

concept
Italy

Italian dental style

USER MANUAL
Pre-sintered Zirconia Coloring
BRUSHING TECHNIQUE

REV.4
25/11/2019



AQUA-P
AQUA-P Quick
AQUA-P Anterior

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CAD-CAM TECHNOLOGY IN DENTAL LABORATORY





MILLED PRODUCT



Remove the milled framework from the block :

Use a small conical shaped milling tool. Spindle tool of handpiece <math><10.000\text{rpm}</math>

Cutting connections

Cut a V-shaped notch on one side of the bar at middle area, then turn around and cut the same point until connection is separated.



Finishing green state zirconia

With non sharp pointed and hard cutting edge milling tool.

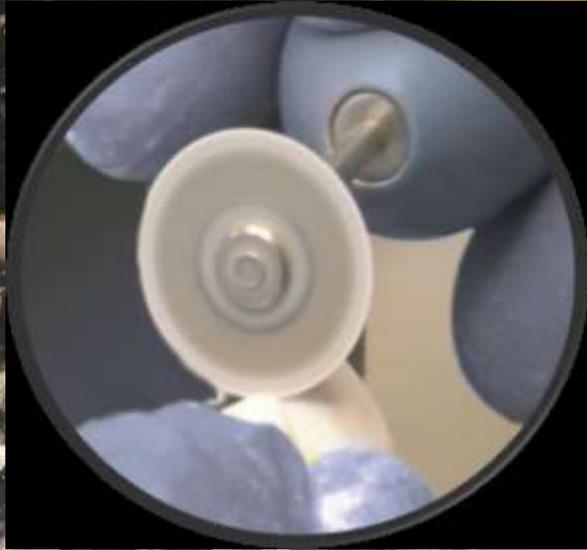
Spindle tool of handpiece <math>< 10.000\text{rpm}</math>.

Start trimming with the connecting bar, untill it gets the right and suitable countour.



Proceed with caution.

Pay attention not to cause chipping or cracks.



Polishing green state zirconia.

In order to have an accurate absorption of the colour

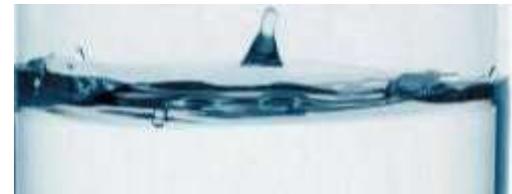
it's important that the framework is completely dust free, oil free and dry even inside, in the occlusal areas and asperities.



Clean with a brush,
paying **attention not to occlude porosities.**

The dust produced by the separation is very thin and the brush could push it into porosities instead of removing it.

Washing the framework with distilled water is very effective.
In this case, before going forward with the colouring, dry the framework in a proper way.



Stainless steel tank
600 ml. capacity
42,000 cycle energy wave



Low-energy ultrasonic cleaner is a very effective way to clean the milled denture before the coloring by infiltration.

Needs only 3 /5 seconds to remove the powder from frameworks.

Be careful not to cause cracks with this equipment.

Ultrasonic Cleaner

The dust, when the colour liquid saturates more and more, prevents the perfect penetration of the colour.

COLORING LIQUID USING BY FIRST TIME



COLORING LIQUID AFTER 50 X USING



ATTENTION



A clean framework prevents the dust, that gets stuck at the brush, from depositing in the colour liquid with negative effects on the final outcome.



Remove any trace of lubricant
in case of

MILLING WITH WATER



Recommended

Thermal treatment (850°C):

- Gradient 25-30°C/min. up to 850°C
- Hold time 850°C for 5-10 min.
- Cooling 25°C/min.

Possible traces of oil could hamper the homogeneous diffusion of the colour liquid, with the appearance of un-coloured areas and negative effects on the translucency as well.

Some recommendations before starting:

- **Don't touch the framework with wet or greasy hands**
Gloves are recommended
- **Shake the colour liquid well** for a few seconds making sure that potential sediments are dissolved
- It's recommended the use of **small soft paint brushes** for colouring areas with pinpoint precision
- Use only **metal-free brushes**
- Dip the metal-free brush into the colour and **wipe excess drops** with a cellulose-free paper napkin
- **Before every change of colour** wash the brush with distilled water and dry it
- Store the colour liquid (hermetically closed) in a cool and dark place after use
- Place the coloured framework on a **not absorbing surface**

Coloring by infiltration



Mark with a pencil different areas to be coloured

Defining marginal and occlusal areas.





The framework is ready to be coloured.

COLORS PREPARATION



Body

Dentin shades of the classic "Vita" scale:

- **A1-A2-A3-A3.5-A4**
- **B1-B2-B3-B4**
- **C1-C2-C3-C4**
- **D2-D3-D4**

AQUA-P LIGHTER

for lightening the colour
to be used in drops

OCCLUSAL-Effect

- **BLEU** depth perception effect
- **GREY** transparent areas for lowering grey tones
- **GREY-BLUE** transparent areas for lowering grey tones
- **AMBER** occlusal grooves and fissures
- **BROWN** occlusal grooves and fissures
- **YELLOW** occlusal grooves
- **VIOLET** incisal areas
- **PINK** gingival areas
- **PINK INTENSE** gingival areas



AQUA-P

The coloring liquids are **intense** so as to allow the technician to manage the chromatic intensity in order to "build" the final effect closest to one's needs.

The intensity can be suitably decreased by mixing the color with the lightening **AQUA P LIGHTER**

To dilute liquids use the dosing pipette supplied with the product.

AQUA-P QUICK-AQUA-P ANTERIOR

The coloring liquids **are already diluted and ready for use.**

If necessary, however, they can be diluted with Aqua P Lighter

AQUA P liquids contain **biocalcinable pigments** that make every single brush stroke visible to allow the technician greater control of the application of color

When using colors, take into account the chromatic result given by the interaction between different colors

(e.g. blue + yellow = green)

Dilution of liquid colors

In the "saturation" coloring, the liquids must be correctly diluted with drops of **AQUA P LIGHTER** to obtain the necessary chromatic color tone.

