

Editorial



Dear Reader

Innovative companies such as Ivoclar Vivadent have coped particularly well with the effects of the current economic crisis. Innovations, however, go far beyond the technological and financial capabilities of a company. At Ivoclar Vivadent, innovations include the interplay of new product systems, new production procedures, new organizational structures and optimized flows of goods.

Results of our strategic focus on innovation are already evident in our Care program and in our concept for Telio: Temporary chairside and labside materials in combination with various luting options provide the basis for the quality of the subsequent long-term restoration.

The IPS e.max CAD-on technique presents another innovation. This technique allows CAD/CAM-fabricated lithium disilicate veneers to be bonded to zirconium oxide frameworks by means of a fusion glass-ceramic.

Would you like to find out more? Contact your local Ivoclar Vivadent consultant. Or catch us at our IDS 2011 booth in Cologne (March 22–26). We are looking forward to your questions and comments.

I hope you enjoy reading the new issue of Update.

Yours sincerely

Josef Richter
Chief Sales Officer
Ivoclar Vivadent AG

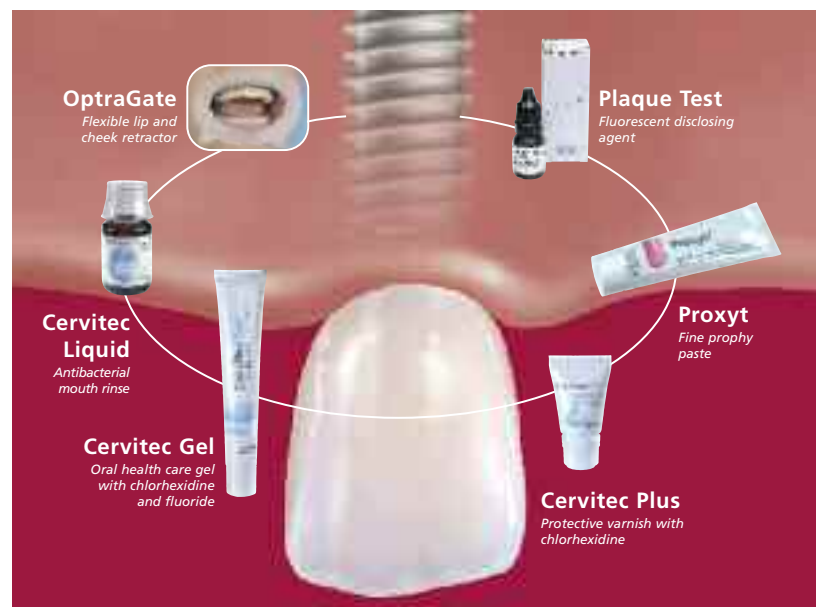
Quality assurance in implant restorations



Assuring the long-term quality of valuable implant restorations and superstructures: Ivoclar Vivadent faces up to this quality requirement. The effective control of harmful microorganisms and the prevention of inflammatory oral processes, which may endanger the restoration, play a prominent role in this respect.

In the field of Implant Esthetics, Ivoclar Vivadent offers a coordinated range of products for high-quality superstructures. Oral function and esthetics are given equal attention. To preserve these qualities over the long term, Ivoclar Vivadent has designed an Implant Care Program which responds to the specific requirements of each stage in the implant treatment, including lifelong aftercare. Complex structural components, demanding peri-implant tissues, existing natural teeth, tooth replacements, gingival tissue and mucous membranes can be professionally treated and protected with the products from the Implant Care range. The components, delivery forms, handling properties and application procedures of these materials have all been tailored to the specific needs of implant care and ensure easier and more comfortable treatment procedures.

