VITA

Instructions for use

VITA LUMEX® AC

One for All Ceramics and more.
Minimum effort –
optimal results.

Veneering ceramics

VITA LUMEX® AC

Versatile. Reliable. Efficient.

Dear Customers,

We are pleased that you have chosen VITA LUMEX AC.

With this product solution, you get an all-ceramic veneering system for veneering all commonly available ceramic substructure materials and for the fabrication of restorations without a substructure, such as veneers.

To use VITA LUMEX AC safely and efficiently at all times, please read this information fully before the first use.

We hope you enjoy VITA VIONIC SOLUTIONS and achieve great results!

Your VITA Product Management Team

Content overview

1 Material system / processes 4

2 Indication range of the ceramic materials 6

3 Preparation of the substructure

3.1 Ceramic 9

3.2 Titanium substructure 10

4 Standard full veneering

4.1 Example of layering pattern A2 for titanium substructures 12

4.2 Example of layering pattern A2 for ceramic substructures 14

4.3 Application of DENTIN 16

4.4 Application of ENAMEL, first dentine firing 16

4.5 Shape correction, second dentine firing 17

4.6 Finishing of the restoration 18

4.7 Characterization/glazing of the restoration 20

5 Partial veneering after cut-back

5.1 Example of layering pattern 22

5.2 Washbake plus characterization 24

5.3 Application of ENAMEL 25

5.4 Characterization/glazing of the restoration 26

6 Individual full veneering

6.1 Layering pattern: example of young anterior tooth in A2 28

6.2 Individual veneering of young anterior tooth 30

6.3 Layering pattern: example of older anterior tooth in A3 32

6.4 Individual veneering of older anterior tooth 34

6.5 Layering pattern: example of old anterior tooth in A3.5 36

6.6 Individual veneering of old anterior tooth 38

7 Shade reproduction/firing

7.1 Overview of ceramic / stain firings 40

7.2 Shade reproduction according to VITA classical A1-A4 42

7.3 Shade reproduction according to VITA SYSTEM 3D-MASTER 44

8 Technical data/information

8.1 Technical / physical data 48

8.2 Chemical composition 48

8.3 Intended purpose 48

8.4 Patient target group 48

8.5 Intended users 48

8.6 Indications 49

8.7 Contraindications 49

8.8 Notes on layer thicknesses 49

8.9 Symbol explanations 50

8.10 Safety at work/health protection 50

9 VITA System Solutions 54

1. Material system/processes

Efficient

VITA LUMEX AC is a leucite-reinforced, glass-ceramic veneering system. Maximum success with minimum effort.

Reliable

For veneering all common, all-ceramic substructure materials (zirconia, lithium disilicate and feldspar ceramics) and titanium substructures. For the production of restorations without a substructure (e.g., veneers).

Versatile

VITA LUMEX AC includes: GINGIVA, OPAQUE, OPAQUE DENTINE, DENTINE and ENAMEL materials, as well as a multitude of effect materials (e.g., OPAL TRANSLUCENT, FLUO INTENSE and many more).

Process steps in the practice and laboratory

Practice	1. Shade determination	
	2. Preparation / impression taking	
Dental laboratory	3. Substructure preparation	4. Wash application*
	5. DENTINE Application	6. ENAMEL Application
	Application of corrective material (optional)	7. Shape corrections
	8. Characterization	
Practice	9. Preparation for placement	
	10. Bonding	

* This process is not necessary for lithium disilicate substructures, but can be performed as an option.

