to a durable material with very good clinical long-term reliability

Highly esthetic

- highly esthetic restorations,
  thanks to a material with superior play of colors and light

Cost-effective

- cost-effective reconstruction,
  thanks to time-saving CAM fabrication and efficient finalization polishing
  without any firing process



CLINICAL EXAMPLES

With **VITABLOCS®**, practices and laboratories achieve predictable results with natural appearance and increased durability for high patient satisfaction. See for yourself!

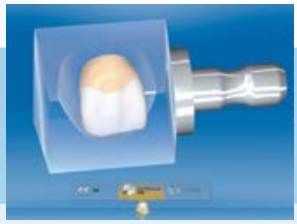
VITABLOCS IN THE CLINICAL USE

CASE STUDY 1: Natural anterior reconstruction using a polychromatic VITABLOCS RealLife blank

1. Highly rotated and non-vital central incisor 11.

2. Leveling of the dental arch within the scope of preparation.

3. Optimum adjustment of the shade and translucency gradient.



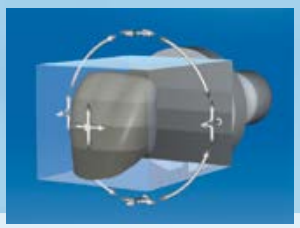
4. Positioning of the crown restoration before milling.

Photos provided by: Dr. Shoji Nakamura, dentist, Tokyo, Japan

CASE STUDY 2: Lifelike anterior restoration using a polychromatic VITABLOCS TriLuxe forte blank

1. Discoloration of the root canal treated incisor.

2. Virtual copy of the original morphology of tooth 11.



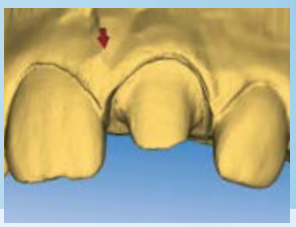
3. Adjusting the shade and translucency gradient.

4. Natural appearance of the monolithic restoration on the model.

Photos provided by: Dr. Mon Li, dentist/Sally Hsieh, dental technician, CEREC Asia, Taipeh, Taiwan

CASE STUDY 3: Highly esthetic anterior reconstruction using a polychromatic VITABLOCS RealLife blank

1. Clinical situation prior to the optical impression.



2. Optical impression.

3. Initial crown after fine morphological adjustments in situ.

4. Adhesive bonding: light-curing.

Photos provided by: Dr. Andreas Kurbad, dentist, Viersen, Germany

CASE STUDY 4: Permanent inlay restoration using a monochromatic VITABLOCS Mark II blank

1. Initial situation with insufficient composite restorations.

2. CAD/CAM-specific inlay preparation of the teeth.

3. Try-in of the VITABLOCS Mark II inlays.

4. Application of the adhesive.

Photos provided by: Dr. Alessandro Devigus, Bülach, Switzerland

5. Final integration of the monolithic crown into the esthetic region.

6. The permanently bonded VITABLOCS RealLife restoration in situ.

5. The highly esthetic, monolithic result in situ.

6. Exact reproduction of the shade effect with VITABLOCS.

5. Completed crown after endodontic treatment and with post-core construction.

6. Final result in situ on tooth 21.

5. Removal of excess material in the approximal area using flexible discs.

6. Final VITABLOCS Mark II inlays after polishing in situ.

FACTS AND EVIDENCE

In clinical long-term studies and test series, **VITABLOCS**®ceramics demonstrate excellent stability. Another positive feature is cost-efficient and precise processing. Key facts and evidence can be found on the following pages.

EVIDENCE FOR EXCELLENT LONG-TERM RELIABILITY

1. VITABLOCS® – 30 years of clinical reliability

VITABLOCS posterior crowns

Initial situation

Result after 20.5 years

Source: PD Dr. Andreas Bindl, dentist, Zurich, Switzerland

VITABLOCS inlays

Initial situation

Result

Source: Dr. A. Devigus, dentist, Bülach, Switzerland

"I've been successfully using VITABLOCS ceramics in my practice for more than 20 years."

Dr. A. Devigus, Bülach, Switzerland, 03/19

1985
VITABLOCS®
Treatment of first patient

1991
VITABLOCS® Mark II

2003
VITABLOCS® TriLuxe

VITABLOCS veneer

Initial situation

Result

Source: PD Dr. A. Bindl, dentist, Zurich, Switzerland;
G. Lombardi, dental technician, Dübendorf, Switzerland

VITABLOCS anterior crown

Initial situation

Result

Source: Dr. A. Kurbad, dentist, Viersen, Germany

"I really enjoy working with VITABLOCS TriLuxe forte because I can quickly achieve an esthetic result."

Dr. A. Reiger, Talheim, Germany, 12/18

"The unique thing about VITABLOCS RealLife is the natural shade effect."