RECOMMENDED DILUTION RATIOS x AQUA P (AQUA P QUICK and AQUA P ANTERIOR are already diluted and ready for use)

DENTINAL COLORS (A1 A2 A3 A3.5 A4 B1 B2 B3 B4 C1 C2 C3 C4 D2 D3 D4)

-2 drops of color + 1 drop of Lighter

OCCLUSAL COLORS (Amber, Blue, Yellow, Gray, Gray Blue, Brown, Pink,

-3 drops of color + 1 drop of Lighter

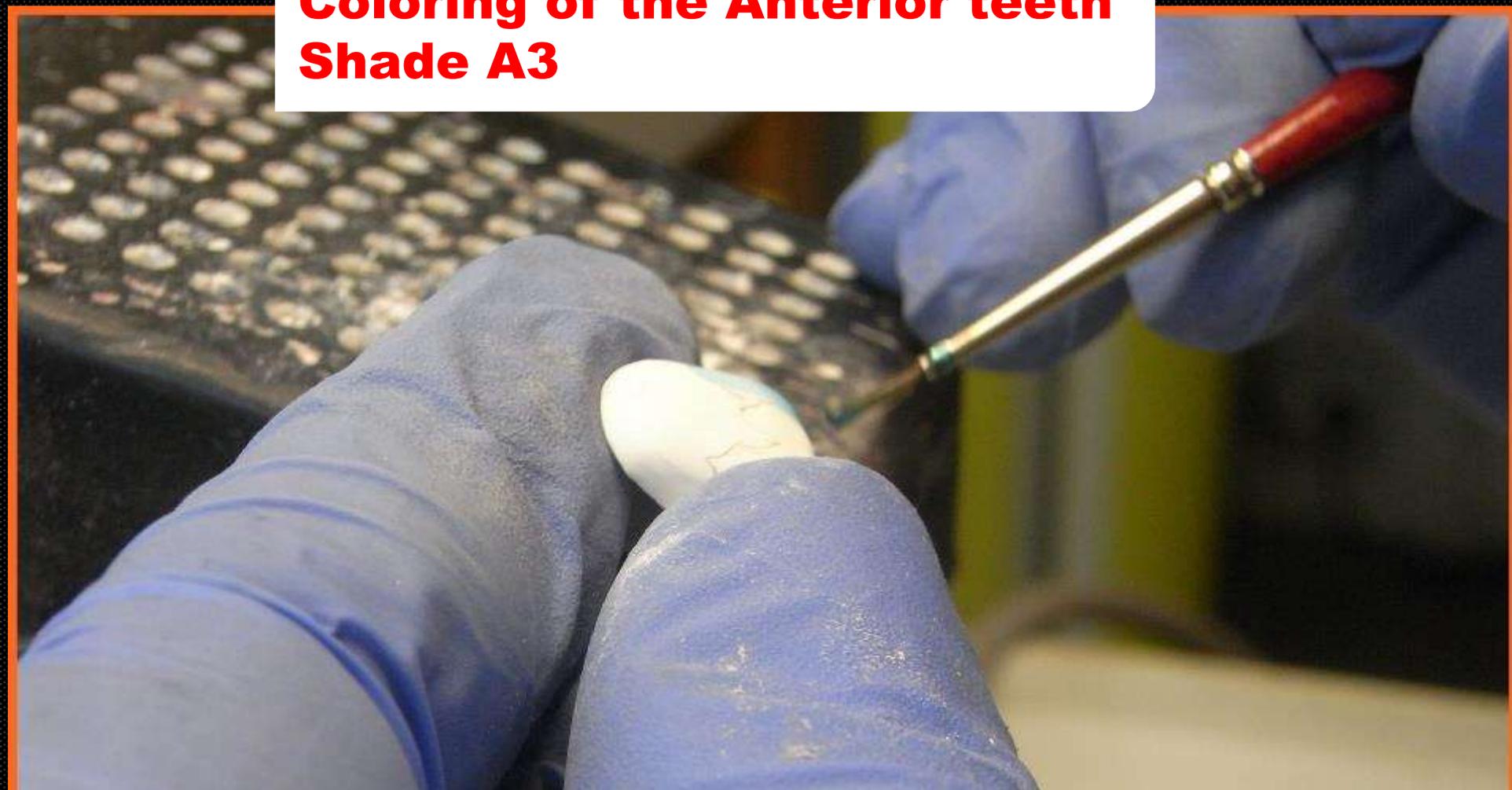
The mixing ratios are indicative.

It is recommended to carry out tests on pieces of pre-sintered zirconia (also waste) to verify the result of the coloring.



