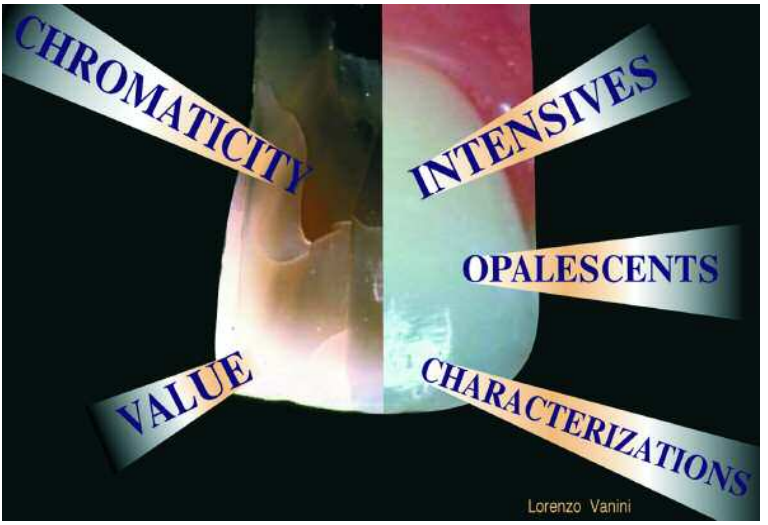
# ENAMEL plus® HFO

New generation

**IL COMPOSITO CHE SI ILLUMINA**

**THE COMPOSITE THAT LIGHTS UP**

**DAS KOMPOSIT, DAS LEUCHTET**




**The five colour dimensions of tooth**

estetica

GRUPPO MICERIUM

# Enamel plus HFO: new generation
# The aesthetic solution to any kind of restoration

## Dentines

The dentine of natural teeth has characteristics of opacity and **fluorescence.** Due to fluorescence a body absorbs luminous energy and then emits it in the form of light. A modern composite system has to include dentines with a fluorescence degree calibrated to the natural tooth: fluorescence considerably increases the **value** or **brightness** of the dentine body and reduces the effect of metamerism**. Metamerism** is a phenomenon that causes an object to change its colour when changing the temperature of the light source. In the clinical practice, restorations that are inserted under a certain light sometimes look completely different when the light source is changed. The average **chroma** of natural teeth (central incisors, lateral incisors and canines) is in the region of 580 nm. The A shades of the Vita® (1) shade guide are closer to the average chroma of natural teeth. Generic enamels influence the shade; today generic enamels are brighter, denser and show an amber-coloured translucency that is more similar to the natural enamel. For this reason, the modification and the improvement of the previous A shades resulted in the development of the **universal dentines (UD)**, the **hue-chroma (chromaticity)** of which is closer to natural teeth. The new dentines have a high brightness (higher value) and are more covering: therefore they help reduce the "glass effect" in the final restoration and allow a better use of the enamels and opalescent materials.

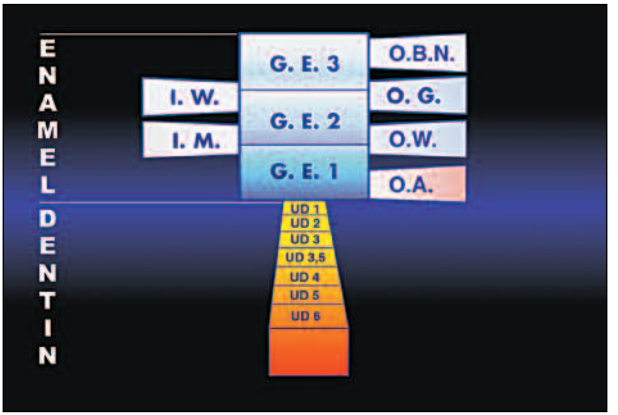



***Fig. 1.*** *The Enamel plus HFO New Generation shade tree.*

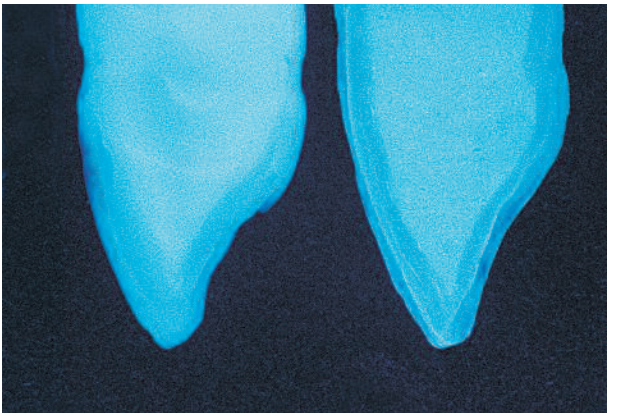


***Fig. 2.*** *Section of extracted tooth (left) and section of tooth restored with Enamel Plus HFO (right). It is clearly visible that the fluorescent composite Enamel Plus HFO is reacting to the light excellently.*

(1) Vita® is a registered trademark of Vita Zahnfabrik H. Rauter mbH & Co. KG, Bad Säckingen - D