Dr. G. Kade, Waldkirch, Germany, 11/18

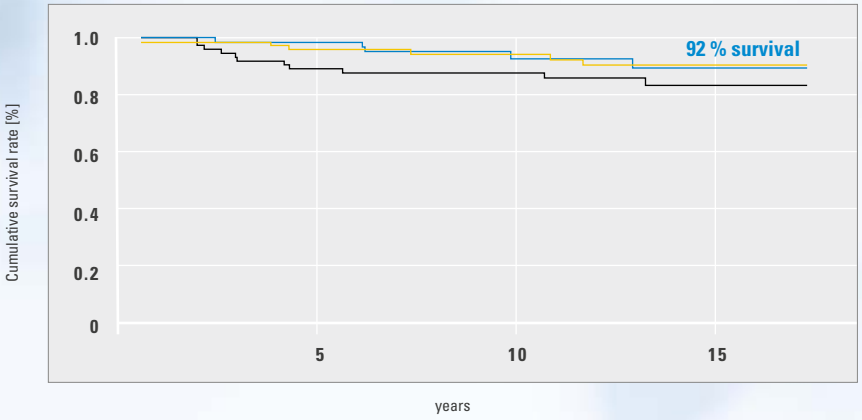
2007
VITABLOCS TriLuxe forte®

2010
VITABLOCS RealLife®

EVIDENCE FOR EXCELLENT LONG-TERM RELIABILITY

2. Very good long-term durability of VITABLOCS® ceramics

17-year results of VITABLOCS Mark II molar crowns

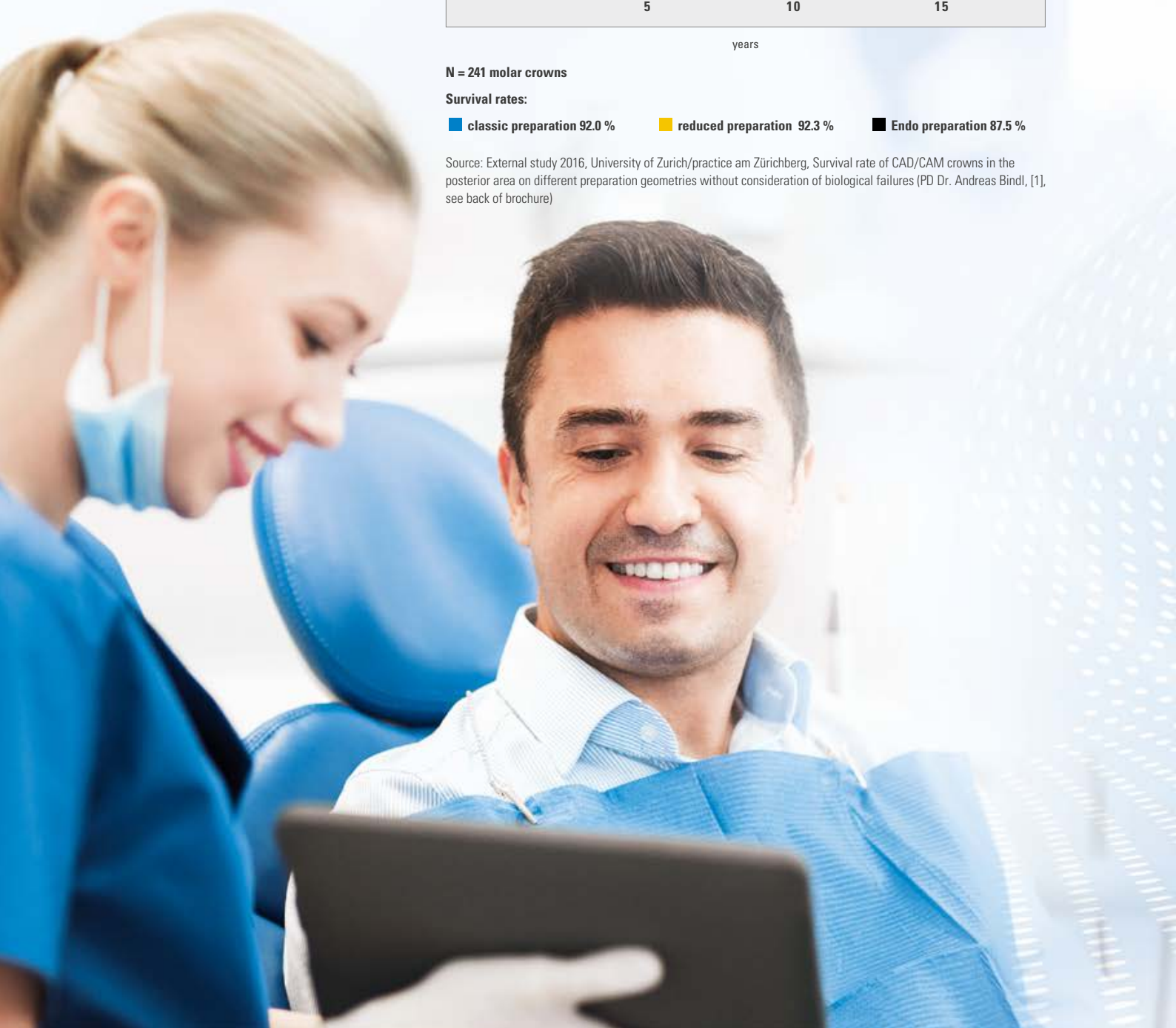


N = 241 molar crowns

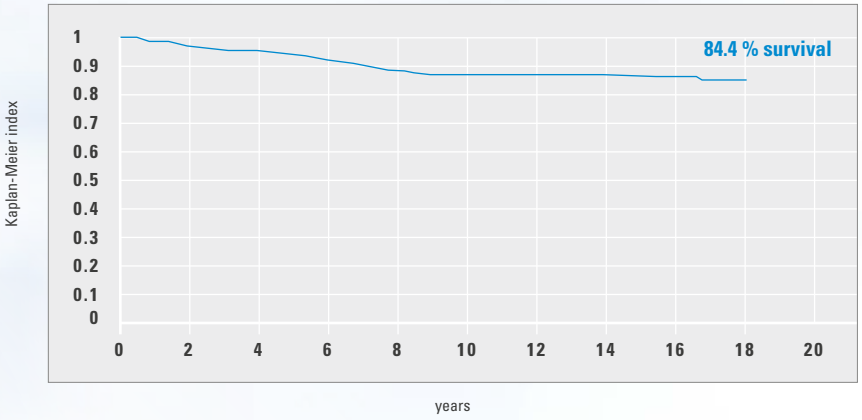
Survival rates:

classic preparation 92.0 % **reduced preparation 92.3 %** **Endo preparation 87.5 %**

Source: External study 2016, University of Zurich/practice am Zürichberg, Survival rate of CAD/CAM crowns in the posterior area on different preparation geometries without consideration of biological failures (PD Dr. Andreas Bindl, [1], see back of brochure)



18-year results of VITABLOCS Mark II inlays*



N = 1011 restorations

Survival rate:

84.4 %

Source: External study 2006, Clinical results of CEREC manufactured inlays from the dental practice over a period of 18 years (Reiss B. Int J Comput Dent, 9, 11 - 22 [2], see back of brochure)

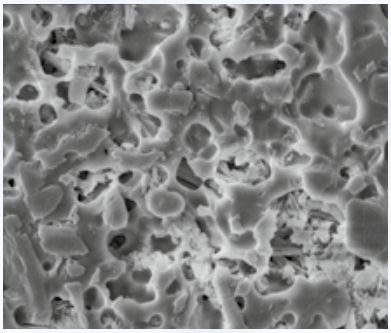
