VITAPAN EXCELL: For predictable, aesthetic and functional results

By VITA Zahnfabrik

For predictable and functional aesthetic results in restorations, in addition to dental technology experience, we need a denture tooth designed on the basis of the aesthetic and functional standards set by nature. VITAPAN EXCELL (VITA Zahnfabrik, Bad Säckingen, Germany) is an example of this kind of anterior tooth, which is characterized by vibrant shapes with “golden proportions.” Tooth axes, the length/width ratio and angle characteristics are consistently patterned after nature. In addition, its special layered structure enables a natural play of shade. In the following case report, Darius Northey, Dental Technician (Buderim, Australia) shows how he was able to successfully use the new denture tooth for an implant-supported restoration.

Fig. 1: Initial situation: The insufficient restorations showed a midline displacement and functional disharmonies

Fig. 2: Two implants were inserted in the incisal region to functionally stabilize the restoration in the mandibular

Fig. 3: A custom-made tray was used in the mandibular for a mucodynamic fixation impression

Fig. 4: A simple bar construction was poured and fixed with synthetic material to the abutments

Fig. 5: The centric and temporomandibular movements were recorded with the gothic arch

Fig. 6: First, the aesthetic zone of the maxillary duplicate was reduced, then replaced with VITAPAN EXCELL, and finally tried in

Fig. 7: The final wax setup in the articulator with molded gingival anatomy before the try-in

Fig. 8: After the try-in, a mucodynamic impression with setup was taken in the maxilla

Fig. 9: The final occlusion-adjusted, mucodynamic impression in the duplicated denture base

Fig. 10: Based on the bite registration of the setups, the maxilla could be accurately rearticulated

Fig. 11: VITAPAN EXCELL and LINGOFORM were conditioned with VITACOLL to ensure good adhesion to the base

Fig. 12: The vestibular plate was customized with several synthetic material layers in different gingival shades

Fig. 13: The bridge and attachments were integrated by polymerization of the synthetic material base

Fig. 14: The finished restorations after elaboration and polishing in static occlusion

Fig. 15: Result: The patient was very happy with the naturalness of the new restoration
Initial clinical situation
A 78-year-old female patient was dissatisfied with the positional sta-

bility of her mandibular prosthesis. The acrylic teeth appeared "worn", degraded and very dull. After the con-
sultation, the patient decided on two implants in the mandibular in-
order to achieve greater functional stability, and was referred to an oral
surgeon. After a healing period of three months, the implants were in-
seminated in the incisal region of the mandibular. First, the patient

did not want a new total prosthesis in the maxilla, although the midline
was shifted extremely to the right and functional disadvantages due
to the well-worn and irregular occlu-
sion were to be expected. She feared
that her usual appearance would be
altered by a new restoration. How-
ever, following a comprehensive
consultation, she finally opted for a
new restoration.

First steps towards restoration
The restoration in the mandible

began with an anatomical allogenic impression. So that it could be or-

erized to the old mandibular prosthesis
by using the staining technique or
larity — and sometimes over-

lapping — indications. This mainly

to the crowns and, in the case of
pressable ZLS (Celtra® Press), three-

unit anterior bridges whose distal

impression cap was affixed. Using
the model, a simple bar construction
was fabricated and affixed with syn-

thetic material to the attachments. A

axial area was created over the bar in
the mandible, and plates for the im-
aging of the Gothic arch positioned
on this and the mandibular maxillary
prostheses. A wax rim was recorded and affixed. The
duplication was subsequently reduced
in the setup area in order to first
position and try in the VITAPAN EX-
CELL anterior tooth and then the VI-
TAPAN LINGOFORM posterior tooth.

Prostheses fabrication and

finalisation

After a complete functional and

esthetic try-in, a mucoadhesive

impression with wax setup on a du-

plicate base was taken in the maxilla.

The bite was registered with silicon.

First steps towards restoration

The restoration in the mandible

began with an anatomical allogenic impression. So that it could be or-

erized to the old mandibular prosthesis
by using the staining technique or

First steps towards restoration

The restoration in the mandible

began with an anatomical allogenic impression. So that it could be or-

erized to the old mandibular prosthesis
by using the staining technique or

First steps towards restoration

The restoration in the mandible

began with an anatomical allogenic impression. So that it could be or-

erized to the old mandibular prosthesis
by using the staining technique or

First steps towards restoration

The restoration in the mandible

began with an anatomical allogenic impression. So that it could be or-

erized to the old mandibular prosthesis
by using the staining technique or

Fig. 1: The smart Celtra

The following report illustrates the
neer with a single ceramic material.
by providing a uniform type of ve-

appearance is further perfected either

Lithium Silicate (ZLS) complement
Zirconia and Zirconia-Reinforced

By Dentsply Sirona

Zirconia and Zirconia-Reinforced
Lithium Silicate (ZLS) complement
each other when it comes to all-ce-
matic oral rehabilitation with excel-
lent performance. The aesthetic ap-

overview of the most suitable ingot is a
dual shade reproduction and

filed appearance with pumice and polishing paste, as

Darius Northey, CDT, Australia
Graduated as a Dental Technician after
working in the family business for many
years. 1997 Established his own dental
laboratory in Sydney, Australia. 2006-
2006 Completed the Advanced Diploma
of Dental Prosthetics.

