












**NATURE
SCIENCE
ART**

Zhongshan Miiyen New Material Technology Co., Ltd

	HT-Plus	ST	SHT	UT	3D-Pro
Transmittance & Strength	40% ≥1400 Mpa	43% ≥1400 Mpa	46% ≥900 Mpa	49% ≥650 Mpa	42%~57% 800-1200Mpa
White					
Shaded					
Multilayer					



Size	ST	HT-Plus	SHT-Multilayer	UT	3D-Pro-Multilayer
OD98*10mm(H)	✓	✓	✓	✓	✓
OD98*12mm(H)	✓	✓	✓	✓	✓
OD98*14mm(H)	✓	✓	✓	✓	✓
OD98*16mm(H)	✓	✓	✓	✓	✓
OD98*18mm(H)	✓	✓	✓	✓	✓
OD98*20mm(H)	✓	✓	✓	✓	✓
OD98*22mm(H)	✓	✓	✓	✓	✓
OD98*25mm(H)	✓	✓	✓	✓	✓
OD95*10mm(H)	✓	✓	✓	✓	✓
OD95*12mm(H)	✓	✓	✓	✓	✓
OD95*14mm(H)	✓	✓	✓	✓	✓
OD95*16mm(H)	✓	✓	✓	✓	✓
OD95*18mm(H)	✓	✓	✓	✓	✓
OD95*20mm(H)	✓	✓	✓	✓	✓
OD95*22mm(H)	✓	✓	✓	✓	✓
OD95*25mm(H)	✓	✓	✓	✓	✓
/					
89*71*12mm(H)	✓	✓	✓	✓	✓
89*71*14mm(H)	✓	✓	✓	✓	✓
89*71*16mm(H)	✓	✓	✓	✓	✓
89*71*18mm(H)	✓	✓	✓	✓	✓
89*71*20mm(H)	✓	✓	✓	✓	✓
/					
89*71*25mm(H)	✓	✓	✓	✓	✓

- 1) Absolutely no addition of any binder during the whole process.
- 2) Every product can be traced with the exact process parameters.
- 3) The usage of each block was illustrated precisely with sintering factors and suggested sintering temperature.
- 4) Varies of transparent (up to 49% transparency), white, colorful and multilayered products can be provided.
- 5) Excellent engraving ability, sintering ability, and homogeneity.
- 6) Good compatibility with the popular engraving machines.

QUALITY & ADVANTAGES



MIYEN

3D Pro
Multilayer

HT-Plus

- High translucent
- Brilliant bending strength and economical Block
- Suitable for coping, framework



Indications



crown



inlay



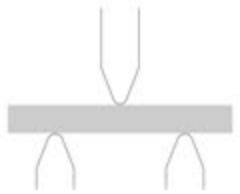
onlay



bridge

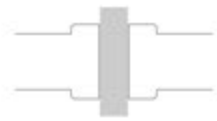


coping



≥1400

Bending strength (MPa)



40%

Light transmittance

Chemical Components and Properties

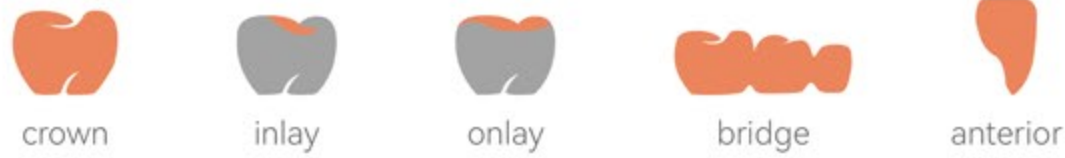
ZrO ₂ +HfO ₂ +Y ₂ O ₃	≥99%	Density before sintering (g/cm ³)	3.10-3.20	Chemical solubility after sintering (ug/cm ²)	<100
Y ₂ O ₃	4.5%-6.0%	Density after sintering (g/cm ³)	6.08-6.10	Cytotoxicity	0 level
Al ₂ O ₃	< 0.25%	CTE (25-500°C) (/K)	10.5	Radioactivity (Bq/g)	<0.1
Other Oxides	< 0.15%	Accelerated aging surface monoclinic phase content	<15%	Sintering temperature (°C)	1500-1550

