



Cercon[®]

Zirconium Oxide

Makes you smile

Brochure for the dental laboratory

Cercon[®] xt / Cercon[®] ht

The new zirconia standard for color accuracy, premium esthetics and faster production.

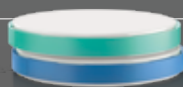


Easy handling

- + New disk adapter fits a variety of milling machines
- + Compatible with many veneering systems
- + Conventional cementation can be used
- + Designed for open systems



Benefits of Cercon[®] xt & Cercon[®] ht



Benefits of Cercon[®] xt only





True Color Technology

- + 15 years of zirconia experience
- + Expertise in ceramic materials
- + Our production process and in-process control guarantee consistent quality from batch to batch
- + Shade results have been confirmed by customers in Europe and the USA



Premium esthetics even in monolithic restorations

- + Extra high translucency (approx. 49%) and unparalleled shade accuracy allows life-like esthetics especially for the anterior region
- + Alternative to lithium disilicate



Time saving & efficiency

- + Identical sintering programs and pre-sintered strength
- + Improves productivity with reproducible results and time saving (no need to dip or veneer)
- + Achieve 16 shades from 6 basic shades using only 2-3 staining firing cycles
- + All 16 VITA shades, white and Bleach2 are available



Cercon® xt - extra translucent zirconia:

Demonstrates extra high translucency and unparalleled shade accuracy with life-like esthetics especially for the anterior region (flexural strength: 750 MPa) and augments the Cercon® product portfolio.



Comparison

Cercon[®] xt, Cercon[®] ht



	Cercon [®] xt	Cercon [®] ht
Composition in % (by mass)	<ul style="list-style-type: none"> • Zirconium oxide • Yttrium oxide 9% • Hafnium oxide < 3% • Aluminum oxide, Silicon oxide, other oxides < 2% 	<ul style="list-style-type: none"> • Zirconium oxide • Yttrium oxide 5% • Hafnium oxide < 3% • Aluminum oxide, Silicon oxide, other oxides < 2%
Flexural Strength	750 MPa	1200 MPa
Translucency***	49%	41%
CTE (Coefficient of Thermal Expansion)	10.1 $\mu\text{m}/\text{m}\cdot\text{K}$ (25 – 500 °C)	10.5 $\mu\text{m}/\text{m}\cdot\text{K}$ (25 – 500 °C)
Indication	<p>Indications in the anterior and posterior segments Cercon[®] xt:</p> <p>Cercon[®] xt is indicated for all ceramic restorations for anterior and posterior locations:</p> <ul style="list-style-type: none"> • Crowns • 3-unit bridges (up to the 2nd premolar) 	<p>Indications in the anterior and posterior segments Cercon[®] ht:</p> <p>Cercon[®] ht is indicated in the anterior and posterior segments for:</p> <ul style="list-style-type: none"> • Crowns • Telescopic primary crowns • Multi-unit bridges (with no more than two pontics between abutment crowns; with no more than 6 units*) • Two piece abutments** <p>Cercon[®] ht can be used as a substructure (framework) which is then veneered with a dental veneering ceramic or can be used for full-contour application (without veneering) as well. In the case of telescopic primary crowns, the substructure is not veneered.</p>
Sintering temperature	1500 °C	1500 °C
Adapter ring	green	blue
True Color Technology	yes	yes
Shades	All 16 VITA**** shades, white and BL2	All 16 VITA**** shades, white and BL2
Staining concept	6 to 16	6 to 16

* for Canada only

** not valid for USA

*** Translucency measured on a white disk with haze meter

**** VITA is a trademark of VITA Zahnfabrik

Cercon®

True Color Technology: The new zirconia standard for color accuracy

We set benchmarks with Cercon® xt and Cercon® ht zirconia and its color accuracy for classic VITA shade reproduction – in many respects.

