

INSTRUCTION FOR USE

EDIT 1.00

Natural HT



DENTAL CERAMIC



ITALIAN STYLE

Natural[®]
CERAMIC
SYSTEM
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Natural[®]

DSL

HT

LF

ZiR

MicroLayer

Stains

1. INDEX

1. INDEX	pag.03	10.4 First firing of a bridge, example case	pag.20
2. Expertise in dental ceramics	pag.04	10.5 Basic and advanced layering of a bridge, example case	pag.11
3. Product characteristics	pag.05	10.6 First firing with THE ONE, example case	pag.22
4. Coefficient of thermal expansion (CTE)	pag.06	10.7 Basic and advanced layering with THE ONE, example case	pag.23
5. Light and color	pag.08	10.8 Before the Glaze firing	pag.24
6. Result of the ceramic firing	pag.09	10.9 The Glaze firing	pag.25
7. Indications	pag.10	11. Natural HT list of materials	pag.26
8. Indications for a metal structure	pag.13	12. Natural STAINS list of universal colors	pag.30
9. Information on paste and powder opaques	pag.14	13. Natural LIQUID list of universal liquids	pag.32
10. OPERATIONAL PHASE:		14. Warnings	pag.33
10.0 Preparation of the metal structure	pag.16	15. The Tressis Italia brands	pag.34
10.1 Application and firing of the opaque	pag.17	16. Natural HT Tables	pag.35
10.2 First firing of a single element, example case	pag.18	Legal Notice and Copyright	pag.46
10.3 Basic and advanced stratification of an element, example case	pag.19		

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.

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3. PRODUCT CHARACTERISTICS

NATURAL HT

Natural HT is a leucite-based glass ceramic for dental restorations using the metal-ceramic technique.

The coloring is the traditional A-D, to which the off-scale colors A0, A5 and B0 have been added, for a more complete range of layering masses.

Coordinated transparency and fluorescence allow the reconstruction of natural teeth such as metal-ceramic crowns and bridges on conventional adhesive alloys with a coefficient of thermal expansion (CTE) between: $13.8 - 15.0 \times 10^{-6} \times K^{-1}$ (25- 500°C).

Natural HT ceramic is made up of a skilful heterogeneous mix of components. The silicates that make up Natural HT are generally defined as structural silicates, as they form, with the heat treatment, very stable three-dimensional networks. In addition, 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.

Leucite, produced by the fusion of orthoclase ($KAlSi_3O_8$), is one of the most important components of Natural HT ceramic: in fact, leucite constitutes the crystalline phase of the ceramic masses and has a dual function, on the one hand it ensures the stability of the shape at high temperatures. temperatures, on the other hand 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 leucite crystals significantly increase the resistance of the ceramic as they actively oppose the propagation of Griffith cracks, naturally present in any glassy material.

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

As a last element, the synthetic colored pigments are added, which define the color of each mass after firing, 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 HT remain unchanged and faithful over time.

CLASSIFICATION		GLASS CERAMIC	
CHEMICAL COMPOSITION:		SiO ₂ , Al ₂ O ₃ , K ₂ O, Na ₂ O, CaO, B ₂ O ₃	
CLASSIFICATION ISO 6872:2019			
NATURAL HT LAYERING POWDERS	TYP: 1	CLASS: 1 b	
NATURAL HT PRESS PELLETS	TYP: 2	CLASS: 2 a	
COEFFICIENT of THERMAL EXPANSION - (25-450°C) [10 ⁻⁶ .K ⁻¹ ±0.5]			
NATURAL HT LAYERING POWDERS	2x : 13.0 - 4x : 13.0		
NATURAL HT PRESS PELLETS	2x : 13.0 - 4x : 13.0		
GLASS TRANSITION TEMPERATURE - TG [°C±20]			
NATURAL HT PASTE OPAQUE	2x : 540 - 4x : 540		
NATURAL HT LAYERING POWDERS	2x : 560 - 4x : 560		
NATURAL HT PRESS PELLETS	2x : 590 - 4x : 590		
BENDING RESISTANCE - [MPa]	DETECTED VALUE	REQUIREMENT ISO 6872	
NATURAL HT LAYERING POWDERS	≥ 50	≥ 50	
NATURAL HT PRESS PELLETS	≥ 100	≥ 100	
SOLUBILITY - [µg / cm ²]	DETECTED VALUE	REQUIREMENT ISO 6872	
NATURAL HT LAYERING POWDERS	< 40 µg/cm ²	< 100 µg/cm ²	
NATURAL HT PRESS PELLETS	< 100 µg/cm ²	< 100 µg/cm ²	

4. COEFFICIENT OF THERMAL EXPANSION (CTE)

NATURAL HT

The coefficient of thermal expansion, abbreviated with the acronym CTE or CET or WAK (in German-derived texts), indicates the dimensional variation of a material, in our case the ceramic and the alloy, in relation to the varying temperature; the need to use two different materials such as ceramic and alloy, must be evaluated in the light of the compatibility of the CTE of the materials.

Our experience in the production of ceramics for different types of material (zirconia, traditional alloys, high expansion alloys, etc.) has led us to identify all precious and non-precious alloys with a CTE as compatible alloys for Natural HT ceramics. between $13.8-14.8 \times 10^{-6} \times K^{-1}$ (25-500 ° C); while the ideal CTE for Natural HT ceramic is $14.2 \times 10^{-6} \times K^{-1}$ (25-500 ° C).

The dental ceramic firing process 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 up 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: in 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 it can be created of the tensions and the cooling phase begins which leads to point 4; the ceramic will begin 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 a longer time by subjecting the material to a tensile tension force; these two opposing forces can cause cracking if the CTE of the alloy is higher than 14.5 at 500°C.

Therefore, the heat treatment must be modulated according to the specific CTE of the alloy: with a CTE between 13.8 and 14.4 at 500 ° C, no particular precautions are necessary; while with a CTE ≥ 14.5 at 500 ° C it will be necessary to use what is generally defined as slow cooling starting from the 1st dentin firing.

We also remember that this general principle applies to all alloys, both precious and non-precious ones. Non-precious alloys dissipate heat more slowly due to their specific composition.

Therefore, it is always good to keep in mind that in the case of non-precious alloys, the use of slow cooling is to be preferred already with a CTE ≥ 14.3 at 500°C.

Cooling must also be modulated in correlation with the shape, dimensions and volumes of the metal structure.

If there is a discrepancy between the coefficient of thermal expansion of the alloy and that of the ceramic, the following situations may occur:

1. If the CTE of the structure material is much lower than the CTE of the veneering ceramic, the tangential tensile stresses increase and radial cracks are generated on the outside; this type of fracture can also form after some time (fig. 4A).

2. If the CTE of the framework material is much higher than the CTE of the veneering ceramic, the pressure tangential stresses increase and cracks parallel to the metal structure are generated, with possible flaking and / or detachment of the ceramic (fig. 4B).