ST

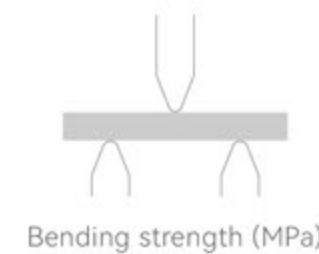
- Super translucent
- Suitable for full contour crown, bridge and anterior



Indications



Shades



≥1200



43%

Chemical Components and Properties

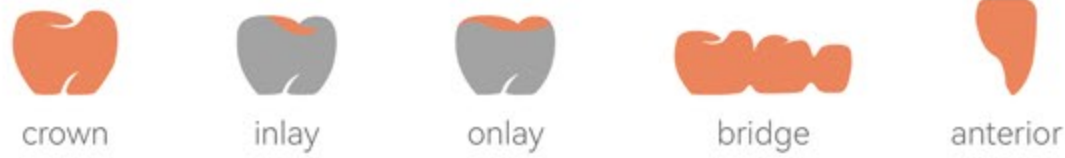
ZrO ₂ +HfO ₂ +Y ₂ O ₃	≥99%	Density before sintering (g/cm ³)	3.10-3.20	Chemical solubility after sintering (ug/cm ²)	<100
Y ₂ O ₃	4.5%-6.0%	Density after sintering (g/cm ³)	6.08-6.10	Cytotoxicity	0 level
Al ₂ O ₃	< 0.15%	CTE (25-500°C) (/K)	10.5	Radioactivity (Bq/g)	<0.1
Other Oxides	< 0.15%	Accelerated aging surface monoclinic phase content	<15%	Sintering temperature (°C)	1480-1530

SHT

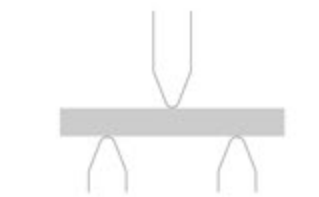
- Multilayer color
- No need for further dyeing operation
- Suitable for anterior, crown and bridge



Indications



Shades



Bending strength (MPa)

≥900



Light transmittance

46%

Chemical Components and Properties

ZrO ₂ +HfO ₂ +Y ₂ O ₃	≥99%	Density before sintering (g/cm ³)	3.15±0.05	Chemical solubility after sintering (ug/cm ²)	<100
Y ₂ O ₃	7.0%-7.8%	Density after sintering (g/cm ³)	6.08±0.01	Cytotoxicity	0 level
Al ₂ O ₃	< 0.15%	CTE (25-500°C) (/K)	10.5±0.5	Radioactivity (Bq/g)	<0.1
Other Oxides	< 0.5%	Accelerated aging surface monoclinic phase content	<15%	Sintering temperature (°C)	1500-1550 Recommend 1530

UT

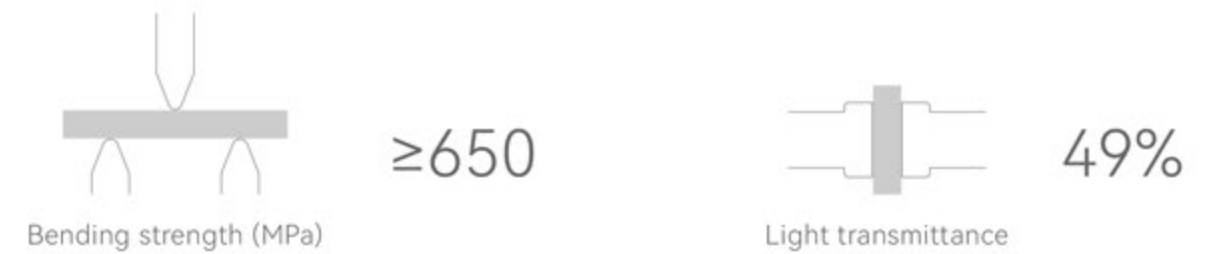
- Ultra translucent
- Suitable for full contour crow, bridge and anterior