1

**Coloring of the Anterior teeth
Shade A3**



1

Coloring of the Anterior teeth Shade A3



AQUA-P

Incisal color Blue: depth perception effect



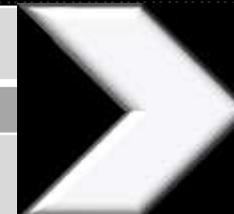


AQUA-P

Incisal Colour BLUE - Preparation

2 LIGHTER drops every 1 colour BLUE liquid drop

AQUA-P LIGHTER	AQUA-P BLUE
DROPS	DROPS
2	1

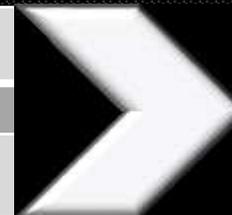


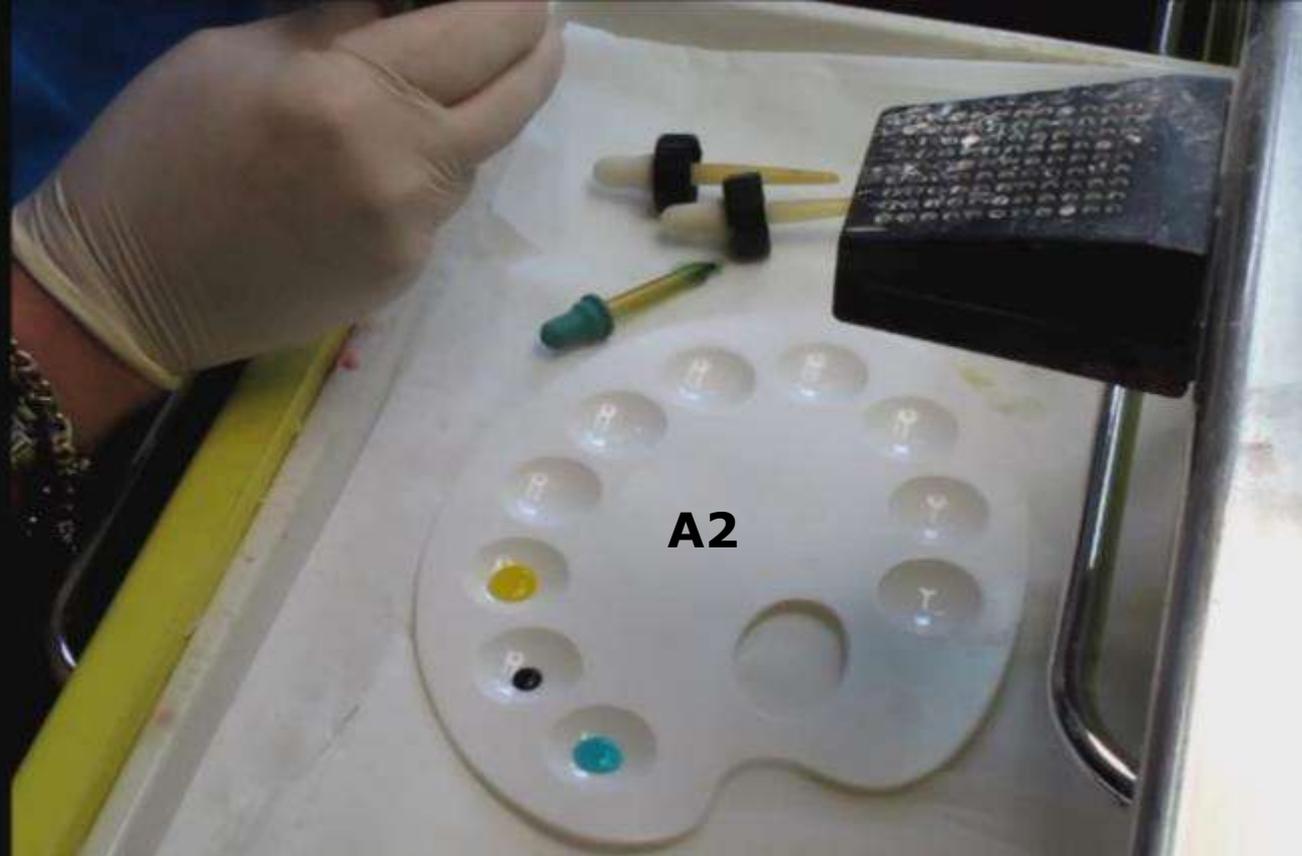


Incisal Color GREY - Preparation

1 LIGHTER drop every 3 colour liquid drops of GREY

AQUA-P LIGHTER	AQUA-P GREY
DROPS	DROPS
1	3





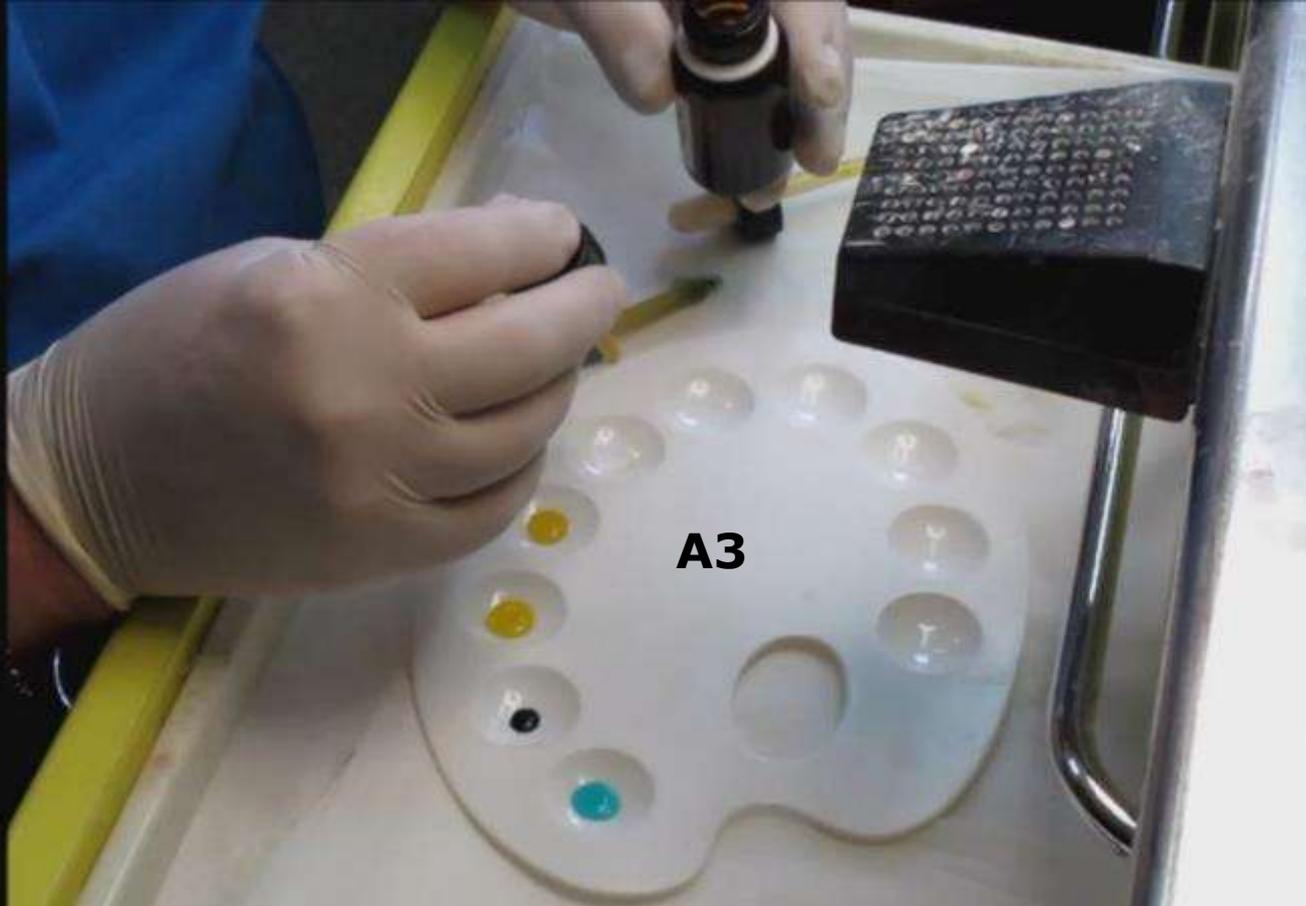
AQUA-P

Preparation of Body color for incisal area with A2 body shade diluted :

