INSTRUCTION FOR USE

EDIT 1.00

Natural ZiR

tressis italia®

DENTAL CERAMIC

ITALIAN STYLE

Natural® CERAMIC SYSTEM

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Natural®

DSL

HT

LF

ZiR

MicroLayer

Stains

1. INDEX

2. EXPERTISE IN DENTAL CERAMICS

NATURAL CERAMIC SYSTEM

Natural Ceramic System (NCS for short) is the Italian ceramic system produced by Tressis Italia srl.

The metal-ceramic technique has been applied in dental technology since the early 1960s. At the beginning, ceramics were fired exclusively on precious gold-based alloys.

With the evolution of dental alloys, various increasingly performing materials have appeared in the dental sector both from an aesthetic point of view and from a physical and chemical point of view.

The growing needs for functionality and aesthetics of metal-ceramic restorations commit us to produce materials that allow the dental technician to achieve high aesthetic results with ever-increasing quality.

From these assumptions the Natural Ceramic System was born, a ceramic system that combines excellent workability characteristics with the latest generation materials to offer the technician a material that is easy to use, stable and reliable.

The Natural ceramic system offers the possibility of creating natural and aesthetic restorations, in a simple and easily replicable way.

NCS is proposed as a tool for solving clinical cases from the simplest to the most complex and individualized.

The traditional layering carried out with the Natural Ceramic System allows to obtain very natural restorations; moreover, a wide range of additional, special masses have been created, in order to face every aesthetic challenge in a totally personalized way, making each restoration absolutely faithful to the natural elements that surround it.

Natural HT is a metal-ceramic for the aesthetic coating of traditional metal structures: noble and precious alloys with both high and low gold content, palladium-based, platinum-based, or even noble non-precious platinum-based alloys, as well as common alloys based on chromium nickel and cobalt chromium with a traditional coefficient of thermal expansion.

Natural HT is available in the traditional A-D color, with the addition of the colors A0, A5 and B0.

3. PRODUCT CHARACTERISTICS

NATURAL ZiR

Natural ZiR is a leucite-free glass ceramic for dental restorations. It can be used with the technique of layered ceramic on zirconia, pressed ceramic on zirconia and full-ceramic restorations.

The coloring is the traditional A-D, to which the off-scale colors A0, B0 have been added, for a more complete range of layering masses.

An excellent combination of transparency and fluorescence allows the reconstruction of natural teeth, crowns and bridges in zirconia-ceramic. Compatible with all types of conventional zirconia with approximate coefficient of thermal expansion (CTE): $10 \times 10^{-6} \times K^{-1}$ (25-500 °C).

Natural ZiR ceramic is made up of a skilful mix of elements. The silicates that make up Natural ZiR are generally defined as structural silicates as they form, with the heat treatment, very stable three-dimensional networks. This mix of materials gives the ceramic a very low abrasion index, close to natural dentition, allowing natural abrasion of the antagonist and excellent physical and chemical stability in the oral cavity.

Natural ZiR ceramic is a biphasic glass-ceramic, free of leucite; there is a glassy phase and a crystalline phase.

The crystalline phase of the ceramic masses fulfills a dual function, on the one hand it ensures the stability of the shape at high temperatures, on the other it controls the coefficient of thermal expansion (CTE) of the ceramic, allowing it to be modulated on the specificities of the dental alloys on the market. Furthermore, the ceramic crystals greatly increase the resistance of the ceramic as they oppose the propagation of Griffith cracks, naturally present in any glassy material.

Metal oxides are added to this composition of Natural ZiR ceramic to optimize the optical characteristics: the added oxides modify the optical aspects of the ceramic such as opacity, translucency (ability to diffuse light inside the element), opalescence, fluorescence and transparency.

As a last element, synthetic colored pigments are added, which define the color of each mass at the end of cooking, and which are not subject to calcination or chromatic variation over the years, but remain stable both in the firing cycles and over time: for this reason the colors of an element made with Natural ZiR remain unchanged and faithful over time.

CLASSIFICATION		VETRO CERAMICA
CHEMICAL COMPOSITION:	SiO_2, Al_2O_3, K_2O, Na_2O, La_2O_2, SrO, CeO_2, ZnO, CaO, B_2O_3	
CLASSIFICATION ISO 6872:2019		
NATURAL ZiRLAYERING POWDERS	TYP: 1	CLASS: 1 b
NATURAL ZiR PRESS PELLETS	TYP: 2	CLASS: 2 a
COEFFICIENT of THERMAL EXPANSION - (25-450°C) [$10^{-6} \cdot K^{-1} \pm 0.5$]		
NATURAL ZiR LINER POWDERS		2x : 9.8 - 4x : 9.8
NATURAL ZiR LAYERING POWDERS		2x : 9.2 - 4x : 9.2
NATURAL ZiR PRESS PELLETS		2x : 9.5 - 4x : 9.5
GLASS TRANSITION TEMPERATURE - TG [°C±20]		
NATURAL ZiR LINER POWDERS		2x : 310 - 4x : 310
NATURAL ZiR LAYERING POWDERS		2x : 540 - 4x : 540
NATURAL ZiR PRESS PELLETS		2x : 570 - 4x : 570
BENDING RESISTANCE - [MPa]	DETECTED VALUE	REQUIREMENT ISO 6872
NATURAL ZiR LINER POWDERS	≥ 80 MPa	≥ 50 MPa
NATURAL ZiR LAYERING POWDERS	≥ 90 MPa	≥ 50 MPa
NATURAL ZiR PRESS PELLETS	≥ 100 MPa	≥ 100 MPa
SOLUBILITY [µg / cm^2]	DETECTED VALUE	REQUIREMENT ISO 6872
NATURAL ZiR LINER POWDERS	< 20 µg/cm^2	< 100 µg/cm^2
NATURAL ZiR LAYERING POWDERS	< 25 µg/cm^2	< 100 µg/cm^2
NATURAL ZiR PRESS PELLETS	< 20 µg/cm^2	< 100 µg/cm^2

4. COEFFICIENT OF THERMAL EXPANSION (CTE)

NATURAL ZiR

The thermal expansion coefficient, abbreviated with the acronym CTE or CET or WAK (in German-derived texts), indicates the dimensional variation of a material, in our case ceramic, in relation to the varying temperature.

The need to use two different materials for the fabrication of a restoration, such as zirconia for the framework and ceramic for the veneering, must be assessed in the light of the compatibility of the CTEs of the materials.

Our experience in the production of ceramics for different types of substructures (zirconia, traditional alloys, high expansion alloys etc.) has led us to create the Natural ZiR that is compatible with both zirconium with a CTE between $9.5 \leq CTE \leq 11.1 \times 10^{-6} \times K^{-1}$(25-500 °C) and with lithium silicate with a CTE between $9.5 \leq CTE \leq 10.5 \times 10^{-6} \times K^{-1}$(25-500 °C).

ATTENTION:
the zirconia present on the world market today is of type Y-TZP (Yttria stabilized-Tetragonal Zirconia Polycristal) and can be divided into three groups according to the quantity of Yttrium present in the compound: 3Y-TZP, 4Y-TZP and 5Y- TZP. These three groups of zirconia, despite having very different clinical indications, have CTE values very close to each other and are compatible with the CTE of Natural ZiR ceramic, therefore they can be veneered with Natural ZiR.

As with the traditional metal ceramic, the firing process of dental ceramic on zirconium and lithium silicate can be summarized schematically in the following steps:
1) the ceramic is dried, to eliminate most of the liquid present;
2) the ceramic is heated under vacuum to the temperature defined by the instructions;
3) the vacuum is released and maintained at the final temperature for at least 1 minute;
4) the ceramic is cooled rapidly and / or slowly as needed.

Points 3 and 4 are of fundamental importance for a correct firing of the ceramic.

Point 3: the ceramic, at a temperature that makes it plastic and viscous, is compressed on the underlying structure by atmospheric pressure when the vacuum is released. In this phase, tensions can be created and the cooling phase that leads to point 4 begins. The ceramic begins to cool and crystallize from the outside by being subjected to a pressure tension force, while the internal part will remain in the plastic state for longer. , subjecting the material to a tensile tension force; these two forces can cause cracking.

ATTENTION: an incorrect drying phase and / or an incorrect firing cycle of the Liner ZiR materials can cause tensions in the ceramic, even very strong, with possible cracks and delamination of the layered ceramic in subsequent firings (fig.4A).

Therefore, the heat treatment must be modulated according to the type and size of the restoration, even if, in the case of zirconia, slow cooling can be applied as a general principle of prudence.

This principle of prudence has two substantial reasons:
1. zirconium oxide is a poor conductor of heat, so it will tend to cool much more slowly than ceramic, so it is better to keep the ceramic in the fluid state for as long as possible;
2. zirconium oxide is very sensitive to thermal shocks, therefore a slow dissipation of heat after firing the ceramic will also protect us from any problems that may arise in the substructure, such as the propagation of cracks and micro-cracks.

As with traditional metal ceramics, the construction of the structure is of fundamental importance to obtain a correct and satisfactory result.

In the fabrication of bridges and single elements it is very important to follow an anatomical modeling that takes into account the layering and the spaces necessary for the ceramic (fig. 4B).

During the modeling of the structure, it will be necessary to round off corners and sharp edges, which can generate tensions and fractures in the ceramic (fig 4C).

Furthermore, it will be necessary to build the structure in zirconia trying to avoid too large thicknesses and / or inhomogeneous volumes to be coated with ceramic; the difference in volumes creates tensile stresses which can lead to breakage and / or delamination of the ceramic (fig. 4D).

ATTENTION: always follow all the indications provided by the zirconia manufacturer regarding dimensions, types of connections, thicknesses and minimum and maximum volumes of the zirconia structure.

fig. 4A

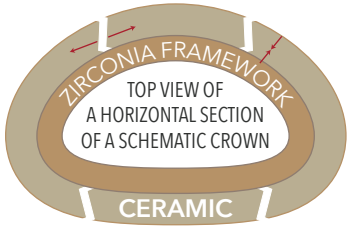


fig. 4B

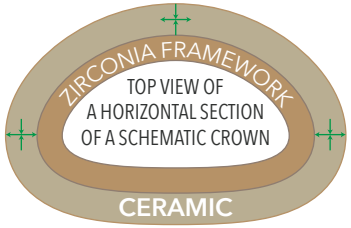


fig. 4D

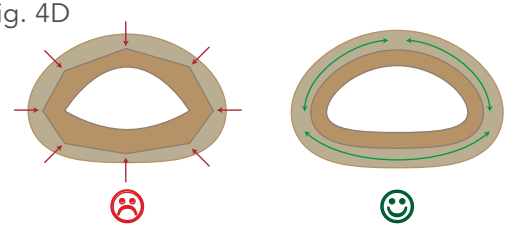
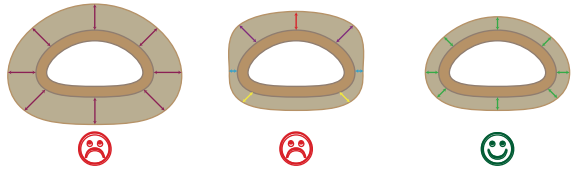


fig. 4D



5. . LIGHT AND COLOR

NATURAL ZiR

Dental ceramic has a far from simple purpose: to replicate the natural color of teeth, in extremely limited spaces and with a completely different material.

To obtain a result in line with expectations, faced with such an arduous task, it is necessary to proceed methodically and make an analysis of the elements, areas, chromaticity and value.