OptraGate provides retraction of lips and cheeks, facilitating the access to complex superstructures. The ready-to-use mouth rinse Cervitec Liquid spreads antibacterial substances in the entire oral cavity immediately before implantation; the mouth rinse can also be used directly after the implantological intervention. Cervitec Gel, which contains chlorhexidine and fluoride, protects the sensitive tissue during the temporization and healing phase. Application of the chlorhexidine-containing protective varnish Cervitec Plus is recommended after placement of the superstructure. Professional tooth cleaning is carried out with the fine Proxyl prophylaxis paste, which provides a smooth biofilm-free surface and helps maintain the esthetic qualities of the restoration. The fluorescent disclosing agent Plaque Test makes existing bacterial plaque clearly visible.



Implant Care provides essential support to quality assurance during all stages of the implant treatment.

Welcome to the latest members of the Telio® family



The Telio® range has been developed in response to the increasing importance of temporary restorations and encompasses products for dentists, dental technicians and CAD/CAM users. The range of products for dentists has

now been complemented by the addition of Telio CS Inlay and Telio CS Onlay, two light-curing single-component materials for the fabrication of direct temporary restorations.

Telio CS Inlay/Onlay are available in consistencies appropriate to the indication; they can be placed without an additional temporary cement and feature convenient moulding and material properties. Furthermore, they offer a sufficiently long working time and they can be polymerized to a high depth of cure by exposing each restoration surface to the light of a curing device for 10 seconds. Telio CS Inlay offers a soft-elastic consistency and is particularly suitable for the temporization of deep, parallel-walled inlay preparations as well as for relining prefabricated temporary crowns and sealing implant screw channels.

Telio CS Onlay features a less elastic consistency and is primarily used for larger, less retentive preparations.

Both materials are quick and easy to apply as they show little stickiness to modelling instruments whilst adhering well to the prepared tooth structure.

Due to their elastic consistency, the temporary filling materials can be easily removed without having an adverse effect on the cavity. Antimicrobial and bacteriostatic active ingredients prevent the risk of odour build-up and caries formation.

Telio CS Inlay/Onlay are available in two colours (transparent, universal) and are supplied in two delivery forms: the new ergonomic syringes and Cavifils for improved intraoral application.

SpeedCEM®: Outstanding strengths

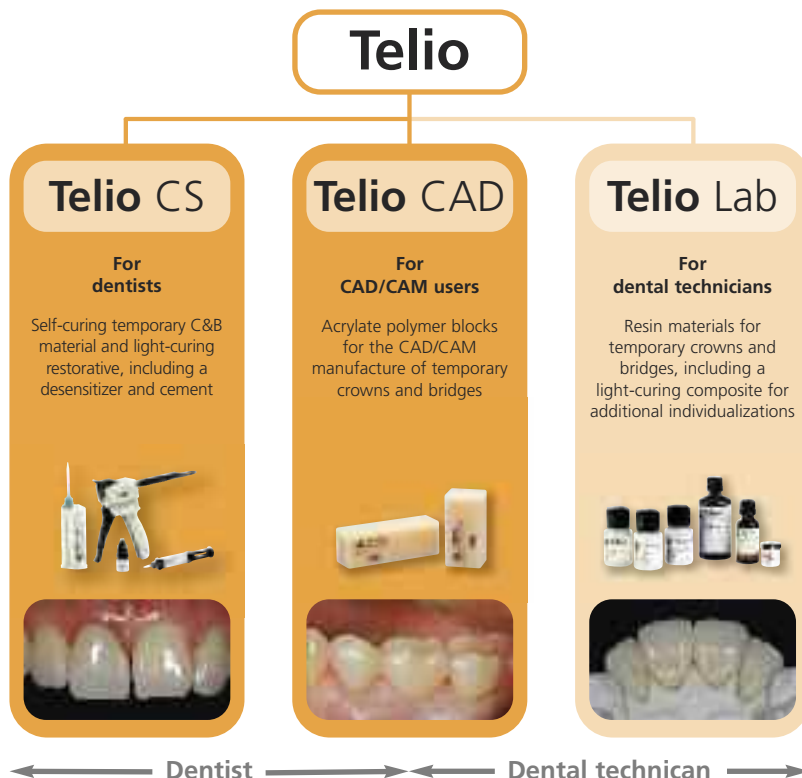


Ideally suitable for the cementation of implant-supported restorations.