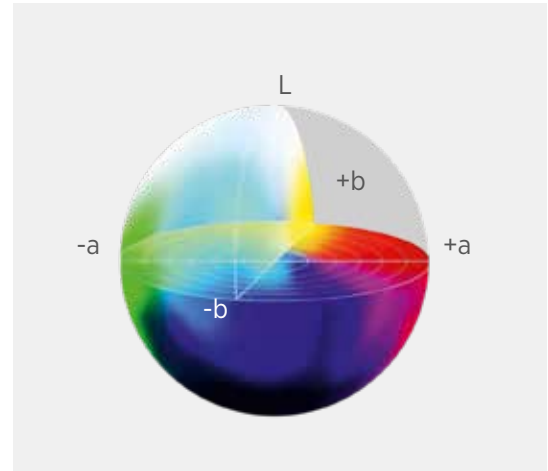
Overall the Cercon® xt and Cercon® ht restorations have a better match to the VITA shade guide than the leading competitors in US and Europe.

True Color Technology

- + We have decades of expertise in ceramic shade reproduction
- + We have developed our own mixing and shade formulations
- + We select and choose special shade pigments
- + Our production process (mixing, pressing, pre-sintering) and in-process control guarantee consistent quality from batch to batch
- + That we obtain the best possible shade results has been confirmed for us by customers in Europe and the USA

L*a*b* COLOR SPACE

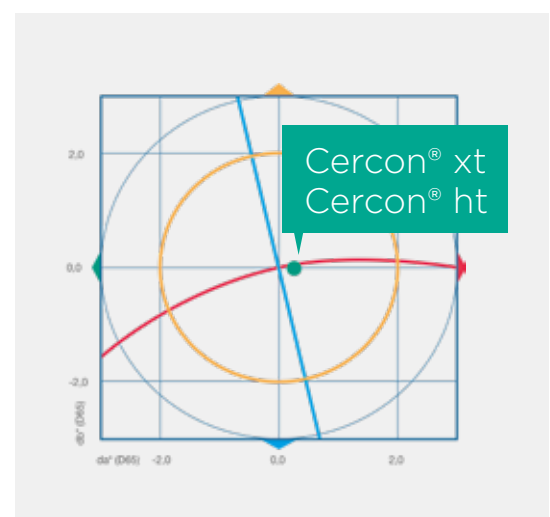
With all perceptible colors



The L*a*b* color space is a map of all perceptible colors. The larger the distance (dE) between the colors within the color space, the more clearly the difference can be perceived with the human eye.

METROLOGICAL SHADE CONTROL

Cercon® xt & Cercon® ht in the center of the diagram



Cercon® xt and Cercon® ht (green dot) and the shade reference (centre of the diagram). Shade deviations at a level of < 2 are imperceptible to the human eye.