Natural dentin has different degrees of color and opacity, natural enamel can be translucent, transparent but also opaque.

The resulting chromaticity of an element is obtained through the diffusion of light: in natural teeth the diffusion of light is influenced not only by the surface but also by elements present in depth: this means that the colors of natural teeth are influenced by environmental conditions.

In different light conditions, such as natural light, neon, etc., the color effect can vary considerably.

Let's analyze and define some of the optical aspects that affect the final result.

TRANSPARENCY
The more transparent an element is, the more it is crossed by light; the more an element is transparent, the more the gray effect of the element will increase. On the contrary, the element is opaque; there will be a greater reflection of the light and therefore a greater chromatic effect.
MATT <--> TRANSPARENT

TRANSLUCENCY
The more translucent an element is, the greater the diffusion of light inside it will be, increasing the three-dimensionality of the element; a translucent element is partially crossed by the light and creates a less transparent milky effect. A non-translucent element will appear flat.
THREE-DIMENSIONAL <--> FLAT

IRIDESCENCE
It is a typical property of the crystalline phase of some minerals: depending on the incident angle of light, the perceived color is different. In dental ceramics it is a little used feature as it cannot be controlled.

OPALESCENCE
It is a subset of iridescence, it is the behavior of an element similar to opal, limited to the color range between the shades of reddish and blue. This feature is widely used in ceramic masses especially in incisal masses to create liveliness.

FLUORESCENCE
It is the property of different materials to re-emit the received light radiation. Highly fluorescent components are added to aesthetic ceramics such as Natural HT, which re-emit white-blue and yellow-orange colors. This property, very visible in special lighting conditions (e.g. Wood's light) also has the characteristic of creating a vital effect in conditions of diffused light and / or low light, making the dental restoration very similar, in terms of visual behavior, to the natural teething.

6. RESULT OF THE CERAMIC FIRING

NATURAL ZiR

The correct use of the ceramic masses provides for the correct management of firings.

The correct firing of the ceramic masses depends not only on the final temperature but also on other parameters, such as: - drying time and temperature; - heating thermal gradient; - holding time; - vacuum (percentage and duration) ; - position on the oven plate.

From a series of tests carried out it emerged that with different cooking temperatures it is possible to obtain the same results by varying the holding time and the heating thermal gradient; obviously the temperatures must be adapted to the oven you are using.

Comparable results are obtained with both high temperatures and short rise times, as well as lower temperatures and longer rise times.

To carry out a test in the laboratory, it is advisable to create a sample with sharp edges, made with the CLEAR Transparent mass, in order to appreciate all aspects correctly.

The fundamental cooking parameters to be taken into consideration and on which one can actively intervene are: final temperature, thermal gradient and maintenance.

These are correct when the ceramic sample is transparent, shiny and with sharp edges.

If the sample is placed on top of a printed text, such as a newspaper, it will be possible to read the underlying letters which will be clear and with sharp outlines.

These results are illustrated in the figure to the side (fig. 6A), along the red diagonal from top left to bottom right.

In case of overcooking, final temperature too high, the sample will be too shiny and the edges will be rounded; elements above the diagonal.

In case of under cooking, final temperature too low, the sample will be milky and cloudy, results under the diagonal.

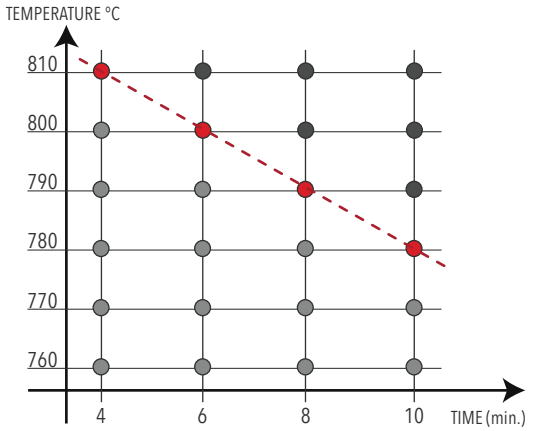
In the laboratory, a slight sheen of the surface indicates a correct cooking cycle, while a milky non-transparent result means that the final temperature is too low.

If necessary, change the final temperature in intervals of 5 ° C at a time.

It is recommended to always dry the ceramic well before starting the firing cycle. Excessive drying of the ceramic has no effect on the result, while on the contrary poor drying can cause discoloration, color irregularities and even fractures and detachments.

It should be noted that the Natural ZiR zirconia ceramic, due to its own formulation, with the same firing, will always be brighter and more shiny than a traditional metal ceramic. This property must be taken into consideration when firing the ceramic.

fig. 6A



7. WARNINGS AND INDICATIONS

The Natural ZiR ceramic system consists of a range of powders and pastes for ceramic layering and press-pellets.

WARNINGS AND CONTRAINDICATIONS:

Combination with materials other than the mentioned Natural Ceramic products and / or materials from other manufacturers.

Realization of restorations not mentioned.

Fabrication of restorations with wall thicknesses and connector cross sections smaller than those mentioned.

Dental ceramic and all-ceramic restorations made of glass ceramic are not recommended for patients with bruxism or parafunction or patients with substantially reduced residual dentition.

TECHNICAL WARNINGS:

Ceramics for dental use; processing must be carried out exclusively by qualified personnel.

During the processing of dental restorations (finishing, cleaning), dust and fragments can be released.

Protect eyes and respiratory tract by avoiding breathing dust.

During processing a vacuum cleaner, goggles and mask is recommended.

Given the diversity of ovens available on the market, the cooking conditions could be different. It is recommended that these variances in temperatures be taken into account.

All temperatures indicated are approximate values only, perform a cooking test before starting to work.

Avoid contact of the material with skin, eyes and mucous membranes.

The cleaning of the spatulas and brushes used in processing must be scrupulous. Any external impurity can have negative effects on cooking. Danger of contamination.

Pay attention during the high temperature firing process and during the die casting process of the artifacts. Danger of burns. Use pliers and gloves.

The reuse of pressing residues is not recommended: risk of discoloration, impurities, stress and breakage.

INVESTMENT WARNINGS:

The use of the T-Vest 2000 coating or other specific coating for lithium silicate presses is recommended.

The coating contains quartz powders. Do not breathe the dust.

If necessary wear a protective mask.

Carefully read the instructions for use of the coating before use.

Follow the instructions provided by the coating manufacturer.

STORAGE WARNINGS:

Storage in a dry place is recommended.

The ceramic material is synthetic, free of organic components and, in common storage conditions, does not undergo variations from temperature, sun, environmental humidity, etc; the possible drying of the paste product may take place over time, but does not affect the quality of the product: it will be sufficient to use the suitable liquid to restore the original consistency.

If properly stored, the product does not expire.

Before using the product, carefully read the instructions for use.

INSTRUCTIONS FOR USE

Natural ZiR is a dental ceamica and consists of two lines of material:
Natural ZiR Ceramic for Layering
Natural ZiR Press Pellets

Natural ZiR is suitable for the complete and partial aesthetic coating of structures made of zirconia.

Natural ZiR can also be used for the die casting of all-ceramic elements, inlays and veneers with the line of pads. Natural ZiR can also be used for pressing on a zirconia structure.

Natural ZiR Press Pellets are not suitable for pressing on a metal structure.

COMPATIBILITY:

Natural ZiR Layering Ceramic is compatible with Natural ZiR Press Pads and vice versa. Natural ZiR is compatible with Natural STAINS stains, with Natural LIQUIDS and with Natural CRYSTAL micro-layering masses.

GENERAL WARNINGS

PREPARATION:

The preparations of the dental abutments are numerous and can be more or less indicated according to the type of restoration that will be made (fig. 7A).

Generally, the preparation for metal-ceramic crowns can be carried out on the shoulder or chamfer and finishing; 90 ° shoulder or rounded shoulder preparation is recommended for full ceramics or ceramic shoulders

In the shoulder preparation, a circular groove depth of about 1mm is recommended and the preparation angle must be at least 6 ° (Fig. 7B).

All axial and occlusal edges must be rounded.

It is recommended to create homogeneous and smooth surfaces avoiding undercuts.

fig. 7B

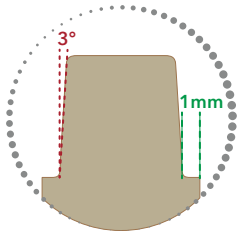


fig. 7A

90° SHOULDER preparation,
suitable for any type
of restoration

ROUND SHOULDER preparation,
suitable for any type
of restoration

FINISH preparation,
contraindicated for
full ceramic restorations
both crowns and veneers

WRONG SHOULDER preparation,
contraindicated for
all types of restorations

NATURAL CERAMIC SYSTEM

DSL

pressable lithium silicate ceramic ingots for the fabrication of full restorations

HT

high temperature ceramic for traditional alloys, for layering and pressed

LF

low temperature ceramic for universal alloys, for layering and pressed

ZiR

special ceramic for zirconium oxide and lithium silicate, for layering and pressing

The ONE

the original highly fluorescent mono-mass ceramic for layering on metal and zirconia

Stains

universal stains in powder and paste, highly fluorescent, for deep and surface use

Glaze FX

universal glazing system in powder, paste, fluorescent paste and fluorescent spray

MicroLayering

system of fluorescent materials for micro layering on monolithic zirconia and lithium silicate

CRYSTAL

set of materials for micro-layering on any material: zirconia, lithium silicate, metal-ceramic

8. INDICATIONS FOR A ZIRCONIUM FRAMEWORK

MODELING:

The structures must be modeled and anatomically shaped in a reduced size; the modeling must take into account the layering of the subsequent ceramic and "support" the shape of the tooth (fig. 8A).

The thickness of the ceramic must be as uniform as possible, trying to avoid unbalanced contiguous areas, and in any case do not exceed 2 mm of maximum thickness.

It is also necessary to take into consideration the indications for the individual structures: - undersized structures cause a greater shrinkage of the ceramic and require a greater number of firings; - undersized structures do not ensure correct support of the ceramic, which in the case of high thicknesses is more subject to the risk of cracking and detachment.

SECTION OF THE CONNECTIONS:

The section of the connections between the interdental surfaces greatly affects the stability of the restoration. Depending on the zirconia used, pay attention to a correct dimensioning of the connection section as reported by the manufacturers (fig. 8B).

Crown and bridge frameworks to be veneered with ceramic must be configured so that the minimum framework thickness after finishing is at least 0.3 mm in the case of single crowns and 0.5 mm in the case of bridges.

The zirconia structure must also be made taking into account the physical characteristics and the instructions for use made by the manufacturer of the zirconia.

Failure to comply with minimum thicknesses, uniform volume distribution and connection sections can lead to tension, fractures and detachments (fig 8C).

Pay attention to sufficient support of the zirconia framework; avoid sharp edges and insufficient thickness.

ATTENTION: zirconia, due to its nature, requires larger connections than a metal-ceramic; always refer to the instructions of the zirconia manufacturer and it is not recommended to refine the connections in the laboratory.

CONFIGURING THE ZIRCONIA EDGE:

the transition of the metal structure to the ceramic must be uniquely defined and possibly present an angle of 90 °.

