



# GUIDANCE

## Zirconia



 **UPCERA**



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## >> Indication Guide



	veneers	inlays/onlays	full contour crown anterior tooth	bridge anterior tooth (3 units)	full contour crown posterior tooth	bridge posterior tooth (3 units)	full contour bridge (4 units)	full contour bridge (≥4 units)	reduced crown anterior tooth	reduced bridge anterior tooth (3 units)	reduced crown posterior tooth	reduced bridge posterior tooth (3 units)	reduced bridge posterior tooth (4 units)	reduced bridge posterior tooth (≥4 units)
HT White	●	●	●	●	●	●	●	●	★	★	★	★	★	★
ST White	●	●	●	●	✓	✓	✓	★	★	★	★	★	★	★
ST Pre-shaded	●	●	●	●	✓	✓	✓	★	★	★	★	★	★	★
ST-Multilayer	●	●	●	●	✓	✓	✓	★	★	★	★	★	★	★
TT One	●	●	✓	✓	★	★	★	✓	✓	✓	✓	✓	✓	●
TT One Pre-shaded	●	●	✓	✓	★	★	★	✓	✓	✓	✓	✓	✓	●
TT One Multilayer	●	●	✓	✓	★	★	★	✓	✓	✓	✓	✓	✓	●
TT White	●	●	★	★	★	★	×	×	✓	✓	✓	✓	×	×
TT Multilayer	●	●	★	★	★	★	×	×	✓	✓	✓	✓	×	×
Functional explore	●	●	✓	✓	★	★	★	✓	✓	✓	✓	✓	✓	✓
Esthetic explore	●	●	★	★	★	★	●	×	✓	✓	✓	✓	●	×

★ optimum    ✓ available    ● available but not recommended    × unavailable



01

Scanning



02

Software Designing



03

Milling



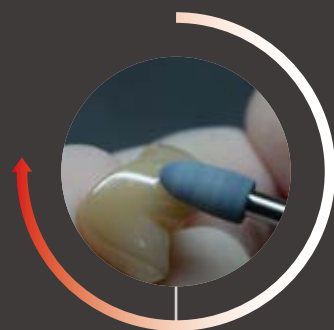
04

Sintering



05

Grinding



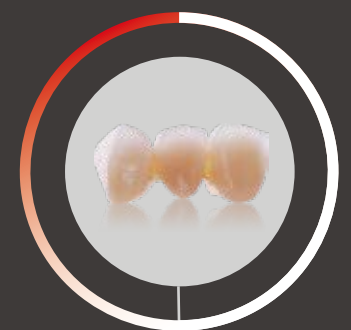
06

Polishing



07

Glazing



08

Full contour crown

# 01

## Cam Software Designing



When creating the CAM file, you can see the natural layering shade on the crown after adding the layer information. This makes sure the incisal, cervical, and body areas are correctly balanced after sintering.

### For example: worknc software

Set the required data in CAM software (e.g WORKNC 4.0 or higher version) and make sure to reserve 2-4mm for incisal area (1st layer).



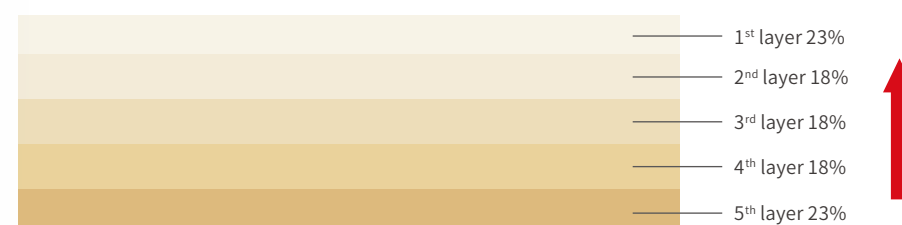
# 02

## Milling



- Choose the suitable size of EXPLORE zirconia according to the shade and height of the final restoration.
- Refer to the layer lines in CAM software for positioning
- Pay attention to the incisal direction (marked on the side of the block ) when placing the block in the holder.
- Import STL files into the milling machine for milling.
- Separate the crown from the block and remove the supporting bar.
- Clean the zirconia powder inside and outside of the crown.