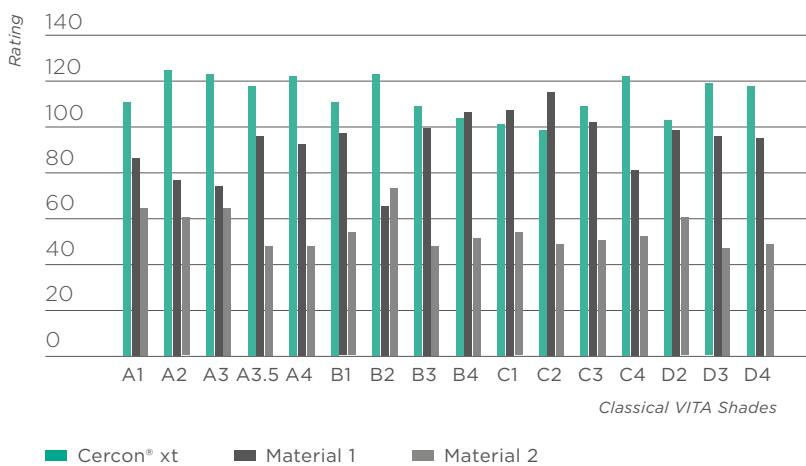


Testimonials from the test

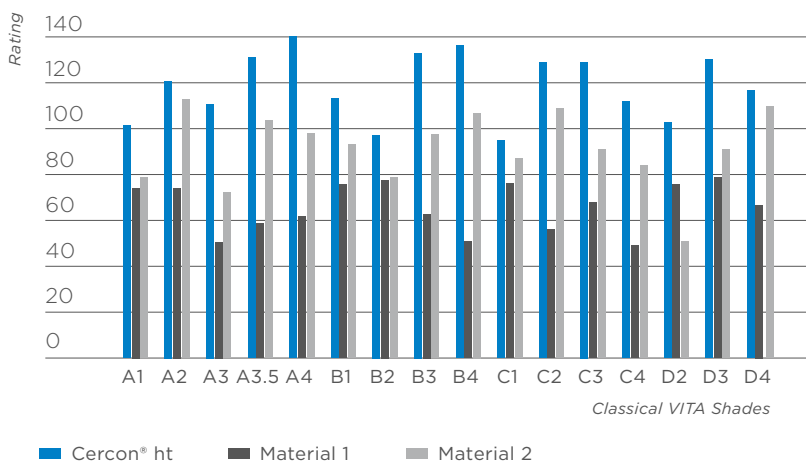
“I had not realized there were such great fluctuations in the accuracy of VITA shades on the market. Especially not when comparing highly reputable manufacturers.”

“The reproducibility of the 16 VITA shades within the staining concept has truly convinced me.”

Cercon® xt



Cercon® ht



BLIND TESTING

In addition to our use of analytical shade measurements, customers from Europe and the USA visually compared Cercon® xt and Cercon® ht in the 16 classic VITA shades with two leading competitors' materials on an ongoing basis.

The color accuracy of Cercon® xt and Cercon® ht has been evaluated as No. 1 in total of 16 classic VITA shades.

Evaluation of the color accuracy of Cercon® xt and Cercon® ht based on the 16 classic VITA shades by participants from Europe and the USA in blind testing.

Cercon® xt, Cercon® ht

5 Performance levels: Full flexibility in every case.

Different indications, different patient requirements, different performance levels. The pressure on laboratories is high to reflect these differences in economic terms. Cercon® xt and Cercon® ht with True Color Technology offer full flexibility.



1 Monolithic glazed-only restorations

- the fastest solution.

2 Monolithic restorations characterized by staining

- more valuable esthetic results.

3 The cut-back technique

- high color accuracy in the anterior and posterior region.

4 Monolithic and partly or fully veneered


- combination as required and desired.

5 Full veneering

- ultimate customization options.

5 performance levels with Cercon® xt and Cercon® ht

xt	<p>Glazed only</p> 
ht	<p>5 min. / customization</p> <p>fast ----- ▲ ----- customized</p>

xt	<p>Customized and glazed</p> 
ht	<p>10 min. / customization</p> <p>fast ----- ▲ ----- customized</p>