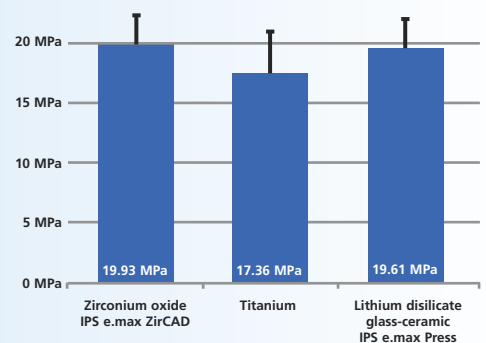
The new self-adhesive resin cement from Ivoclar Vivadent has already gained itself a considerable fan base. SpeedCEM® convinces users with its outstanding convenience of use and good adhesion.

Due to the cement's self-adhesive properties on titanium and zirconium oxide ceramics, SpeedCEM can play to its strengths particularly in the cementation of restorations on implant abutments. As these materials cannot be penetrated by the blue light used in light curing, SpeedCEM's good adhesion following the autopolymerization process is a particular asset. As excess is easy to remove, the material also meets customer requirements in this respect.

Restorations made of reinforced glass-ceramics, e.g. IPS e.max lithium disilicate (LS₂), can also be cemented with SpeedCEM, provided that the bonding surfaces are etched first and the universal primer Monobond Plus is applied prior to cementation.



Shear bond strength of SpeedCEM on different substrates following autocuring:



Source: R&D Ivoclar Vivadent, 2009

Economically attractive alloy



Callisto® 75 Pd is a palladium-based alloy for use in conjunction with layering ceramics and the press-on-metal technique in particular. Callisto 75 Pd is used to fabricate distortion-free frameworks and long-span bridges.

The low silver content produces a light oxide, which imparts a natural-looking colour in the cervical area in particular. In addition, it prevents green discolouration of ceramic materials. The balanced mechanical properties of Callisto 75 Pd offer users convenient processing from casting to polishing – similarly to gold alloys.

Callisto 75 Pd is a type 4 alloy and features a high modulus of elasticity and a high 0.2% proof stress. These properties allow this alloy to be used for a wide variety of indications, in-

cluding implant superstructures. Callisto 75 Pd is ideally used in conjunction with IPS InLine. With IPS InLine One, restorations can be fabricated in the efficient one-layer technique in an easy and economical fashion. The use of the conventionally layered IPS InLine metal-ceramic material with this alloy has also been tested and validated. The high strength values are specially useful in the Press-on-Metal technique. It is therefore possible to press a metal-free shoulder – and thus fabricate highly esthetic restorations.



Callisto 75 Pd: attractive palladium-based alloy.



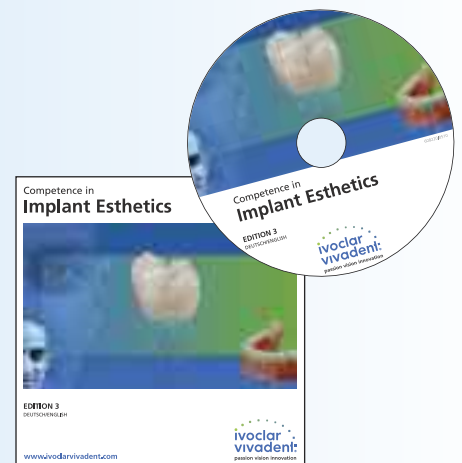
CD-ROM “Competence in Implant Esthetics”



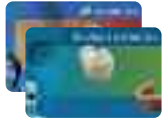
New release of
“Competence in Implant
Esthetics” CD-ROM

The proven “Competence in Implant Esthetics” CD-ROM is now available in a third revamped version. In addition to detailed facts and figures on the basics of implantology, the CD-ROM also contains information on various Ivoclar Vivadent products. These products are introduced in the order in which they are used in the course of fabricating and completing an implant-borne restoration. The CD-ROM covers each key stage in the implant treatment, from planning the implant restoration to completing the final restoration and implementing aftercare measures.