2. Indication range: ceramic materials

VITA LUMEX® AC materials overview

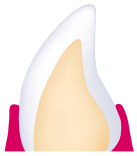
Basic materials

OPAQUE	For masking substructures	
Stains	opaque-0 · opaque-1 · opaque-2 · opaque-3 · opaque-4 · opaque-5	
POWER WASH	To support the intensity of the tooth shade and control the degree of fluorescence or lightness	
Stains	VITA classical A1-D4 and VITA SYSTEM 3D-MASTER lightness levels LL0-LL5	
OPAQUE DENTINE	For reproduction of the base shade in cases with minimum wall thicknesses.	
Stains	VITA classical A1-D4 and VITA SYSTEM 3D-MASTER	
DENTINE	For the reproduction of base shades in the neck and body area.	
Stains	VITA classical A1-D4 and VITA SYSTEM 3D-MASTER	
ENAMEL	For the reproduction of the play of shade and light in the tooth enamel.	
Stains	light · medium · intense · clear · fog	

Effect / addition materials DENTIN

GINGIVA

For the reconstruction of gingival areas



Stains

pale-papilla · light-rose · nectarine · grapefruit · rosewood · purple · deep-red · dark-red

DENTINE MODIFIER

For modifying DENTIN and OPAQUE DENTIN materials and reproducing effects in the neck and dentine area.

Stains

cloudy-white · caramel · honey · copper

CHROMA INTENSE

For increasing the chromaticity in the cervical area, especially in cases of thin layer thicknesses

Stains

ivory · almond · hazelnut

FLUO INTENSE

For the control of fluorescence from the depths

Shades

arctic-white · cream · cappuccino · sand · sesame

MARGIN

For ceramic shoulders and corrections in the margin area

Stains

straw-yellow · corn-yellow

2. Indication range: ceramic materials

VITA LUMEX® AC materials overview

Effect / addition materials Enamel

MAMELON

For imitating mamelons in the incisal area

Stains

- saffron
- honey-melon

TRANS-LUCENT

Universally applicable translucent enamel effect materials for the reproduction of shade effects in the incisal area

Stains

- smoky-white
- light-blonde
- misty-rose
- sunlight
- sun-intense
- waterdrop
- deep-blue
- foggy-grey

OPAL TRANS-LUCENT

For the reproduction of opal effects

Stains

- opal-neutral
- opal-sky
- opal-azure

PEARL

For the reproduction of mother-of-pearl effects

Stains

- shell

CORREC-TIVE

For corrections after the glaze firing with a reduced firing temperature

Stains

- neutral
- desert

3. Preparation of the substructure

3.1 Washbake for ceramic substructures

1 Initial situation. 2 Applying wash material. 3 Substructure after washbake.

DENTINE, POWERWASH or FLUO INTENSE materials can be used for the washbake. The following applies:

The appearance of VITA LUMEX AC is matched to the pre-colored zirconia material VITA YZ ST with regard to full veneers.

In the case of partial veneers or micro veneering, the base tooth shade is determined by the substructure body (e.g., lithium disilicate, feldspar ceramic):

In order to achieve the best possible result with full veneers on other substructure materials, full coverage application with the VITA LUMEX AC POWERWASH materials (approx. 0.2 mm) is recommended.

Substructure materials from other manufacturers may have different optical properties due to pre-coloring, which may require the use of additional effect materials.

- A washbake is recommended for a good bond of VITA LUMEX AC to the ceramic substructure.
  - Mix DENTINE or POWERWASH materials with VITA LUMEX AC MODELLING LIQUID to obtain a thin aqueous mixture.
  - Use a brush to apply thinly, evenly and uniformly to the clean, dry substructure.
  - For more fluorescence or opacity from the depths, other materials such as FLUO INTENSE or OPAQUE DENTINE can also be used as an alternative.
- For the OPAQUE materials, use VITA OPAQUE FLUID (BOF50, BOF250), for the remaining ceramic materials use VITA LUMEX AC MODELLING LIQUID.
- Mix the MARGIN materials with VITA LUMEX AC Modelling Liquid. It is possible to use a hair dryer or radiated heat from the furnace to stabilize the shoulder.

Please note

This process is not necessary for lithium disilicate substructures, but can be performed as an option.