All-ceramics for every need

By Dentsply Sirona

Zirconia and Zirconia-Reinforced
Lithium Silicate (ZLS) complement
each other when it comes to all-ce-
matic oral rehabilitation with excel-
lent performance. The aesthetic ap-

Overview of the most suitable ingot is a
dual shade reproduction and

filed appearance with pumice and polishing paste, as

Darius Northey, CDT, Australia
Graduated as a Dental Technician after
working in the family business for many
years. 1997 Established his own dental
laboratory in Sydney, Australia. 2006-
2006 Completed the Advanced Diploma
of Dental Prosthetics.

All-ceramics for every need

By Dentsply Sirona

Zirconia and Zirconia-Reinforced
Lithium Silicate (ZLS) complement
each other when it comes to all-ce-
matic oral rehabilitation with excel-
lent performance. The aesthetic ap-

Overview of the most suitable ingot is a
dual shade reproduction and

filed appearance with pumice and polishing paste, as

Darius Northey, CDT, Australia
Graduated as a Dental Technician after
working in the family business for many
years. 1997 Established his own dental
laboratory in Sydney, Australia. 2006-
2006 Completed the Advanced Diploma
of Dental Prosthetics.

All-ceramics for every need

By Dentsply Sirona

Zirconia and Zirconia-Reinforced
Lithium Silicate (ZLS) complement
each other when it comes to all-ce-
matic oral rehabilitation with excel-
lent performance. The aesthetic ap-

Overview of the most suitable ingot is a
dual shade reproduction and

filed appearance with pumice and polishing paste, as

Darius Northey, CDT, Australia
Graduated as a Dental Technician after
working in the family business for many
years. 1997 Established his own dental
laboratory in Sydney, Australia. 2006-
2006 Completed the Advanced Diploma
of Dental Prosthetics.

All-ceramics for every need

By Dentsply Sirona

Zirconia and Zirconia-Reinforced
Lithium Silicate (ZLS) complement
each other when it comes to all-ce-
matic oral rehabilitation with excel-
lent performance. The aesthetic ap-

Overview of the most suitable ingot is a
dual shade reproduction and

filed appearance with pumice and polishing paste, as

Darius Northey, CDT, Australia
Graduated as a Dental Technician after
working in the family business for many
years. 1997 Established his own dental
laboratory in Sydney, Australia. 2006-
2006 Completed the Advanced Diploma
of Dental Prosthetics.

All-ceramics for every need

By Dentsply Sirona

Zirconia and Zirconia-Reinforced
Lithium Silicate (ZLS) complement
each other when it comes to all-ce-
matic oral rehabilitation with excel-
lent performance. The aesthetic ap-

Overview of the most suitable ingot is a
dual shade reproduction and

filed appearance with pumice and polishing paste, as

Darius Northey, CDT, Australia
Graduated as a Dental Technician after
working in the family business for many
years. 1997 Established his own dental
laboratory in Sydney, Australia. 2006-
2006 Completed the Advanced Diploma
of Dental Prosthetics.

All-ceramics for every need

By Dentsply Sirona

Zirconia and Zirconia-Reinforced
Lithium Silicate (ZLS) complement
each other when it comes to all-ce-
matic oral rehabilitation with excel-
lent performance. The aesthetic ap-

Overview of the most suitable ingot is a
dual shade reproduction and

filed appearance with pumice and polishing paste, as

Darius Northey, CDT, Australia
Graduated as a Dental Technician after
working in the family business for many
years. 1997 Established his own dental
laboratory in Sydney, Australia. 2006-
2006 Completed the Advanced Diploma
of Dental Prosthetics.

All-ceramics for every need

By Dentsply Sirona

Zirconia and Zirconia-Reinforced
Lithium Silicate (ZLS) complement
each other when it comes to all-ce-
matic oral rehabilitation with excel-
lent performance. The aesthetic ap-

Overview of the most suitable ingot is a
dual shade reproduction and

filed appearance with pumice and polishing paste, as

Darius Northey, CDT, Australia
Graduated as a Dental Technician after
working in the family business for many
years. 1997 Established his own dental
laboratory in Sydney, Australia. 2006-
2006 Completed the Advanced Diploma
of Dental Prosthetics.