*) Note: The graph primarily shows the survival rate for VITABLOCS ceramics, however, it also includes a small percentage of Dicor MGC restorations (~ 10 %). Both materials produced comparable results.

VITABLOCS

- show very good clinical long-term durability in studies and often achieve what is considered the gold standard for success/survival rates.

EVIDENCE FOR MATERIAL DURABILITY/ABRASION RESISTANCE

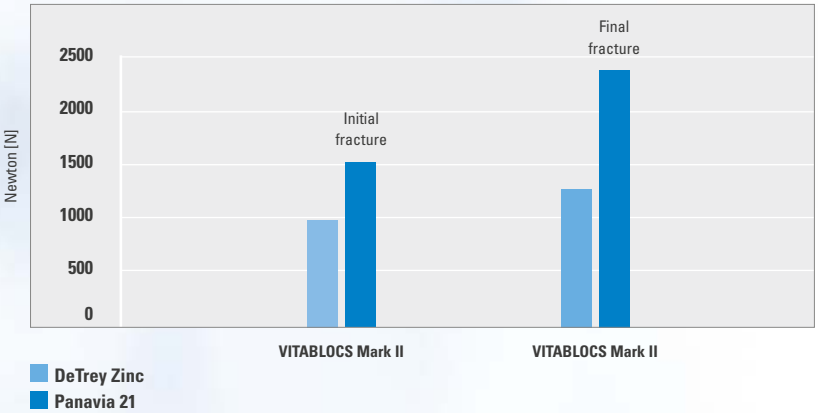
1. Good load capacity after adhesive bonding



SEM picture: HF-etched feldspar ceramic with retentive surface structure

Source: Internal study VITA F&E; SEM picture of VITABLOCS, etched with 5% hydrofluoric acid for 60 seconds, magnification x 5000 (A. Coldea 2010 [3], see back of brochure)

Fracture load study: VITABLOCS crowns



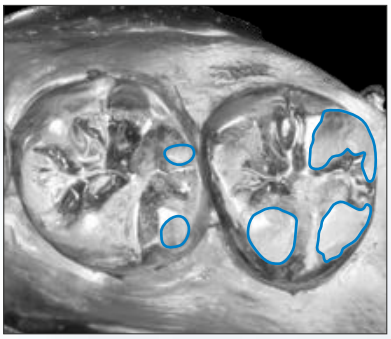
Source: External study 2006, Strength and Fracture Pattern of Monolithic CAD/CAM-Generated Posterior Crowns (Bindl, A., Lüthy, H., Mörmann, W. H., Dental Materials, 22(1), 29 – 36, [4], see back of brochure)

Note: The use of conventional bonding for VITABLOCS restorations has not been approved by VITA!