Firing:

Recommended firing - wash firing						
	Pre-dry °C	→ min.	↗ °C/min.	Temp. approx. °C	→ min.	VAC
Zirconia substructures	400	4.00	50	800	1.00	on
lithium disilicate substructures	400	4.00	50	760	1.00	on

3. Preparation of the substructure

3.2 Preparation of substructures made of titanium grades 1-5

1 Sandblasted substructure, ceramic-supporting design with cooling fins

2 Passivation for five minutes is required (leave framework in place, without machining) Then clean the surface with a steam cleaner.

3 Substructure with OPAQUE

Please note

- Crown and bridge frameworks as a reduced tooth shape with anatomical and ceramic-supporting framework design
- Recommended thickness of the substructure at least 0.4 - 0.5 mm; avoid sharp edges and overlapping
- Bridge connectors should have adequate dimensions in the interdental area
- Attach cooling fin to fully veneered bridge units
- Use only cutters suitable for titanium (low speed, approx. 15,000 rpm and reduced pressure). Grind in one direction only and avoid overlapping.
- Sandblast at an angle of 45° using high-grade corundum (120 – 150 µm) at 2 bar and a distance of 3 - 5 cm
- Passivation for five minutes is required (leave framework in place, without machining)
- Cleaning the surface with a steam cleaner
- No oxide firing
- For shade classification of the OPAQUE materials, see pages 40 - 44
- Carry out opaque firings with OPAQUE:
  - First opaque firing should be applied thinly (like a washbake).
  - Subsequent opaque firings should completely cover the substructure.
- The use of a titanium bonder is not necessary, but possible.* For improved wetting of the titanium surface, approx. 50% VITA AKZENT PLUS GLAZE LT can optionally be mixed with the OPAQUE. VITA OPAQUE FLUID (BOF50, BOF250) must be used for mixing OPAQUE.

Firing - opaque firing with OPAQUE:

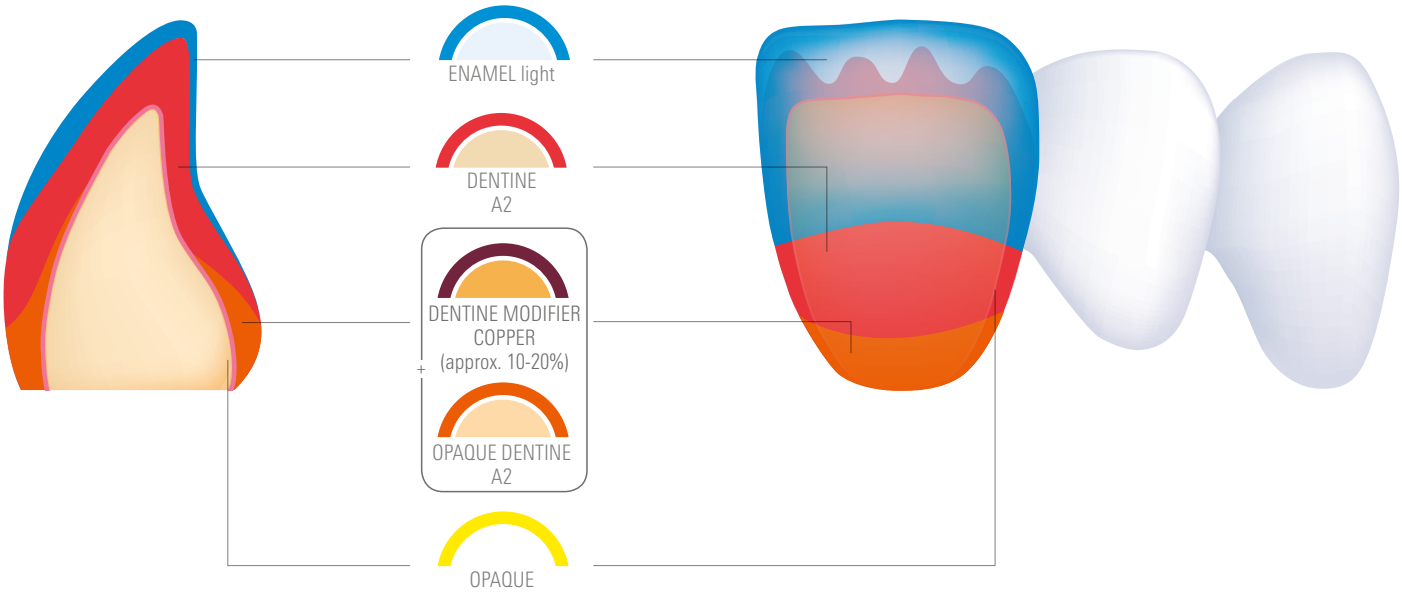
Recommended firing for OPAQUE on titanium frameworks							
Pre-dry °C	**→ min.**	**↗ °C/min.**	**Temp. approx. °C**	**→ min.**	**°C ↘**	**→ min.**	**VAC**
400	4.00	50	800	1.00	–	–	on