All-ceramics for every need

By Dentsply Sirona

Zirconia and Zirconia-Reinforced
Lithium Silicate (ZLS) complement
each other when it comes to all-ce-
matic oral rehabilitation with excel-
lent performance. The aesthetic ap-

Overview of the most suitable ingot is a
dual shade reproduction and

filed appearance with pumice and polishing paste, as

Darius Northey, CDT, Australia
Graduated as a Dental Technician after
working in the family business for many
years. 1997 Established his own dental
laboratory in Sydney, Australia. 2006-
2006 Completed the Advanced Diploma
of Dental Prosthetics.

All-ceramics for every need

By Dentsply Sirona

Zirconia and Zirconia-Reinforced
Lithium Silicate (ZLS) complement
each other when it comes to all-ce-
matic oral rehabilitation with excel-
lent performance. The aesthetic ap-

Overview of the most suitable ingot is a
dual shade reproduction and

filed appearance with pumice and polishing paste, as

Darius Northey, CDT, Australia
Graduated as a Dental Technician after
working in the family business for many
years. 1997 Established his own dental
laboratory in Sydney, Australia. 2006-
2006 Completed the Advanced Diploma
of Dental Prosthetics.

All-ceramics for every need

By Dentsply Sirona

Zirconia and Zirconia-Reinforced
Lithium Silicate (ZLS) complement
each other when it comes to all-ce-
matic oral rehabilitation with excel-
lent performance. The aesthetic ap-

Overview of the most suitable ingot is a
dual shade reproduction and

filed appearance with pumice and polishing paste, as

Darius Northey, CDT, Australia
Graduated as a Dental Technician after
working in the family business for many
years. 1997 Established his own dental
laboratory in Sydney, Australia. 2006-
2006 Completed the Advanced Diploma
of Dental Prosthetics.

All-ceramics for every need

By Dentsply Sirona

Zirconia and Zirconia-Reinforced
Lithium Silicate (ZLS) complement
each other when it comes to all-ce-
matic oral rehabilitation with excel-
lent performance. The aesthetic ap-

Overview of the most suitable ingot is a
dual shade reproduction and

filed appearance with pumice and polishing paste, as

Darius Northey, CDT, Australia
Graduated as a Dental Technician after
working in the family business for many
years. 1997 Established his own dental
laboratory in Sydney, Australia. 2006-
2006 Completed the Advanced Diploma
of Dental Prosthetics.
Example 2: Extra-translucent zirconia, cut-back technique

To reproduce an A2 shade on a crown framework made of extra-transparent zirconia, the most closely matching ingot is again chosen (as in the first example, Figs. 8 and 9). Mamelon structures are included at the time of designing the framework. The labial and palatal aspects of the enamel layer are built up with Celtra® Ceram Enamel E1 (Fig. 10) while at the same time giving the restoration its final shape in a finishing step that includes creating desired surface texture after ceramic firing (Fig. 11).

The restoration is finalised with stain and glaze in a single step. A fine line of Crème is painted onto the incisal edges (Fig. 12). The final step is the application of Universal Stain in the incisal region (Fig. 13).

The desired shade has been achieved, and the restoration looks “live” with just one enamel material and some stain (Fig. 14). A ZLS framework (Celtra® Press) can be customised in a similar way. Achieving the desired result requires only a single incisal space to be closed both labially and palatally with Dentin DA2, creating delicate mamelon structures in the process (Fig. 17). The incisal edge and the areas between the mamelons and on the incisal ridges strips are emphasised with Enamel Opal Transparent EO4 (Figs. 18 and 19). Enamel E1 completes the build-up (Fig. 20).

After the ceramic firing, the restoration is finished and prepared for the second layer. The interdental spaces are closed both labially and palatally with Dentin DA2 (Fig. 21). A mixture of Effect Enamel Sky EE3 and Enamel Opal Transparent EO4 is used on the cervical aspect (Fig. 22). The mesial and distal ridges are supported with Celtra® Ceram Enamel E1 (Figs. 23 and 24). A fine line of neutral Enamel Opal is added in the central labial region (Fig. 25). The restoration is finalised with stain and glaze in a single step. A fine line of Crème is painted onto the incisal edges (Fig. 26). The final step is the application of Universal Stain in the incisal region (Fig. 27).

The desired shade has been achieved, and the restoration looks “live” with just one enamel material and some stain (Fig. 28). A ZLS framework (Celtra® Press) can be customised in a similar way. Achieving the desired result requires only a single incisal space to be closed both labially and palatally with Dentin DA2, creating delicate mamelon structures in the process (Fig. 17). The incisal edge and the areas between the mamelons and on the incisal ridges strips are emphasised with Enamel Opal Transparent EO4 (Figs. 18 and 19). Enamel E1 completes the build-up (Fig. 20).