3. If the CTE of the framework material is compatible with the CTE of the veneering ceramic the tensile stress and pressure forces are balanced (Fig. 4C), no cracking or flaking occurs.

The optimal situation arises when the ceramic has a thermal expansion coefficient slightly lower than that of the structural alloy: since there is an adhesive bond, the ceramic must follow the structural trend of the alloy. During cooling, the ceramic is subjected to a slight tangential tension-pressure force.

When the aesthetic coating of an alloy structure with a ceramic material is carried out, in addition to the coefficient of thermal expansion, both the thickness of the coating and its distribution on the structure are decisive: in fact, tension forces develop inside the ceramic coating (radial tensile stresses) which increase with increasing thickness; therefore it is necessary that the thickness of the ceramic is not excessive and that there is also a uniformity in the distribution of the thickness of the ceramic itself (fig.4D)

fig. 4A

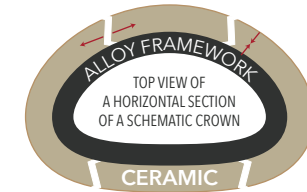


fig. 4B

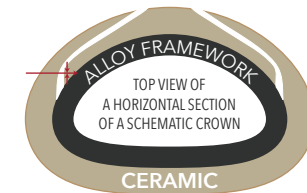


fig. 4C

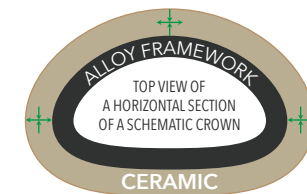
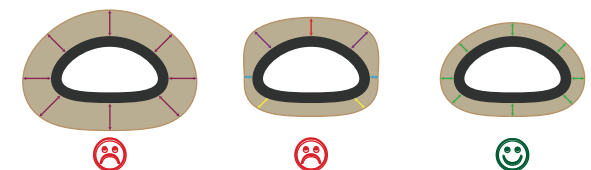


fig. 4D



5. LIGHT AND COLOR

NATURAL HT

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.

OPALESCEENCE

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 HT

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.

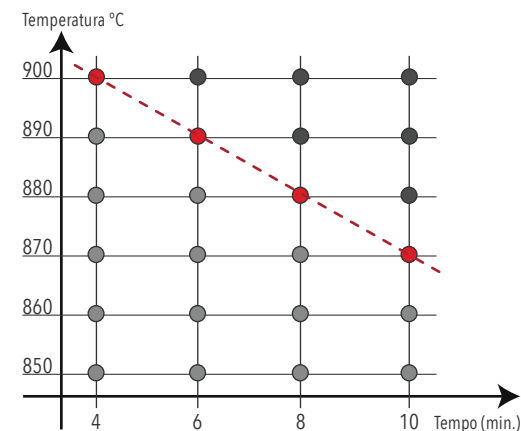
In the laboratory, a slight sheen of the surface indicates a correct cooking cycle, while a milky non-transparent result means that the final temperature is too low.

If necessary, change the final temperature

in intervals of 5 ° C at a time.

It is recommended to always carry out a good drying of the ceramic before starting the firing cycle with the temperature increase. Excessive drying of the ceramic has no effect on the result, while on the contrary poor drying can cause discoloration, irregularity in the coloring and even fractures and detachments.

fig. 6A



7. INDICATIONS

The Natural HT ceramic system is composed of a range of powders and pastes for ceramic layering and press-pellets.

WARNINGS AND CONTRAINDICATIONS:

Combination with materials other than the Natural Ceramic products mentioned 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, the use of a vacuum cleaner, protective 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 HT is a dental ceramic and consists of two lines of material:
Natural HT Ceramic for Layering and
Natural HT Press pellets

Natural HT is suitable for the complete aesthetic coating of structures made with metal alloys, for the partial coating of structures made with metal alloys.

Natural HT can also be used for the die casting of all-ceramic elements, inlays and veneers with the line of pads. Natural HT Press pellets is not suitable for pressing on a metal structure.

COMPATIBILITY:

Natural HT Ceramic for Layering is compatible with Natural HT Pads for Pressed and vice versa. Natural HT is compatible with the Natural STAINS line of stains, with the Natural LIQUIDS line of liquids and with the Natural CRYSTAL line of masses for micro-layering.

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

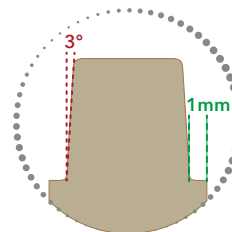


fig. 7A

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 METAL STRUCTURE

MODELING: The structures must be modeled in anatomical form 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 remaining within 2 mm of maximum thickness.

It is also necessary to take into account the indications for the individual alloys: - undersized metal structures involve a greater shrinkage of the ceramic and therefore require a greater number of firings; - undersized metal structures do not ensure correct support of the ceramic, which in case of thickness high is more subject to the risk of cracks and detachments.

SECTION OF THE CONNECTIONS: The section of the connections between the interdental surfaces greatly affects the stability of the restoration. Depending on the alloy used, pay attention to correct sizing of the connection section (fig. 8B).

Crown and bridge frameworks to be veneered with ceramic must be configured so that after

finishing the minimum thickness of the metal framework is at least 0.3 mm in the case of single crowns and 0.5 mm in the case of bridges.

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

Failure to observe the minimum separators, uniform volume distribution and connection sections can lead to tension, detachment and twisting (fig 8C).

Pay attention to a sufficient support of the metal structure; avoid sharp edges and insufficient thickness.

CONFIGURE THE METALLIC EDGE: the transition of the metal structure to the ceramic must be uniquely defined and possibly present an angle of 90 °.

The passages between metal and ceramic must not coincide with points of contact 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

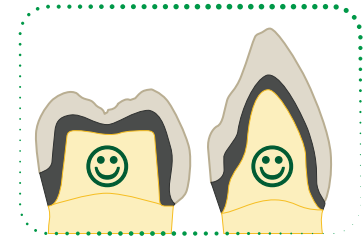
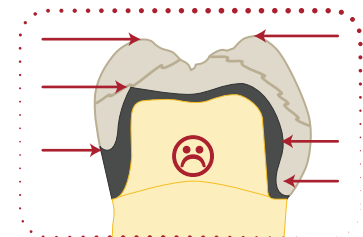


fig. 8B



fig. 8C



9. INFORMATIONS ON PASTE AND POWDER OPAQUES

NATURAL HT

The application of the opaque has the purpose of masking the color of the alloy and ensuring a perfect bond with the metal structure; in addition, the opaque gives the chromatic base to the aesthetic restoration.

The firing phases of the opaque are very important in the layering of the ceramic. Proper management of these phases maximizes the bond and adhesion between the alloy structure and the veneering ceramic.