## Enamels

The **enamel** reflects, absorbs and transmits the light to the internal dentine body. **Enamel prisms** have a high translucency, thus allowing the light to easily pass through; the **interprismatic substance** and the **protein layer**, having a low translucency, create an internal diffusion of the light and transfer it to the dentine body. The level of translucency of the natural enamel is closely

***Fig. 3.*** *Old patient*

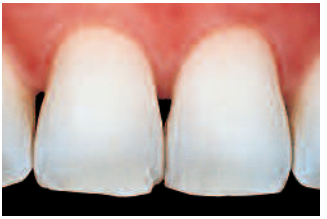


***Fig. 4.*** *Adult patient*

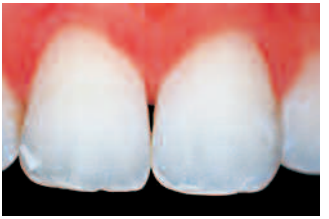


***Fig. 5.*** *Child patient*

related to the thickness and to the degree of mineralization that determine the **value** or **brightness** of a tooth. Thick enamel, typical of children, has a low translucency and a high degree of luminosity, while thin enamel shows a high translucency and a low degree of luminosity. In the teeth of children a rich surface macro- and micro texture is evident, that is a sign of thick enamel, high in value. Teeth of adult patients are quite worn out: for this reasons the surface micro texture is nearly completely cancelled and the enamel less thick and more translucent compared to children's teeth, with a medium value. In the case of older people both the macro and micro texture are cancelled and the loss of thickness due to wear strongly reduces the enamel value.

***Fig. 6.*** *Enamel G.E.1*
*Low value ◆ old patient*

***Fig. 7.*** *Enamel G.E.2*
*Medium value ◆ adult patient*

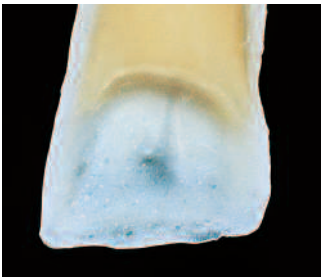


***Fig. 8.*** *Enamel G.E.3*
*High value ◆ child patient*

For the three levels of enamel value, three shades of Generic Enamel (GE) are included in the system, that can simulate the three most recurrent clinical situations, these being the enamel of the old patient with GE1 (low value), the adult with GE2 (medium value) and the child with GE3 (high value). Unlimited combinations of brightness and translucency can be obtained when these shades are mixed together, and will be successful even in the most complex cases.

The behaviour of light cured composite enamels is exactly opposite to that of the natural enamel. In the natural enamel the value is directly proportional to the thickness; on the contrary, in a composite material, any increase in the thickness of the enamel causes a "glass effect" that is related to a decrease in value, because the index of refraction is different from that of the natural enamel. This is why we recommend building up Generic Enamels in layers that are from 0,3 to 0,4 mm thick.

## Opalescent and intensive enamels

Generic enamels alone cannot reproduce all forms of translucency that are present in the natural enamel and that are typical of its complex structure. By carefully observing natural teeth it is possible to distinguish in the enamel at least three different situations of translucency. For this reason it was necessary to develop at least three masses: one with a low translucency (**intensive enamel**), one with a medium translucency (**generic enamel**) and one with a high translucency (**opalescent enamel**). Intensive whites and opalescent enamels always have to be applied over or inside the dentine body and covered with generic enamel; this is why they can be considered characterizations of the generic enamel, which is the material that is closest to the natural enamel.

### Opalescence

The characteristics of translucency of the enamel give rise to the phenomenon of opalescence, which is the iridescent aspect of a transparent medium that is illuminated by a visible polychrome radiation, for example the sunlight. To produce this phenomenon, a body must have a high degree of translucency. The diameters of the atmospheric dust particles give rise to the colours of the sky, as they absorb, filter and give the wavelengths back to the environment, dispersing them in all directions; this dispersed light originates the blue colour of the sky, the yellow colour of the sun at noon and its red colour at sunset and at dawn. To obtain an opalescent composite material, its masses have to be highly translucent and filled with very fine opaque particles that are well distributed and not too densely concentrated inside the organic matrix; the special filler filtrates the light and originates the **Opalescent Blue Natural** (**OBN**) colour that reproduces the natural opalescence typical of the incisal area. Opalescence comes in different shapes (mamelon, split mamelon, comb, window, spot) and in different shades (amber, blue, gray), as described in the following sections of this manual.

### Intensive

The intensive whites (IM, IW) are used for further characterization of the enamel (ridges and cusps) and are inserted within the surface generic enamel.