Incisal area cervical area



# 03

## Coloring



### Upcera Visible Coloring Liquid Table

Application	Dentin area	Gingival area	Fossa area	Incisal area
Shades	16 VITA shades	P1/P2/P3	O1/O2	G1/G2
Visible coloring liquid	Blue	Red	Brown	Purple

PS: The diluting liquid can reduce the density of the coloring liquid to lighten shades



### ATTENTION

- If you are using wet milling, make sure the framework is completely dry before coloring.
- Use the palette or measuring cup supplied in your kit.
- Use the plastic tweezers in your kit, do not use metal tweezers, as it can affect the final shade.
- Gloves are recommended when coloring frameworks.
- Do not put used liquid back into the bottle to avoid contamination.
- Keep the bottles sealed after use. Cold storage (0~4 degree) is recommended.
- Use the Upcera diluting liquid instead of water to dilute the coloring liquids.
- Use a piece of tissue to gently dab the crown before drying, the crown should at room temperature and dry if more color stain is needed.
- Skin sensitive gloves are recommended.

## ST WHITE

ST White zirconia discs can be colored by three different methods:

### A.Brushing+Dipping



Brush the incisal area with G1/G2 coloring liquid.



Paint the occlusal surface with O1/O1 liquid 1-2 times. (err on the mean side)



Dip the restoration into the coloring liquid for 2-5 minutes.

### B.Dipping+Brushing



Dip the restoration into the A2 coloring liquid for 2-5 minutes.



Dry the restoration under an infrared lamp for 20-30 minutes.



Paint the occlusal surface with O1/O2 liquid 1-2 times. (Rather light than deep)



Brush the cervical and body areas with A3 liquid once. And then brush the cervical area once more.



Brush the whole fit surface with A3 liquid once and then brush the cervical area once more.



Brush the occlusal area with G1/G2 liquid 1-2 times.



## ST COLOR

Choose the closest shade of the zirconia disc to the case. Then stain the incisal and fossa areas as required.

### Incisal coloring



Brush 6 - 8 times from half way to the incisal surface with T0 coloring liquid.



Brush 1 - 2 times onto the incisal surface and marginal ridges with T0 coloring liquid.

### Fossa coloring



Brush the occlusal surface with O1/O2 liquid 1-2 times.



#### ATTENTION

- Clean all residual zirconia powder from the restoration either with a dry brush or carefully using a dry and oil free airline, before coloring.
- To coloring liquid cannot be used on the bridge connector area; keep to incisal areas only.
- To avoid too deep a color after sintering, use the minimum O1 and O2 stains in the fossa areas.
- Make sure the restoration is fully dried before sintering.

## TT WHITE

TT White zirconia discs can be colored by three different methods:

### A. Dipping



- ① Dip the restoration into the A2 coloring liquid for 2 minutes.
- ② Remove from the coloring liquid and dry carefully with a tissue.



#### ATTENTION

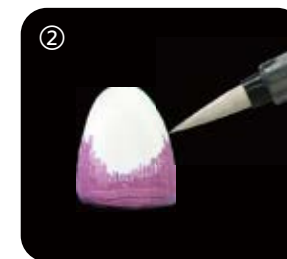
Place the restoration into coloring liquid slowly to avoid any bubbles which may appear around the restoration, They may impact on the color conformity of the restoration; Vibrating the restoration while immersing also helps to clear any bubbles that appear on the surface.



### B. Brushing+Dipping



Paint O1 or O2 on the lingual side and occlusal fossa 1-2 times.



Brush G1 or G2 onto the incisal area 1-2 times.



Fully immerse the crown into A2 coloring liquid for at least 2mins.