VITABLOCS

- Feldspar ceramic crowns feature high load capacity after adhesive bonding and achieve fracture load values of more than 2000 Newton (= final fracture) in tests.
- After hydrofluoric acid etching, feldspar ceramics reveal a retentive surface for good micromechanical retention.

2. Enamel-like wear resistance

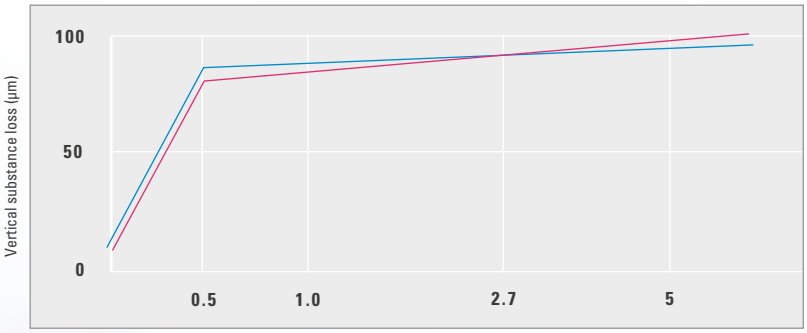


Abraded surfaces after 14.5 years

SEM photo; functionally intact occlusal surfaces of VITABLOCS crowns after 14.5 years

Source: External study 2016, University of Zurich/ practice am Zürichberg, Epoxy model of impression after 14.5 years, vapor-plated with gold, b/w photo of the model (PD Dr. Andreas Bindl), [1], see back of brochure)

Natural abrasion behavior



VITABLOCS Mark II
Enamel

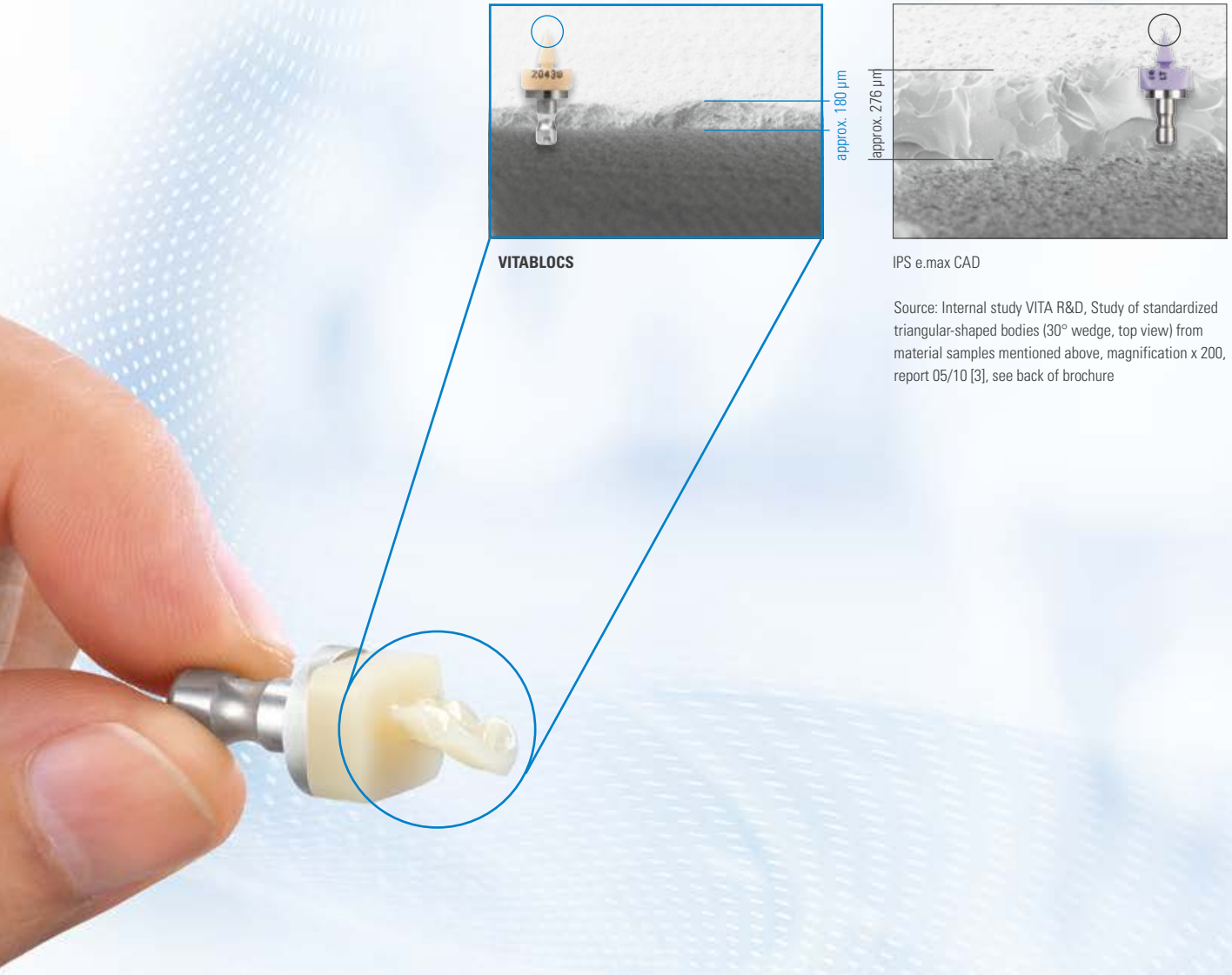
Source: External study 1991, Wear of Cerec and other Restorative Materials. In Proceedings of the International Symposium on Computer Restorations: State of the Art of the Cerec Method, (Krejci, Berlin: Quintessence Publishing, 245 – 251, [5], see back of brochure)