Practical tips on how to achieve successful, durable implant restorations complete the range of information offered on this CD-ROM. The CD-ROM is available in German and English.



Programat® P300/G2: Expanded range of programs



The second generation of the Programat® P300 features the established advantages as well as new technological characteristics.

With its 300+ individual and 120 Ivoclar Vivadent programs, the Programat P300/G2 furnace is equipped with significantly more programs than its predecessor model. The program structure of this ceramic furnace has also been revised in the course of the expansion of the program range. As a result, this furnace has become even easier to operate. The built-in USB slot can be used for software updates and the exchange of data.

New technological features

A series of new technological features have been built into in the Programat P300: The state-of-the-art Power Saving Technology reduces power consumption by up to 40% in the stand-by mode; the Thermo Shock Protection (TSP) prevents thermal shock in the ceramic if the furnace head is closed while it is too hot; and the

Power Fail Save technology bridges short power failures without aborting the program.

Proven features

Apart from all these innovations, Programat P300 continues to offer the proven product features: The QTK muffle technology ensures optimum heat distribution and thus optimum firing results; furthermore, a special calibration program enables the furnace temperature to be checked at any time and adjusted if necessary. In addition, the ceramic material can be optimally pre-dried with the furnace head open by means of the special pre-drying function before the furnace is closed and the firing cycle is conducted.



The Programat P300/G2 furnace



The USB slot allows software updates to be downloaded from the Internet via a PC or laptop.

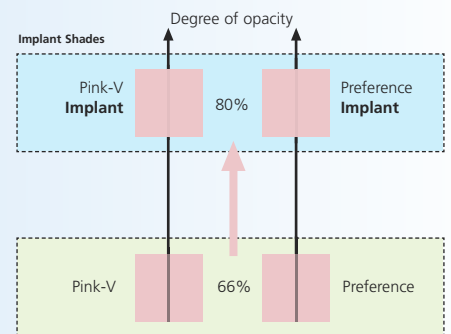
Removable prosthetics: More shade despite little space



There isn't sufficient space to implement the technical solution you planned? We can help you work around this problem.

The new implant shades of the Ivoclar Vivadent denture base material range help to achieve more esthetic results. Their 20% higher opacity, in combination with the well-known Ivoclar Vivadent Pink-V and Preference shades, ensures more effective masking of construction elements than with the standard shades.

The shades Pink-V Implant and Preference Implant now form part of the SR Ivocap High Impact, ProBase Hot and ProBase Cold range.



Difference in opacity of standard and implant shades

The IPS e.max® CAD-on technique: Connecting the next generation



The IPS e.max® CAD-on technique enables users to fabricate high-strength and highly esthetic restorations from IPS e.max CAD (LS₂) and IPS e.max ZirCAD (ZrO₂) material. Due to the CAD/CAM-based fabrication process, tooth-

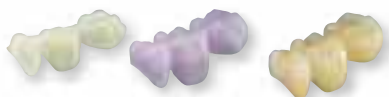
or implant-borne posterior bridge restorations (with up to 4 units) can be produced.

Two components are required for the CAD-on technique: a zirconium oxide framework made of IPS e.max ZirCAD and a lithium disilicate veneering structure milled from the new IPS e.max CAD HT B40 block. This material meets the most exacting esthetic demands and combines sophisticated technology with ease of use.

Homogeneous all-ceramic bond

The homogeneous all-ceramic bond between the two separately milled components is achieved during the IPS e.max CAD crystallization process by means of the specifically developed innovative IPS e.max CAD Crystall./Connect fusion glass-ceramic.