The passages between zirconia and ceramic must not coincide with the contact points and surfaces involved in chewing; moreover, at the interdental level, the configuration must be such as to allow the correct measurements of hygiene.

fig. 8A

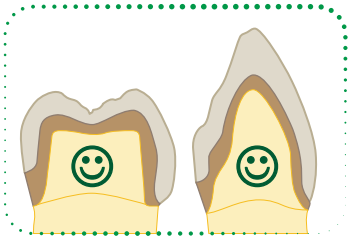
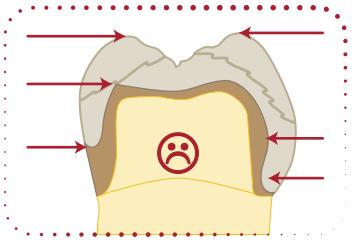


fig. 8B

fig. 8C



9. INFORMATIONS ON THE ZiR LINER

NATURAL ZiR

The application of the ZiR LINER has several functions: the main one is to improve the adhesion of the ceramic to the zirconia structure; while the secondary ones are the possibility to intervene and, if necessary, modify the shape and color of structure.

The firing phases of the ZiR LINER materials are very important in the layering of the ceramic. Proper management of these phases maximizes the bond and adhesion between the zirconia structure and the veneering ceramic.

For a correct management of the material it is recommended to work with more firings:
1. First firing for adjusting color;
2. Second firing to modify shape and color;
3. Optional third firing for shape and color.

With the first ZiR LINER firing by color, the color of the structure is calibrated according to the needs of the final restoration: if the color is in line with the finished element, it will be necessary to layer only the Liner Neutral over the entire restoration; if, on the other hand, there are differences to be corrected, it will be possible to intervene with the ZiR LINER CROMA and / or COLOR according to the specific needs of the case.

ATTENTION: it is not recommended to create large thicknesses with a single ZiR LINER firing, it is recommended to carry out several firings and to keep thin thicknesses in the first firing.

With the second ZiR LINER firing it is possible to intervene again to correct the color if necessary; moreover, with the second firing it is possible to adjust volumes and shapes of the structure if these are under-dimensioned compared to the final shape.

If necessary, it is possible to carry out further ZiR LINER firings to obtain a structure according to the desired requirements.

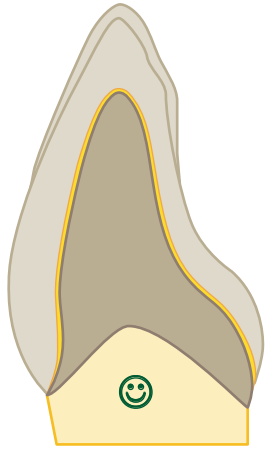
ATTENTION: in the second firing, if the structure is to be modified only from a chromatic point of view, it is possible to mix dentinal modifiers, chromatizers and / or other intensive colored masses with the ZiR LINER masses to create customized effects.

The very thin application of the liner also facilitates the drying phase which must be very scrupulous (fig. 9A).

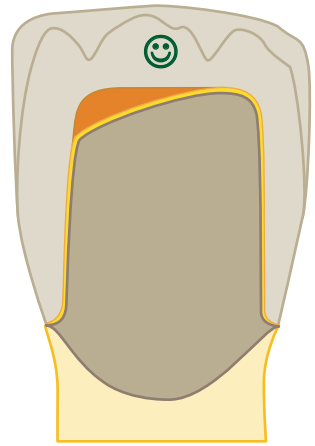
ATTENTION: all the ZiR LINER masses in the various firings must be mixed only with Natural Liquid Modeling and Modeling SPECIAL; NEVER use liquid for opaque powder or paste.

fig. 9A

For the first firing, the ZiR LINER must be layered thinly and evenly over the entire zirconia framework



With the 2nd firing, dark orange area, it is also possible to compensate the structure if it is too undersized compared to the final shape



10. OPERATIONAL PHASE

10.0 PREPARATION OF THE ZIRCONIUM FRAMEWORK

After having modeled the structure with a CAD software, it will be milled by a CAM machine in the labs or in the milling centers.

For details on the correct shaping and milling process, refer to the instructions provided by the zirconium manufacturer.

Follow the instructions of the manufacturer of the structure and of the manufacturer of the zirconium also for the eventual bench finishing phase; if a finishing is carried out, it is recommended to work with a micromotor at low revolutions, keeping the texture wet in order not to create thermal shocks and to use highly abrasive diamond burs that have no chemical affinity with zirconium, such as the RED SHARK BLACK ring burs.

ATTENTION:
zirconium bridge structures require larger connections than metal-ceramic; refining of bridge connections is not recommended.

After any finishing phase, sandblast the product very carefully with glass beads to remove any debris, we recommend T-GLASS 50 at 50µ, with a pressure of about 2 atmospheres (MAX).

Carefully clean the structure with a brush under running water; immerse in a bath of distilled water in an ultrasonic tank and then vaporize.

CAUTION:
Zirconia is a ceramic material, therefore thermal shocks can cause fractures.

CAUTION:
after cleaning the structures must no longer be touched with hands, instead use clean tweezers (fig.10.0A)

For a better and easier handling of the elements during the subsequent processing steps, a small amount of EASY FIX refractory paste can be inserted inside the caps. In this way, by inserting the SIMPLY FIRE cooking support, the refractory dough, during the cooking cycle, will solidify becoming one with the cooking support, improving the handling of the elements (fig. 10.0B).

To remove EASY FIX, simply sandblast the inside with glass beads and gently remove the support; then proceed with cleaning first with distilled water in an ultrasonic tank, then with steam.

fig. 10.0B

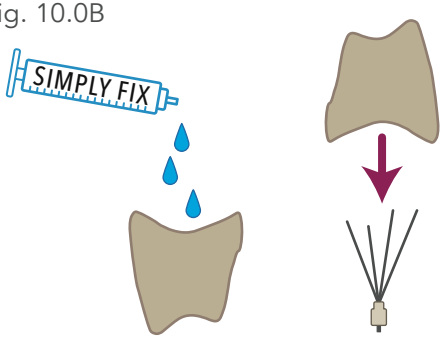
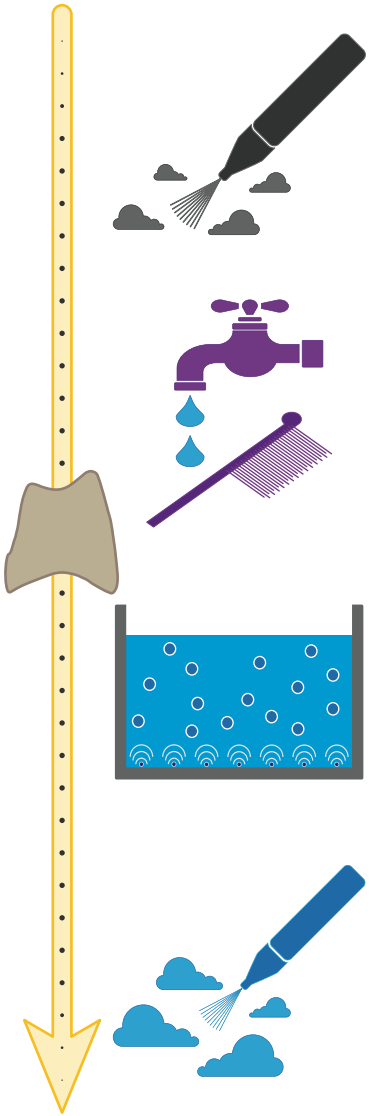


fig. 10.0A



10.1 APPLICATION AND FIRING OF THE ZiR LINER

The Natural ZiR LINER masses are in powder form to be mixed using traditional modeling liquids, such as Natural Liquid Modeling or Modeling Special; the use of distilled water is not recommended as it is more difficult to spread the dough evenly on the structure.

WARNING:
do not use opaque liquids such as Liquid Opaque Paste or Liquid Opaque Powder.

WARNING:
if a more plastic liquid is used for processing, vary the drying and closing times of the oven accordingly.

Once the first layer of ZiR LINER has been applied, the structure can be slightly vibrated to condense the material; it is recommended to apply the ZiR LINER masses with thin and homogeneous thicknesses in the first firing.

When choosing the ZiR LINER masses to use, it is possible to opt for a neutral color with the NEUTRAL Liner, if the color of the structure is correct; otherwise it is already possible to use the ZiR LINER COLOR and CROMA masses to correct the coloring according to the case (fig. 10.1A).

Perform the first firing of the ZiR LINER mass as shown in the table, after cooling the product proceed with the application of the second coat of ZiR LINER.

With the second firing it is possible both to intervene further in modifying the color of the zirconium structure and to modify the volumes according to the case.

The appearance after firing ZiR LINER has a very bright and lively surface (fig. 10.1B).

ATTENTION:
insufficient or too rapid drying of the ZiR LINER materials can cause problems. Failure to observe the indicated drying and rising times may cause micro-cracks or the lifting of the Liner mass: during subsequent firings there will be cracks and / or detachments in the affected areas.

If necessary, it is possible to carry out further ZiR LINER firings by reducing the final temperature up to 1010 ° C, until the desired color is achieved (fig.10.1C)

WARNING:
ZiR LINER materials are to be used only on zirconium structures to be layered; for processing on lithium silicate and / or monolithic zirconium with the micro-layering technique, use only the LINER SPECIAL DS.

fig. 10.1A

fig. 10.1B

fig. 10.1C

10.2 FIRST FIRING OF A SINGLE ELEMENT

DISCLAIMER:
the layering of a single element is subject to a medical prescription and must be oriented towards integration with the patient's residual dentition, so this example is purely illustrative.

1.ISOLATE THE MODEL:
After firing the ZiR LINER, as reported in paragraph 10.1, before placing the restoration on the plaster model, isolate the plaster model in the areas where the ceramic can come into contact with the plaster, using the special liquid Natural Insulating Liquid and dry thoroughly (fig. 10.2A).

WARNING:
incorrect drying of the insulating liquid can lead to cracks and discolouration during the firing of the ceramic, pay great attention.

2. OPAQUE DENTIN:
Unlike metal-ceramic, except in special cases, there is no need to mask the zirconia structure, which is generally less reduced than a metal structure. Use the Opaque Dentine to manage the incisal transition area, and more in the interproximal areas (Fig. 10.2B).

3. DENTIN:
Apply the Dentin materials in the mesial and distal parts until the complete anatomical shape is modeled, in order to have a good indication of the shape and size of the restoration. We can use a thin spatula to perform a cut-back (removal of material) of the element, creating the space for the enamel layering (fig. 10.2C).

To obtain a uniform humidity of the masses, before applying the enamel, moisten the palatal area with a brush wet with distilled water, the capillarity will distribute the liquid evenly over the whole element.

4. ENAMEL:
To complete the tooth shape, layer small amounts of enamel by slightly oversizing the final shape to compensate for the firing shrinkage (Fig. 10.2D). Dentine Natural ZiR already offers an excellent degree of translucency and three-dimensionality, therefore it will not be necessary to layer the enamel on it, which will be positioned only in the incisal third.

After removing the element from the model, complete the layering with dentin and enamel masses at the contact points.