Indications



Shades



Chemical Components and Properties

ZrO ₂ +HfO ₂ +Y ₂ O ₃	≥99%	Density before sintering (g/cm ³)	3.15-3.25	Chemical solubility after sintering (ug/cm ²)	<100
Y ₂ O ₃	9%-10%	Density after sintering (g/cm ³)	6.05-6.07	Cytotoxicity	0 level
Al ₂ O ₃	< 0.05%	CTE (25-500°C) (/K)	10.5	Radioactivity (Bq/g)	<0.1
Other Oxides	< 0.05%	Accelerated aging surface monoclinic phase content	<15%	Sintering temperature (°C)	1435-1450

3D-Pro-ML

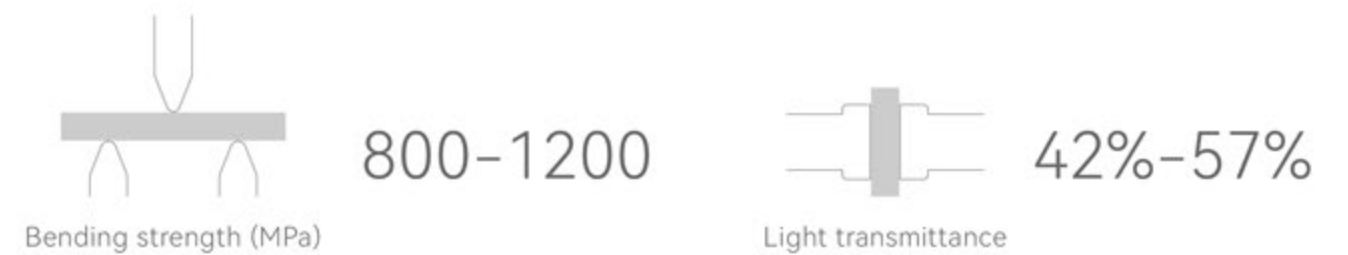
- 5 layers material produces, 9 layers gradient colour
- From 42% to 57% gradient for transparency
- Strength shows gradient from 800MPa to 1200MPa
- All in one



Indications



Shades



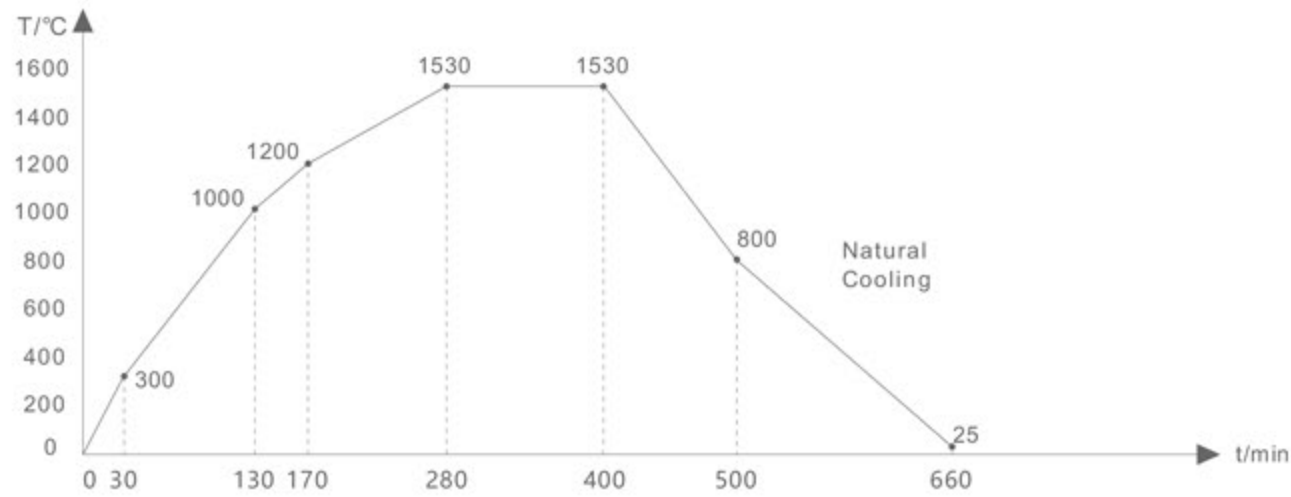
Chemical Components and Properties

ZrO ₂ +HfO ₂ +Y ₂ O ₃	≥99%	Density before sintering (g/cm ³)	3.10-3.20	Chemical solubility after sintering (ug/cm ²)	<100
Y ₂ O ₃	4.5%-10%	Density after sintering (g/cm ³)	6.05-6.09	Cytotoxicity	0 level
Al ₂ O ₃	< 0.15%	CTE (25-500°C) (/K)	10.0-11.0	Radioactivity (Bq/g)	<0.1
Other Oxides	< 0.5%	Accelerated aging surface monoclinic phase content	<15%	Sintering temperature (°C)	1480-1530 Recommend 1500