The IPS e.max CAD-on technique is a viable alternative to the layering or press-on technique and represents a new generation in bridge technology, which is unmatched in terms of user-friendliness, efficiency, esthetics and overall strength.



Zirconium oxide framework, lithium disilicate veneering structure, 3-unit CAD-on bridge.

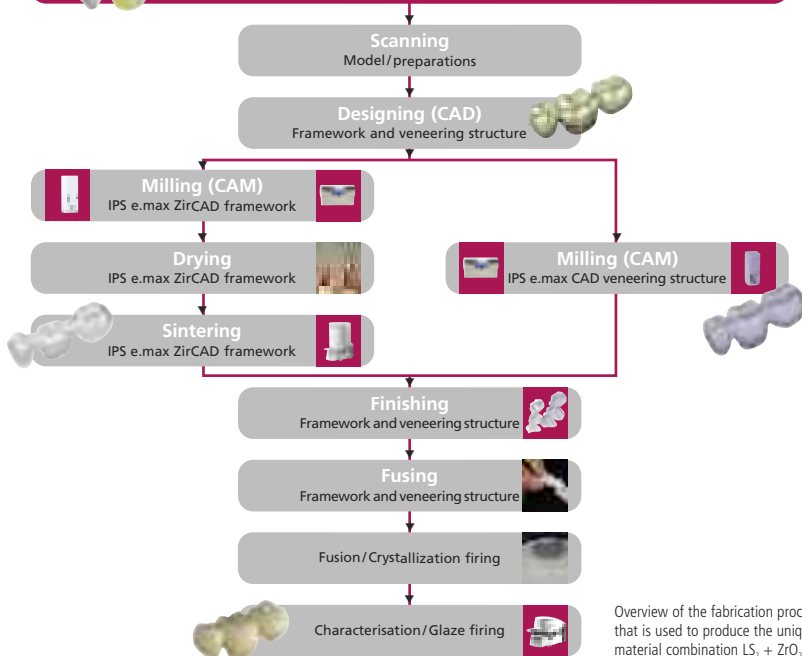
Efficient processing

Both components are designed with the intuitive Sirona inLab software V3.80 and milled in a Sirona inLab MC-XL unit. The rapid sintering of the IPS e.max ZirCAD framework takes place in a Programat S1. Productivity is increased due to parallel processing and the short process times: The active work time is reduced by up to 40%.



Materials for the IPS e.max CAD-on technique: IPS e.max ZirCAD, IPS e.max Crystall./Connect, IPS e.max CAD

IPS e.max CAD-on technique Process overview



Overview of the fabrication process that is used to produce the unique material combination LS₂ + ZrO₂.

Glass-ceramic restorations available from Straumann®



The glass-ceramic materials from Ivoclar Vivadent can be used to fabricate inlays and onlays, partial

crowns, copings and full crowns with the Straumann® CARES® CAD/CAM technology.



A well-rehearsed team: Straumann CARES Scan CS2 scanner and Straumann CARES Visual 6.0 software.

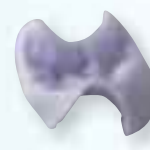
Restorations milled from any of the Ivoclar Vivadent glass-ceramic materials (IPS Empress® CAD and IPS e.max® CAD) can be obtained from our partner Straumann CAD/CAM.

The high-quality IPS e.max CAD restorations are milled with high precision and quality by Straumann and supplied to its customers in the "blue" state. The customers then proceed with the crystallization and characterization of the restorations.

The HT and LT versions of the proven IPS Empress CAD leucite ceramic have been newly added to the Straumann range. This material is used to fabricate esthetic single-tooth restorations such as inlays, onlays, veneers and partial crowns. The IPS Empress CAD Multi block is the highlight of the product range; due to the natural progression of the shade and fluorescence gradient from the dentin to the incisal region, this material can be used to fabricate highly esthetic, lifelike restorations – even without characterization.