5. FIRING:
Place the element on the firing supports and proceed with the first dentin firing.

fig. 10.2A

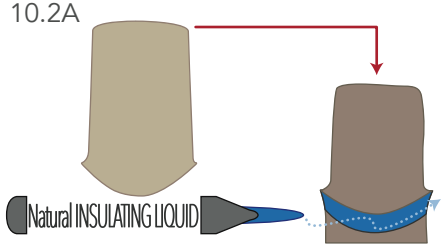


fig. 10.2B

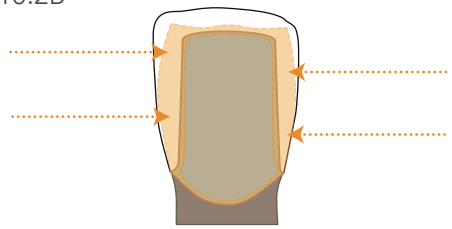


fig. 10.2C

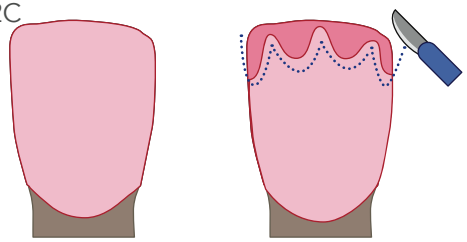
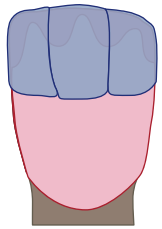


fig. 10.2D



10.3 BASIC AND ADVANCED LAYERING OF AN ELEMENT

After the first firing, the appearance of the Natural ZiR ceramic must be vital, the colors saturated and the enamel visible on the dentin.

Due to its nature, the ceramic will have undergone a retraction during firing which makes the element under-sized compared to the final shape.

We refine the surface of the element with a RED SHARK diamond bur on the areas to be compensated (fig. 10.3A); we carefully steam and rinse the element to remove any fragment of ceramic.

We now have two ways to go:
1. BASIC layering;
2. ADVANCED layering.

1. BASIC LAYERING:
In the basic layering we will compensate for the linear retraction of the ceramic by adding dentin, enamel and transparent masses to complete the final shape (Fig. 10.3B).

In the second ceramic firing, it is possible to condense the ceramic by slightly vibrating the layered masses without the risk of them mixing.

There is no need to oversize the restoration as there will be minimal shrinkage during firing due to both reduced material input and condensation.

If the aesthetic result of the restoration is satisfactory after firing, we can proceed with the Glaze firing, otherwise it is possible to carry out further firings with Natural Stains to achieve perfect integration of the shade into the oral cavity.

After the Color Fixing firings, proceed with the Glaze firing.

ADVANCED LAYERING:
In advanced layering we will characterize the element more with special masses to compensate for the firing shrinkage.

With advanced layering it is possible to achieve a high degree of aesthetic naturalness; we will use Transparent Neck in the root areas, contrasting SC and S Enamels in the incisal area and we will increase the enamel effect by adding a light layer of Transparent Clear on the enamel area (fig. 10.3C).

Similarly to the basic layering, if the firing result is satisfactory, it will be possible to glaze the product with the appropriate program, either it is possible to carry out further firings and / or various color fixings with Natural Stains colors and then glaze.

fig. 10.3A

We refine the surface of the element according to the needs of the individual restoration

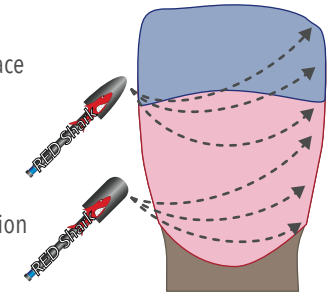


fig. 10.3B

BASIC layering:
we compensate the shrinkage due to firing with the same materials used previously

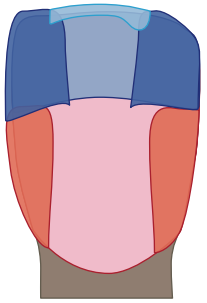
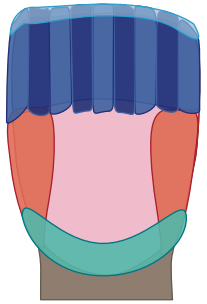


fig. 10.3C

ADVANCED layering:
we use contrasting intense and / or opalescent enamels in the incisal area



10.4 FIRST FIRING OF A BRIDGE

DISCLAIMER:
the layering of a bridge element is subject to a medical prescription and must be oriented towards integration with the patient's residual dentition, so this example is purely illustrative.

1.ISOLATE THE MODEL:
After the opaque firing, as reported in paragraph 10.1, and before placing the framework on the plaster model, isolate the model in the areas where the ceramic can come into contact with the plaster, paying attention also to the saddles of the bridge elements using with the special Natural Insulating Liquid and dry thoroughly (fig. 10.4A).

WARNING:
incorrect drying of the insulating liquid can lead to cracks and discolouration during the firing of the ceramic, pay great attention.

2. OPAQUE DENTIN:
Also in this case the Opaque Dentin will be used in a lighter way than a metal-ceramic; the main layering part of the Opaque Dentin will be in the distal areas of the elements and in the bridge connections; an attempt will be made to uniform the volumes to have a greater full effect. A greater amount of Opaque Dentin will be placed in the cervical third of the bridge element to complete the anatomy of the element and not have shadows in the area in contact with the gum (Fig. 10.4B).

3. DENTIN:
Apply the Dentin materials in the mesial and distal parts, in the connections until the opaque dentin is completely covered and the complete anatomical shape is modeled, in order to have a good indication of the shape and size of the restoration. Using a thin spatula, cut-back the elements to create space for the enamel layering (fig 10.4C).

To obtain uniform humidity, before applying the enamel, moisten the palatal area with a brush wet with distilled water, the capillarity will distribute the liquid evenly over the entire element.

4. ENAMEL:
To complete the tooth shape, layer small amounts of enamel by slightly oversizing the final shape to compensate for the firing shrinkage (fig 10.5D). Natural ZiR dentins already offers an excellent degree of translucency and three-dimensionality, therefore it is not necessary to layer the enamel on it, which will be positioned only in the incisal third.

After removing the bridge from the model, complete the layering with Dentin and Incisal materials at the contact points.

5 FIRING:
Before firing, carefully separate the layered masses in the bridge connections, until they reach the liner, with a very thin spatula (fig.10.4D), then place the element on the firing supports and proceed with the first firing of dentin.

fig. 10.4A

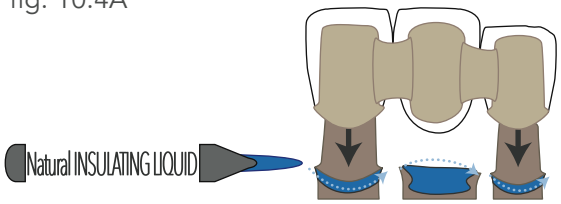


fig. 10.4B

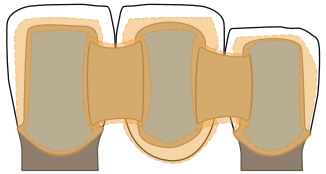


fig. 10.4C

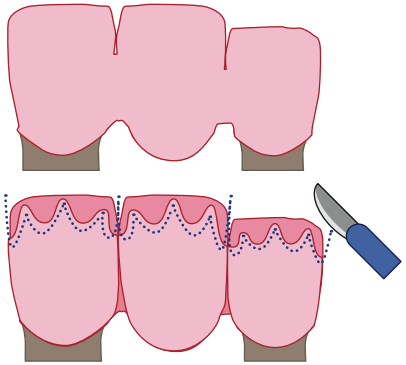
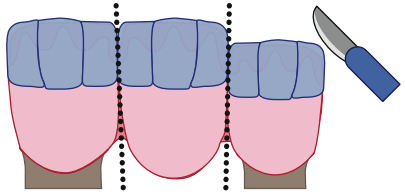


fig. 10.4D



10.5 BASIC AND ADVANCED LAYERING OF A BRIDGE

After the first firing, the appearance of the Natural ZiR ceramic must be vital, the colors saturated and the enamel visible on the dentin.

Due to its nature, the ceramic will have undergone a retraction during firing which makes the bridge under-dimensioned compared to the final shape.

We refine the surface of the element with a RED SHARK diamond bur and with an RS DISK diamond disc we work the elements in the bridge connections (fig. 10.5A); we carefully steam and rinse the element to remove any fragment of ceramic.

We have two ways to go:
1. BASIC layering;
2. ADVANCED layering.

1. BASIC LAYERING:
in the basic layering we will compensate for the linear retraction of the ceramic by adding dentin, enamel and transparent masses to complete the final shape (Fig. 10.5B).

In the second ceramic firing, it is possible to condense the ceramic by slightly vibrating the layered masses without the risk of them mixing.

There is no need to oversize the restoration as there will be minimal shrinkage during firing due to both reduced material input and condensation.

If the aesthetic result of the restoration is satisfactory after firing, we can proceed with the Glaze firing, otherwise it is possible to carry out further fixation firings with Natural Stains to achieve perfect integration of the shade into the oral cavity. After the Color Fixing firings, proceed with the Glaze firing.

ADVANCED LAYERING:
in advanced layering we will characterize the element more with special masses to compensate for the firing shrinkage.

With advanced layering it is possible to achieve a high degree of aesthetic naturalness; we can use Transparent of the Collar and Chromatizer in the cervical areas, contrasting SC and S Enamels in the incisal area and we will increase the enamel effect with a light layer of Transparent (fig. 10.5C).

Similarly to the basic layering, if the firing result is satisfactory it will be possible to glaze the product with the appropriate glazing program, alternatively it is possible to make various color fixings with Natura Stains super colors and then glaze.

ATTENTION:
Before firing, separate the elements again along the median of the bridge connections with a thin spatula (Fig. 10.5D).

fig. 10.5A

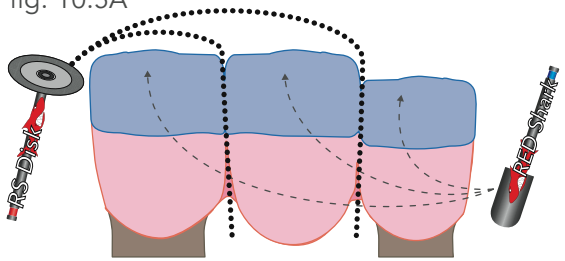


fig. 10.5B

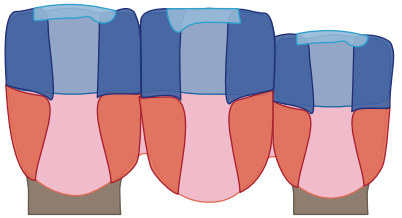


fig. 10.5C

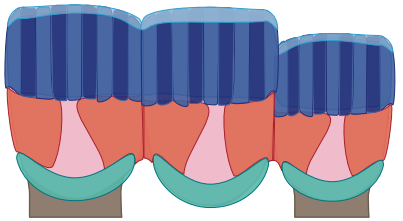
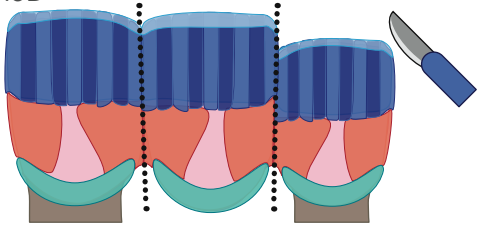


fig. 10.5D



10.6 FIRST FIRING WITH THE ONE

The special Natural THE ONE 1, 2 and 3 masses allow the dental technician to layer the entire restoration with just a single layering powder.

THE ONE is ideal for creating inexpensive restorations and can be used for both single and extended processing.

Natural ZiR THE ONE is compatible with all the layering masses of the Natural ZiR line, it actually behaves just like a dentinal mass.

After the first firing has been carried out, it is possible to finalize the work in two ways:
1. EASY layering and coloring;
2. ADVANCED layering and coloring.

DISCLAIMER:
the stratification of a single element is subject to a medical prescription and must be oriented towards integration with the patient's residual dentition, so this example is purely illustrative.