3 LIGHTER drops every 2 drops of AQUA-P "A2"

AQUA-P LIGHTER	AQUA-P A2
DROP	DROP
3	2



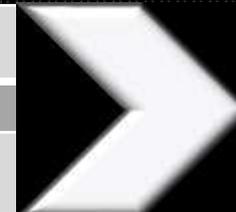


AQUA-P

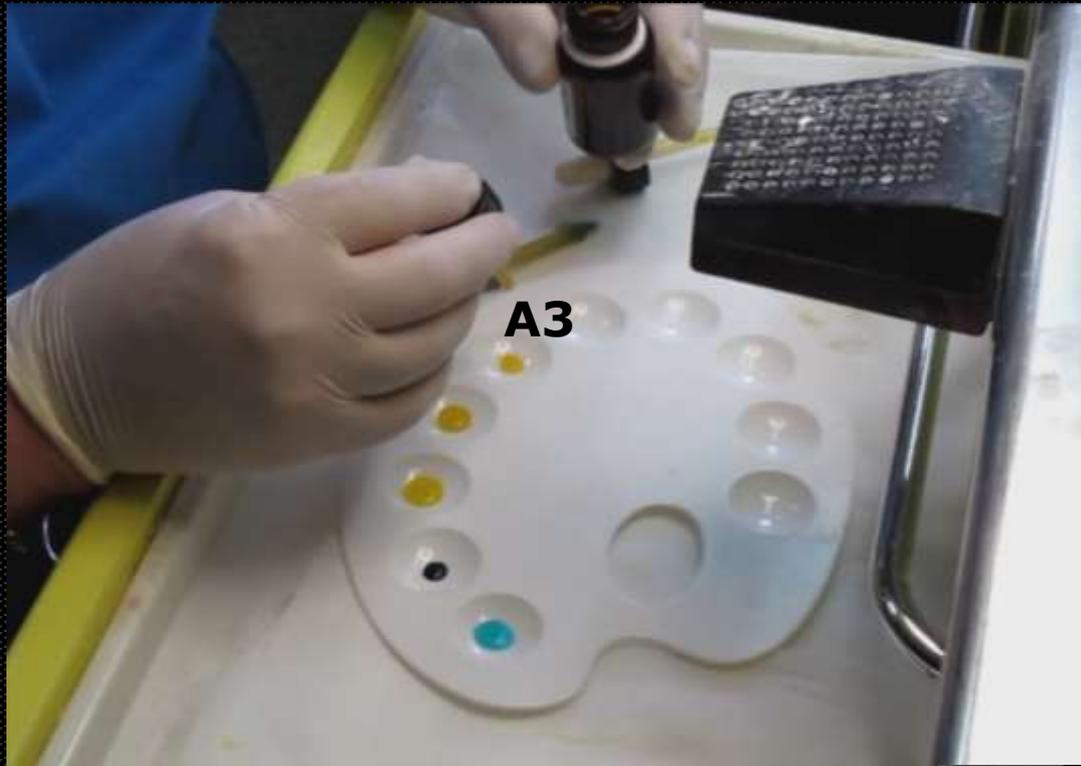
A3 Body shade preparation

Diluted with 1 *Lighter* drop every 2 of AQUA-P "A3"

AQUA-P LIGHTER	AQUA-P A3
DROP	DROP
1	2



AQUA-P



Preparation of color of Occlusal side:
A3 Body shade color not diluted.

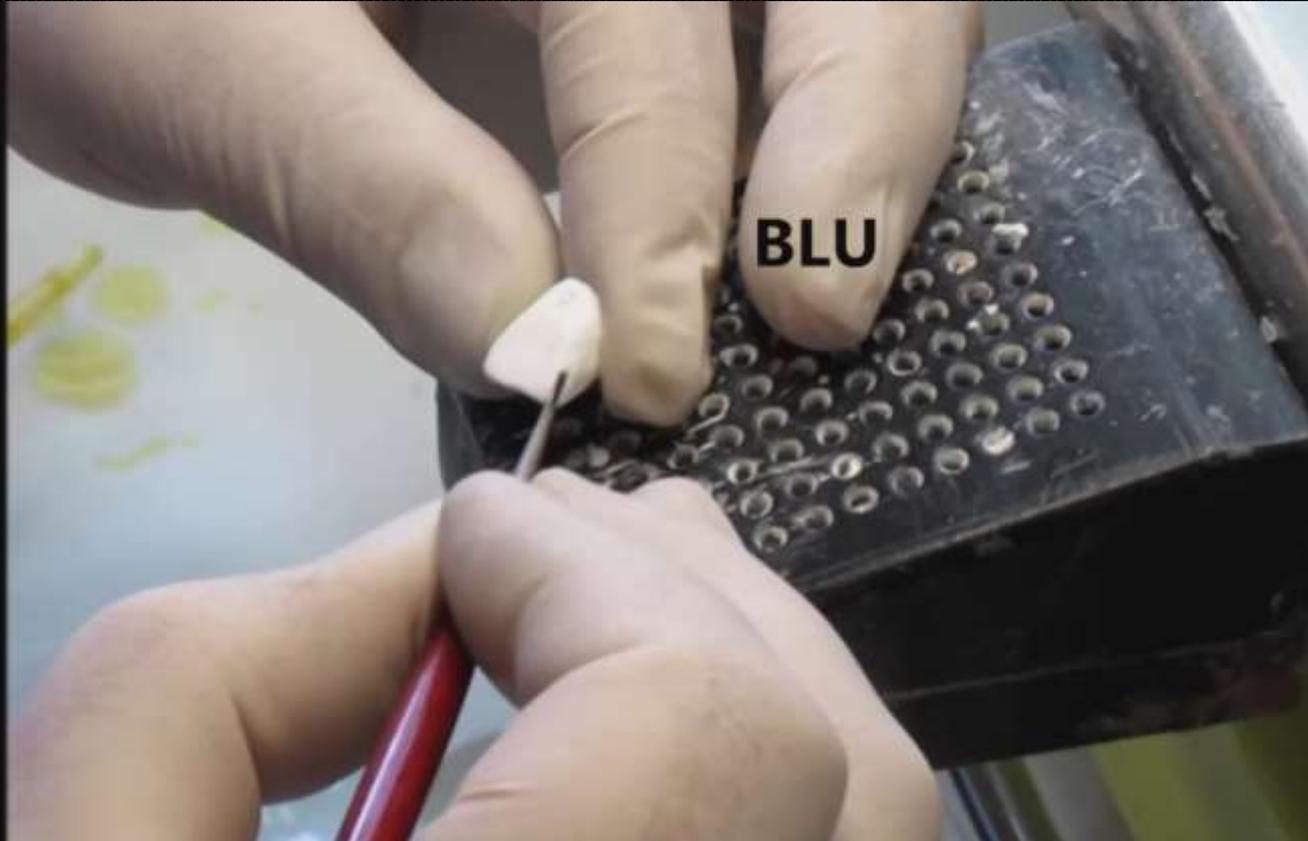




By brush apply colour on previously marked areas



AQUA-P



Using Blue an opal and translucent effect can be achieved.
Apply at the upper side of the ridge area.

Before every change of colour you need to wash the brush
with water and dry it well (with a napkin).





Apply **GREY** for a gentle translucency.
Apply on the dents or slopes, between the ridges.

BROWN shade (for C/D) can be applied to the lingual side for more depth.