*) For products that are not manufactured or approved by VITA Zahnfabrik H.Rauter GmbH & Co. KG, no warranty can be given if they are used; the manufacturer's instructions must be observed.

VITA LUMEX® AC
sunlight
094
TRANSLUCENT
VITA
VITA LUMEX® AC
TRANSLUCENT
VITA
VITA LUMEX®
ENAMEL

4. Standard full veneering

4.1 Example of layering pattern A2 for titanium substructures



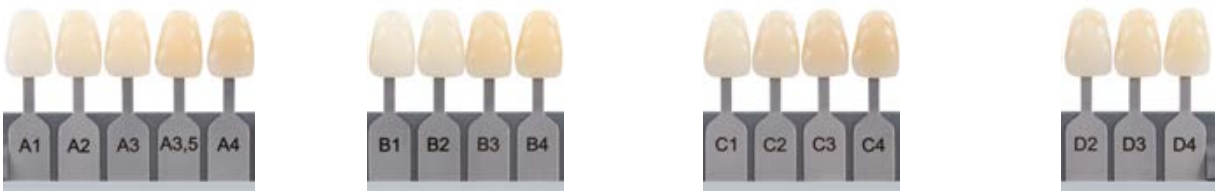
- For more intense chroma, it is recommended to add 10 - 20 % DENTINE MODIFIER to OPAQUE DENTINE (see graphic for shade classification).
- To increase the lightness level in the incisal area, TRANSLUCENT smoky-white can be mixed with the ENAMEL materials.

Please note

Shade classification - DENTINE MODIFIER for OPAQUE DENTINE for VITA classical A1 – D4 shades

copper **honey** **caramel** **brown**

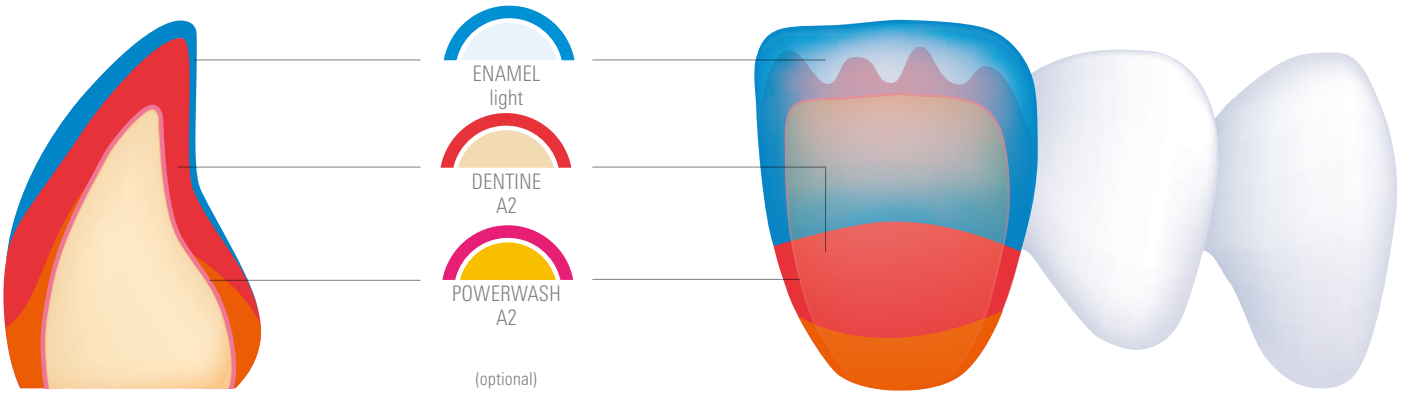
Mix 10-20% with the OPAQUE DENTINE depending on the layer thickness