1. ISOLATE THE MODEL:
after the opaque firing, as reported in paragraph 10.1, and before placing the hood on the plaster model, isolate the plaster model in the areas where the ceramic can come into contact with the plaster, paying attention also to the saddles of the bridge elements, with the special Natural Insulating Liquid and dry thoroughly (fig. 10.6A).

ATTENTION:
incorrect drying of the insulating liquid can lead to cracks and discolouration during the firing of the ceramic, pay great attention.

2. THE ONE:
model the entire element with the Natural THE ONE mass corresponding to the desired color (fig. 10.6B).

With Natural THE ONE it is possible to vibrate and condense ceramic, much more than with a traditional layering; therefore, be careful not to oversize the restoration.

After removing the bridge from the model, complete the contact points with additional THE ONE mass.

Before firing, carefully separate the layered masses in the bridge connections, until they reach the opaque, with a very thin spatula (Fig. 10.6C),

EASY PROCESSING:
go directly to firing (point 3).

ADVANCED PROCESSING:
using a thin spatula, perform a reduced cut back to create space for the incisal masses (fig.10.6D).

3. FIRING:
Place the element on the cooking supports and proceed with the first THE ONE firing.

fig. 10.6A

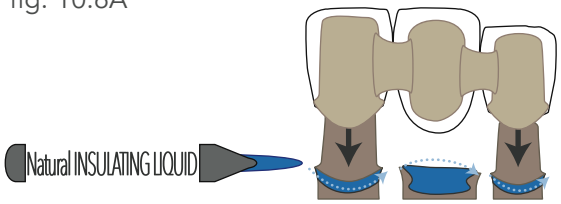


fig. 10.6B

fig. 10.6C

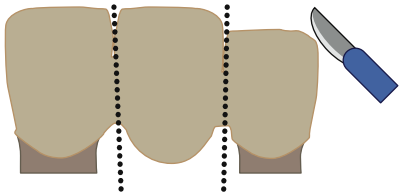
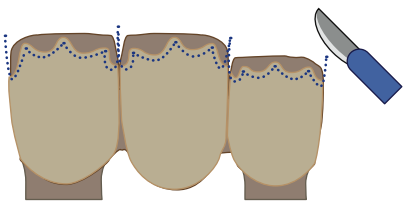


fig. 10.6D



10.7 BASIC AND ADVANCED LAYERING WITH THE ONE

After the first firing, the appearance of the restoration must be bright, vital, and luminous, slightly lacking in chroma compared to the final color.

THE ONE ceramic, thanks to its special formulation, will have undergone less shrinkage during firing compared to traditional layering, making it much easier to achieve the final shape.

We refine the surface of the element with a RED SHARK diamond bur and with an RS DISK diamond disc we work the elements in the bridge connections (fig. 10.7A); we carefully steam and rinse the element to remove any fragment of ceramic.

1. EASY LAYERING:
After the finishing and cleaning phase, use the Natural Stains super-colors in the neck, incisal and interproximal areas to obtain the characterization necessary to achieve the final result. For better color management, color fixing firings can be carried out until the desired result is achieved; in this phase it is possible to compensate for any shrinkage due to firing by applying small amounts of THE ONE mass where necessary (fig 10.7B); once the shape is complete, proceed with the second cooking of THE ONE.

2. ADVANCED LAYERING:
After the finishing and cleaning phase, proceed with the characterization with the Natural Stains super-colors in the various areas of the restoration to obtain the desired individual coloring; in this phase it is also possible to define particularly marked effects such as for example mamelons and / or emphasize transparencies with suitable colors.

After obtaining the desired color with Natural Stains super-colors proceed with the color fixing firing.

Then move on to the aesthetic layering of the incisal area with incisal and effect masses such as contrasting enamels S and SC, Transparent, chromatizers etc; until the final shape of the restoration is obtained (fig.10.7C)

ATTENTION:
Before the second firing, separate the elements again along the median of the bridge connections with a thin spatula (Fig. 10.7D).

fig. 10.7A

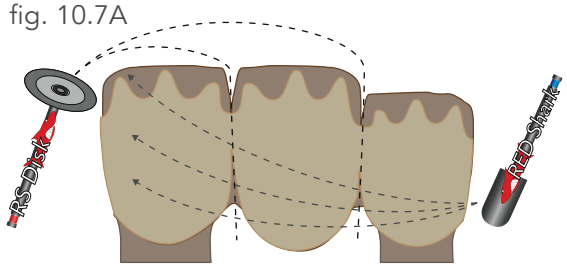


fig. 10.7B

fig. 10.7C

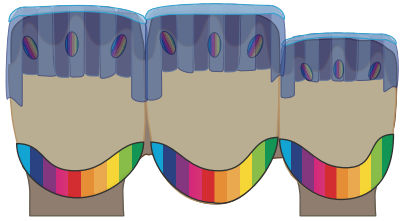
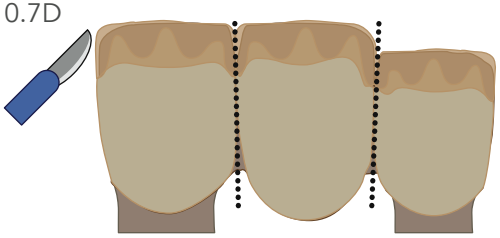


fig. 10.7D



10.8 BEFORE GLAZING FIRING

With Natural ZiR, even before the final Glaze firing, it is possible to intervene and change the shade of the restoration.

With Natural Stains universal fluorescent super-colors it is possible to intervene in many different ways.

Moreover, thanks to the specific color fixing firing, present in the Natural ZIR firing table, it is possible to carry out countless firings without the risk of changing the shape created with the layering.

The low temperature color fixing only partially fires the super colors and, by wetting the surface with a few drops of Natural Liquid Stains & Glazie, makes the final effect appear, thus allowing you to fully evaluate the aesthetic result of the restoration.

It is possible to modify both the color and the chromatic saturation using the fluorescent super-colors Natural Stains CROMA and CROMA LIGHT, depending on the desired shade (fig. 10.8A).

CROMA Natural Stains can be applied in the root third, increasing the chroma saturation of the collar as in natural elements; applied in the middle third, they increase the dentin saturation, making the dentin effect more chromatic and increasing the color on the A-D scale.

The Natural Stains COLOR allow you to create special effects in all areas of the restoration: fake caries, fake roots, crack lines, haloes, smoke effect etc; all bespoke colors can be made very easily with the multiple shades of the Natural Stains super-colors.

With Natural Stains it is also possible to increase the contrast effect of the enamel masses, lower the value to recreate the transparency effects of older teeth or increase it by increasing the brightness of the element in younger restorations (Fig. 10.8B).

All Natural Stains colors must be mixed exclusively with the dedicated Natural Liquid Stains & Glaze.

ATTENTION:
if one or more firings are carried out with Natural Stains, it is necessary to finalize the restoration with one of the Natural Glaze FX glazes; self-gloss firing is not recommended.

fig. 10.8A

It is possible to intensify or even substantially change the chromaticity of the restoration with CROMA STAINS

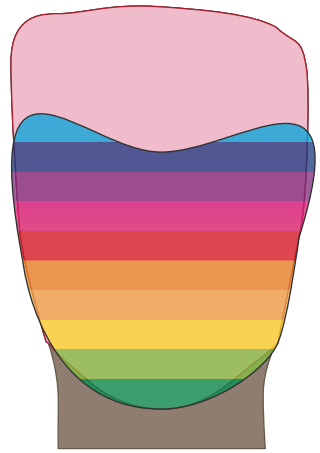
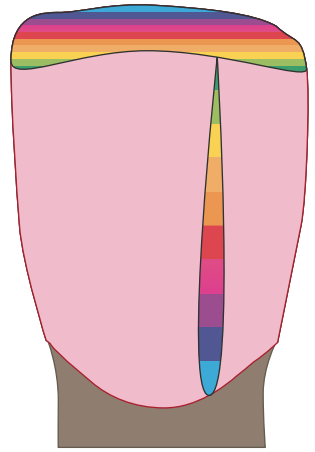


fig. 10.8B

COLOR STAINS can both emphasize layered effects with Natural ZiR ceramic, and create ad hoc effects such as crack lines or fake caries



10.9 THE GLAZE FIRING

The Glaze firing is the last firing that is performed on a layered metal-ceramic restoration.

Natural Ceramic System has a wide range of glazes: powder, paste, fluorescent paste, ultra-fluorescent gel and spray.

They can be used for each other, the effect and properties of the material are the same, although for each type of processing there is a more suitable glaze.

The glaze firing has two basic purposes, which are very important for a correct realization of the ceramic coating:

1. Surface polishing;
2. Surface sealing.

POLISHING:
The best known and most easily recognizable feature of the Glaze firing is the surface polishing.

The very thin layer of Natural Glaze FX material is sufficient to create a very bright and shiny glass veil; this aspect has a strong aesthetic value, the restoration seems much more alive and lively after the glaze firing.

SEALING:
In addition to an aesthetic factor, the glaze also responds to a physical need, the surface sealing; the ultra-fine grain size of the Natural Glaze FX materials creates a very compact surface, penetrating all the irregularities of the layered ceramic, and sealing the restoration.

Surface sealing is very important because it significantly decreases the engraftment and accumulation of plaque, which would find a natural grip on irregular and rough surfaces.

The most suitable glazes for Natural ZiR ceramic are the traditional ones, in powder or paste: it is not necessary to choose a fluorescent glaze as the Natural ZiR layering materials are already sufficiently fluorescent.

For a correct application of Glaze FX paste and powder, it is necessary to use a short bristle brush; taking a small amount of glaze, create a creamy paste that is not too liquid, and "massage" with the brush in a circular motion the entire surface of the element (fig. 10.9A).

If the work protocol applied in the laboratory provides for it, it is also possible to use the Natural AIR GLAZE FX in spray with great success.

The benefit of using a glaze spray comes from the possibility of unifying the glaze and the staining firings with Natural Stains, reducing processing times (Fig. 10.9B).

ATTENTION: Do not create thickness.

fig. 10.9A

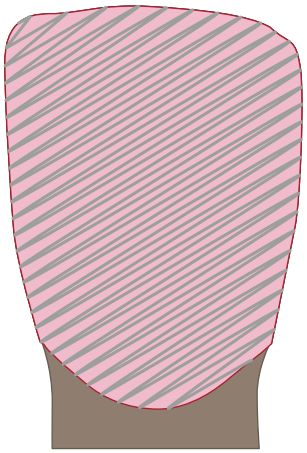


fig. 10.9B

11. LIST OF NATURAL ZIR MASSES

Below are all the Natural ZiR layering masses with the reference colors for easy and clear identification of the same, the reference color scale for each ceramic mass in the available packaging.

For the details of the colors, the layering technique and the suggested and recommended uses of each mass, refer to the Natural ZIR tables in paragraph 16. or to the Ceramica Natural ZiR Catalog.

ZiR LINER NEUTRAL 0
POWDER 20/50gr.

ZiR LINER BRIGHT 1-5
POWDER 20/50gr.

ZiR LINER COLOR 6-10
POWDER 20/50gr.

ZiR LINER CROMA 11-14
POWDER 20/50gr.

ZiR MASSA SPALLA A-D
POWDER 20 gr.

ZiR MASSA SPALLA MODIFY
POWDER 20 gr.

ZiR CUSPID DENTIN
POWDER 20/50gr.

ZiR SiD DENTIN
POWDER 20/50gr.