YELLOW shade(A/B) can be applied to the lingual side for more depth.

Apply **VIOLET** on the marginal ridge and above the contour area to achieve bright and translucency effect.

Before every change of colour you need to wash the brush with water and dry it well (with a napkin).

AQUA-P



Coloring of the collar with A3 not diluted . External surface.

Apply Body shade A3, not diluted, on internal cervical area of collar surface . Apply brush strokes until the area of piece will be wet.

Body shade A3, not diluted, is one shade darker than what is applied on the surface .



AQUA-P



Incisal area coloring with Body Shade A2 diluted

Before every change of colour you need to wash the brush with water and dry it well (with a napkin).



AQUA-P



Coloring of the incisal side with Body shade A2 dilut



A3 DILUTED

Coloring of the external body with A3 diluted.

Apply basic colour, saturating the surface well with wide brush.

Before every change of colour you need to wash the brush with water and dry it well (with a napkin).



AQUA-P



Coloring of the body internal with A3 diluted.



**Coloring of the posterior-molar teeth
Shade A3**

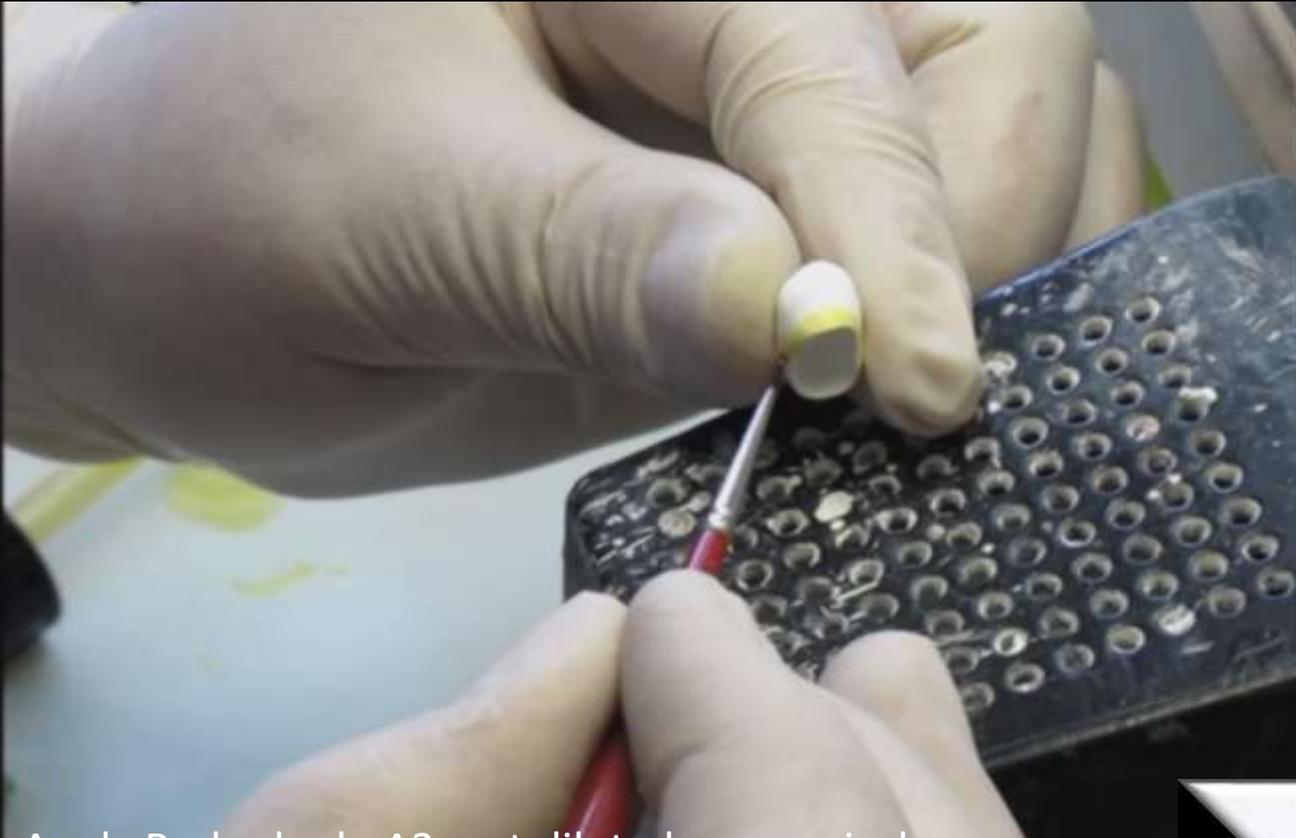




Apply **A3**, or **YELLOW (A/B)**, or **BROWN (C/D)**
colour shade not diluted in the occlusal fossa.



