UPCERA

...where art meets science

explore

Explore with us

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UPCERA are proud to introduce **EXPLORE** to the world of Dentistry,
it is the result of many years research and dedication. This multilayer zirconia exceeds all current zirconias on the market with its **unique balance of strength and translucency**.

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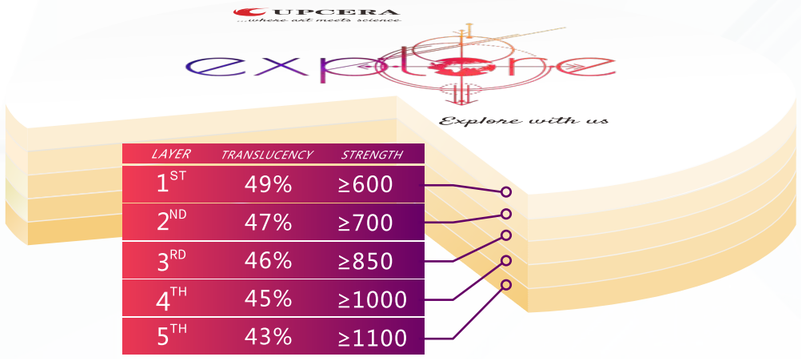
What's Explore ?

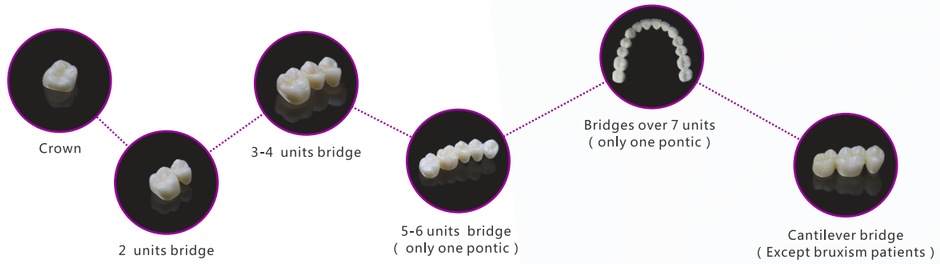
Upcera Explore is multilayer full contour zirconia with following features to cover all indications:

- Anterior translucency for incisors.
- A multilayer color gradient.
- High strength to support all bridge.
- High fracture toughness to resist chipping.



Available shade

Indications



Chemical Composition

ZrO_2·HfO_2	86.3%-94.2%
Er_2O_3	< 2%
Fe_2O_3	< 0.5%
Y_2O_3	5.8%-9.7%
Al_2O_3	< 0.5%
Others	< 0.5%

Physical characteristics

CTE (25-500℃)	(10.5±1.0)X$10^{-6}K^{-1}$
Accelerated aging surface monoclinic phase content	< 5%
Chemical solubility after sintering	< 100 (μg/cm^2)
Cytotoxicity test	Level 0
Radioactivity	<0.1(Bq/g)
Sintering temperature	1450-1500℃ recommend1480℃

Procedure

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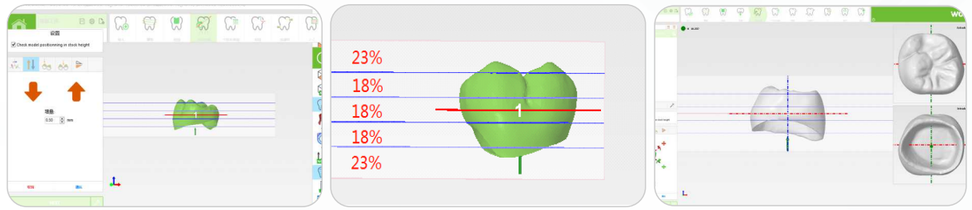
HOW TO USE EXPLORE ?

Step 1 CAM software design

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 correctly balanced after sintering.

For example : WORKNC software

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



Step 2 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 the restoration 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.

Step 3 Sintering

Use the below sintering program specially designed for UPCERA Explore:

Procedure	Start temperature (℃)	Finishing temperature (℃)	time (min)
Step1	Room temperature	1150	140.63
Step2	1150	1150	30
Step3	1150	1300	75
Step4	1300	1480	45
Step5	1480	1480	120
Step6	1480	800	85
Step7	800	100	Furance cooling

Note:

A. the ideal temperature for Explore is 1480℃ keep 2 hours.

B. the real temperature inside the sintering furnace must be tested before sintering to ensure the consistency of the sintering temperature and the program temperature.

Step 4 Grinding

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

Step 5 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.

Step 6 Sandblasting

Sandblast under 2-2.5Bar with 50μm Al_2O_3 grit,Polish the crown if applicable.

Step 7 Glzaing

Available for two stains kits :

UPCERA Base stains kit	Base A/Base B/Base C and also yellow/olive yellow/pink/brown/reddish brown/ grey/blue/purple/black/white/olive green together with glaze/universal glaze liquid.
UPCERA 16 shades stains kit	A3.5/A4/B2/B4/C1/C3/C4/D2/D3/D4 together with glaze and universal glaze liquid.

Glazing process

Glazing cycle							
Starting temp (℃)	Drying time (min)	Pre-heat time (min)	Heating rate (℃/min)	Highest temp (℃)	Holding time (min)	Final temp (℃)	Cooling time (min)
400	3	2	50	830	2-4	400	4

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