ZiR DENTIN OPAQUE A-D
POWDER 20/50gr.

ZiR DENTINA A-D
POWDER 20/50gr.

ZiR DENTIN OPAQUE MODIFY
POWDER 20/50gr.

ZiR DENTIN MODIFY
POWDER 20/50gr.

ZiR CROMATIZER
POWDER 20/50gr.

ZiR PRISMATIC DENTIN
POWDER 20/50gr.

ZiR BODY DENTIN
POWDER 20/50gr.

ZiR CORRECTION
POWDER 20/50gr.

ZiR ENAMEL S
POWDER 20/50gr.

ZiR ENAMEL OPALESCENT
POWDER 20/50gr.

ZiR ENAMEL SC
POWDER 20/50gr.

ZiR ENAMEL SPECIAL
POWDER 20/50gr.

ZiR TRANSPARENT
POWDER 20/50gr.

ZiR TRANSPARENT COLOR
POWDER 20/50gr.

ZiR TRANSPARENT NECK
POWDER 20/50gr.

ZiR GINGIVAL
POWDER 20/50gr.

ZiR THE ONE
POWDER 20/50gr.

ZiR ITALIAN WHITE SMILE
POWDER 20/50gr.

ZiR MASTER SET - MCF
Mamelon Cuspid & Fosse
POWDER 20/50gr.

ZiR MASTER SET - PDM
Professional Dentin Master
POWDER 20/50gr.

ZiR MASTER SET - DLS
Dynamic Light System
POWDER 20/50gr.

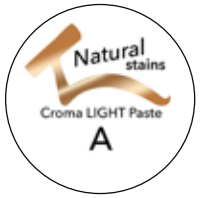
ZiR MASTER SET - VED
Value Enhance Dentin
POWDER 20/50gr.

12. LIST OF NATURAL STAINS UNIVERSAL COLORS

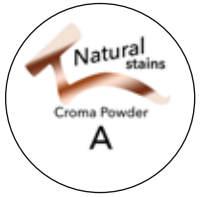
All the universal Natural Stains and Natural GLAZE FX are shown below, with the reference colors for easy and clear identification.

For the details of the colors and the suggested and recommended uses of each mass, refer to the Natural STAINS stains table in paragraph 16. or refer to the Natural STAINS & GLAZE Ceramic Catalog.

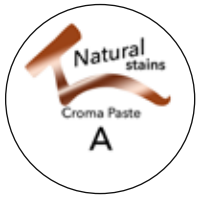
Stains CROMA LIGHT PASTE 4 gr.



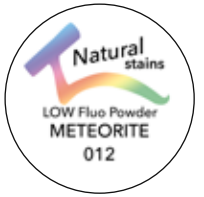
Stains CHROMA POWDER 4 gr.



Stains CHROMA PASTE 4 gr.



Stains LOW FLUO POWDER 4 gr.



Stains HIGH FLUO POWDER 4 gr.

Stains FLAT POWDER 4 gr.

Stains HIGH FLUO PASTE 4 gr.

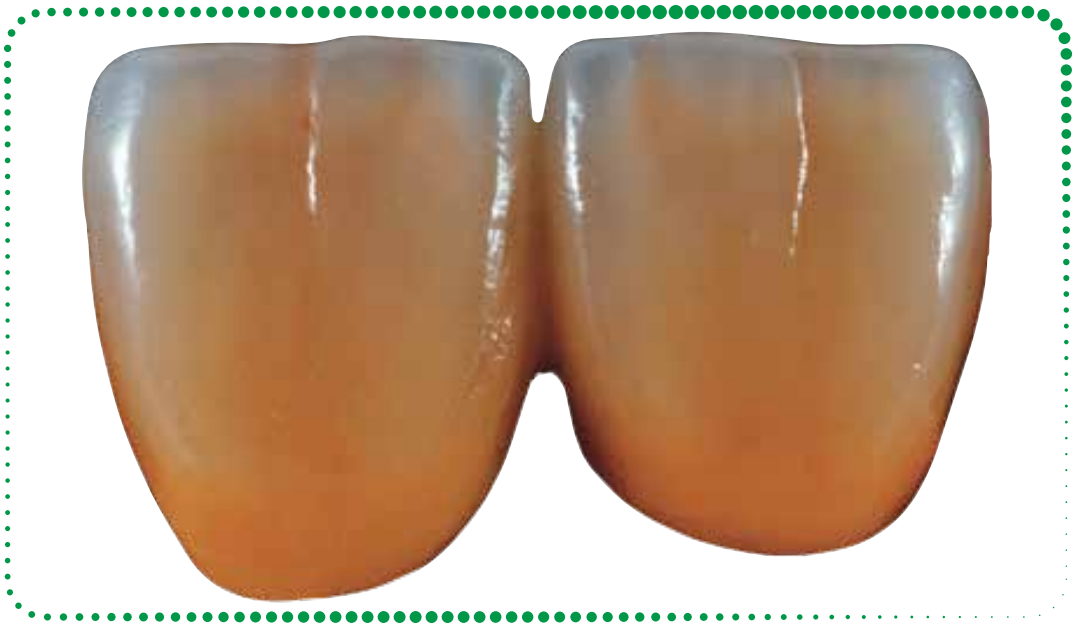
GLAZE FX TRADIZIONAL
POWDER 10 gr.

GLAZE FX TRADIZIONAL
POWDER 10 gr.

GLAZE FX FLUORESCENT
PASTE 10 gr.

GLAZE FX CRYSTAL
ULTRA-FLUORESCENT
PASTE 10 gr.

GLAZE AIR FX SPRAY
ULTRA-FLUORESCENT
SOLUTION 75 ml.



HIGH AESTHETIC PERFORMANCE

Elements in zirconia layered with Natural ZiR ceramic

Realized by: **NUNZIO ROSA**
Laboratorio RDB
CASALE DI SCODOSIA - ITALIA

13. NATURAL LIQUID LIST OF UNIVERSAL LIQUIDS

Below are all the universal liquids of the Natural LIQUID family compatible with the various Natural Ceramic System masses, with the reference colors for easy and clear identification of the same.

For information on the suggested and recommended uses of each liquid, refer to the ceramic manual or refer to the specific Natural LIQUID Catalog.

Liquid INSULATING
Liquid 20/50 ml.

Liquid PASTE OPAQUE
Liquid 20/50 ml.

Liquid POWDER OPAQUE
Liquid 20/50 ml.

Liquid SHOULDER MASS
Liquid 20/50 ml.

Liquid MODELLING
Liquid 100/250/1000 ml.

Liquid SPECIAL
MODELLING
Liquid 100/250/1000 ml.

Liquid MORFOLOGIC
SID & CUSPID
Liquid 100/250 ml.

Liquid PRISMATIC DENTIN
Liquid 100/250 ml.

Liquid STAINS & GLAZE
Liquid 20/50/100 ml.

18. WARNINGS

1. GENERAL:
All Natural Ceramic System products have been designed and manufactured as part of a single ceramic system and therefore, in the layering of the restorations, only original Natural Ceramic System materials must be used, carefully following the instructions for use. and the recommendations provided by the manufacturer. Information on Natural Ceramic System products is transmitted to users through paper documentation (instructions for use, manuals, technical sheets, catalogs, etc.), audiovisuals, IT tools, training courses, practical demonstrations and telephone or verbal support from recognized Tressis specialists. Italy. The information provided is always at the highest level of technical and scientific updating available at the time the product is marketed.

2. RESPONSIBILITY OF THE USER:
The availability of the support information provided by Tressis Italia does not exempt the user from the obligation to personally verify the compliance of the products with the needs, indications and methods of use envisaged. All the processes, manipulations and applications of Natural Ceramic System products that take place outside the control of Tressis Italia itself, are under the control and complete responsibility of the user, who therefore also assumes responsibility for any consequential damage, in cases in which Tressis Italia products, components and tools are not used for procedures not expressly provided for or recommended.

3. MANUFACTURER'S RESPONSIBILITY:
The Natural Ceramic System is a medical device according to the 93/42 EEC directive, aimed at the production of all-ceramic and / or layered prostheses on alloy and zirconia structures, for application in oral cavity of humans. Any use of the system other than that stated is configured as "improper use" relieving the manufacturer of any obligation and liability. Given that the choice and application of the product are acts carried out by qualified dental technicians on the recommendation of a dentist in total autonomy of judgment, no responsibility can be attributed to Tressis Italia for damages of any nature deriving from such acts.

4. DELIVERY:
All Natural Ceramic System products are intended exclusively for dentists and dental technicians, according to their respective skills, both in the case of direct sales and in the case of use of other commercial distribution channels.

5. WARRANTY:
Tressis Italia subjects all the products in the system to rigorous quality controls, in accordance with the regulations in force, aimed at providing a product free from obvious flaws and defects. As indicated in the conditions of sale, the verification of any defects and the methods of any replacement of the product must be agreed with Tressis Italia. No responsibility can be attributed to Tressis Italia for hidden defects or defects not ascertained by the user at the time of application of the product.

6. AVAILABILITY:
All Tressis Italia products may not be available in some countries or commercial areas.

7. PRODUCT IDENTIFICATION - MARKING:
All Natural Ceramic System products are identifiable based on the item code and lot code, shown on the packaging.

8. PRODUCT DOCUMENTATION:
All the documentation for Natural Ceramic System products can be requested from Tressis Italia directly or through its marketing channels and is available on the website www.naturalceramic.it

9. SEMINARS AND TRAINING COURSES:
Tressis Italia regularly organizes training courses for its customers in order to allow users of its products to inform themselves and update themselves on the characteristics and use of Natural Ceramic System products.

10. KEY TO THE SYMBOLS SHOWN ON THE PACKAGE:

 Producer

 Production date YYYY MM

 Medical Device

 Production Lot

 Product code

 Unique identification of the device

 ATTENTION: consult the instructions for use

ATTENTION: Not necessarily all the symbols mentioned are present at the same time on the product packaging.

15. I TRESSIS ITALIA BRANDMARKS

TRESSIS ITALIA TRADEMARKS

Tressis Italia, a leading company in the dental sector, specializes in the production of dental ceramics and in the development of innovative products.

The strength of Tressis Italia is based above all on the quality of the product which derives from a deep knowledge of the materials.

Innovation has become a tradition in the philosophy of our work: technical and scientific progress, new materials, new technologies are challenges that see us at the forefront.

Our dynamism leads us to promptly identify the needs of the changing market, managing to offer operators in the sector products that anticipate change.

Tressis Italia has developed the Natural Ceramic System, one of the most complete and innovative in the sector, bringing new generation highly performing materials to the dental ceramics branch.

Our flagships:

- the complete range with over 200 masses for traditional layering and an exceptional series of special masses;
- THE ONE monomass for metal and zirconia, launched on the market well over 10 years ago as an absolute novelty ;
- The materials for micro layering on monolithic zirconia and lithium disilicate MiLa, Frame, Overlay, MAC and the CRYSTAL method with the innovative Micro Layering System technique.

In addition to the porcelain masses, Tressis Italia has developed Natural Stains, universal colors that can be used with all the highly fluorescent Natural ceramic lines. The working temperature range is very wide, and the Stains retain their color after numerous firings.

The Tressis Italia Natural Ceramic System is complemented by the Glaze FX range of glazes. Universal glazes, usable with all Natural ceramic lines, which meet all needs: normal powder, normal paste, highly fluorescent paste, highly sprayable fluorescent.