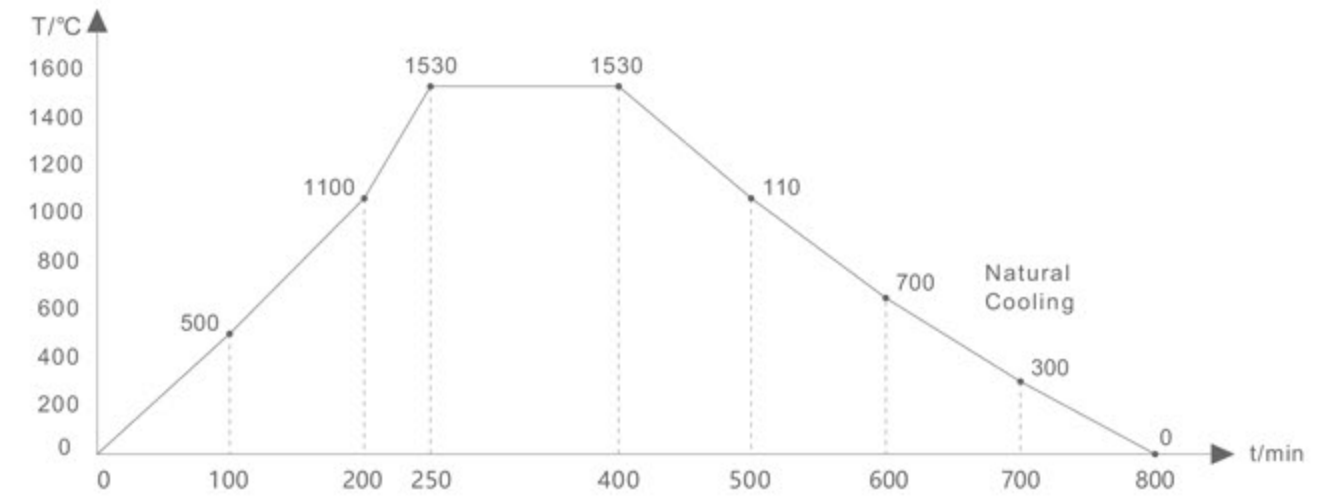
Sintering Temperature

• ST

ST (white & shade)