On precious alloys, the opaque can be fired in three steps:

1. Opaque WASH firing; 2. First opaque firing; 3. Second opaque firing.

The WASH opaque is a special mixing of the paste opaque, we recommend the use of the BASE Opaque Paste which, due to its formulation, is very suitable for this task, diluted with the Liquid for Opaque Paste. The mixture thus composed serves not so much to opacify the structure, but to create the adhesive oxides necessary for the chemical bond and the formation of ceramic areas on the metallic surface to strengthen retentions for the ceramic.

On the non-precious alloys based on Cr-Ni and Cr-Co, the opaque is fired with the following steps:

1. BOND 007 cooking; 2. First opaque firing; 3. Second opaque firing.

BOND 007 is a special mass for non-precious alloys whose use is to create a strong metal-ceramic bond, opacify and color the structure and prevent the proliferation of oxides in subsequent firing of the ceramic.

It is very important to keep in mind that the opaque, in order to maintain excellent adhesive characteristics, must be applied very thinly, without creating puddles; an excessive thickness of opaque leads to cracks and possible detachments in subsequent firing of the ceramic.

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

It is recommended to pay attention not to put the paste opaques in contact with the modeling liquids and water: the pastes tend to disintegrate and cracks and fissures may form during cooking.

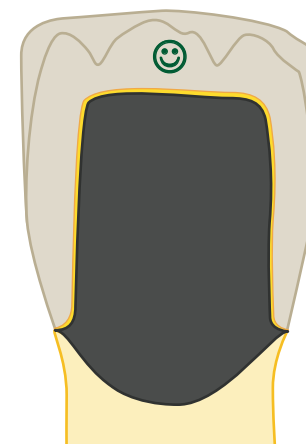
fig. 9A

The opaque paste must be spread evenly, without creating excessive thickness on the whole element



With the 1st cooking, the framework is covered by about 60-70%;

With the 2nd cooking, the 100% coverage is finalized



10. OPERATIONAL PHASE

10.0 PREPARATION OF THE METAL STRUCTURE

10.1 APPLICATION AND FIRING OF THE OPAQUE

10.2 FIRST FIRING OF A SINGLE CROWN, EXAMPLE CASE

10.3 BASIC AND ADVANCED LAYERING OF A SINGLE CROWN, EXAMPLE CASE

10.4 FIRST FIRING OF A BRIDGE, EXAMPLE CASE

10.5 BASIC AND ADVANCED LAYERING OF A BRIDGE, EXAMPLE CASE

10.6 FIRST FIRING WITH THE ONE, EXAMPLE CASE

10.7 BASIC AND ADVANCED LAYERING WITH THE ONE, EXAMPLE CASE

10.8 BEFORE THE GLAZING FIRING

10.9 THE GLAZE FIRING

10.0 PREPARATION OF THE METAL STRUCTURE

After having modeled the metal structure to be veneered in wax, taking into account the previously reported indications, we will move on to pinning and casting.

For details on proper pin setting and casting process refer to the instructions provided by the alloy manufacturer.

After casting, as usual, we proceed to remove the sprues and finish the metal structure; it is recommended to use suitable, cross-cut, non-worn cutters to avoid hardening of the alloy which will lead to cracks and fissures in the ceramic.

After the finishing phase, sandblast the product very carefully with pure aluminum oxide (Al_2O_3); for precious alloys we recommend HALODUR 110 at 110 μ , while for non-precious alloys we recommend the use of HALODUR 250 at 250 μ .

Proceed with the oxidation phase (for precious alloys), or degassing (for all non-precious alloys), strictly following the instructions provided by the alloy manufacturer.

CAUTION:

The oxidation must be homogeneous (fig. 10.1A) over the entire structure, without variations in color or appearance in general; if the oxidation is spotty or uneven, sandblast the structure again with aluminum oxide and repeat the oxidation / degassing protocol (fig. 10.1B).

After the heat treatment, before proceeding with the processing, carry out the cleaning process: brush the metal structure under running water, then clean it with the steamer. After cleansing, let the structure dry perfectly.

CAUTION:

after cleaning the structures should no longer be touched with your hands, use clean tweezers instead.

CAUTION:

for all non-precious alloys and precious alloys that produce many oxides, the cleaning procedure with brushing under running water and subsequent vaporization must be repeated after each ceramic firing.

fig. 10.1A

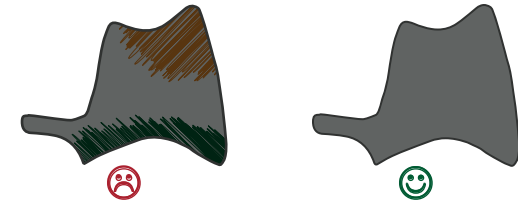
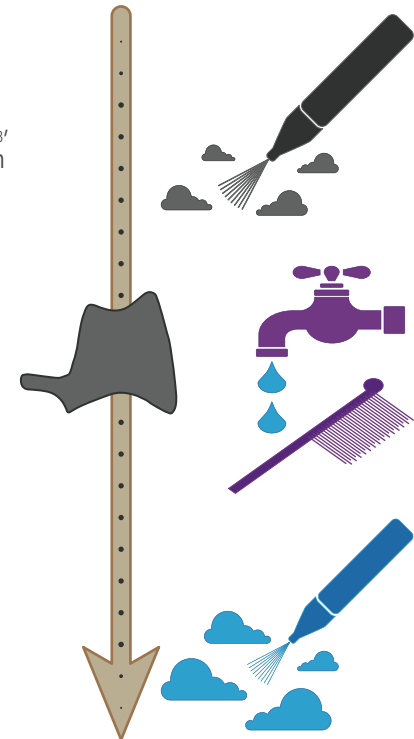


fig. 10.1B

Sandblast the entire surface with pure Al_2O_3 , 110 or 250 μ m at 4 BAR max

Rinse the restoration with running water and a brush

Vaporize the element thoroughly



10.1 APPLICATION AND FIRING OF THE OPAQUE

The Natural HT opaque paste is ready for use. Mix the opaque inside the jar with a glass or ceramic spatula to mix any liquid that may have separated.

ATTENTION:

never dry or drain any excess liquid present on the surface of the opaque paste, but mix it vigorously in the jar.

If the opaque dries up over time, just add a few drops of Liquid for Opaque Paste to restore the ideal creaminess.

After the eventual firing of BOND 007, only for non-precious alloys (fig. 10.1A), proceed with the application of the opaque, with a clean brush or a glass tool, uniformly and thinly over the entire element; avoiding puddles and stagnations; with the first firing of the opaque we will obtain a coverage of about 60-75% of the metal structure (fig. 10.1B).

ATTENTION:

do not excessively vibrate the opaque paste once spread, especially in the case of bridges, to avoid the accumulation of material in the saddle and collar areas.

Bake the first opaque as shown in the table, after cooling the product proceed with the application of the second coat of opaque, always evenly and thinly.