IPS Empress CAD crown by Straumann CARES CAD/CAM



IPS e.max CAD partial crown by Straumann CARES CAD/CAM

Enhanced anterior esthetics with IPS Empress® CAD Multi



Users of Sirona CEREC MC XL and inLab MC XL units now have the possibility to position

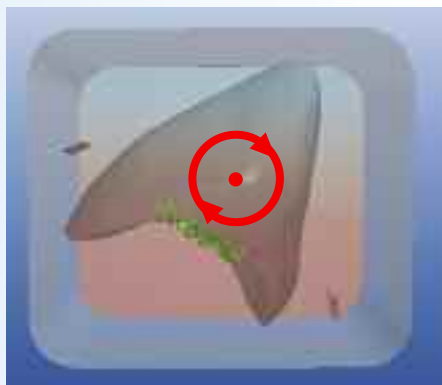
IPS Empress® CAD Multi restorations three-dimensionally.

In the past, users had only the possibility of determining the vertical position. The software update CEREC/inLab 3D 3.80 includes a new function called "Rotate".

With this feature, the anterior restoration can be rotated around the block holder axis and the cervical-incisal length axis of the tooth. As a result, the incisal and dentin portions can be determined more precisely. The "Rotate" function allows the full potential of IPS Empress CAD Multi blocks to be realized, the degree of individuality to be improved and the esthetics to be enhanced.



Previous positioning possibilities



New positioning possibilities from software version 3.80

In pursuit of nature – with IPS e.max® Press Impulse



The IPS e.max® Press lithium disilicate (LS₂) ingots available in four translucency levels already allowed the fabrication of highly esthetic high-strength restorations in the past. Now this exciting esthetic range has been

enhanced with the Impulse ingots, which are supplied in three value (Value 1, 2, 3) and two opalescent (Opal 1, 2) shades.

The IPS e.max Press Impulse materials are used to fabricate thin veneers, veneers, Table Tops and partial and single crowns. The suitable ingot is selected depending on the preferred fabrication technique (staining or cut-back technique) and the individual patient situation at hand.

Value ingots:

Different brightness values

The Value ingots feature different brightness values: 1 is the lowest and 3 the highest. This allows the optimum integration of the restoration into the intraoral situation – regardless of whether the tooth shade is to be individually adjusted in the case of a given brightness value, or whether the same brightness level is required for preparations with different shades.

Opal ingots:

Lifelike opalescent effect

The Opal ingots exhibit a decreasing opalescence and increasing bright-

ness value from 1 to 2, similar to the IPS e.max Ceram Opal Effect materials. Due to their unique opalescence and strength, the Opal ingots can be used as an "enamel replacement" material. As a result of the opalescence inherent to the material, highly esthetic and minimally invasive restorations – thin veneers in particular – can be fabricated.



IPS e.max Press Value veneers

IPS e.max Press Impulse Value ingot selection

Shade of the preparation	Desired tooth shade: Bleach and A-D shade guide			
	BL3	BL4	A1	B1
ND 1			Value 1	Value 1
		Value 2		
	Value 3	Value 3		
ND 2			Value 1	Value 1
				Value 2
ND 3			Value 1	

The appropriate Opal ingots are selected on the basis of the shade of the enamel of the natural tooth.



Matt Roberts, dental technician, USA:

"The new IPS e.max Press Impulse ingots are the most exciting esthetic development I have seen in many years. The value ingots allow me to replicate the optically denser natural dentition that has previously been challenging for ceramists to match."



Clinical case: preoperative situation and veneers made of IPS e.max Press Impulse ingot, Value 1.

Creating esthetics in a targeted fashion



IPS Empress® Direct "Art" from Ivoclar Vivadent is the flowable version of the

light-curing nano-hybrid composite IPS Empress® Direct.

With the three shades of the IPS Empress Direct Flow range, esthetic effects can be placed with even higher precision in anterior restorations than in the past.