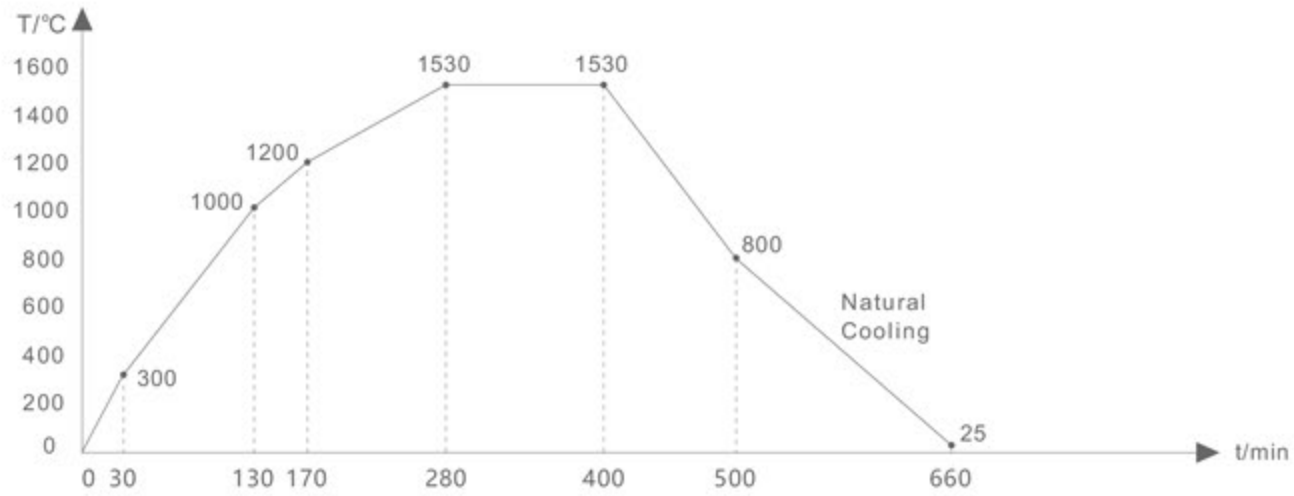


ST (multilayer)

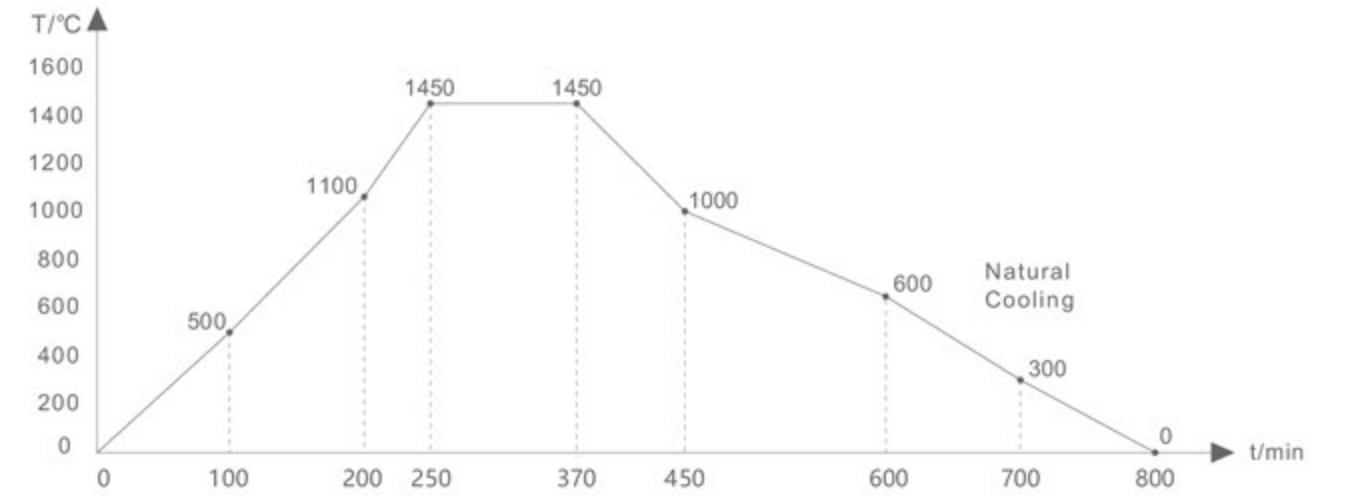


ZIRCONIA BLOCK	ST	HT-Plus	SHT-Multilayer	UT	3D-Pro-Multilayer
SINTERING TEMPERATURE(°C)	1500-1550	1500-1550	1480-1530	1435-1470	1480-1530
RECOMMEND TEMPERATURE(°C)	1530	1530	1500	1450	1500