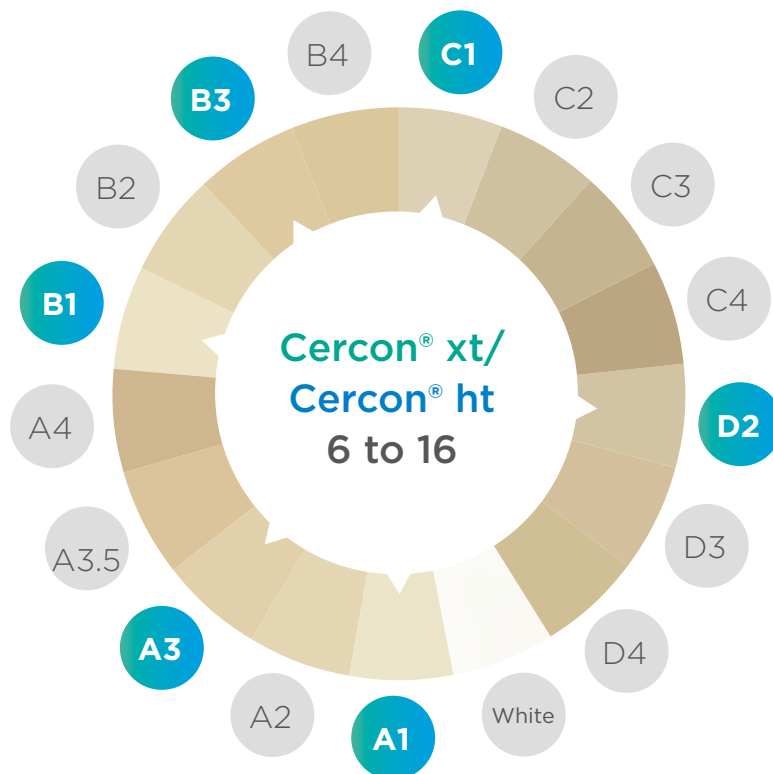
xt	<p>Cut-back technology</p> 
ht	<p>30 min. / customization</p> <p>fast ----- ▲ ----- customized</p>

xt	<p>Combining multiple techniques</p> 
ht	<p>fast ----- ▲ ----- customized</p>

ht	<p>Unlimited customization</p> 
	<p>fast ----- ▲ ----- customized</p>

6 to 16

Time saving and efficiency: The sleek color scheme



6 to 16

With Cercon® xt and Cercon® ht in the 16 VITA shades you can produce restorations of different performance levels in the laboratory.

However, if you want to use a slimmed-down variant of the system in terms of shade usage, you can use the “6 to 16” color selection.



Clear labelling and color coding of the A, B, C, D and White shades simplifies your inventory.

6 to 16 with Dentsply Sirona Universal Stain & Glaze

Staining technique

Just 6 Cercon® xt or Cercon® ht disks in shades A1, A3, B1, B3, C1, D2 plus the Dentsply Sirona Universal Stain & Glaze reproduce the 16 classic VITA shades using the staining technique. This is another, extended option for using the system for the fabrication of economical monolithic restorations in the lab.

Cercon® xt - Extra translucent

VITA- Shade	Cercon® xt Disk-shade	1 st Stain Firing Stain/ glaze	2 nd Stain Firing Stain/ glaze	Incisal	Remark
A1	A1*	Body2	a little bit Pink	i1	
A2	A1	Body2	a little bit Pink	i1	
A3	A3*	Body4	a little bit Pink	i1	
A3,5	A3	Body4	a little bit Pink	i1	
A4	A3	50 % Body3, 50 % Body4	a little bit Pink	i1	mix Body stains
B1	B1*	(without)		i1	cover with i1 all over up diminishing to the margin
B2	B1	Body2		i1	
B3	B3*	(without)		i1, Pink	
B4	B3	Body2	a little bit Pink	i1, Pink	
C1	C1*	i1	a little bit Pink	i1	at first Pink all over
C2	C1	Body3	a little bit Pink	i1, Pink	
C3	C1	50 % Body3, 50 % Body4	a little bit Pink	i1 Pink	
C4	C1	25 % Body3, 50 % Body4, 25 % Grey**		i1 Pink	mix Body stains
D2	D2*	Body4	Pink	i1	at first Pink all over, mix Body stains
D3	D2	Body3, Body4** thin coverage	Pink	i1	at first Pink all over, mix Body stains
D4	D2	Body3, Body4** coverage	Pink	i1	at first Pink all over, mix Body stains