Learn more in Tutorial Videos now:

4. Standard full veneering

4.2 Example of layering pattern A2 for ceramic substructures



- Generally, standard full veneering is done with DENTINE and ENAMEL materials. However, OPAQUE DENTINE materials can also be used as an option.
- In the following cases, the additional use of OPAQUE DENTINE materials is recommended:
  - To avoid loss in color of the pontics, in particular in the area of the gingiva.
  - To reproduce areas with intense shades, such as occlusal surfaces of molars.
  - To enhance the shade effect, especially in cases of limited space (< 0.8 mm).

Please note

- The relationship of the layer thicknesses of DENTINE and ENAMEL can impact the shade intensity of the restoration. Shade intensive results are achieved with thicker layers of OPAQUE DENTINE and DENTINE materials – the thicker the layer of ENAMEL, the more pallid the end result.
- ENAMEL light is intended to achieve a translucent effect of the incisal edge. If a higher opacity is desired, TRANSLUCENT light-blonde, for example, can be used for lighter tooth shades, and TRANSLUCENT smoky-white for bleach shades.

4. Standard full veneering

4.3 Application of DENTINE

1 Prepared substructure.

2 Isolate model.

3 Apply OPAQUE DENTINE.

4 Apply DENTINE; Step 1.

5 … Step 2.

6 … Step 3.

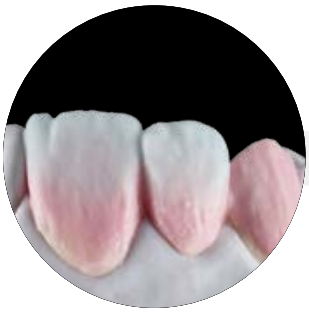
- For easier removal of the restoration, insulate the model beforehand with VITA Modisol.
- To avoid differences in the shade of abutment crowns and pontics, OPAQUE DENTINE materials are applied to the basal surface and the cervical area of the pontic.
- In cases of insufficient space relationships (just at the cuspids), apply a thin layer of OPAQUE DENTINE before applying the dentine and enamel. This guarantees a precise reproduction of shade, especially in cases of layer thicknesses of less than 0.8 mm.
- For a good orientation with regard to size, shape and position of the teeth, apply the DENTINE fully anatomically.

4.4 Application of ENAMEL: first dentine firing

1 Reduce dentine using cut-back.

2 Apply ENAMEL …

3 … Step 2 …



4 … Step 3.

5 Perform interdental separation …

6 Mark the contact points.

- For an optimal enamel application, reduce the dentine in the upper third.
- For a uniform level of moisture, the material should be carefully wetted with a brush in the interproximal areas from the palatal side before the enamel material is applied.
- To complete the crown shape, ENAMEL is applied in several small quantities.
- To compensate for firing shrinkage, the size of the mould should be prepared somewhat larger.
- Using a slightly moist separating knife, the individual bridge units are separated in the interproximal area down to the substructure, prior to the first dentine firing.
- After removing the bridge from the model, complete the contact points with DENTINE and ENAMEL.
- Finally, the bridge is placed on a firing tray for the subsequent firing process.
- ENAMEL light is intended to achieve a translucent effect of the incisal edge. If a higher opacity is desired, TRANSLUCENT light-blonde, for example, can be used for lighter tooth shades, and TRANSLUCENT smoky-white for bleached shades.