The original products developed by Tressis Italia in over 20 years of activity have seen countless attempts at imitation, which have remained far from our level of excellence, 100% made in Italy.

Tressis Italia is now synonymous with innovation, research, functionality, simplicity, style and beauty.

Tressis Italia has brought to the dental sector a ceramic range of extraordinary technical, aesthetic and functional value, at the same time simple and fast as time requires.

Tressis Italia owns the following brands:

AURICOM INDUSTRIES

BIO ALLOYS

creolab SMART PRODUCTS FOR DENTAL LAB

FURNACES

iCeramist line

Natural CERAMIC SYSTEM

RED Shark HEAVY DUTY GRINDING TOOLS

16. NATURAL ZIR CHARTS

NATURAL ZiR SYSTEM COMPOSITION TABLES:

- NATURAL ZiR Layering Powders 1/2
- NATURAL ZiR Layering Powders 2/2
- NATURAL ZiR Combo
- NATURAL ZiR Firing
- NATURAL ZiR Press Pellets
- NATURAL ZiR Press Pellets Combo
- NATURAL ZiR Master Set Layering Powders
- NATURAL ZiR Prismatic Dentin Layering Powders
- NATURAL STAINS Paste & Powders Chart
- NATURAL STAINS Paste

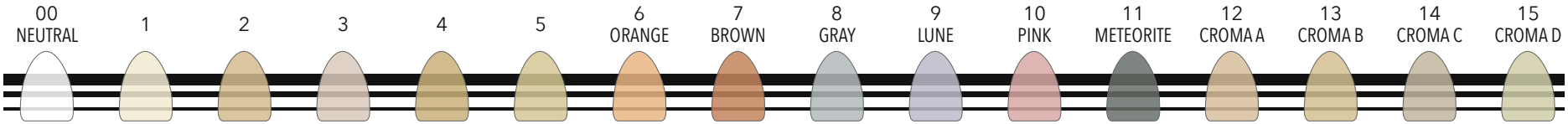
tressis italia®

LAYERING POWDER CHART 1/2

Natural® ZiR

CE 0546

LINER 3D

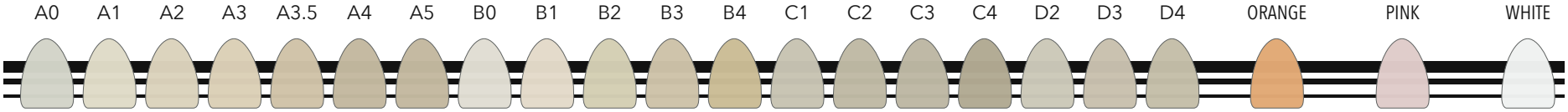


SHOULER MASS

A0 A1 A2 A3 A3.5 A4 A5 B0 B1 B2 B3 B4 C1 C2 C3 C4 D2 D3 D4

SHOULDER MASS MODIFY

ORANGE PINK WHITE

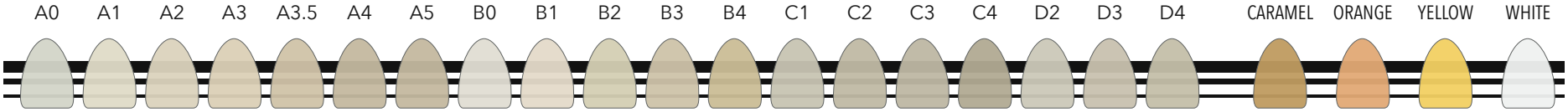


OPAQUE DENTIN

A0 A1 A2 A3 A3.5 A4 A5 B0 B1 B2 B3 B4 C1 C2 C3 C4 D2 D3 D4

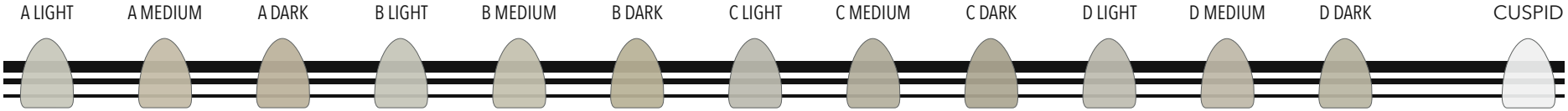
OPAQUE DENTIN MODIFY

CARAMEL ORANGE YELLOW WHITE



SID & CUSPID DENTIN

A LIGHT A MEDIUM A DARK B LIGHT B MEDIUM B DARK C LIGHT C MEDIUM C DARK D LIGHT D MEDIUM D DARK CUSPID



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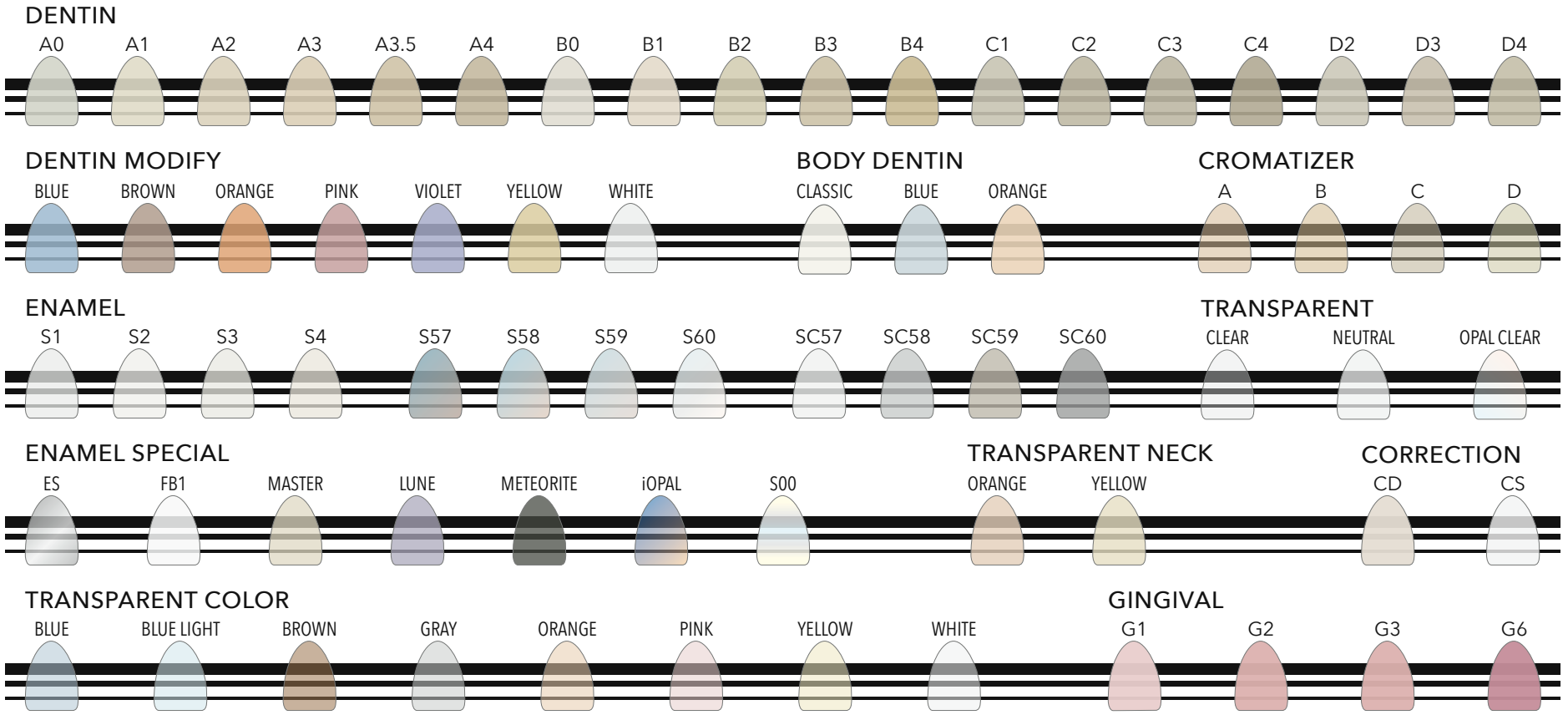
DENTAL CERAMIC
ITALIAN STYLE

REF 31 TABZR 010 -1

tressis italia®

Natural® ZiR CE 0546

LAYERING POWDER CHART 2/2



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DENTAL CERAMIC
ITALIAN STYLE

REF 31 TABZR 010 -2

tressis italia®

COMBO CHART

Natural® ZiR CE 0546

A - D COLOR RANGE	A0	A1	A2	A3	A3,5	A4	B0	B1	B2	B3	B4	C1	C2	C3	C4	D2	D3	D4
Liner	01	01	02	02	02	04	01	01	01	02	02	01	03	03	04	01	05	05
Liner COLOR	NEUTRAL				ORANGE		BROWN			GRAY			LUNE			PINK		
Liner CROMA	A						B					C				D		
Shoudler Mass	A0	A1	A2	A3	A3,5	A4	B0	B1	B2	B3	B4	C1	C2	C3	C4	D2	D3	D4
Shoudler Mass MODIFY	WHITE						ORANGE						PINK					
Gengival	G1						G2			G3					G6			
SiD Dentin	A LIGHT			A MEDIUM		A DARK	B LIGHT		B MEDIUM		B DARK	C LIGHT		C MEDIUM	C DARK	D LIGHT	D MEDIUM	D DARK
Cuspid Dentin	CUSPID																	
Dentin Opaque	A0	A1	A2	A3	A3,5	A4	B0	B1	B2	B3	B4	C1	C2	C3	C4	D2	D3	D4
Dentin Opaque MODIFY	WHITE					ORANGE			BROWN					CARAMEL				
Dentin	A0	A1	A2	A3	A3,5	A4	B0	B1	B2	B3	B4	C1	C2	C3	C4	D2	D3	D4
Dentin MODIFY	WHITE		YELLOW		ORANGE		BROWN			PINK			VIOLET			BLUE		
Enamel	S1	S1	S2	S2	S4	S4	S1	S1	S2	S3	S4	S2	S2	S3	S4	S1	S2	S3
Enamel SC	SC57	SC57	SC58	SC59	SC59	SC60	SC57	SC57	SC59	SC59	SC59	SC60	SC59	SC59	SC60	SC60	SC59	SC59
Enamel SPECIAL	LUNE			METEORITE			ES			FB1			iOPAL			00		
Enamel OPAL	S60					S59			S58					S57				
Trasparent	NEUTRAL						CLEAR											
Trasparent COLOR	YELLOW		ORANGE		WHITE			GRAY			BLUE		LIGHT BLUE			PINK		
Trasparent NECK	YELLOW									ORANGE								
Cromatizer	A						B					C				D		
Body Dentin	CLASSIC						ORANGE					BLUE						
Correction Mass	Correction Dentin									Correction Enamel								
Glaze FX	GLAZE FX Powder				GLAZE FX Paste				GLAZE FX Paste FLUORESCENT				AIR GLAZE FX Spray FLUORESCENT					

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DENTAL CERAMIC
ITALIAN STYLE