Three shades, three different effects: With TransOpal, an opalescent effect can be achieved, Trans 30 is used to obtain translucency in the incisal area and Bleach XL serves to create a fluorosis or a halo effect. Due to the new, ergonomic Luerlock syringe, which is equipped with a 0.9mm wide metal tip, dentists can apply the flowable composite exactly where needed.



For nearly 20 years, the name IPS Empress has been associated with a high level of esthetics in the reconstruction of natural tooth characteristics. IPS Empress Direct: The only direct composite that can be called Empress!

High-gloss polishing in just one step



With OptraPol® "Next Generation", an innovative and efficient one-step polishing system was launched in April 2010.

OptraPol® "Next Generation" is a high-quality one-step polishing system containing diamond crystals, which is suitable for the finishing and polishing of all popular composite, compomer, glass ionomer cement and amalgam materials. The unique silicone polishers consist of a light grey polishing body which is highly filled with micro-fine diamond crystals (72% wt.) and a red silicone core without diamond particles, which provides no polishing action (Fig. 1).



Fig. 1: Polishing of an anterior restoration with OptraPol
Source: Dr M. Dieter, Ivoclar Vivadent, Liechtenstein

The polishers are available in four shapes: small and large flame, cup and lens.

Tests have shown (Fig. 2) that OptraPol polishers achieve a significantly higher surface lustre on valuable composite restorations made of Tetric EvoCeram than one-step polishers of other manufacturers. Due to the high efficiency of these polishers, which are highly filled with diamond crystals, the polishing effect becomes visible after only 10 seconds of polishing and is significantly superior to that of competitive one-step polishers. This is confirmed by gloss measurement tests (see Fig. 2). Consequently, very smooth and highly lustrous restoration surfaces are produced, which considerably reduce the risk of discolouration and plaque accumulation. The dimensionally stable and wear-resistant polishers are very long-lasting. Depending on the rate of wear, the polishers can be autoclaved and reused up to 20 times.

Surface gloss measurement:

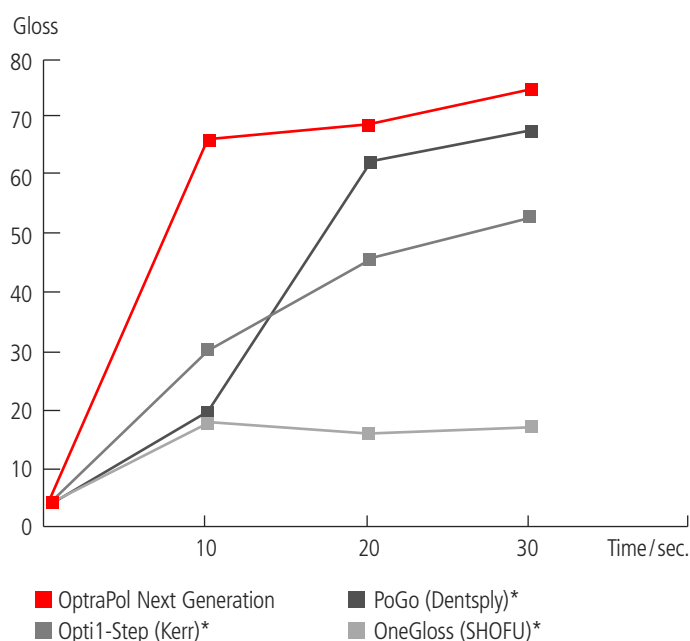


Fig. 2: Mean surface gloss on Tetric EvoCeram test specimens after 10 sec, 20 sec and 30 sec of polishing with OptraPol "Next Generation", Opti 1-Step, PoGo and OneGloss. Reference material: black glass = 94.2 gloss units
*not registered trademarks of Ivoclar Vivadent AG

Source: Surface gloss measurements with Novo-Curve Glossmeter, R&D Ivoclar Vivadent AG, Liechtenstein, March 2010.

bluephase® gives you the licence to cure!