Cercon® ht - High translucent

VITA- Shade	Cercon® ht Disk-shade	1 st Stain Firing Stain/ glaze	2 nd Stain Firing Stain/ glaze	Incisal
A1	A1*	3, some Olive		i1 + i2
A2	A1	2 + 3, some Olive		i1 + i2, White
A3	A3*	1 + 3		i1 + i2
A3,5	A3	Olive	3	i1 + i2
A4	A3	1 + 3	3	i1 + i2
B1	B1*	3		i1 + i2
B2	B1	3 + 4		i1 + White
B3	B3*	2 + 3		i1 + i2
B4	B3	3 + 4, some Olive + Sunset		i1 + i2
C1	C1*	3		i1 + i2
C2	C1	3		i1 + i2
C3	C1	3		i1 + i2
C4	C1	3, some Olive		i1 + i2
D2	D2*	4		i1 + i2
D3	D2	4		i1 + i2
D4	D2	3, some Olive	3, some Sunset	i1 + i2

* Stains are only necessary for individualisation not for coloring.

** Apply several times to avoid speckles

CAD/CAM partners

Zirconia for open systems

The high-performance zirconia materials Cercon® xt and Cercon® ht are available for almost all CAD/CAM systems as 98 mm and 105 mm disks for sophisticated restorations.

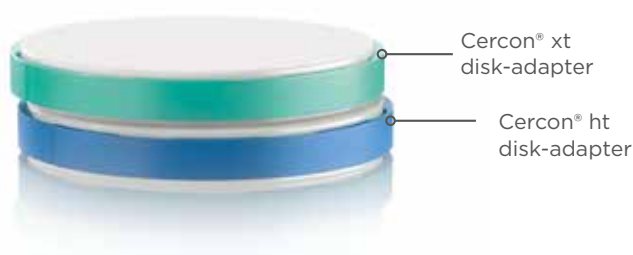
- › We have examined Cercon® xt and Cercon® ht in extensive tests on the leading open CAD/CAM systems.
- › We adapted the blank strength in the pre-sintered state to their specific requirements and developed an optimized disk adapter.

PRE-SINTERING

The material is pre-sintered in a temperature-controlled process. This serves to control the strength of the material, which is ideally suited for milling in dental milling units. High edge stability and a high-quality surface finish are the results of this systematic adaptation.

NEW DISK ADAPTER

The disk adapter, specially developed for 98 mm disks (patent pending), lets you process Cercon® xt and Cercon® ht in your dental milling unit, well secured in place and passively fitting. Adhesive attachment of the disk adapter across the entire contact surface and the invariable wall thickness make for maximum precision and durability throughout the entire milling process.



It's great to have a choice which delivers a high esthetic solution for the anterior region out of zirconia. Especially if you don't have enough space for Lithium silicate. With Cercon® xt you have a higher bending strength and almost the same translucency as with Lithium silicate. The results from Cercon® xt are really impressive.



Kersten Wegner, Dentist
Dentapont
Aachen | Germany

Compatible with all leading open
CAD/CAM systems



I already achieved great results with Cercon® ht using different performance levels. Starting with monolithic restorations using only the staining technique, the esthetics from Cercon® xt is really amazing. It's hard to differentiate Cercon® xt from a Lithium silicate crown. And it's hard to believe that these results are achieved out of zirconia in this easy and fast way.



Thomas Bartsch, Master DT
TRIODONT Zahntechnik GmbH
Eschweiler | Germany



Cercon® ht with True Color Technology convinced me to change my production process from dipping into using pre-shaded disks in my mill. The results are consistent and reproducible. I was able to increase my capacity which means I can satisfy more customers at the same time. I am excited to now have Cercon® xt with True Color Technology.



Frankie Acosta, Dental Technician
AA Dental Design
Murrieta | US | CA

Technical information

Cercon® ht and Cercon® xt blanks are made of yttrium oxide- (yttria-) stabilized zirconium oxide (zirconia) (Y-TZP). They are used in fabricating frameworks for fixed prosthetic restorations. Depending on the framework design, Cercon® ht and Cercon® xt frameworks can be ceramically veneered or delivered as fully contoured restorations. Which blank is selected will depend on the tooth shade to be reproduced and the space available for the veneer. With fully contoured restorations, no space is required for the ceramic veneer, which may allow the dentist to preserve more of the tooth substance during preparation.