VITABLOCS

- In tests, feldspar ceramics reveal natural, enamel-like wear resistance, thanks to the particularly fine crystal structure.

EVIDENCE FOR PRECISE AND EFFICIENT CAM FABRICATION

1. Precise results for exact marginal fit



VITABLOCS

IPS e.max CAD

Source: Internal study VITA R&D, Study of standardized triangular-shaped bodies (30° wedge, top view) from material samples mentioned above, magnification x 200, report 05/10 [3], see back of brochure

VITABLOCS

- enables restorations with precise marginal areas to achieve an exact marginal seal, thanks to high edge stability.
- produces high marginal precision in tests for objects with thinning marginal areas.

2. Fast fabrication in a few minutes

		Inlay	Anterior crown	Posterior crown
VITABLOCS	normal	10:27	10:35	13:29
	fast	6:24	7:03	9:26
IPS e.max CAD	normal	12:17	12:36	14:58
	fast	10:00	8:11	12:14

Source: Internal study VITA R&D, Milling times for three restoration types with Sirona MC XL, report 05/12, [3], see back of brochure

VITABLOCS

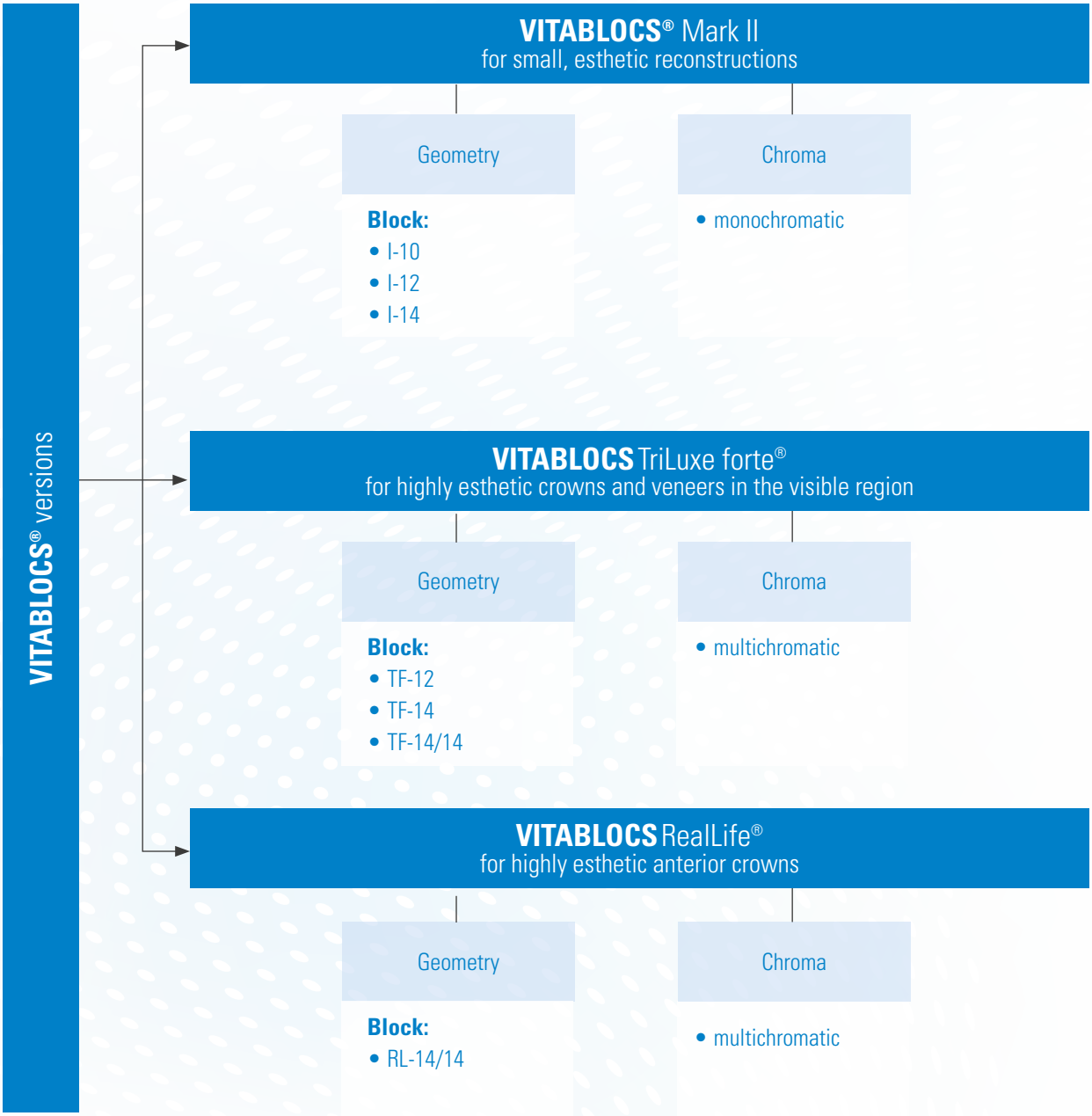
- enables fast fabrication of restorations, since seating can be done immediately after the CAM process and polishing.
- demonstrated fast processing properties with CAM techniques/ equipment within a few minutes.