With the second firing, complete coverage of the metal structure will be obtained; in this phase it is possible to intervene with the opaque chromatic and / or colored masses to create customized color and chromaticity effects.

The appearance after the correct firing of the opaque has the classic eggshell shine (fig. 10.1C). Do not over-bake the opaque ones.

WARNING:

insufficient or too rapid drying of the opaque can cause problems. Failure to observe the times indicated for drying and rising can cause micro-cracks or the lifting of the opaque: during subsequent firings there will be cracks and / or detachments in the affected areas.

If necessary, it is possible to carry out a further firing of the opaque, with the same parameters used for the 2nd firing.

fig. 10.1A



fig. 10.1B



fig. 10.1C



10.2 FIRST FIRING OF A SINGLE CROWN

WARNING: 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 firing the opaque, as reported in paragraph 10.1, 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, using the special Natural Insulating Liquid and dry thoroughly (fig. 10.2A).

ATTENTION:

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

2. OPAQUE DENTIN:

To avoid color differences and blend the incisal area, layer a small amount of Opaque Dentine on the coping in the cervical areas and, if necessary, increase the volume, interproximal (fig. 10.2B).

3. DENTINE:

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 uniform moisture 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 HT 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 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

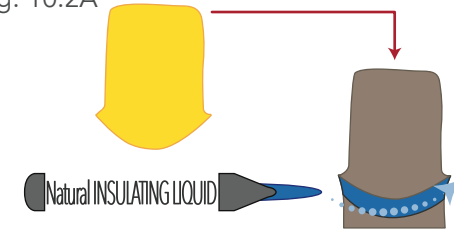


fig. 10.2B

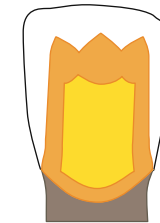


fig. 10.2C

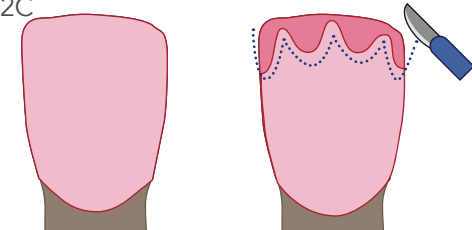
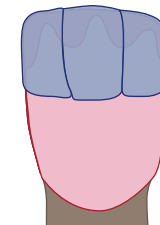


fig. 10.2D



10.3 BASIC & ADVANCED LAYERING OF A SINGLE CROWN

After the first firing, the appearance of the Natural HT 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 of the element (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 go overboard with oversizing the restoration as shrinkage

during firing will be minimal due to both less 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.

2. 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 superimposing a light layer of Transparent on the enamels (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 glazing program, alternatively it is possible to make various color fixings with the super Natural Stains colors and then glaze.

fig. 10.3A

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

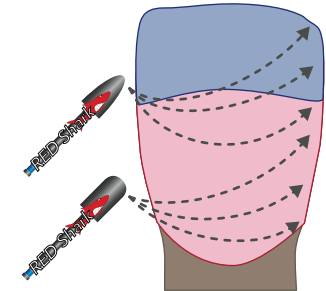


fig. 10.3B

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

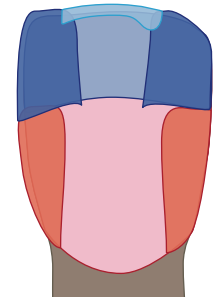
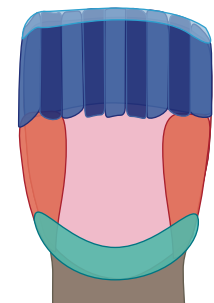


fig. 10.3C

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



10.4 FIRST FIRING OF A BRIDGE

WARNING: 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 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 using the special Natural Insulating Liquid and dry thoroughly (fig. 10.4A).

ATTENTION:

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

2. OPAQUE DENTIN:

To avoid sharp detachments of the enamel area, blend the middle third in the incisal area, layer the opaque dentin in the cervical and interproximal areas, on the connections and on the intermediate element, until the final volume of the cervical third is completed. (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). Dentine Natural HT 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 opaque, with a very thin spatula (fig.10.4D), then place the element on the firing supports and proceed with the first dentin firing.

fig. 10.4A

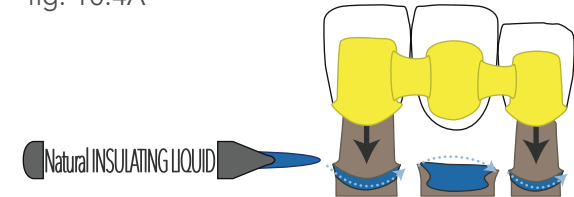


fig. 10.4B

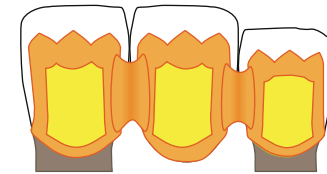


fig. 10.4C

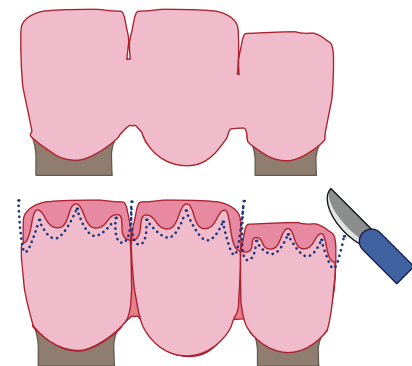
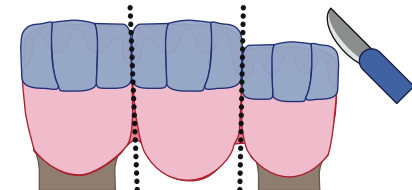


fig. 10.4D



10.5 BASIC & ADVANCED LAYERING OF A BRIDGE

After the first firing, the appearance of the Natural HT 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 of the element (Fig. 10.5B).

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

There is no need to go overboard with oversizing the restoration as shrinkage during firing will be minimal due to both less 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.

2. 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 Neck 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 Natural Stains and then glaze.

CAUTION:

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

fig. 10.5A

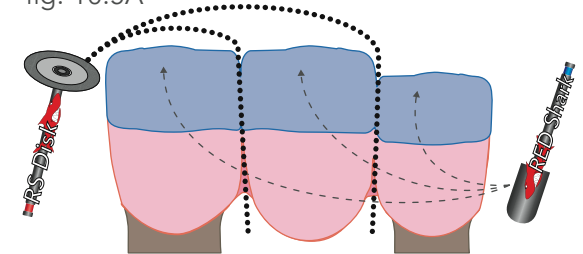


fig. 10.5B

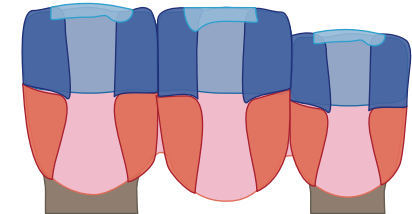


fig. 10.5C

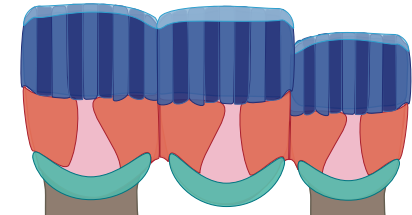
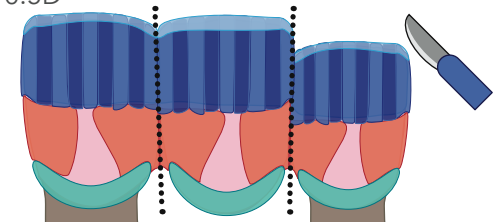


fig. 10.5D



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 element with a single layering powder.