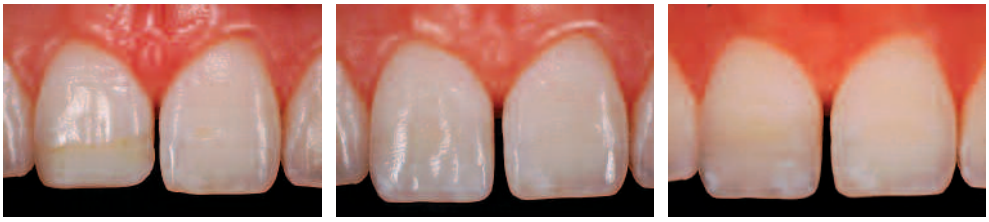
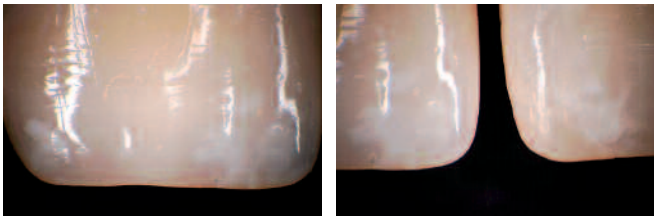


***Fig. 9. 10. 11.*** *Replacement of unsuitable restorations in a young patient; the new restorations are well integrated, thanks to intensive whites and to blue and amber opalescent enamels.*



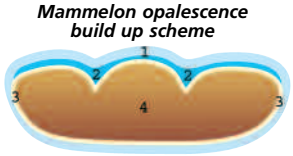



***Fig. 12. 13.*** *Intensive whites and opalescent incisals: details under the microscope.*

## The five colour dimensions of tooth

Enamel plus HFO is a rational system made by five types of bodies (dentines, generic enamels, opalescent enamels, intensive enamels, stains) that reproduce the five dimensions of natural colour of teeth (Fig. 14), following the technique of Dr. Lorenzo Vanini.

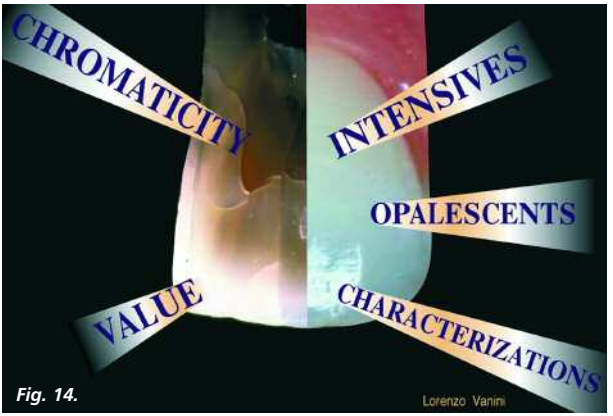



*Fig. 14.*

### Chromaticity

➤ **7 UNIVERSAL DENTINE**
UD1 (A1) - UD2 (A2) - UD3 (A3) UD3,5 (A3,5) - UD4 (A4) - UD5 - UD6
The fluorescent dentine Enamel Plus HFO is reacting to the light excellently, in the same way of natural tooth

### Value

➤ **3 GENERIC ENAMELS**
G.E.1 (low value) - G.E.2 (medium value) - G.E.3 (higher value)
Translucency and brightness calibrated to the natural enamel (different value depending on the age of the patient)

### Intensive

➤ **2 INTENSIVE ENAMELS WHITES**
I.M. (Intensive Milky: warm and strong white hue) **-** I.W. (Intensive White: cold white hue)
Intensive whites are used for further characterisation of the surface enamel.

### Opalescent enamels

➤ **1 UNIVERSAL OPALESCENT ENAMEL**
O.B.N. (opalescent blue natural)

➤ **3 OPALESCENT ENAMELS FOR CHARACTERIZATIONS AND SPECIAL CASES**
O.W. (white) – O.A. (amber) – O.G. (grey for special cases)

Natural opalescent enamel OBN, OG and OA, reproduce the internal incisal opalescence.
Opalescent enamels amber (OA) and white (OW) are also used for characterizations type 1,2,3.

### Characterizations

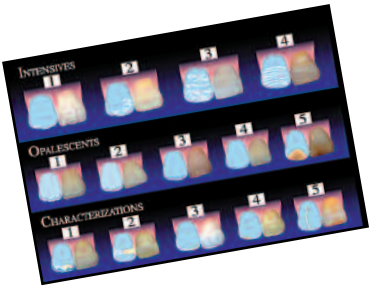
➤ **6 FLUORESCENT STAINS**
white, yellow, orange, blue, brown, dark brown
The fluorescent stains and OW, IW, IM, OA are used to reproduce characterizations (internal hues and cracks)

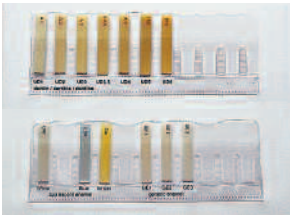
# Colour registration

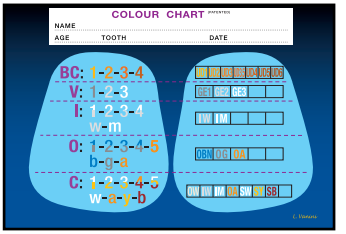
## Instructions for a correct use of the Colour Chart

Colour chart and Enamel plus HFO shade guide, made with original composite, are unique elements for registration of the colour. Due to the wedge-form of the shade guide, it is possible to simulate layers with varying thickness.

The five colour dimensions of tooth have to be determined in the order suggested in the chart.




### 1. BC = Basic Chromaticity

Consider 4 basic chromaticities (1, 2, 3, 4) that are obtained by building up 7 dentines (UD1, UD2, UD3, UD 3,5, UD4, UD5, UD6). The areas of the tooth that are most suitable for the study of this dimension are the cervical and the middle third.