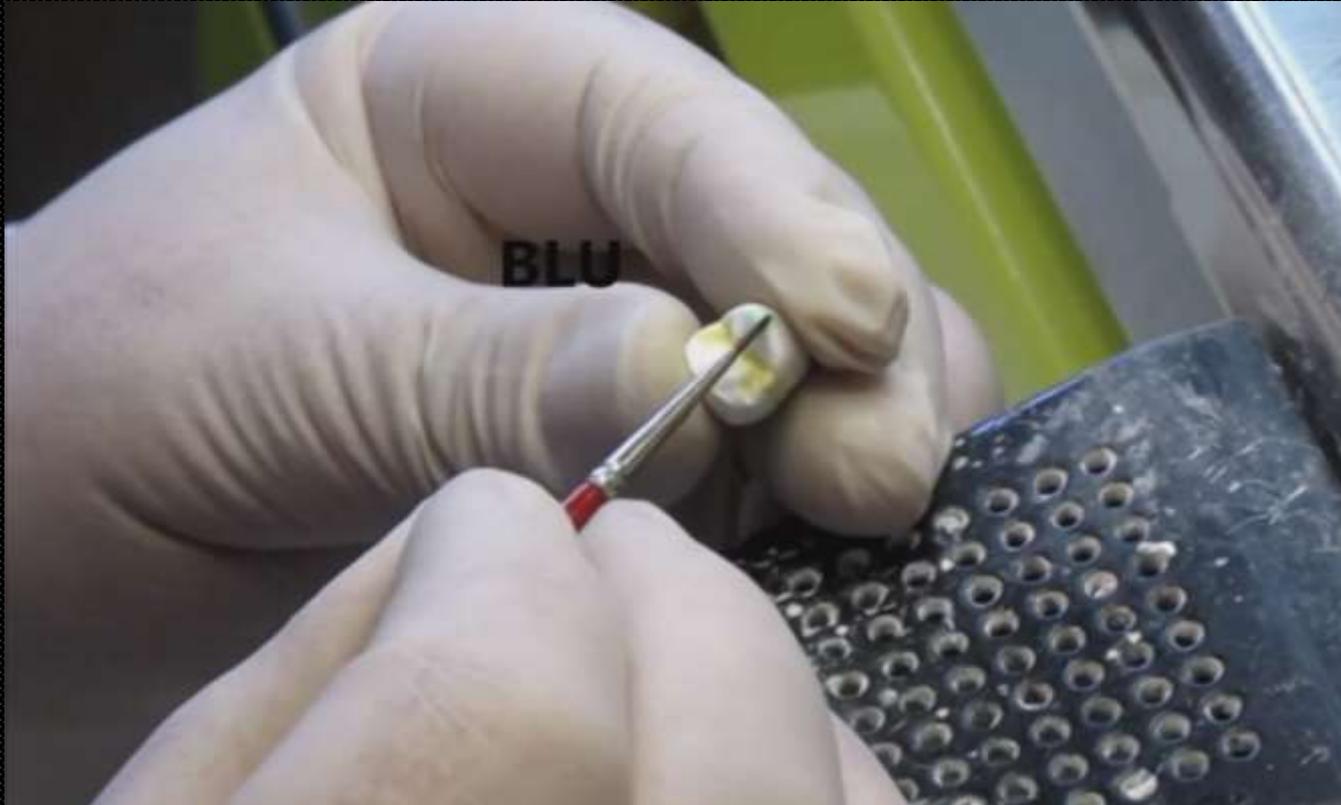
AQUA-P



Apply Body shade A3, not diluted, on cervical area
that is one shade darker than what is applied on the surface



NOVA-P

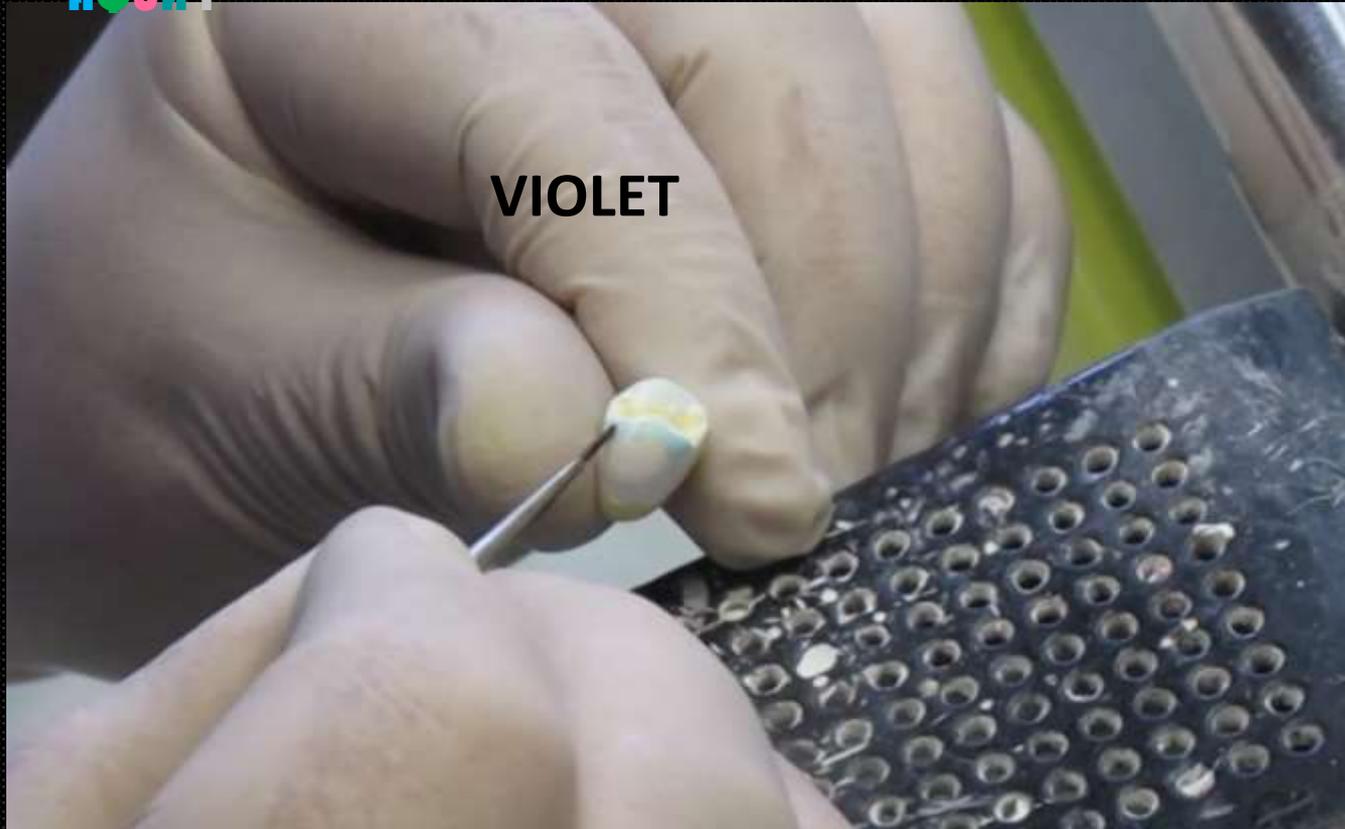


Using BLUE an opal and translucent effect can be achieved.
Apply at the upper side of the ridge area.

*Before every change of colour you need to wash the brush with water
and dry it well (with a napkin).*



AQUA-P



Apply Incisal **VIOLET** colour liquid on the outer edge area.

Before every change of colour you need to wash the brush with water and dry it well (with a napkin).



AQUA-P



Apply **GREY** for a gentle translucency.
Apply in the dents or slopes, between the ridges.

*Before every change of colour you need to wash the brush
with water and dry it well (with a napkin).*





Incisal area coloring with Body shade **A2** diluted.

Before every change of colour you need to wash the brush with water and dry it well (with a napkin).





Coloring of the external body with A3 diluted.

Apply basic colour, saturating the surface well with wide brus

Before every change of colour you need to wash the brush with water and dry it well (with a napkin).





Coloring of the external body with A3 diluted.

DRYING OF THE PIECE

Others procedures are possible:

- fan assisted oven with warm air for 30 minutes at a temperature of 80°C.

Drying time may increase up to 1 hour for big frameworks.

- infrared lamp for 20-40 minutes (according to framework size, paying attention to adjust the distance (25/30cm) not to «burn» Zirconia surface

Preventing a deep drying

Place the occlusal surface down.