This October, CLINICIANS REPORT® published an extensive curing light evaluation involving over 20 LED curing lights.

We are happy that the bluephase was rated "Overall Excellent" and received a CR Choice! The ratings are based on clinical trials, ease of use, intraoral access, speed of polymerization, material compatibility, convenience features and cost. The bluephase was also mentioned in the article as being an "Excellent combination of performance, features and cost".

Contact Ivoclar Vivadent for the full report or go to www.cliniciansreport.org.



Visit us:

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i-Kids – Pediatric Dental Solutions



The i-Kids program from Ivoclar Vivadent enables comprehensive oral health management in children and adolescents of different age groups and is designed to create a positive dental experience.

The i-Kids program offers professional solutions for the dental care of young people. The special oral health care needs of children and adolescents are at the focus of i-Kids. The products of the i-Kids range are easy and quick to apply and ensure

effective treatment. They therefore offer an advantage to both the practice team and the young patients. The i-Kids program includes preventive care, restoration and oral care, as shown on the diagram below.

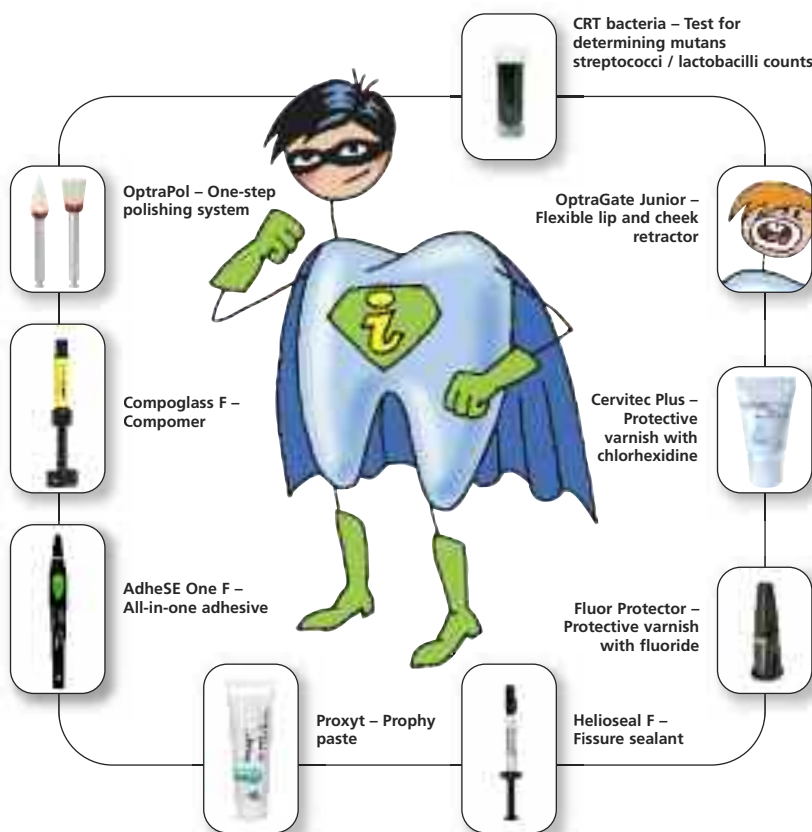


Fig. 1: Selected products of the i-Kids range

The use of each product of the i-Kids range has been documented in international studies and clinically proven in the dental practice within the framework of pediatric and adolescent dental care. However, i-Kids presents a great deal more than just an array of products: i-Kids is designed to cre-

ate an environment which makes every visit to the dental practice a positive experience. For this purpose, several accessories, such as i-Kids certificates of bravery, i-Kids bags, i-Kids stamps and i-Kids polo shirts have already been introduced. The i-Kids World stands for a healthy tooth adventure.



Fig. 2: Now, that was a cool dental visit!