### 2. V = Value

Consider 3 values (1, 2, 3) that refer to enamels with a low (1), middle (2) and high value (3). The three numbers are written on the chart in a colour from grey (1) to cold white (2) to milky white (3), in order to remind the user the relation to the value. The corresponding composite masses are GE1 (1), GE2 (2), GE3 (3). The area of the tooth that is most suitable for the study of this dimension is the middle third.

### 3. I = Intensive whites

The numbers 1, 2, 3, 4 refer to the classification by shapes that is reproduced on the back of the chart. The user has to follow this classification when choosing the colour.
**W-M** indicates the shades of intensive white that can be found in natural teeth: **w** is a cold white, whereas **m** is a warmer and milky white. The masses of the composite system that should be used to reproduce these dimensions are **IW** (cold white) and **IM** (warm white). The Intensive whites can affect all areas of the tooth (cervical, middle and incisal third).

### 4. O = Opalescence

The numbers 1, 2, 3, 4, 5, refer to the classification by shapes that are reproduced on the back of the chart. The user has to follow this classification when choosing the colour. **B-G-A** indicate the shades of the opalescences that can be found in natural teeth: **B** (blue), **G** (grey), **A** (amber). The masses of the composite system that should be used to reproduce these dimensions are OBN (blue), OG (grey) and OA (amber). The opalescence's only affect the incisal third of a tooth (interproximal and marginal area).

### 5. C = Characterizations

The numbers 1, 2, 3, 4, 5, refer to the classification by shapes that are reproduced on the back of the chart. The user has to follow this classification when choosing the colour.
Each number is written with the same colour shades that can be found in natural teeth.
**W-A-Y-B** indicates and reminds the user the shades of natural teeth (white, amber, yellow, brown). The masses of the composite system that should be used to reproduce these dimensions are **OW** (soft white), I**W** (cold white), **IM** (milky white) **OA** (amber), **SW** (intense white), **SY** (intense yellow) and **SB** (intense brown). Type 1 and 3 characterizations are typical of the incisal third of a tooth; type 2 characterizations affect both the middle and the cervical third, while type 4 and 5 can be seen in all three coronal regions (cervical, middle and incisal third).

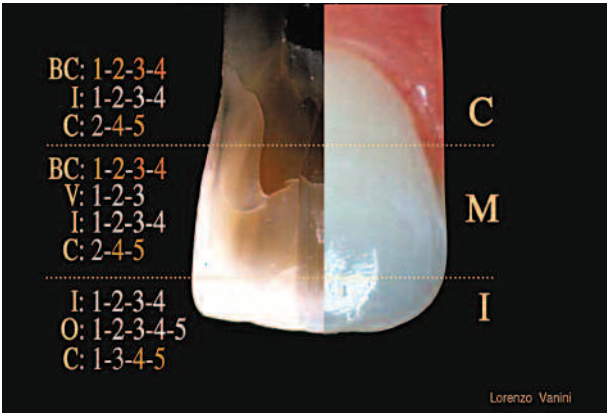



***Fig. 15.*** *Taking of the colour dimensions in the three areas of the tooth (cervical, middle and incisal third).*

## Glass Connector

Glass Connector is a highly flowable body, with high elasticity and calibrated light diffusion that reproduces the protein layer of the natural tooth. Glass Connector can be used in direct and indirect restorations (inlay, onlay, veneers) and should be positioned in a thin layer (less than 0,1mm) between enamel and dentine using a small brush. Glass connector increases the internal light diffusion, strengthens the fluorescence of the dentine body, reduce the decrease of value that is typical of the vitreous masses and create an elastic layer between enamel and dentine that reduces the internal tension due to the polymerisation.

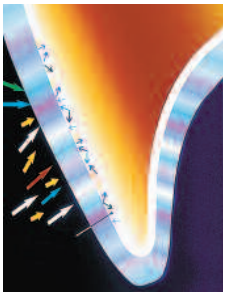
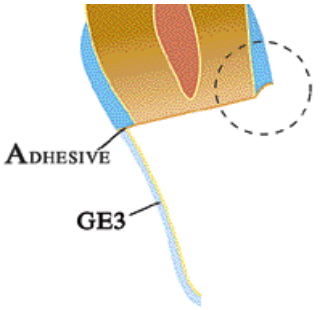


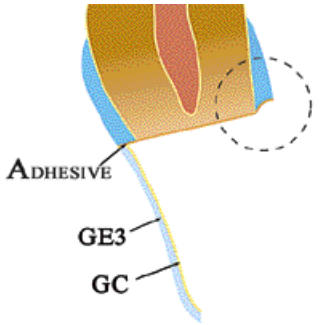
***Fig. 16. 17. 18.***
*Section of natural tooth where the protein layer between enamel and dentine is very evident (on the left) compared with a section of tooth made with in Enamel plus HFO where Glass Connector layer is modulating in a natural way the internal light diffusion.*

## Anatomic stratification technique of Dr. L. Vanini

In order to maximise the characteristics of the Enamel plus HFO System, we suggest following the anatomic stratification technique of Dr. Lorenzo Vanini; any other stratification technique that does not respect the anatomy of a natural tooth would considerably limit the aesthetic performance of the system. To follow the anatomic stratification technique, first the lingual enamel is built up, then the internal dentine body and the vestibular enamel.