Framework material	Zirconium oxide (Y-TZP)
Temporary cementation	<ul style="list-style-type: none">• Possible for Cercon® ht• Not possible for Cercon® xt
Definitive cementation	<ul style="list-style-type: none">• Adhesive cementing• Conventional cementing

Objects are individually fabricated to your digital design specifications such as anatomic contour, framework and wall thickness, connector diameter and cementing gap.



Technical specifications Cercon® ht

- Type II, class 5 (pursuant to DIN EN ISO 6872:2015)
- CTE: 10.5 µm/m·K (25–500 °C)
- Modulus of elasticity: 210 GPa
- Flexural strength: approx. 1 200 MPa (three-point flexural testing)

Composition (in % by mass) Cercon® ht:

- Zirconium oxide
- Yttrium oxide 5%
- Hafnium oxide < 3%
- Aluminum oxide, Silicon oxide, other oxides < 2%

Indications in the anterior and posterior segments Cercon® ht:

Cercon® ht is indicated in the anterior and posterior segments for:

- Crowns
- Telescopic primary crowns
- Multi-unit bridges (with no more than two pontics between abutment crowns; with no more than 6 units*)
- Two piece abutments**

Cercon® ht can be used as a substructure (framework) which is then veneered with a dental veneering ceramic or can be used for full-contour application (without veneering) as well. In the case of telescopic primary crowns, the substructure is not veneered.

*for Canada only ** not valid for USA

Technical specifications Cercon® xt

- Type II, class 4 (pursuant to DIN EN ISO 6872:2015)
- CTE: 10.1 µm/m·K (25–500 °C)
- Modulus of elasticity: 210 GPa
- Flexural Strength: approx. 750 MPa (three-point flexural testing)

Composition (in % by mass) Cercon® xt:

- Zirconium oxide
- Yttrium oxide 9%
- Hafnium oxide < 3%
- Aluminum oxide, Silicon oxide, other oxides < 2%

Indications in the anterior and posterior segments Cercon® xt:

Cercon® xt is indicated for all ceramic restorations for anterior and posterior locations:

- Crowns
- 3-unit bridges (up to the 2nd premolar)

Contraindications:

- This medical product may not be used in patient hypersensitivity to zirconia (Y-TZP) or one of the other ingredients
- Bruxism or recalcitrant parafunctional habits (for ceramically veneered frameworks)
- Insufficient available space
- Endodontic posts
- Endosseous implants
- Inlay bridges
- 3-unit bridges in the molar region (for Cercon® xt only)

Warnings:

Possible cross-reactions or interactions of this medical product with other medical products or material already present in the oral environment must be taken into consideration by the dentist when selecting this medical product.

Precautions:

Please note:

- Keep product dust away from eyes.
- Avoid any contact with mucosa.

- After use, wash your hands and apply a hand cream.
- Do not smoke, eat or drink while handling the product.
- Do not swallow the product.
- Do not inhale dust particles during grinding.
- Use local vacuum suction and suitable mouth/face protection during manual machining at the workplace.

The safety and warning notes listed here describe how to use our medical product in a safe and risk-free manner. Notify the dentist in charge of all factors described above if you use this medical product for a custom design and make sure to comply with the pertinent Material Safety Data Sheets (MSDS).

Adverse effects:

If properly processed and used, adverse effects of this medical product are highly unlikely. However, reactions of the immune system (such as allergies) to substances contained in the material or localized paraesthesia (such as taste disturbances or irritation of the oral mucosa) cannot be completely ruled out as a matter of principle. Should you hear or be informed of any adverse effects – even when doubtful – we would like to request notification.



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