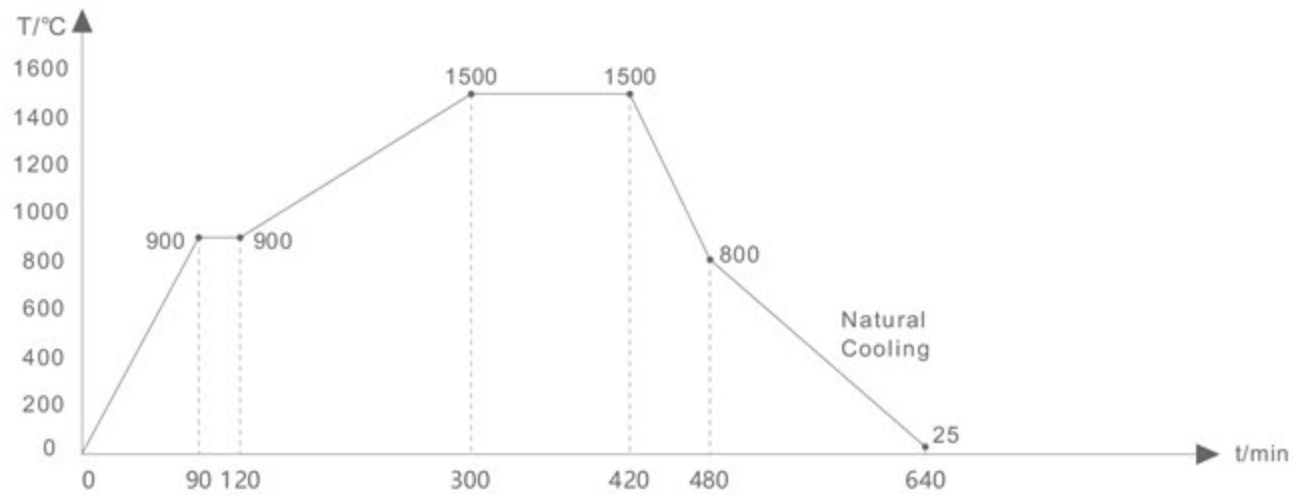
• HT-Plus



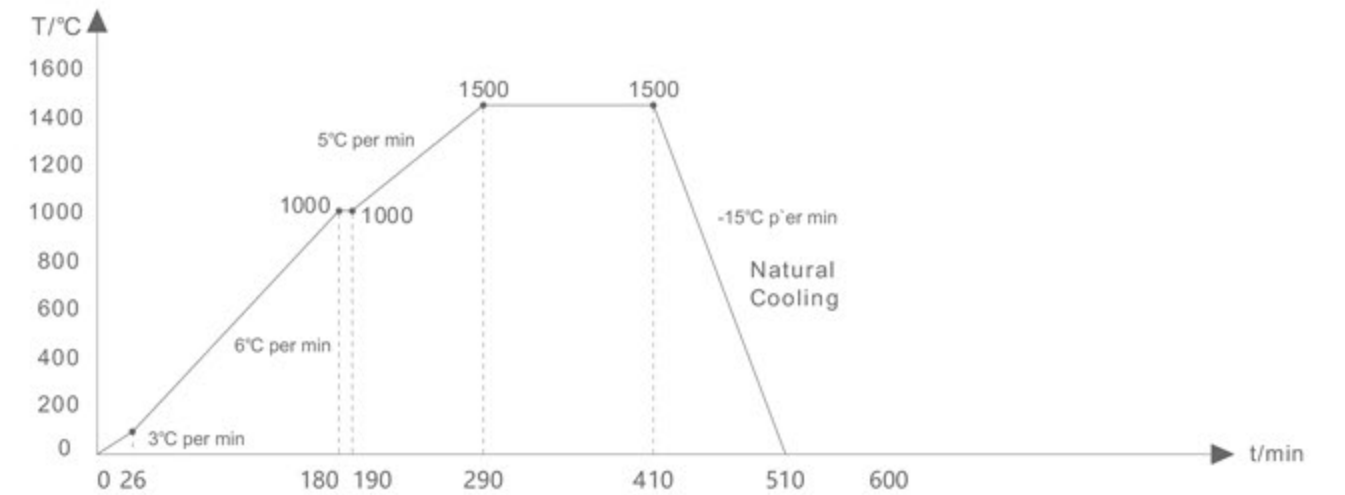
• UT



• SHT



• 3D-Pro-ML



Sintering temperature of ST/HT-plus is from 1500°C to 1550°C, UT is from 1435°C to 1470°C, SHT/3D-pro is from 1480°C to 1530°C, you should make sure peak temperature at this range.