SYSTEMS AND COMPONENTS

VITABLOCS® blanks are available in numerous versions, geometries and shades. Perfectly matched system components enable efficient processing. Read on to learn more.


Charakterisierung
mit VITA AKZENT Plus
Individualisierung
mit VITA VM 9
Befestigung mit
VITA ADIVA LUTING SOLUTIONS

AVAILABLE VERSIONS, GEOMETRIES, CHROMATICITIES



AVAILABLE SHADES

VITA SYSTEM 3D-Master range of shades

Shades	0M1C	1M1C	1M2C	2M1C	2M2C	2M3C	3M1C	3M2C	3M3C	4M2C
VITABLOCS® Mark II	*									
VITABLOCS TriLuxe forte®										
VITABLOCS RealLife®										

VITA classical A1–D4

Shades	A1C	A2C	A3C	A3.5C	A4C	B2C	B3C	C2C	C3C	D3C
VITABLOCS® Mark II										
VITABLOCS TriLuxe forte®										

*) Only for I12, I14

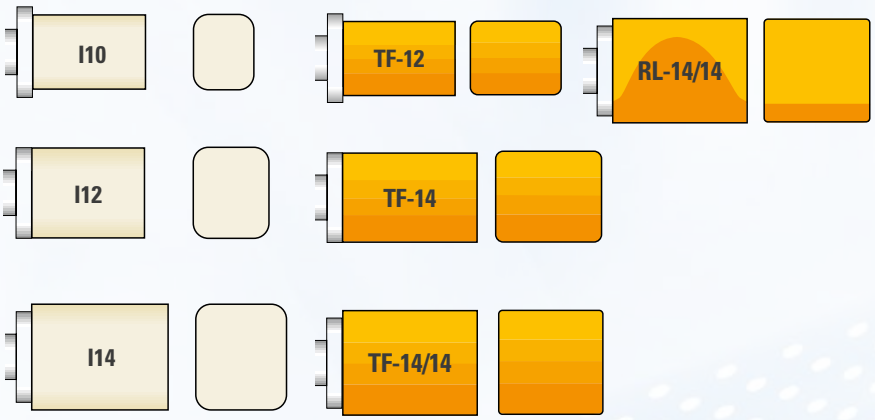
RECOMMENDED INDICATIONS

VITABLOCS®

Indication	**VITABLOCS** Mark II	**VITABLOCS** TriLuxe forte	**VITABLOCS** RealLife
Inlay	●	○	○
Onlay	●	○	○
Veneer	○	●	●
Endo-crown [1]	○	○	○
Anterior crown [2]	○	●	●
Posterior crown [2]	○	○	○
Veneer structure for the VITA Rapid Layer Technology	●	●	–

● recommended ○ possible 1) molars only 2) not recommended for implant restorations

AVAILABLE GEOMETRIES (geometries in mm)



- **VITABLOCS** Mark II: **I10:** 8 x 10 x 15; **I12:** 10 x 12 x 15; **I14:** 12 x 14 x 18
- **VITABLOCS** TriLuxe forte: **TF-12:** 10 x 12 x 15; **TF-14:** 12 x 14 x 18; **TF-14/14:** 14 x 14 x 18
- **VITABLOCS** RealLife: **RL-14/14:** 14 x 14 x 18

AVAILABLE SYSTEM COMPONENTS

Characterization
with VITA AKZENT Plus

Individualization
with VITA VM 9

Bonding with
VITA ADIVA LUTING SOLUTIONS

SYSTEM COMPATIBILITY

VITABLOCS – SYSTEM SOLUTIONS*

VITA offers VITABLOCS with specific holder systems for the CAD/CAM systems:

- CEREC/inLab (Dentsply Sirona), PlanMill 40/PlanMill 40 S (Planmeca),
- Ceramill mikro IC/Ceramill Motion 2/Ceramill Matik (Amann Girrbach AG),
- TS150 (Glidewell Laboratories), KaVo ARCTICA/Everest (KaVo Dental GmbH)

VITABLOCS – UNIVERSAL SOLUTIONS*

VITA offers VITABLOCS with the universal holder system for the CAD/CAM systems:

- CORiTEC line (imes-icore GmbH), DGSHAPE DWX-4W (DGSHAPE Corporation),
- CS 3100 (Carestream Dental, Inc.), N4/S1/S2/Z4/R5 (vhf camfacture AG)
- Zfx Inhouse5x (Zfx GmbH), Organical Desktop line (R+K CAD/CAM Technologie GmbH & Co. KG)

*) Note: The range of VITA CAD/CAM material versions/geometries/shades available may vary for individual CAD/CAM system partners or systems.