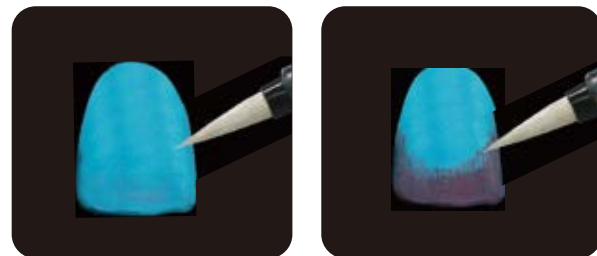
## C.Brushing



Paint O1 or O2 on the lingual side and occlusal fossa 1-2 times.

Brush G1 or G2 onto the incisal area 1-2 times.

Fully immerse the crown into A2 coloring liquid at least 2mins.



Brush A1 onto the body area and cervical third twice.

Brush G1 or G2 onto the incisal area 1-2 times.



### ATTENTION

Do not load the brush too much when staining the incisal and occlusal areas, to avoid too deep a color.

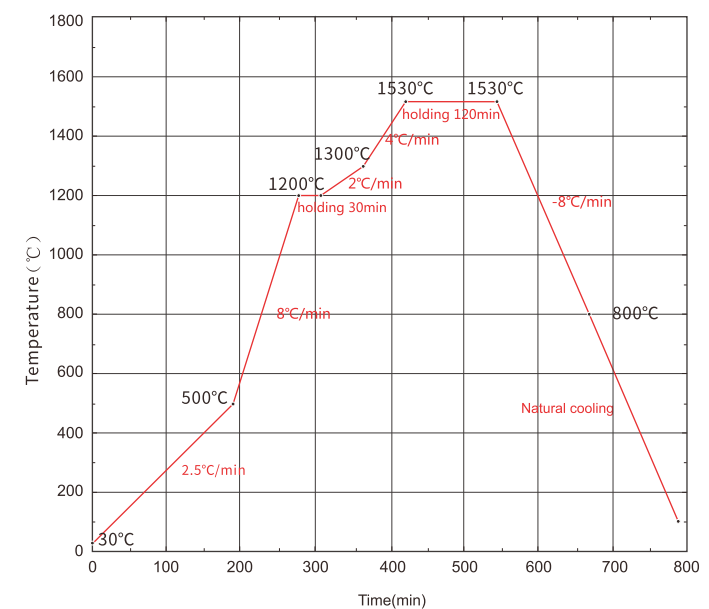


# 04

## Sintering



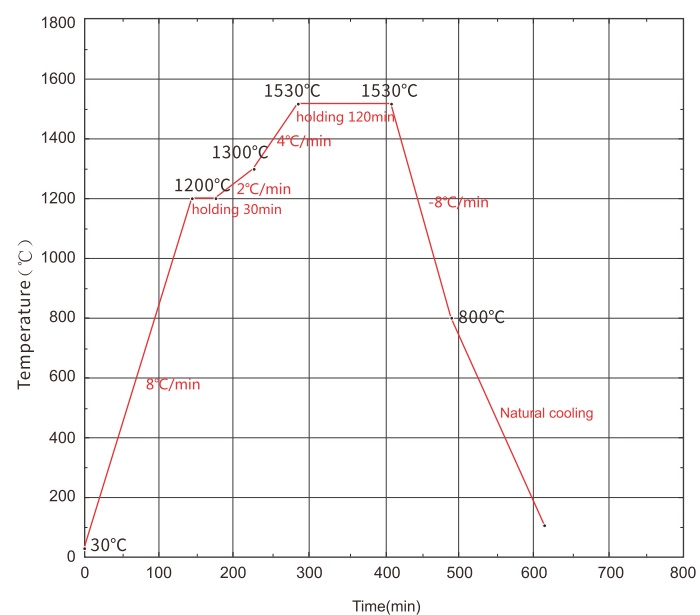
The ideal sintering temperature for ST White is 1530°C, holding for 2 hours.