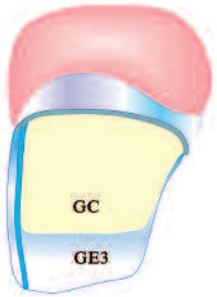


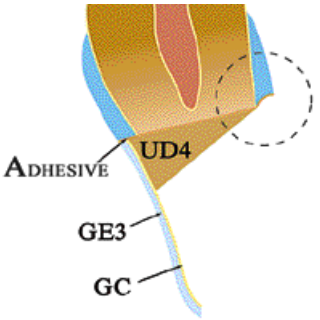

The lingual enamel is applied by means of a silicone matrix, using a Generic Enamel (GE1, GE2, GE3).

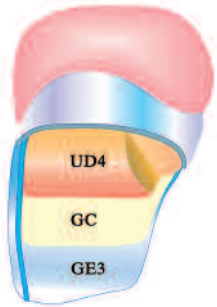

The interproximal enamel wall is built up using generic enamel.

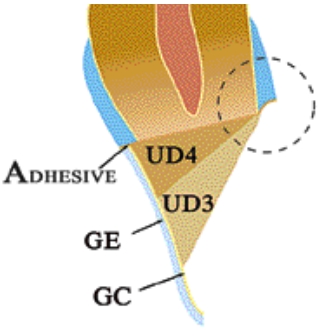
A thin layer of Glass Connector is applied to the internal surface of generic enamel.



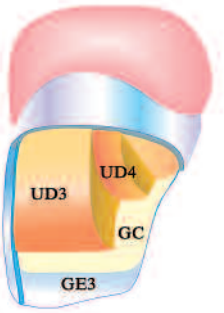



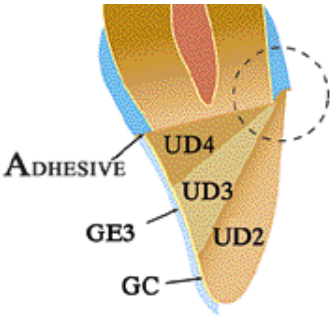

To obtain a natural chromatic composition, for the construction of the internal dentine body three chromas are used. Start with the basic hue and increase by 2 shades (for example for the basic hue UD2: dentine body shade UD2, UD3, UD4) in order to make up for the lower chroma due to the transition of the composite from the gel phase to the glass phase and to the desaturation caused by the generic enamel. The highest chroma (UD4) is built up starting from the margin of the cavity.



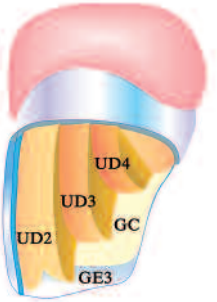


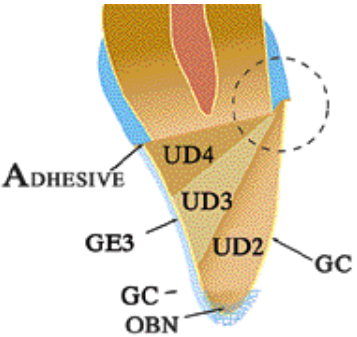

Then this is covered by the intermediate chroma (UD3).



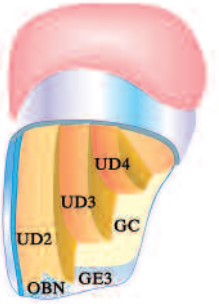

Finally the basic hue shade (UD2) covers the underlying chromas. Using this "slice technique" it is possible to obtain a rich and natural chromatic composition.

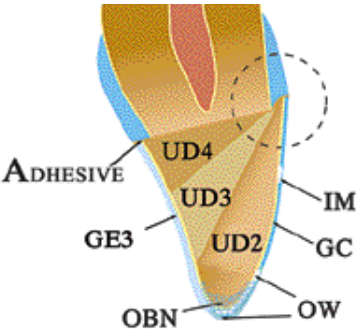



The completed dentine body is covered with a thin layer of Glass Connector.

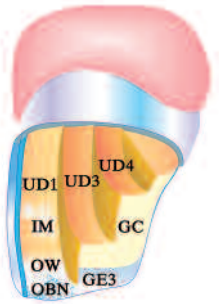
The opalescent enamel (OBN) is applied between the mamelons, in the incisal area, in order to reproduce the internal opalescence.




The intensive whites (IM, IW) are built up and the characterizations are reproduced with the opalescent materials (OA, OW, IW, IM) and with stains.

Finally the vestibular enamel is applied, that should include some generic enamel (GE1, GE2, GE3).