ADHESIVE BONDING SYSTEMS

Recommended system

- **VITA ADIVA** LUTING SOLUTIONS (full-/self-adhesive*)

Other systems

- Variolink Esthetic (Ivoclar Vivadent), Vitique (DMG)
- NX3 (KerrHawe), Calibra Ceram (DENTSPLY), RelyX Ultimate (3M ESPE), Bifix QM (VOCO)
- PANAVIA V5 (Kuraray), DuoCem (Coltène)

*) Self-adhesive systems may only be used for crown restorations.

IDEAL SOLUTIONS IN THE PROCESS

Shade determination

- For digital shade determination, use **VITA Easyshade** V, and for visual shade determination, the **VITA Linearguide 3D-MASTER** or the **VITA classical A1–D4 shade guide** can be used.

CAD/CAM fabrication

- For CAD/CAM-fabrication, VITA offers **VITABLOCS** Mark II, TriLuxe forte and RealLife – simply select the material solution that fulfills your individual requirements.

Characterization Glaze*

- For feldspar ceramics, use **VITA AKZENT** Plus stains and **VITA VM 9** veneering material.

Firing*

- Glaze, stains and/or individualization firing can be carried out with the **VITA VACUMAT 6000 M** furnace or with **VITA SMART.FIRE**.

Polishing

- In the case of VITA feldspar ceramics, use polishing systems suitable for silicate ceramics (e. g., **VITA Karat diamond polishing set**).

Bonding

- **VITA ADIVA LUTING SOLUTIONS** includes all products for self-adhesive and full adhesive bonding.

*) Note "Optional process steps"
The feldspar ceramic material can be inserted immediately after milling and polishing. As a result, the process steps mentioned above are optional for feldspar ceramics.

NOTES

NOTES

NOTES

WE WILL BE GLAD TO HELP

› More information about the products and processing is also available at **www.vita-zahnfabrik.com**

Hotline Sales Support

Mr. Udo Wolfner and his team (Internal Sales Department) will be glad to assist you with orders or questions about the delivery, product data and marketing materials.

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8:00 a.m. to 5 p.m. CET
E-mail: info@vita-zahnfabrik.com

Technical Hotline

If you have technical questions concerning VITA product solutions, you can contact our technical specialists Mr. Ralf Mehlin or Mr. Daniel Schneider.