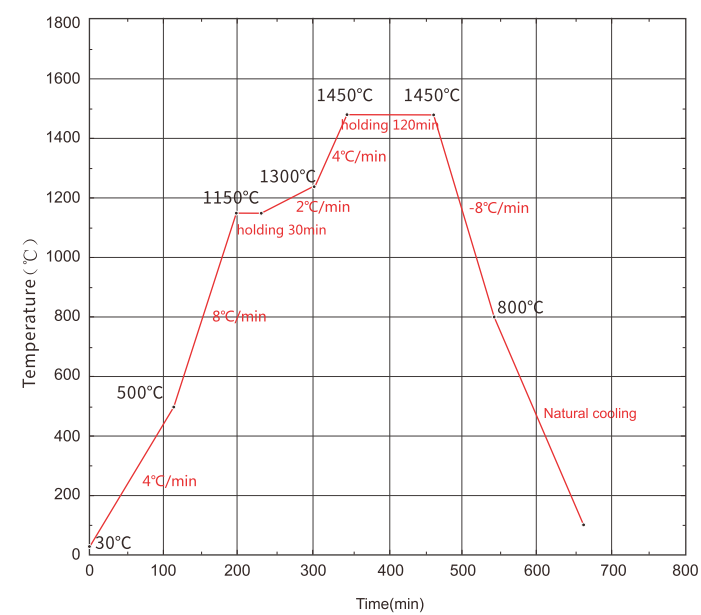
### ATTENTION

The Path of Insertion, the accuracy of the impression or digital scan file, the design, the parameters set in your CAD software, the coarseness of the burs, staining choices and accuracy, and the surgery skills at try-in, all impacts on the final fit and aesthetics of zirconia restorations.

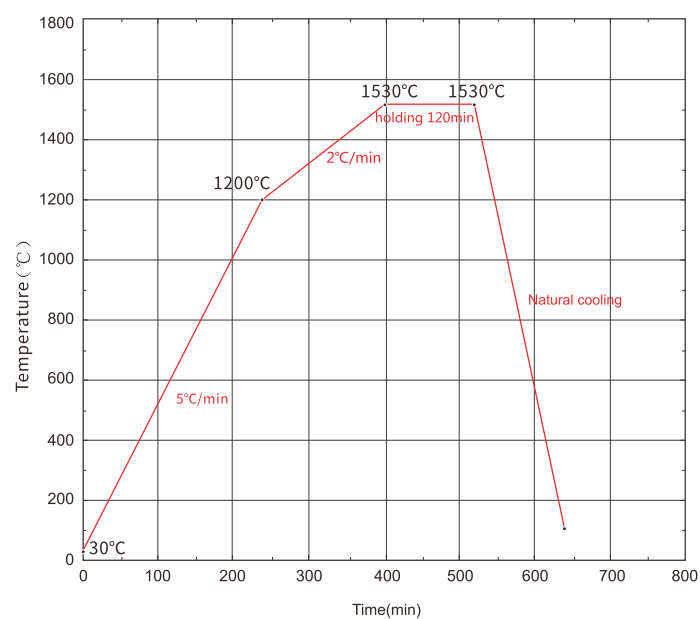
Sintering Schedule(ST-Color / ST-ML)



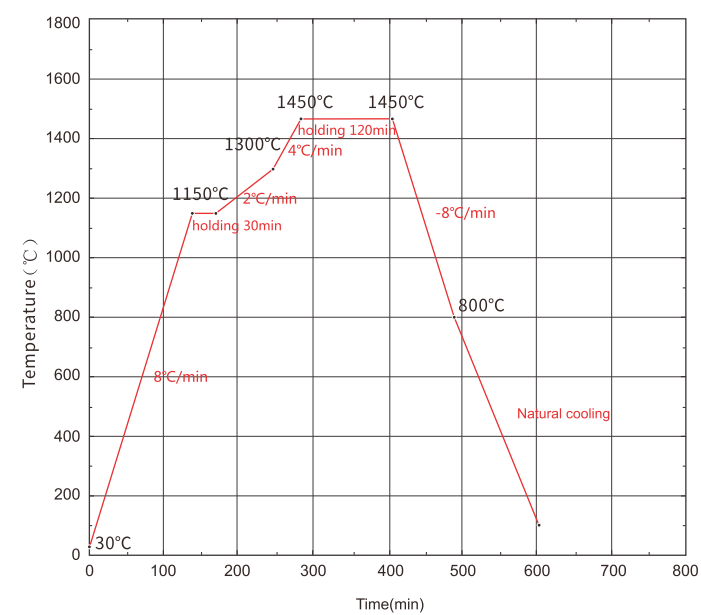
Sintering Schedule(TT-White)