After the ceramic firing, the restoration is finished and prepared for the second layer. The interdental spaces are closed both labially and palatally with Dentin DA2 (Fig. 21). A mixture of Effect Enamel Sky EE3 and Enamel Opal Transparent EO4 is used on the cervical aspect (Fig. 22). The mesial and distal ridges are supported with Celtra® Ceram Enamel Effect Sky EE3. A thin layer of the neutral Enamel Opal Extra Light SO4 is added in the central labial area (Fig. 24). The incisal edges are finalised with Enamel Effect Ivory EE6. After the ceramic firing, the shape is finalised and the desired surface texture is created. This is followed by applying the glaze (High Flu), with some Universal Stain Crème applied in the incisal area for the most delicate individual features (Figs. 25 and 27).

The target shade has been matched exactly, with the opalescence of the incisal edge supporting the natural appearance of the restoration. In addition, an excellent depth effect is achieved between the mamelons and on the incisal ridges, thanks to the Enamel Opal Transparent EO4 used (Fig. 28). High-translucency zirconia frameworks can be veneered in a similar manner, yielding highly aesthetic restorations with a perfectly match-
Due to its higher strength, this framework material is also suitable for posterior bridges.

Outcomes for the dental laboratory ZLS frameworks and also zirconia frameworks (with different translucencies) can be aesthetically refined in several ways. One method includes finalisation by staining — achieving pleasing basic aesthetics safely and easily with a monolithic restoration.

At a higher level of aesthetic sophistication, the framework can be veneered with ceramics. The innovative Celtra® Ceram material presented here provides an aesthetic link between ZLS and zirconia. This veneering ceramic allows the dental technician to individualise frameworks made of both materials using the same standardised technique. This is possible using the cut-back technique or by full veneering for premium aesthetics without limitations. This variability gives dental technicians a comprehensive all-ceramic treatment and performance concept.

¹Not a registered trademark of Dentsply Sirona.

Cercon®

Makes you smile

Cercon with True Colour Technology sets new standards for zirconia when it comes to reproducing the classic 16 VITA® shades.

Cercon xt – extra translucent zirconia:
- Demonstrates extra high translucency and unparalleled shade accuracy with a life-like aesthetics especially for the anterior region (bending strength: 750 MPa) and complements the Cercon product portfolio
- Saves processing time and increases productivity (no need to dip, to stain or to veneer)

Cercon ht – high translucent zirconia:
- Offers a wide range of indications in the anterior and posterior region (bending strength: 1200 MPa). With Cercon ht as a high translucent material you can choose different performance levels out of one disk

dentsplysirona.com

Dental Technician Int’l Meeting 12 April 2019 in Dubai

By Dental Tribune MEA / CAPPmea

The Dental Technician International Meeting (DTIM) is the continuation and growth of CAPP’s Dental Technician Sessions during the last 12 years. These Dental Technician Sessions were accomplishments not only for dental laboratory owners and dental technicians but for the entire dental technology profession.

The DTIM will be held on the 12 April 2019 at the Madinat Jumeirah Conference Centre. Over 200 dental technicians, clinical dental technicians (CDTs), lab owners, trade visitors and more are expected to attend.

During the event, delegates will be able to attend free of charge hands-on trainings that will be organised by the companies. During the sessions dental technicians will be able to work with the product provided ad learn new techniques.

The DTIM takes place in conjunction with the 14th CAD/CAM & Digital Dentistry Conference & Exhibition which will be attended by over 2000 dental professionals.

Who Should Attend?
- Dental technicians
- Clinical Dental Technicians (CDTs)
- Dental lab owners

CAPP Events
Onyx Tower 2 | Office P204 & P205
The Greens | Dubai | UAE
PO Box: 450355 Tel: +971 4 347 6747
Web: www.cappmea.com
E-mail: events@cappmea.com

Cercon®

Makes you smile

Cercon with True Colour Technology sets new standards for zirconia when it comes to reproducing the classic 16 VITA® shades.

Cercon xt – extra translucent zirconia:
- Demonstrates extra high translucency and unparalleled shade accuracy with a life-like aesthetics especially for the anterior region (bending strength: 750 MPa) and complements the Cercon product portfolio
- Saves processing time and increases productivity (no need to dip, to stain or to veneer)

Cercon ht – high translucent zirconia:
- Offers a wide range of indications in the anterior and posterior region (bending strength: 1200 MPa). With Cercon ht as a high translucent material you can choose different performance levels out of one disk

dentsplysirona.com

* VITA is a trademark of VITA Zahnfabrik

Dentsply Sirona
The Bay Gate Tower Dubai, UAE
Tel: +971 4 523 0600
Web: www.dentsplysirona.com