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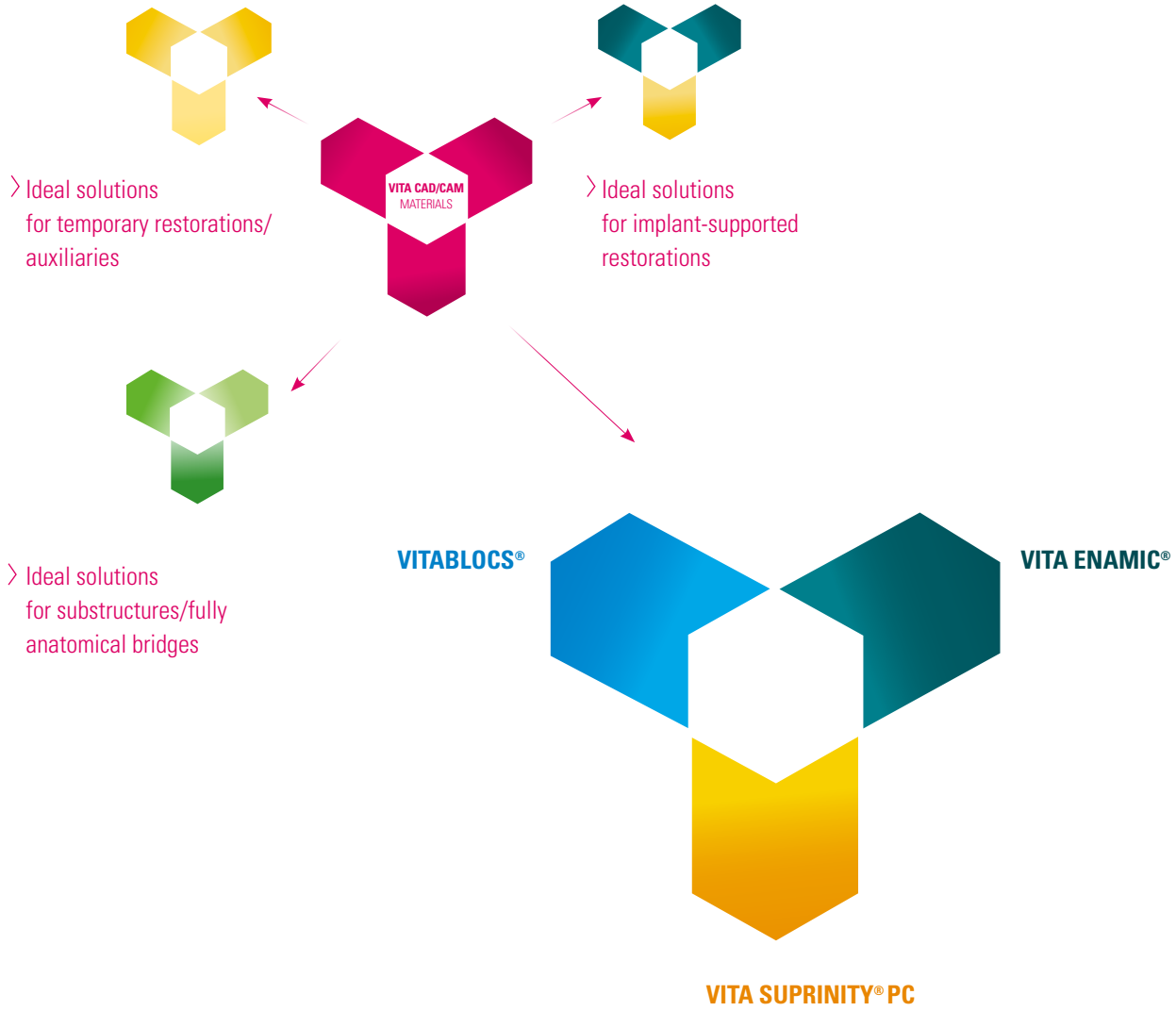
Fax +49 (0) 7761 / 56 24 46
8:00 a.m. to 5 p.m. CET
E-mail: info@vita-zahnfabrik.com

› Additional international contact information can be found at **www.vita-zahnfabrik.com/contacts**

VITA CAD/CAM MATERIALS – for ideal solutions. Proven a million times over.



Ideal solutions for single-tooth restorations

Over the course of 30 years, more than 20 million single-tooth restorations have been fabricated using esthetic tooth-colored VITA CAD/CAM ceramics. Today, practices and laboratories can choose the ideal material solution for their individual needs, from highly esthetic feldspar ceramics, high-strength glass ceramics and innovative hybrid ceramics to treat a variety of single-tooth indications. In addition, these CAD/CAM ceramics are distinguished by simple and efficient processing.

Literature:

1. PD Dr. A. Bindl 2016
Überlebensrate von CAD/CAM-Kronen im Seitenzahngebiet auf unterschiedlichen Präparationsgeometrien, University of Zurich/practice am Zürichberg, Switzerland

REM-Foto nach einer Liegezeit von 14,5 Jahren, University of Zurich/practice am Zürichberg, Switzerland.

2. Dr. B. Reiss 2006
Klinische Ergebnisse von Cerec-Inlays aus der Praxis über einen Zeitraum von 18 Jahren. Int J Comput Dent, 9,11–22, 3/2006.

3. Internal studies, VITA F&E
VITA Zahnfabrik H. Rauter GmbH & Co. KG
Ressort Forschung und Entwicklung
Spitalgasse 3, 79713 Bad Säckingen, Deutschland

Dr. Enno Bojemüller, Leiter Festkörperanalytik VITA F&E,
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Dr.-Ing. Andrea Coldea, Materialentwicklung F&E,
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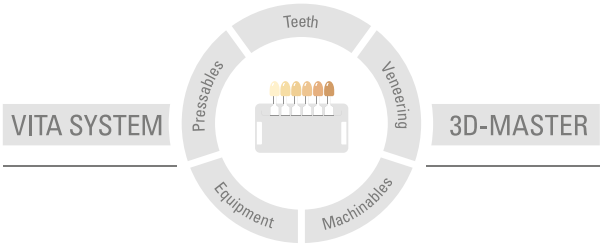
Dr. Berit Müller, Projektleiterin VITA F&E, VITA Zahnfabrik, Bad Säckingen
Prof. Dr. Dr. Jens Fischer, Ressortleiter F&E, VITA Zahnfabrik, Bad Säckingen

Detailed test data can be provided upon request.

4. Dr. A. Bindl, H. Lüthy, W. H. Mörmann 2006
Strength and Fracture Pattern of Monolithic CAD/CAM-Generated Posterior Crowns. Dent Mat, 22(1), 29-36, 1/2006.

5. I. Krejci 1991
Wear of Cerec and other Restorative Materials. In: Proceedings of the International Symposium on Computer Restorations: State of the Art of the Cerec Method. Berlin: Quintessence Publishing, 245-25, 05/1991.

More information about VITABLOCS
can be found at: www.vita-zahnfabrik.com.



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