Firing:

Recommended firing first dentine firing*					
Pre-dry °C	**→ min.**	**↗ °C/min.**	**Temp. approx. °C**	**→ min.**	**VAC**
400	6.00	50	760	1.00	on

* Applies for both zirconia and lithium disilicate substructures.

4. Standard full veneering

4.5 Shape correction: second dentine firing

1 Result after the first dentine firing.

2 Isolate model.

3 Apply OPAQUE DENTINE / DENTINE.

4 Apply ENAMEL …

5 … Step 2.

- Insulate with VITA Modisol again before placing on the model. This way, any material applied in the basal area will not stick to the model.
- Make corrections of the shape starting from the cervical area with OPAQUE DENTINE / DENTINE and ENAMEL.

Firing:

Recommended firing 2. dentine firing*					
Pre-dry °C	**→ min.**	**↗ °C/min.**	**Temp. approx. °C**	**→ min.**	**VAC**
400	6.00	50	755	1.00	on

* Applies for both zirconia and lithium disilicate substructures.

4.6 Finishing of the restoration

1 Grind contact point.

2 Correct the shape …

3 … Step 2.

4 … Step 3.

5 Final finished restoration.

- After firing, place on the model and grind the contact points.
- Use a diamond tool for smaller shape corrections; separate the approximal spaces carefully using a diamond disc. Make sure not to damage the substructure.
- Then incorporate natural surface structures (e.g., growth grooves or convex / concave surfaces).

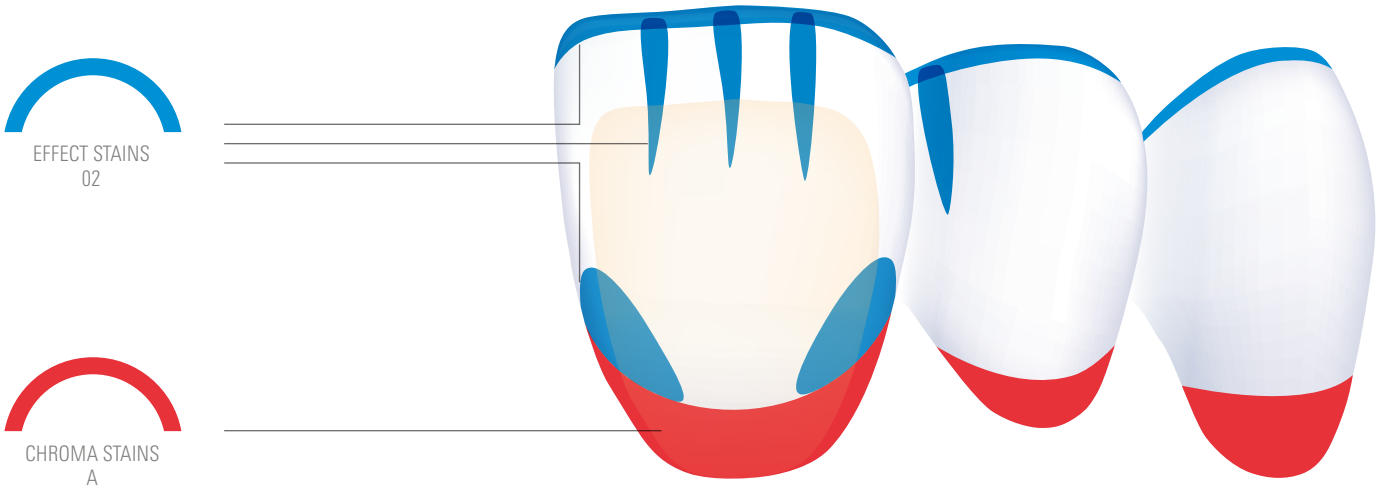
Please note

Before the glaze / stain firing, clean the restoration thoroughly of grinding dust with a toothbrush under running water or with a steam jet.