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

Natural HT THE ONE is compatible with all the layering masses of the Natural HT 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.

ATTENTION: 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 cooking (point 5)

ADVANCED PROCESSING:

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

5. FIRING:

Place the element on the firing tray and proceed with the first THE ONE firing.

fig. 10.6A

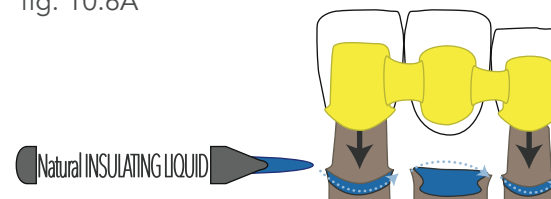


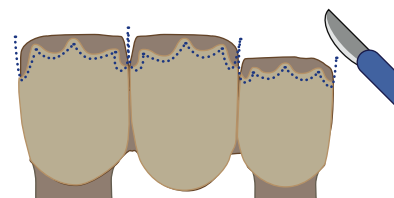
fig. 10.6B



fig. 10.6C



fig. 10.6D



10.7 BASIC & 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 PROCESSING:

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 PROCESSING:

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)

CAUTION:

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

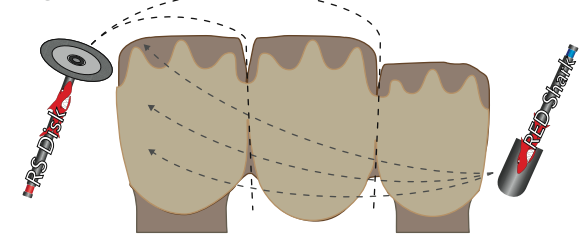


fig. 10.7B



fig. 10.7C

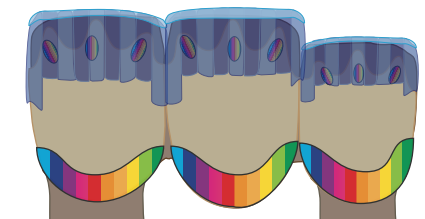
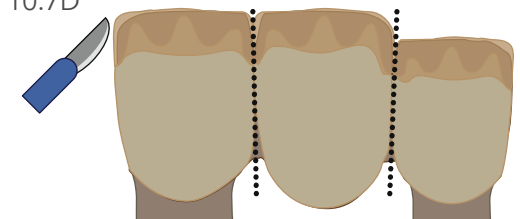


fig. 10.7D



10.8 BEFORE THE GLAZING FIRING

With Natural HT, 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 HT 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 change both the color and the chromatic saturation using the fluorescent super-colors Natural Stains CROMA and CHROMA LIGHT, depending on the desired shade (fig. 10.8A).

CHROMA 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 COLOR Natural Stains 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 as in younger restorations (fig.10.8B).

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

WARNING:

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 CHROMA STAINS

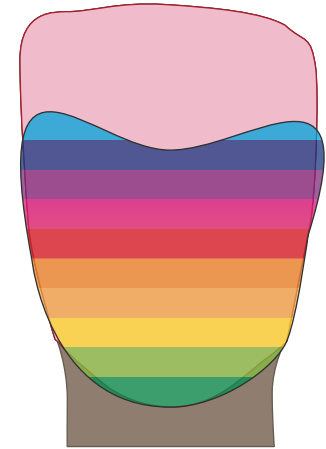
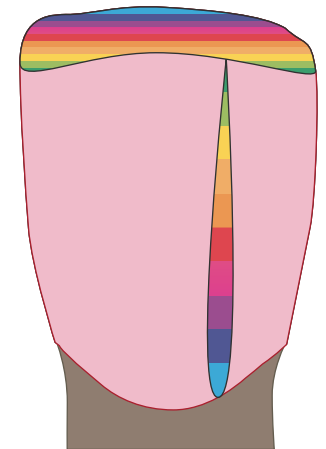


fig. 10.8B

COLOR STAINS can both emphasize layered effects with Natural HT 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 very wide range of glazes available: powder, paste, fluorescent paste, 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.

A 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 HT ceramic are the traditional ones, in powder or paste: it is not necessary to choose a fluorescent glaze as the Natural HT layering materials are already sufficiently fluorescent.

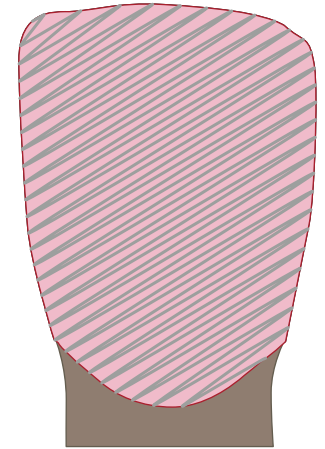
For a correct application of Glaze FX paste and powder, it is necessary to use a short bristle brush; taking a small amount of glaze, create a creamy paste that is not too liquid, and "massage" with the brush in a circular motion the entire surface of the element (fig. 10.9A).

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 firing and the staining firing with Natural Stains, reducing processing times.

WARNING: Do not create thickness.

fig. 10.9A



11. NATURAL HT LIST OF MATERIALS

Below are all the Natural HT layering materials 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 HT tables in paragraph 16. or to the Ceramica Natural HT Catalog

HT BOND 007
PASTE 7 gr.



HT OPAQUE COLOR
PASTE 4 gr.



HT OPAQUE A-D
PASTE 4 gr.



HT SHOULDER MASS A-D
POWDER 20 gr.



HT OPAQUE BASE
PASTE 4 gr.



HT SHOULDER MASS MODIFY
POWDER 20 gr.



HT OPACO CROMA
PASTE 4 gr.



HT CUSPID DENTIN
POWDER 20/50gr.



HT SiD DENTIN
POWDER 20/50gr.



HT DENTIN A-D
POWDER 20/50gr.



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



HT DENTIN MODIFY
POWDER 20/50gr.



HT OPAQUE DENTIN MODIFY
POWDER 20/50gr.



HT CHROMATIZER
POWDER 20/50gr.



HT BODY DENTIN
POWDER 20/50gr.



HT PRISMATIC DENTIN
POWDER 20/50gr.