## Direct technique

**a)** Enamel etching: orthophosphoric acid gel 37%; the application times are the same as the ones used for the dentinal substrate (30", 60");

**b)** Dentine etching: orthophosphoric acid 37%; recommended application times: living dentine 30", sclerotic and non-vital dentine 60". Total etching completely removes the smear layer, produces a demineralization of the dentine and opens the dentinal tubules;

**c)** Suction of the acid, rinsing and application of a new generation bonding system (EnaBond); following light curing;

**d)** If also the lingual wall has to be built up, it is advisable to fabricate a silicone matrix. After fabricating the matrix (by means of the impression of a temporary restoration or a wax-up carried out in the laboratory), the clinician can start with the application of the material outside the oral cavity; a portion of generic enamel is applied directly to the matrix in his hands and pulled in a thin layer using a small brush. When doing this it is advisable to switch off the light from the dental unit, to avoid early polymerization of the composite (Fig.20);

**e)** Once the generic enamel has been adapted to the matrix surface, the matrix is brought into proper position in the mouth; the composite is pressed against the preparation margins with



***Fig. 19.***
*Child Class IV fracture*

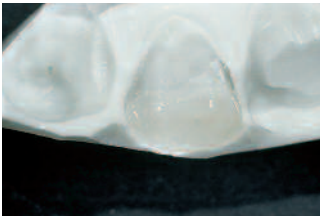


***Fig. 20.***
*Stratification of GE 3 directly on the silicon matrix*

***Fig. 21.***
*Silicon matrix is positioned in mouth*

***Fig. 22.***
*Cured lingual wall*

***Fig. 23.***
*Build up of interproximal enamel wall and application of Glass Connector*

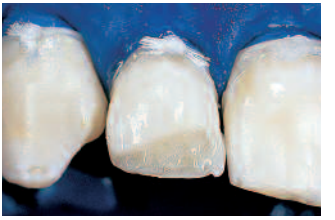


***Fig. 24.***
*Build up of the internal dentine body and incisal halo and application of G.C.*

***Fig. 25.***
*Build up of vestibular areas with GE3 characterization with IM*

***Fig. 26.***
*Build up polished with Enamel plus Shiny pastes*

***Fig. 27.***
*Palatal view of the restoration*

the flat brush. Ensure the material adheres well to the cavity and then cure. After curing, remove the matrix (Fig.21-22);

**f)** Shape the interproximal generic enamel, then light cure. The restoration is transformed from a complex cavity into a simple one. After completing the enamel shell, the high diffusion layer is reproduced with Glass Connector; do not apply this fluid mass to the margins, but only inside in a film that covers the internal enamel wall (Fig.23);

**g)** Now you can start with the construction of the dentine body. Here you have to desaturate the hue proceeding from cervical to incisal and from palatal to vestibular. If the basic chromaticity is UD2, you start with UD4 at the most cervical margin of the cavity; this has to be covered with UD3 that ends a little more in an incisal position, followed by UD2 that extends to an even more incisal area. The first dentine layer extends up to the enamel margin of the cavity, while the other two layers go up to fill about half of the bevel thickness on the enamel. With this technique it is possible to perfectly hide the margin. Before curing the dentine at the incisal third, the grooves for the mamelons have to be cut in (Fig.24);

**h)** The free vestibular surface of the dentine body is covered with a film of Glass Connector that is pulled using the flat brush and then cured;

**i)** The opalescent enamel OBN is inserted in the grooves made between the mamelons of the dentine body. Always pull the material with the flat brush. For characterizations it is also possible to use the enamels OW and OA and the Stain Flows (stains);

**l)** The following step consists in the application of the intensive white (generally IM for anterior restorations, IW for posterior restorations) onto the dentine body and then covers it with the vestibular generic enamel. The intensive white has to be pulled in a very thin layer, shaped as desired and have a very limited thickness compared to the generic enamel (Fig.25);

**m)** The last material to be built up is the vestibular generic enamel. By means of a small brush the enamel is pulled so as to achieve an ideal aspect of the surface. After, the restoration is cured, finished and then polished (Fig.25-26).

**RESTORATION OF THE POSTERIORS**

***Fig. 28.***
*Case before*

***Fig. 29.***
*Preparation of the cavities*

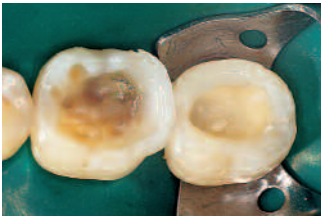


***Fig. 30.***
*Build up of the ridges with generic enamel*

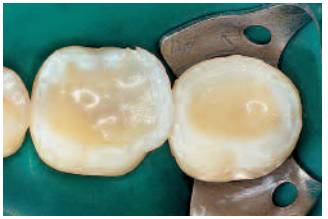


***Fig. 31.***
*Build up of the dentine body*

***Fig. 32.***
*Build up of intensive enamels and generic enamel*

***Fig. 33.***
*Completed build up*

## Indirect technique

Enamel plus HFO can be used indirectly for anterior (laminated veneers: Fig. 34-43; onlays: Fig. 44-54) and posterior restorations (inlays: Fig. 55-57).
The dental technicians use Enamel plus HFO with the same strafication technique as with modern ceramic systems.