The framework is ready for SINTERING



Post sintering framework



FINISHING OF SINTERED FRAMEWORK

After sintering, finishing with diamond discs and burs.

Warning: do not overheat the framework.

Please use a turbine with wheel cooled with water.



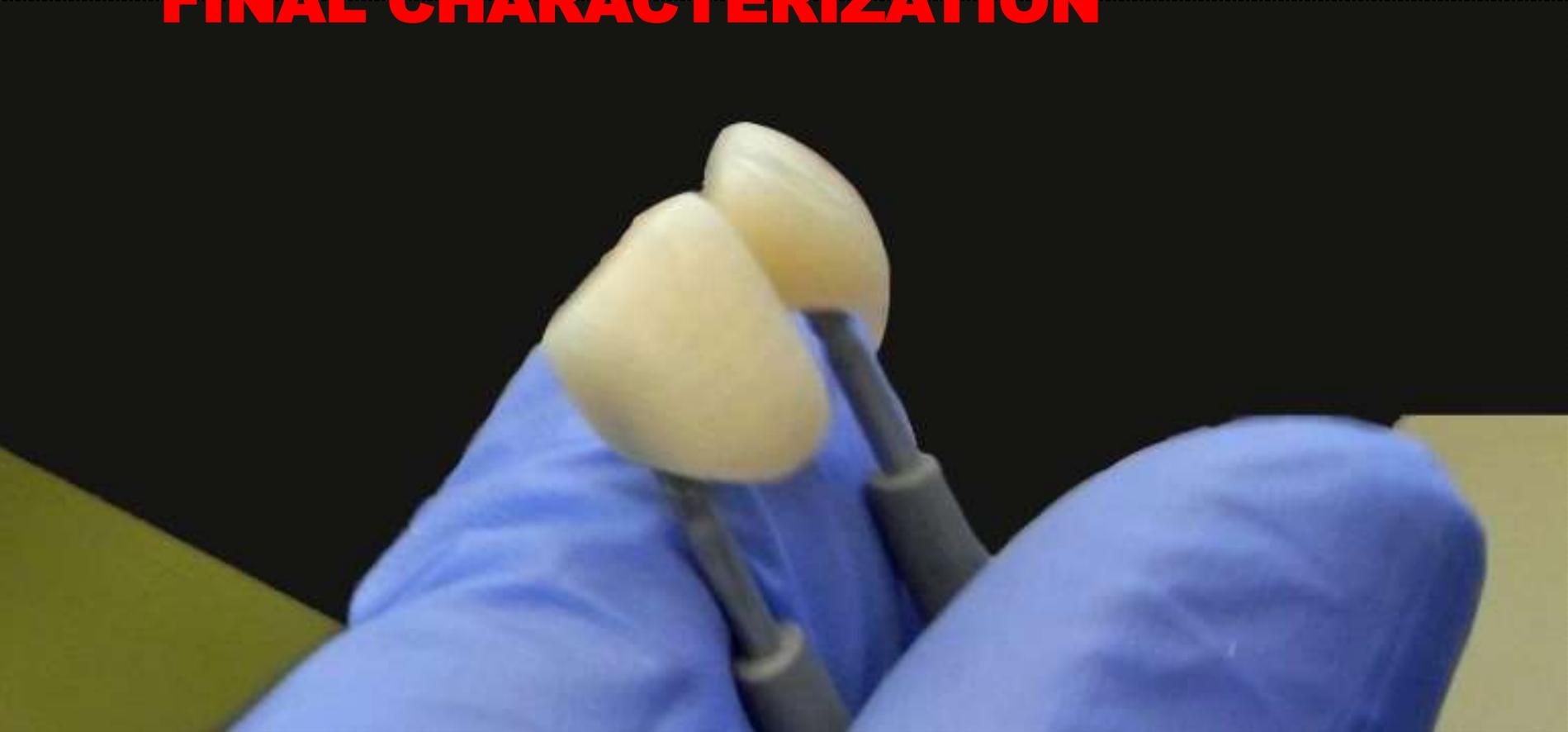
Sandblast the surface of the crown with aluminum oxide (1 ATM)
with a 110 Micron grain size.



Clean the framework carefully. You can use steam.

Before going on with the colouring of the surface, dry it well.

FINAL CHARACTERIZATION



Proceed with the colouring of the surface in order to characterize the framework.

Even high esthetic restorations are possible

You can achieve a higher esthetic appearance by layering porcelains and utilizing internal /or external staining technique.

Concept has selected **universal color paste** of the line **NATURAL STAINS**, to make it easier and more powerful coloring of monolithic zirconia.

With simple touches of color you can create gorgeous cervical and incisal effects, increase and decrease the depth, saturate and desaturate the chroma at will making the vital restoration and visually similar to a layered porcelain.

Your monolithic zirconia will never be the same!

NATURAL STAINS set



CROMA A STAIN

color base in shades A, very intense and brilliant

CROMA STAIN B

color base hue B, very bright and brilliant

CROMA STAIN C

color base tones C, very intense and brilliant

CROMA STAIN D

color base D shades, intense and brilliant



Meteorite # 612

Grey complex, with orange and blue tones, ideal for large depth effects

WHITE # 613

bright white, slightly pearly, for cusps and incisal effects

LONDON # 617

smoke gray, low value with purple reflections, ideal for incisal areas

ATLANTIC BLUE # 621

deep blue, with gray notes, for special effects in the dentine and incisal areas

SAND # 622

Yellow sand, lit and bright, with a subtle hint of gray

ORANGE # 623

Orange brick, bright and firm, very good depth in the occlusal areas and in the collar



OVERLAY 1

Mass for micro stratification of translucent zirconia and lithium disilicate

GLAZE FX

Universal glaze in paste, ready to use, ideal for glazing any restoration in one firing



Natural Zir Overlay 1 is the mass of new CONCEPT that allows the realization of integral elements in monolithic zirconia with amazing results.

The microstratificazione technique enhances the color of the structure, it is infiltrated zirconia, and creates a smooth, shiny surface ideal for surface staining technique



Micro Layering Overlay

Apply Overlay with a soft brush on surfaces keeping a creamy solidity (must not pour).