HT ENAMEL S
POWDER 20/50gr.



HT ENAMEL INTENSIVE
POWDER 20/50gr.



HT ENAMEL OPAL
POWDER 20/50gr.



HT TRANSPARENT
POWDER 20/50gr.



HT ENAMEL SC
POWDER 20/50gr.



HT TRANSPARENT COLOR
POWDER 20/50gr.



HT ENAMEL SPECIAL
POWDER 20/50gr.



HT TRANSPARENT NECK
POWDER 20/50gr.



HT GINGIVAL
POWDER 20/50gr.



HT MASTER SET
Mamelon Cuspid & Fosse
POWDER 20/50gr.



HT THE ONE
POWDER 20/50gr.



HT MASTER SET
Professional Dentin Master
POWDER 20/50gr.



HT VALUE ENHACER
POWDER 20/50gr.



HT MASTER SET
Dynamic Light System
POWDER 20/50gr.



HT CORRECTION
POWDER 20/50gr.



HT MASTER SET
Value Enhance Dentin
POWDER 20/50gr.

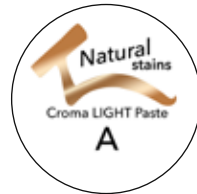


12. NATURAL STAINS LIST OF UNIVERSAL COLORS

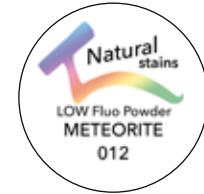
All the universal Natural Stains and Natural GLAZE FX are shown below, with the reference colors for easy and clear identification.

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

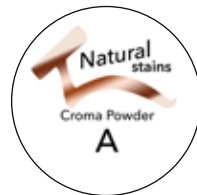
Stains CHROMA LIGHT
PASTE 4 gr.



Stains LOW FLUO
POWDER 4 gr.



Stains CHROMA
POWDER 4 gr.



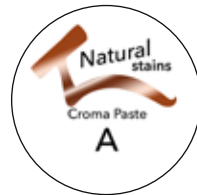
Stains HIGH FLUO
POWDER 4 gr.



Stains FLAT
POWDER 4 gr.



Stains CHROMA
PASTE 4 gr.



Stains HIGH FLUO
PASTE 4 gr.



GLAZE FX TRADITIONAL
POWDER 10 gr.



GLAZE AIR FX SPRAY
ULTRA FLUORESCENT
SOLUTION 75 ml.



GLAZE FX TRADITIONAL
PASTE 10 gr.



GLAZE FX FLUORESCENT
PASTE 10 gr.



GLAZE FX CRYSTAL
ULTRA FLUORESCENT
PASTE 10 gr.



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 MODELLING
Liquid 100/250/1000 ml.



Liquid PASTE OPAQUE
Liquid 20/50 ml.



Liquid SPECIAL
MODELLING
Liquid 100/250/1000 ml.



Liquid MORFOLOGIC
SID & CUSPID
Liquid 100/250 ml.



Liquid POWDER OPAQUE
Liquid 20/50 ml.



Liquid PRISMATIC DENTIN
Liquid 100/250 ml.



Liquid SHOULDER MASS
Liquid 20/50 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. TRESSIS ITALIA BRANDS

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:



16. NATURAL HT CHARTS

NATURAL HT SYSTEM COMPOSITION TABLES:

NATURAL HT Layering Powders 1/2

NATURAL HT Layering Powders 2/2

NATURAL HT Combo

NATURAL HT Firing

NATURAL HT Press Pellets

NATURAL HT Press Pellets Combo

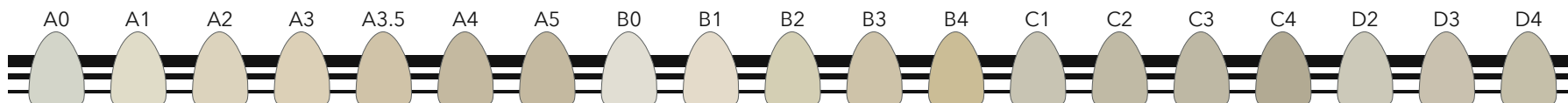
NATURAL HT Master Set Layering Powders

NATURAL HT Prismatic Dentin Layering Powders

NATURAL STAINS Paste & Powders Chart

NATURAL STAINS Paste

OPAQUE PASTE



OPAQUE PASTE COLOR

BROWN ORANGE PINK WHITE



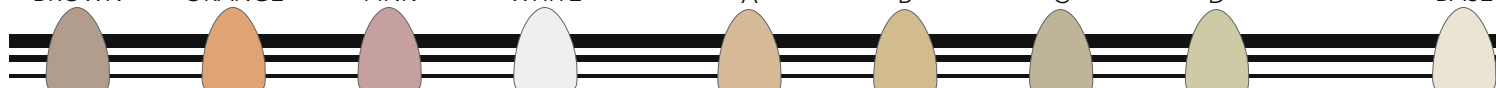
OPAQUE PASTE CROMA

A B C D

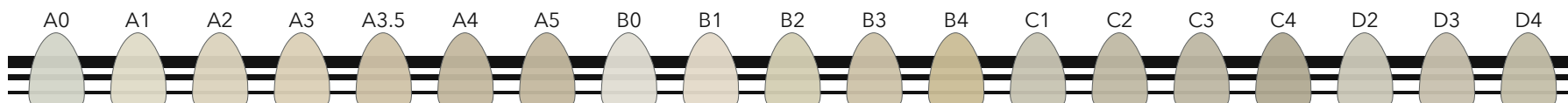


OPAQUE PASTE BASE

BASE



OPAQUE DENTIN



OPAQUE DENTIN MODIFY

BROWN ORANGE WHITE



BODY DENTIN

CLASSIC BLUE ORANGE



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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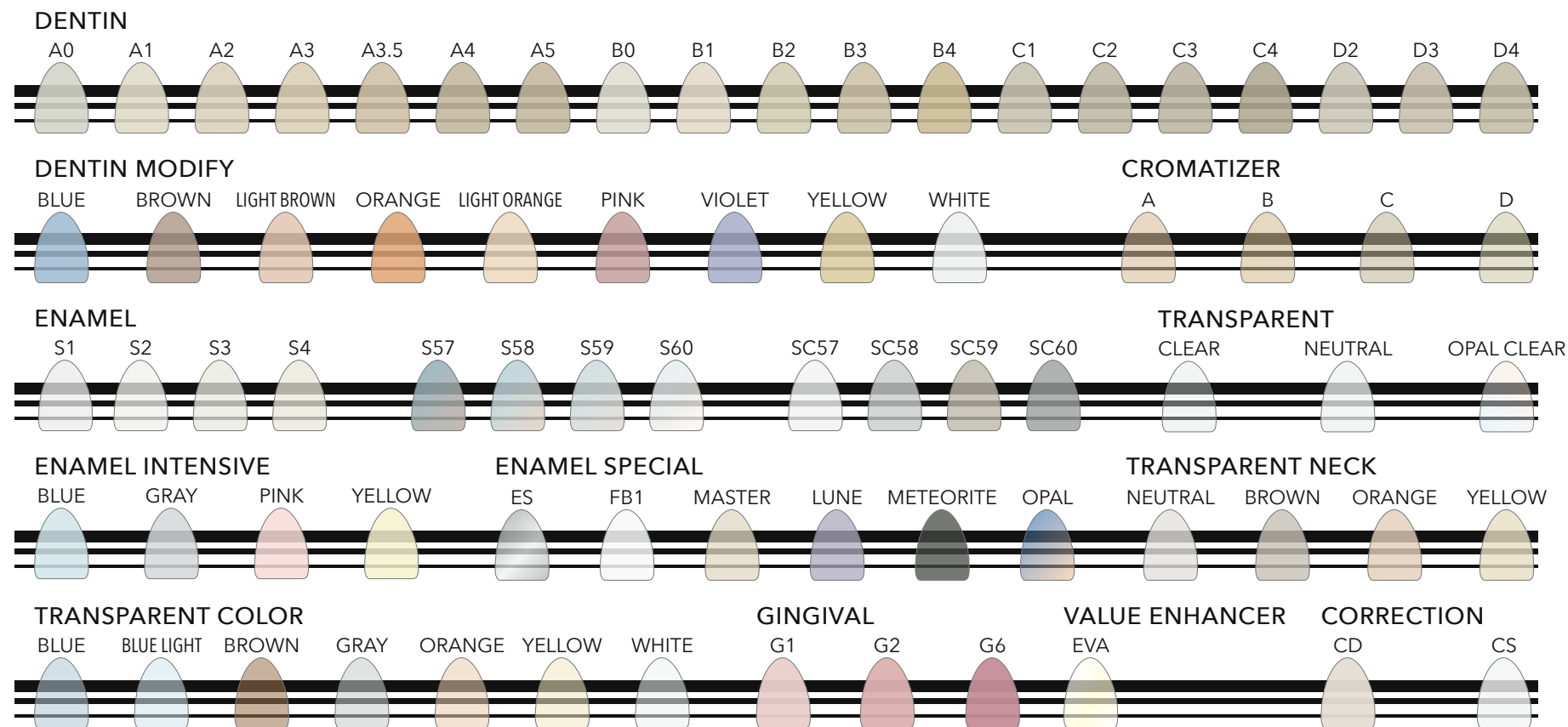
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DENTAL CERAMIC



ITALIAN STYLE

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DENTAL CERAMIC

ITALIAN STYLE

REF 51 TABHT 010 -2

A - D COLOR RANGE	A0	A1	A2	A3	A3,5	A4	A5	B0	B1	B2	B3	B4	C1	C2	C3	C4	D2	D3	D4	
OPAQUE PASTE	A0	A1	A2	A3	A3,5	A4	A5	B0	B1	B2	B3	B4	C1	C2	C3	C4	D2	D3	D4	
OPAQUE PASTE COLOR	WHITE				BROWN				PINK						ORANGE					
OPAQUE PASTE CROMA	A							B					C				D			
OPAQUE PASTE BASE	BASE																			
GINGIVAL	G1					G2							G6							
SHOULDER MASS	A0	A1	A2	A3	A3,5	A4	A5	B0	B1	B2	B3	B4	C1	C2	C3	C4	D2	D3	D4	
SHOULDER MASS MODIFY	NEUTRAL																			
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 DENTIN	A0	A1	A2	A3	A3,5	A4	A5	B0	B1	B2	B3	B4	C1	C2	C3	C4	D2	D3	D4	
OPAQUE DENTIN MODIFY	WHITE					BROWN							ORANGE							
DENTIN	A0	A1	A2	A3	A3,5	A4	A5	B0	B1	B2	B3	B4	C1	C2	C3	C4	D2	D3	D4	
DENTIN MODIFY	WHITE		ORANGE		YELLOW		BROWN		BLUE		VIOLET		PINK		ORANGE LIGHT		BROWN LIGHT			
ENAMEL S1 - S4	S1	S1	S2	S2	S4	S4	S4	S1	S1	S2	S3	S4	S2	S2	S3	S4	S1	S2	S3	
ENAMEL S57 - S60	S60	S60	S59	S59	S58	S57	S57	S60	S60	S59	S58	S57	S59	S59	S58	S57	S60	S59	S58	
ENAMEL SC57 - SC60	SC57	SC57	SC58	SC58	SC60	SC60	SC60	SC57	SC57	SC58	SC59	SC60	SC58	SC58	SC59	SC60	SC57	SC58	SC59	
ENAMEL SPECIAL	LUNE			METEORITE			OPAL			E5					FB1					
ENAMEL INTENSIVE	YELLOW					BLUE					GRAY					PINK				
TRANSPARENT	NEUTRO					CLEAR							OPAL CLEAR							
TRANSPARENT COLOR	YELLOW			ORANGE			BROWN				BLUE			LIGHT BLUE			GRAY			
TRANSPARENT NECK	NEUTRAL					YELLOW					ORANGE					BROWN				
CROMATIZER	A							B					C				D			
BODY DENTIN	CLASSIC						ORANGE						BLUE							
VALUE ENHANCER	EVA																			
CORRECTION MASS	CORREZIONE DENTINA									CORREZIONE SMALTO										
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 51 TABHT 020 -1

PROGRAM	DRY TIME	CLOSING TIME	START TEMPERATURE	SATURATION *	HEAT RATE	FINAL TEMPERATURE**	VACUUM START	VACUUM STOP	HOLD TIME	NOTE***
	min	min	°C	min	°C / min	°C	°C	°C	min	
Bond 007	1 - 2	6 - 8	450	1	80	980	450	980	6	DRYTIME and CLOSING TIME should be changed for bigger restorations or when fire multiple restorations at once
Opaque 1st & 2nd	6	6	400	1	55	950	405	950	1	After firing, opaque appearance should be lighty bright, egg like and well fired; if it appears too dull rise temperature.
Shoulder Mass 1st & 2nd	2 - 4	6	400	1	45	940	405	940	1	To mix powders use only Liquid for Shoulder Masse.
SiD & Cuspid Dentin	2 - 4	4	400	1	45	920	405	920	1	Increase DRYTIME and CLOSE TIME on big restorations or if multiple restorations are fired at once.
Dentin 1st	2 - 4	4	400	1	45	880	405	880	1	Increase DRYTIME and CLOSE TIME on big restorations or if multiple restorations are fired at once.
Dentin 2nd	2 - 4	4	400	1	45	870	405	870	1	
Correction Masse	2	4	400	1	45	800	405	800	1	Correction Masse firing program for pure usage, if mixed with other layering powders change FINAL TEMPERATURE.
Stains Fixing	2	4	400	0	45	770	NO	NO	1	Fix stains on surface and between layered masses, this firing avoids mixes, this program can be used several time.
Stains Firing	2	4	400	1	45	800	405	800	1	After firing, stains should appear glossy and shiny, increase DRYTIME for bigger restorations.
Glaze FX	4	2	400	0	45	850	NO	NO	1	To be used only with paste GLAZE FX, suitable both for layering and pressed ceramic.