**VENEERS**

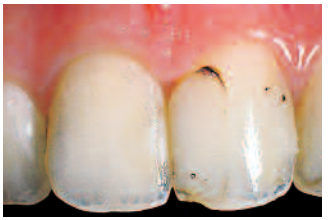


***Fig. 34.***
*Adult central with old restorations*

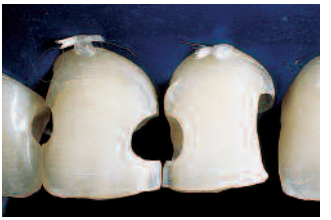


***Fig. 35.***
*Removal of old restorations and secondary caries*

***Fig. 36.***
*Filling of cavities with Enamel plus HFO and preparation for veneers*

***Fig. 37.***
*Study model with dies*

***Fig. 38.***
*Application of wax as spacer*

***Fig. 39.***
*Stratification of dentine*

***Fig. 40.***
*Finished Veneers after application of OBN and GE3*

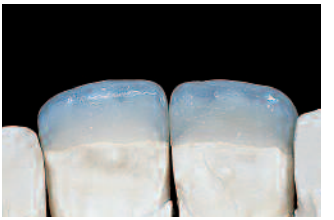


***Fig. 41.***
*Lingual view of Veneers*

***Fig. 42-43.***
*Clinical case before and after application of composite veneers*



***Fig. 44. 45. 46.***
*Complex fractures. On 1.1 also the lingual wall is fractured to the crest. After periodontal treatment, 1.1 is prepared for an overlay and 2.1 for a direct restoration.*

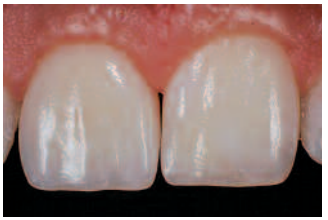


***Fig. 47. 48. 49.***
*The finished case: notice the extension on the palatal side due to the depth of the fracture.*

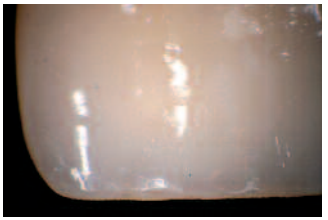
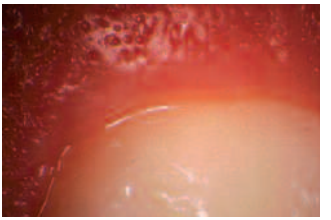
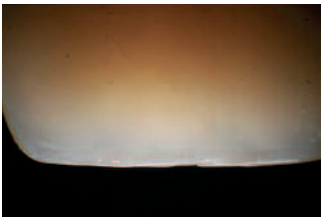




***Fig. 50. 51. 52.***
*Details under the microscope: the restorations show a natural opalescence that is pointed out by different lights, while the Generic Enamel is perfectly integrated with a calibrated and very delicate translucency.*

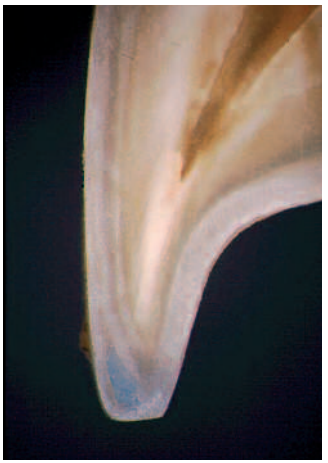


***Fig. 53.***
*Transilluminated section of a natural tooth restored with a composite veneer.*

***Fig. 54.***
*Transilluminated section of a natural tooth restored with a composite crown.*

**INLAY**

***Fig. 55.*** *Composite restoration with infiltration*

***Fig. 56.*** *Cavities prepared for new restorations*

***Fig. 57.*** *Cemented composite inlays*

**RESTORATION OF PROSTHETIC CORES**

***Fig. 58.*** *Complex restoration with carbon fibre posts and composite*

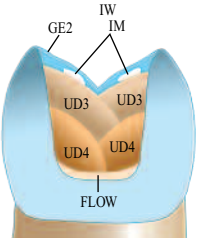



***Fig. 59.*** *Scheme for the build-up of the restoration*

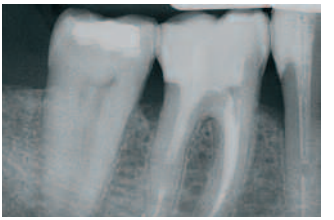


***Fig. 60.*** *X-ray control of the restoration*

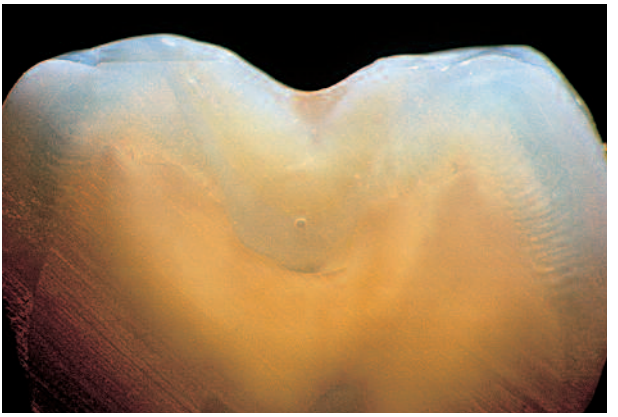


***Fig. 61.*** *Section of a transilluminated Class 2 restoration in composite on extracted tooth*

**CLINICAL INDICATIONS**

| | |
|---|---|
| Classi I | (all cavities) |
| Classi II | (small and medium cavities) |
| Classi III | (all cavities) |
| Classi IV | (all cavities) |
| Classi V | (all cavities) |