REF 31 TABZR 020 -2

FIRING CHART

PROGRAM	DRY TIME	CLOSE TIME	START TEMP.	SATURATION *	HEAT RATE	FINAL TEMP.**	VACUUM START	VACUUM STOP	HOLD TIME	NOTE ***
	min	min	°C	min	°C / min	°C	°C	°C	min	
Liner 1st & 2nd	4 - 6	6	450	1	60	1020	450	1020	2	"DRY TIME" and "CLOSE TIME" may change for span bridges or if many items are fired at once.
Liner Special DS	4 - 6	6	400	1	45	800	450	800	1	To be used only on LITHIUM SILICATE.
Shoulder Mass 1st & 2nd	2 - 4	6	400	1	45	860	405	860	1	Use only Liquid for Shoulder Masse.
SiD & Cuspid Dentin	2 - 4	4	400	1	45	850	405	850	1	"DRY TIME" and "CLOSE TIME" may change for span bridges or if many items are fired at once.
Dentin 1st	2 - 4	4	400	1	45	800 - 840	405	800 - 840	1	"DRY TIME" and "CLOSE TIME" may change for span bridges or if many items are fired at once.
Dentin 2nd	2 - 4	4	400	1	45	790 - 830	405	790 - 830	1	SECOND FIRING should be -10°C lower than FIRST FIRING.
Correction Masse	2 - 4	4	400	1	45	730	405	730	1	Correction Masse firing program for pure usage, if mixed with other layering powders it lowers their final temperature.
Stains Fixing	2 - 4	4	400	0	45	700	405	700	1	After firing, stains should appear glossy and shiny, increase DRY TIME for bigger restorations.
Stains Firing	2 - 4	4	400	0	45	750	405	750	1	After firing, stains should appear glossy and shiny, increase DRY TIME for bigger restorations.
Glaze FX	4 - 6	2	400	0	45	770	NO	NO	1	To be used only with paste GLAZE FX, suitable both for layering and press ceramic

PROGRAM	INGOTS		START TEMP.		HEAT RATE	FINAL TEMP.	HOLD TIME	PRESS TIME	PRESSION	NOTE ****
	n°		°C		°C / min	°C	min	min	BAR	
Up to 0,6 gr.	1		700		60	900	30	6 - 8	4,5	Wax weight max 0,6 grams sprues included
From 0,6 gr to 1,4 gr.	2		700		60	910	30	10 - 12	4,5	Wax weight within 0,6 and 1,4 grams sprues included

GENERAL INFORMATIONS:
All the data shown are indicative and must be modified according to specific cases (long bridges, circular bridges, many items at once, etc.).
We recommend a good drying before starting the firning cycle; we also recommend also slow oven opening and slow cooling.

*** SATURATION:**
This program can only be run from ovens equipped with this function; ask your oven manufacturer for more information.

**** FINAL TEMPERATURE:**
FINAL TEMPERATURE can change according to the furnace used, depending on furnace brand, model, use and update!
If FIRST FIRING is carried out at 840°C, SECOND FIRING should be carried out at 830°C; if FIRST FIRING is carried out at 810°C, SECOND FIRING should be carried out at 800°C.
For IVOCLAR brand ovens and similar, set VACUUM STOP 1°C lower than the FINAL TEMPERATURE, so as to carry out the HOLD TIME without vacuum.

***** NOTE:**
All the parameters in this table have been defined using an **F1 DIGITAL PRESS** oven; manufacturer, type, age, updating and overall status of the oven can cause the data shown here to vary, even considerably.
It is recommended to carry out a test firing before starting the actual work.
Should changes be made to the programs, it is recommended to make small changes (±10°C) at a time.

****** PRESS NOTE:**
The use of the X1 investment cylinder is never recommended, in any case, not even for single restorations.
The use of disposable pistons in refractory material is recommended.

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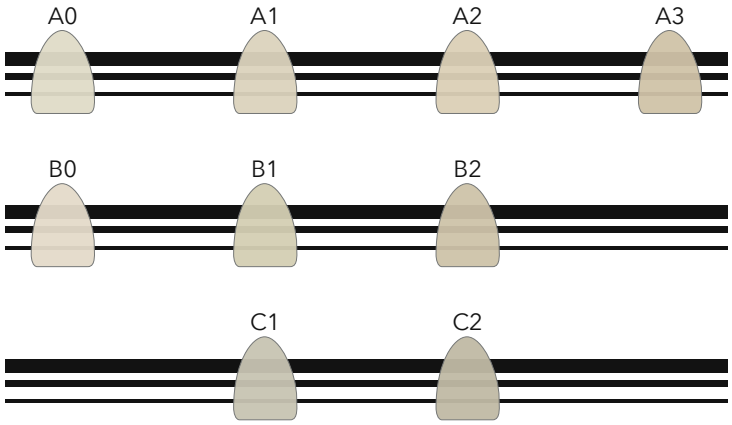
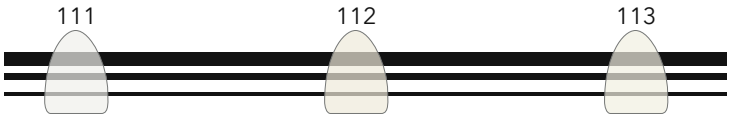
DENTAL CERAMIC
ITALIAN STYLE

DENTIN A-D (opacity ±75%)



UNIVERSAL TRANSPARENT (opacity ±35%)



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DENTAL CERAMIC
ITALIAN STYLE

REF 31 TABZR 050 -1

	A0	A1	A2	A3	A3,5	A4	A5	B0	B1	B2	B3	B4	C1	C2	C3	C4	D2	D3	D4
DENTIN	A0	A0	A1	A2	A3	A3	A3	B0	B0	B1	B2	B2	C1	C1	C2	C2	A1	A2	A3

	A0	A1	A2	A3	A3,5	A4	A5	B0	B1	B2	B3	B4	C1	C2	C3	C4	D2	D3	D4
111	V	V	V					V	V				V				V		
112				V						V	V			V				V	
113					V	V	V					V			V	V			V

Natural ZiR Press Pellets DENTIN series:

Dentin opacity (± 75% approx) ideal for making veneers, cosmetic veneers, full crowns and inlays on vital and slightly discolored natural abutments; they can be finalized both with the painting technique and layered with Natural HT ceramic. It is advisable to choose a lower tablet of at least one chromatic tone compared to the final color, depending on the case to be made.

Natural ZiR Press Pellets series 110:

Low opacity (± 35% approx) ideal for making veneers, cosmetic veneers, full crowns and inlays on vital natural abutments; recommended for the staining technique, they can also be layered with the respective ceramic.

WARNING: DIFFERENT ABUTMENT CONDITIONS AND DIFFERENT THICKNESSES CAN AFFECT THE FINAL RESULT.

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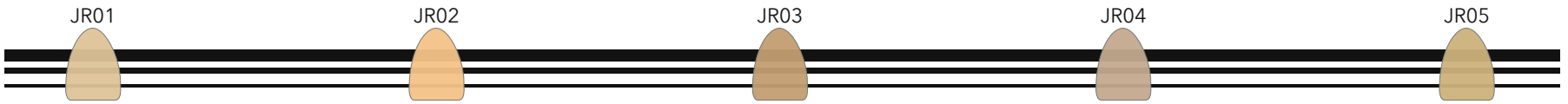
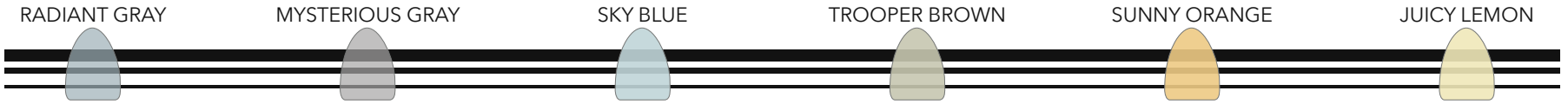
DENTAL CERAMIC
ITALIAN STYLE

MCF - MAMELON CUSPID & FOSSE

PDM - PROFESSIONAL DENTIN MASTER



DLS - DYNAMIC LIGHT SYSTEM



VED - VALUE ENHANCE DENTIN

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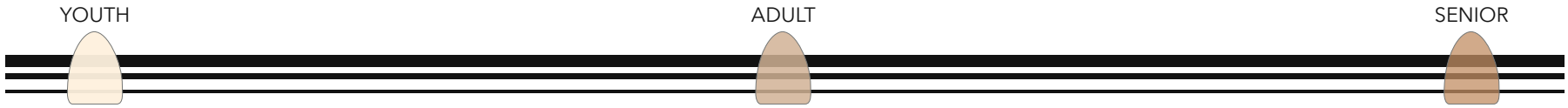
PRISMATIC DENTIN



PRISMATIC FLUORESCENT

ENAMEL MASTER

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UNIVERSAL STAINS POWDER & PASTE

POWDER LOW FLUORESCENCE

METEORITE 012 | LIGHT BLUE 018

POWDER FLAT

BROWN 508 | WHITE 513

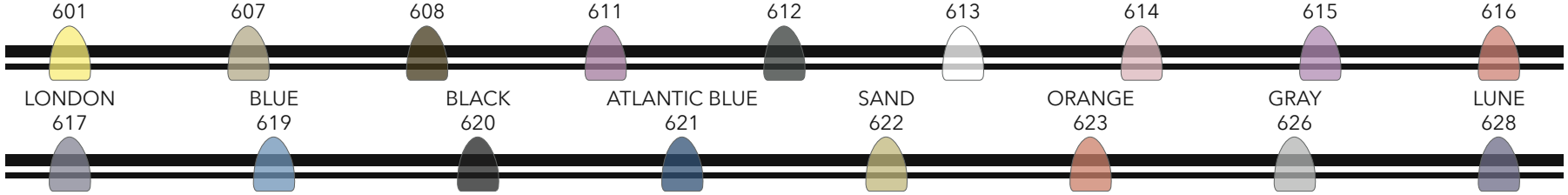
POWDER HIGH FLUORESCENCE

ORANGE 106 | CHOCOLATE 109 | WHITE 113 | PINK 114 | BLUE 119 | BLACK 120 | ORANGE 123 | GRAY 126

PASTE HIGH FLUORESCENCE

YELLOW 601 | SAFARI 607 | BROWN 608 | VIOLETT 611 | METEORITE 612 | WHITE 613 | PINK 614 | DEEP PURPLE 615 | RED PASSION 616

LONDON 617 | BLUE 619 | BLACK 620 | ATLANTIC BLUE 621 | SAND 622 | ORANGE 623 | GRAY 626 | LUNE 628



POWDER CROMA HIGH FLUORESCENCE

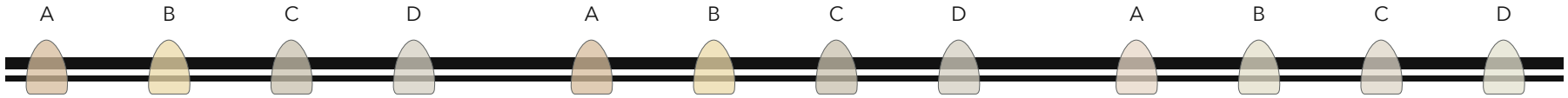
A | B | C | D

PASTE CROMA HIGH FLUORESCENCE

A | B | C | D

PASTE CROMA LIGHT HIGH FLUORESCENCE

A | B | C | D



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COLOR PASTE HIGH FLUORESCENCE

YELLOW 601

SAFARI 607

BROWN 608

VIOLETT 611

METEORITE 612

WHITE 613

PINK 614

DEEP PURPLE 615

RED PASSION 616

LONDON 617

BLUE 619

BLACK 620

ATLANTIC BLUE 621

SAND 622

ORANGE 623

GRAY 626

LUNE 628

CROMA PASTE HIGH FLUORESCENCE

A

B

C

D

CROMA LIGHT PASTE HIGH FLUORESCENCE

A LIGHT

B LIGHT

C LIGHT

D LIGHT

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