Sintering Schedule(ST White \ ST-Color \ ST-ML)

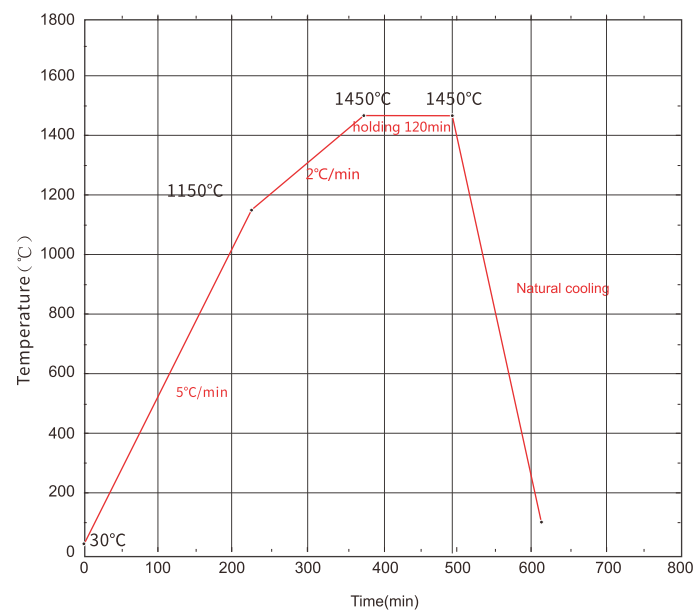


Sintering Schedule(TT-Color / TT-ML)

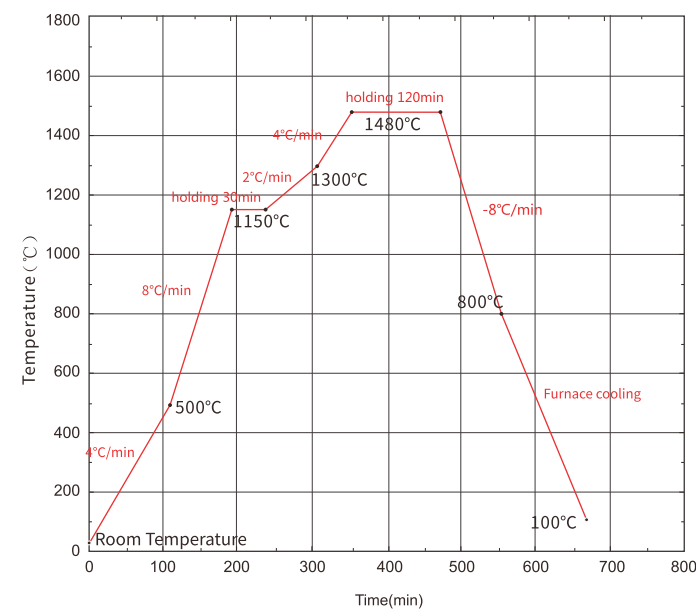




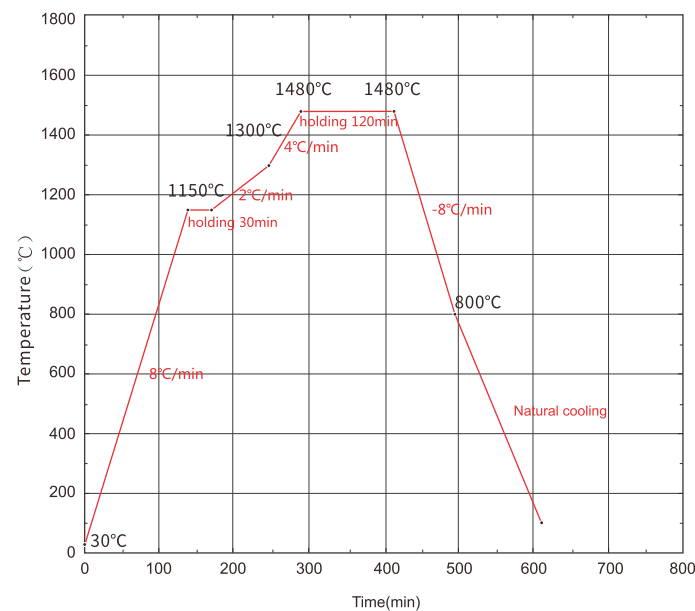
Sintering Schedule(TT-White \ TT-Color \ TT-ML)