The recommended sintering temperature corresponding to them are **1530°C, 1450°C and 1500°C.**

Coloring Liquid

Coloring liquid for all-ceramic dental prosthesis

The main ingredients: Deionized water, polyethylene glycol, barium nitrate

Specifications and Models

COLORING LIQUID	SHADES	SPECIFICATIONS
HT	A1-D4 16 shades	50ml/bottle
ST	A1-D4 16 shades	50ml/bottle
SHT	A1-D4 16 shades	50ml/bottle
UT	A1,A2,A3,A3.5 B1,B2,B3,B4	50ml/bottle
3D-Pro-ML	/	/
Indicator	Red, Blue, Yellow	10ml/bottle

SPECIAL LIQUID	WITHOUT INDICATOR	SPECIFICATIONS
Incisal	T0(Translucency)	50ml/bottle
Dilution	D0(Translucency)	50ml/bottle

Usage

Used for coloring inner crown, full zirconia teeth and bridges.

Soaking Method(for example for A3)

1. Soak the crown into A3 dyeing liquid for 1 minute

Note:The Soaking time has a small effect on the color crowns with a thickness of less than 1.5mm;

The thicker the crown, the Soaking time will be larger effect to the color of crown.

For crown thicker than 3mm, we recommended to soak in a light color.

Cover the cup to prevent the evaporation of water from darkening.

2. Take the crown out with plastic tweezers, then clean the dyeing liquid inside and outside of the crown.

3. Dry the crown with infrared drying lamp.

Note:Dry 30 minutes for single crown and consecutive crown (thickness < 2 mm), dry more than 60 minutes for bridge or thicker crown. The distance between infrared drying lamp and crown is according to the power of lamp. Usually the temperature on the surface of crown should be less than 100°C.

Note

1. The dyeing liquid should be stored separately, suggest to be stored at room temperature (20±5°C). If room temperature changes too much, we suggest to store dyeing liquid in refrigerator. Take the bottle out from refrigerator half an hour before using it.
2. If you soak several crowns once, crowns can't be soaked with overlapping, and you move the crowns slightly during Soaking, so the crowns contact positions can be changed, which will be better for color dyeing.

Coloring Liquid

Soaking + Brushing Method

1. Soak the crown with A2 dyeing solutions. Details please see above soaking method
2. Dry the crown with infrared drying lamp for 20-30 minutes (see above)
3. Dyeing method of fossa, groove and incisal please see in below
4. Brush A3 liquid once on 1/3 middle and 1/3 neck with No.4-6 porcelain brush.
5. Brush A3 liquid once or twice inside the crown with No. 4-6 porcelain brush.
6. Brush A3 liquid once on 1/3 neck with OP brush or No.4-6 porcelain brush.

Note

Brush T0 liquid 2-3 times on 1/3 parts of incisal with OP brush or No.1 glaze brush.

Dyeing fossa and groove

Brush fossa and groove coloring liquid with No.0 or No.00 glaze brush (Only brush main fossa and groove) or brush A3 liquid twice with No.4-6 porcelain brush.

Dyeing fossa and groove

1. Dyeing liquid and crown should keep clean and dry. (Water processing is not suggested. The crown should be dried before dyeing if it is produced under water processing)
2. Dyeing liquid is weakly acidic. Please wear gloves for people with sensitive skin, if it gets in your eyes accidentally, rinse immediately with water and seek medical treatment in time.
3. Do not dilute the dyeing solution with water by yourself to avoid affecting the color stability.
4. After dyeing, the crown should be dried before sintering. To avoid contamination of the internal components of the sintering furnace and hidden cracks in the crown. For dyeing of bridge, it is recommended to use 01 liquid + brushing method to reduce the color difference between the bridge body and crowns.



ZIRCONIA BLOCK

Milling

Pre-sintered zirconia blocks have an corresponding shrinkage rate for each batch. This shrinkage rate must be input into the milling preparation software to ensure the accuracy of the final restoration.

When milling HT-plus, ST, SHT, UT, 3D-Pro, it is suggested to follow below general guidelines:

- Use sharp-end burs with carbide or diamond coating.
- Do not use any restoration that has chips or cracks.
 - Remove the units from the disc using a handpiece with diamond-coated burs.
- Smooth the support areas with a medium-grit rubber polishing wheel.
- Remove any residual zirconia dust with a brush.
- If wet milling is used, make sure restoration is completely dried before sintering.
 - Air dry for at least 15 minutes before sintering. Damp restoration will crack if being sintered.