WAX WEIGHT	PELLETS		START TEMPERATURE		HEAT RATE	FINAL TEMPERATURE	HOLD TIME	PRESS TIME	PRESSION	PRESS NOTE****
	n°		°C		°C / min	°C	min	min	BAR	
Up to 0,6 gr.	1		700		60	1100	30	6 - 8	4,5	Wax weight max 0,6 grams, sprues included
From 0,6 gr to 1,4 gr.	2		700		60	1100	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, etc.). A good drying of the restorations is recommended.

* SATURATION:

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

** FINAL TEMPERATURE:

For IVOCAR brand ovens and similar, set the 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 ($\pm 10^\circ\text{C}$) 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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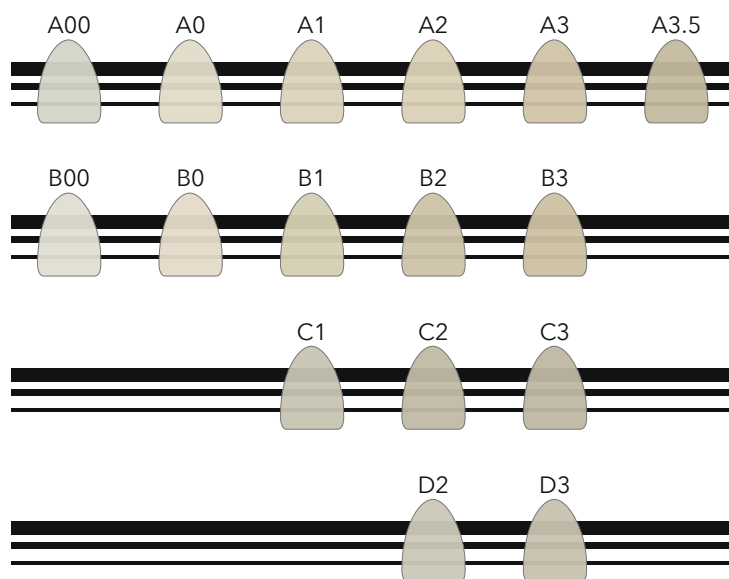
DENTAL CERAMIC



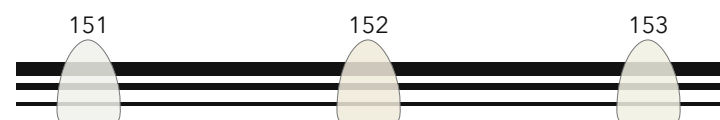
ITALIAN STYLE

REF 51 TABHT 020 -2

DENTIN A-D (opacity ±75%)



UNIVERSAL LOW OPACITY (opacity ±45%)



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DENTAL CERAMIC

ITALIAN STYLE

REF 51 TABHT 050 -1

	A0	A1	A2	A3	A3,5	A4	A5	B0	B1	B2	B3	B4	C1	C2	C3	C4	D2	D3	D4
DENTIN	A00	A0	A1	A2	A3	A3,5	A4	B00	B0	B1	B2	B3	C1	C1	C2	C3	D2	D2	D3
	A0	A1	A2	A3	A3,5	A4	A5	B0	B1	B2	B3	B4	C1	C2	C3	C4	D2	D3	D4
151	V	V	V					V	V				V				V		
152				V						V	V			V				V	
153					V	V	V					V			V	V			V

Natural HT Press Pellets DENTIN series:

Dentin opacity ($\pm$ 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 HT Press Pellets series 150:

Low opacity ($\pm$ 45% 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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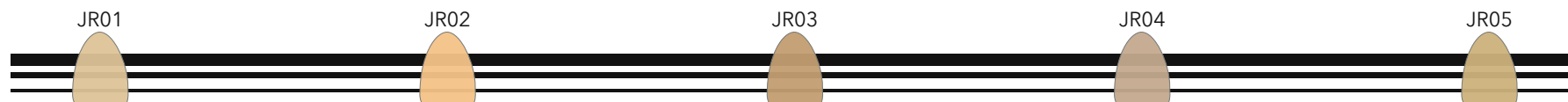
ITALIAN STYLE

REF 51 TABHT 050 -2

MCF - MAMELON CUSPID & FOSSE



PDM - PROFESSIONAL DENTIN MASTER



DLS - DYNAMIC LIGHT SYSTEM



VED - VALUE ENHANCE DENTIN



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DENTAL CERAMIC

ITALIAN STYLE

REF 01 TABUN 025 -1

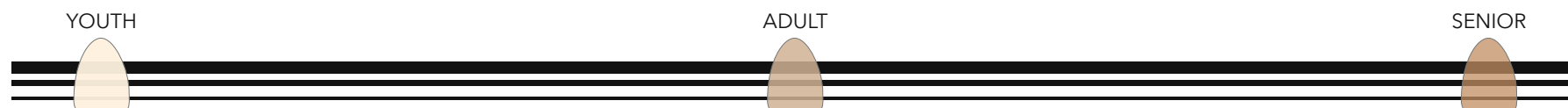


PRISMATIC DENTIN POWDER CHART

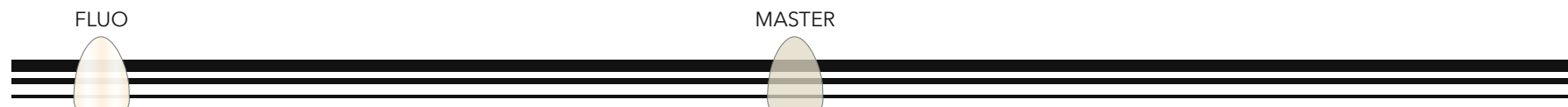
Natural[®] PRISMATIC
DENTIN
CE 0546

HT
LF
ZiR
DSL

PRISMATIC DENTIN



PRISMATIC FLUORESCENT



ENAMEL MASTER



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DENTAL CERAMIC



ITALIAN STYLE

REF 01 TABUN 030 -1

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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DENTAL CERAMIC
ITALIAN STYLE

REF 01 TABUN 010 -1

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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DENTAL CERAMIC



ITALIAN STYLE

REF 01 TABUN 010 -2

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Client: Tressis Italia srl

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DIPARTIMENTO ENERGIE RINNOVABILI

Natural[®]

DSL

HT

LF

ZiR

MicroLayer

Stains

NATURAL HT INSTRUCTION FOR USE



DENTAL CERAMIC

ITALIAN STYLE

Natural
CERAMIC
SYSTEM
CE 0546

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