Sintering Schedule(TT-LT White \ 4D White)



Sintering Schedule(4D \ TT-LT-Color \ TT-LT-ML)



# 05

## Grinding



Grind the restoration with Upcera stones series TG03 / TG07 / TG10(8000-12000 rev/M) or water-cooled diamond burs. SH392 can be used to polish the interdental areas when necessary. (When finishing a sintered zirconia restoration, pay attention to the grinding speed and the pressure, otherwise local hotspots lead to cracking)



# 06

## Polishing



Use special zirconia polishers (e.g Upcera polishing kit DPH2Z / DPH8Z / DPH2F / DPH8F / DPH9F at rotation speeds of 8000-12000 rev/M) to polish the occlusal surface, and polish the buccal and distal surfaces as required.



## Sandblasting

Sandblast under 2-2.5Bar with 50µm AL<sub>2</sub>O<sub>3</sub> grit. Polish the crown if applicable.

# 07

## Glazing



Available for two stain kits:

UPCERA Base Stains Kit

BASIC SHADE



FOSSA SHADE



INCISAL SHADE



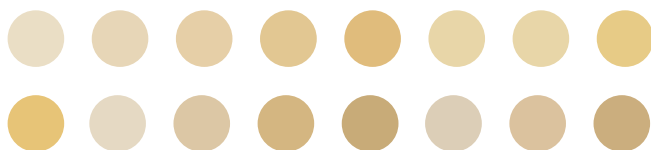
GINGIVAL SHADE



ADJUSTING SHADE



UPCERA  
16 shades stain kit



## Glazing process

Starting temp (°C)	Drying time (mins)	Pre-heat time (mins)	Heating rate (°C/min)
400	3	2	50
Highest temp (°C)	Holding time (mins)	Final temp (°C)	Cooling time (mins)
830	2-4	400	4

NB.For bridges, reduce the heating rate to 35 °C/min

## How to use the Upcera 16 shades Stain Kit:

The UPCERA 16 shades stains kit is formulated to work with Upcera ST pre-shaded zirconia discs. This table shows you how to combine the stains with Upcera pre-shaded ST zirconia to achieve the correct end result:

Classical 16 shades A-D combination table

The shade you want	Use this st color	Stain needed	Incisal and fossae stain
A1	A1	None needed	Purple/Blue as necessary Brown or red-brown for the fissures
A2	A2	None needed	
A3	A3	None needed	
A3.5	A3	Use A3.5	
A4	A3	Use A4	
B1	B1	None needed	
B2	B1	Use B2	
B3	B3	None needed	
B4	B3	Use B4	
C1	A1	Use C1	
C2	C2	None needed	
C3	C2	Use C3	
C4	C2	Use C4	
D2	A1	Use D2	
D3	A2	Use D3	
D4	C2	Use D4	

### Matters need attention when using Upcera glazing kits:

- If the shade is too light at first staining, you can deepen the color effect with a second application (more chroma).
- With irregular use, the stains and glaze paste may separate a little. Before each use, the glaze and stains should be mixed thoroughly with a mixing knife or glaze pen.
- It is important to keep the glaze pens clean by dipping in the universal liquid and drying before use.
- You can adjust the consistency of the glaze paste by mixing with extra universal .

- liquid. For any given firing temperature, a thicker glaze paste will increase the value slightly.
- You can increase the value (brightness) slightly by raising the firing temperature and extending the hold time, but still keeping the temperature to no more than 840 °C.
- To lower the value (brightness) slightly, glaze a second time.