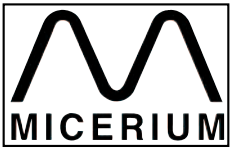
Sealings
Total and partials vestibular covering
Cosmetic corrections
Complex restorations
Onlays Class I (all cavities)
Crowns

Inlays Class II (all cavities)
Inlays Class IV (all cavities)
Veneers
Onlays
Restoration of prosthetic cores
Metal and fiber-glass bridges

*The Enamel plus HFO composite system has been designed and verified thanks to the researches of Dr. Lorenzo Vanini, assisted by the dental technicians Alessandro Tentardini e Franco Monti, with the R&D Department of G.D.F.*

**Bibliography**


1. Vanini L., Toffenetti F. Nuovi concetti estetici nell'uso dei materiali compositi. Quaderni di progresso odontostomatologico a cura degli "Amici di Brugg". 1995;13
2. Dietschi D. Free-hand composite resin restorations: A key to anterior aesthetics. Pract. Periodont. Aesthet. Dent. 1995; 7(7): 15-25
3. Devoto V. L'intarsio in composito come soluzione di restauro estetico. Conservativa dei settori latero-posteriori. Attualità dentale 1996;02 22-31
4. Vanini L. Sistema composito microibrido fluorescente e opalescente. Dental Cadmos 1996; 8:36-46.
5. Vanini L., Devoto W. Rifinitura e lucidatura di restauri in composito. I dossier: Materiali dentali. Supplemento a "Il dentista moderno", 5, 1996
6. C.L. Davidson, A.J. de Gee and A. Werner. Wear of 3 shades of enamel plus HFO and three other resin based filling materials. Acta May-June, 1996
7. B. Hugo, A. Stassinakis, P. Hotz Ästhetische. Behandlungsmethoden. September 1996
8. Vanini L. Light and color in anterior composite restorations. Pract. Periodont. Aesthet. Dent. 1996; 8(7): 673-682
9. Dietschi D. Current Developments in composite Materials And Techniques. Practical periodontics and Aesthetic dentistry. September 1996
10 L. Portalier. Diagnostic Use of Composite in Anterior Aesthetic. Practical periodontics and Aesthetic dentistry Sept. 1996
11. Svanetti M., Turillazzi O. Gli intarsi in composito. Rivista di tecnologie dentali, febbraio 1997
12. Boschian, Gagliani, Brenna. Dentista Moderno. May 1997
13. Pascal Magne. Megabrasion: A Conservative Strategy for the Anterior Dentition.Practical periodontics and Aesthetic dentistry May 1997
14. Vanini L., De Simone F., Tammaro S. Indirect composite restorations in the anterior region: a predictable technique for complex cases. Pract. Periodont. Aesthet. Dent. 1997;9(7):795-804
15. G. Goracci, G. Mori. Università degli Studi di Roma "La Sapienza". Ricostruzione estetica nei settori posteriori. Dental Cadmos n. 13/1997
16. Vanini L. The control phases for checking the final aesthetic result in composite restoration of the anterior sector. Accademia Italiana di Conservativa 5th International Congress, Riva del Garda, 1997
17. Vanini L., Tasca G. Dalla forma al colore, tecnica standardizzata per restauri in composito nei settori anteriori. Rivista degli Amici di Brugg n. 2/1999
18. Hugo "Directe Veneers" Asthetische 4/99
19. Mangani F., Vanini L., D. Cocchia, S. Condò "Polimerizzazione rapida delle resine composte valutazione della lampada al plasma" Dental Cadmos 6/2000
20. Milnar "Recreating natural esthetics with a direct composite resin in the treatment of a complex class IV fracture–a case report" The journal of cosmetic dentistry , Spring 2001
21. Dolecki "Kompozytowe rekonstrukcje podobne do porcelany–jak to si_ robi?" Compendium stomatologi 3/2001
22. Vanini L., Mangani F. "Determination and communication of the color using the five dimensions of teeth" PPAD Jan/Feb 2001
23. Mangani F., Sigalot C., Vanini L. "Intarsi in resina composita nel restauro estetico dei settori latero–posteriori" Il dentista moderno febbraio 2001
24. Rollny, S. Gmünd, J. Dieterich, Winnenden "Das geheimnis eines natürlichen erscheinungsbildes: Veneers" Teamwork 4/2001
25. Ricciardi, M. Grande, V. Campanella, L. Cianconi "Analisi di un composito a basso modulo di elasticità" Il dentista moderno, Gennaio 2002
26. Brenna, S. Porro, G. Artioli "Clinica e laboratorio nella realizzazione di restauri estetici indiretti nei settori posteriori" Il dentista moderno, Maggio 2002
27. Vanini L., Mangani F., Klimovskaia O., Il restauro conservativo dei denti anteriori, 2002 Promoden, Viterbo.
28. Vanini L., Theunissen J.P:"Development of Esthetics in the Anterior Region" Journal of Dental Symposia, Fall 2002




**MICERIUM S.p.A.**
Via Marconi,83 -16030 Avegno (GE) Italy
Tel. +39 0185 7887 880  Fax +39 0185 7887 970
www.micerium.it • e-mail:hfo@micerium.it

File: HFO manuale 2004 ing