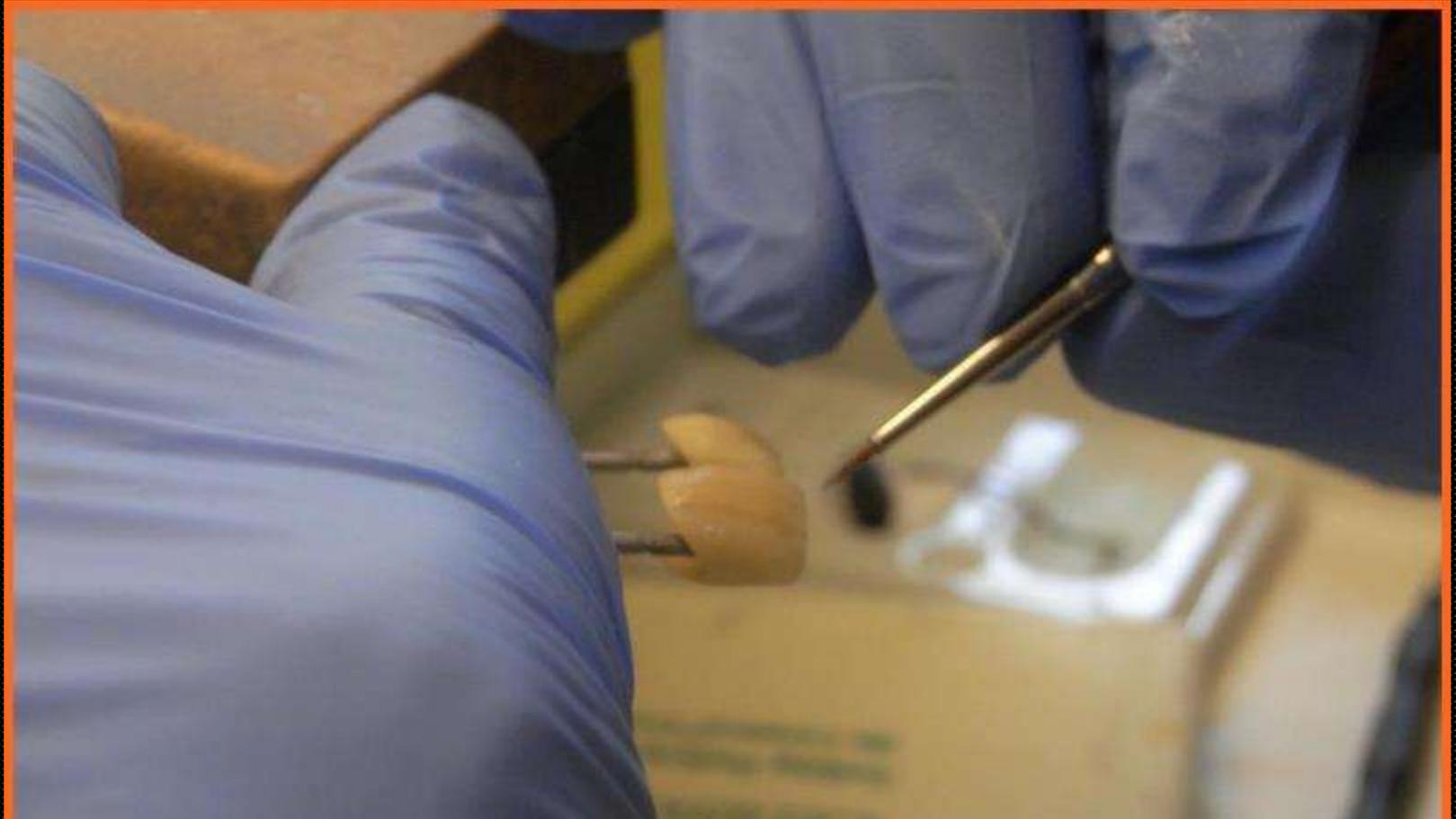


Proceed with the correction of the colour and customization.

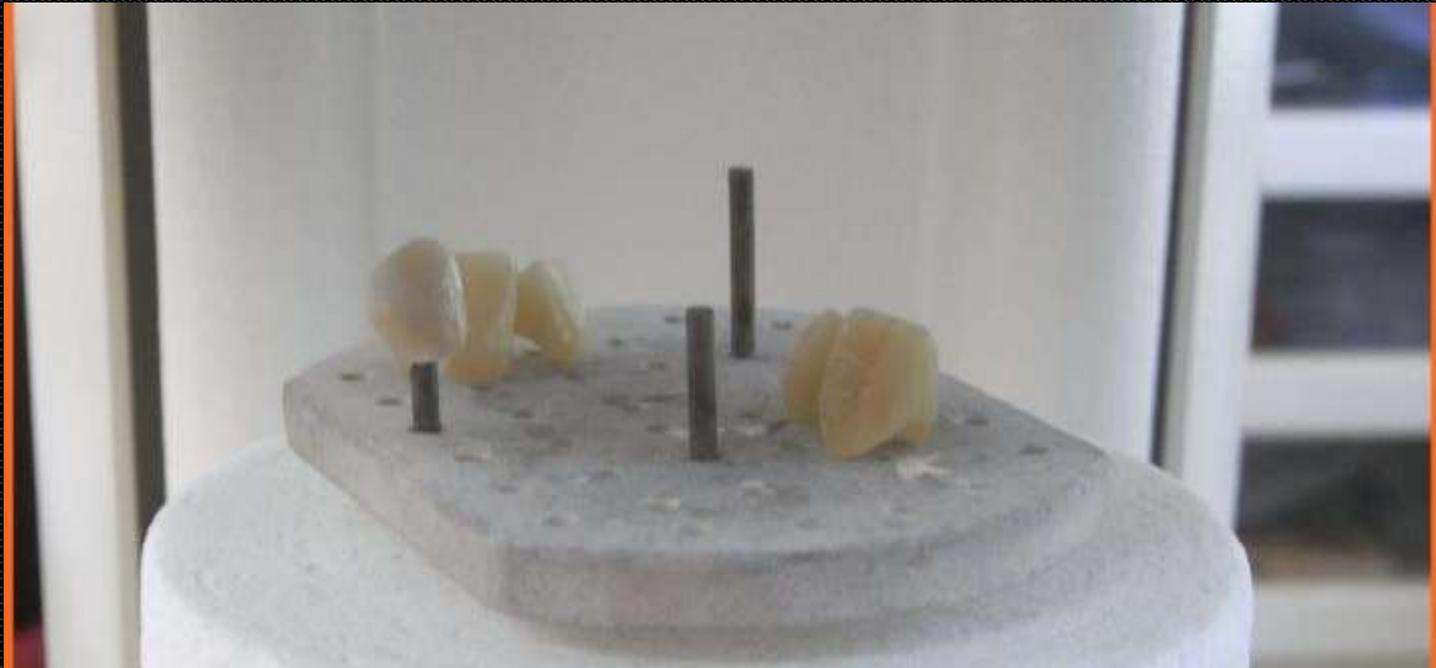








Firing in a furnace for ceramic following glaze manufacturer's guidelines.



Final result