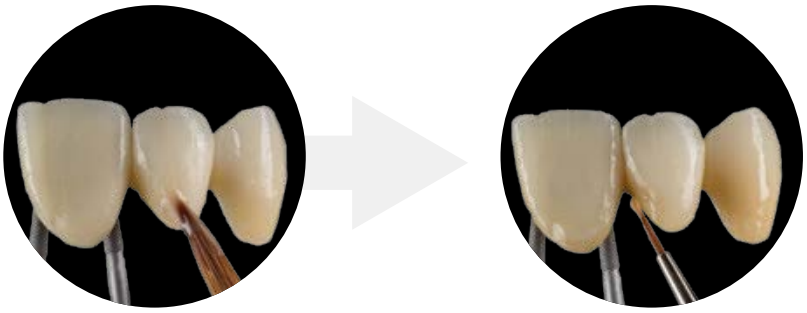
A2

4. Standard full veneering

4.7 Characterization/glazing of the restoration



Example of pattern for characterization.



1 Application of glaze.

2 Apply stains.

- Glaze the entire restoration with VITA AKZENT PLUS GLAZE LT as needed.
- To intensify the shade in the cervical area, for example, apply VITA AKZENT Plus CHROMA STAINS.
- For the reproduction of individual shade characteristics, for example, apply VITA AKZENT Plus EFFECT STAINS.

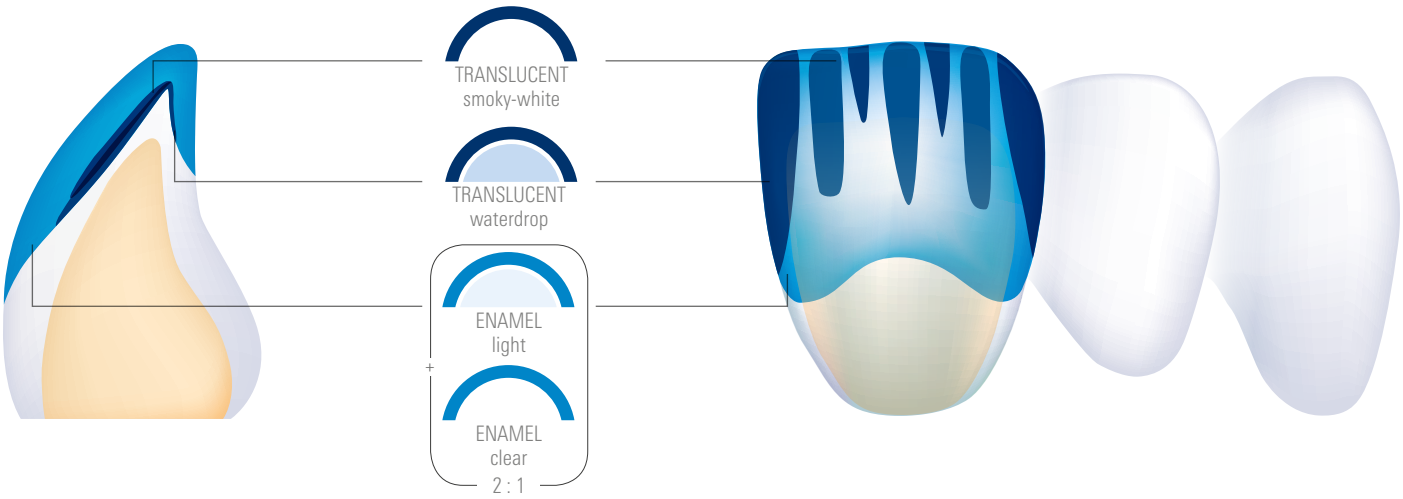
Firing:

Recommended firing - glaze firing with VITA AKZENT® Plus Glaze LT Powder*					
Pre-dry °C	**→ min.**	**↗ °C/min.**	**Temp. approx. °C**	**→ min.**	**VAC**
400	4.00	80	750	1.00	–

*) Applies for both zirconia and glass ceramic substructures.

5. Partial veneering after cut-back

5.1 Example of layering pattern



The dentine shade is formed by the cut-back substructure; the individual incisal characterization is done with ENAMEL and TRANSLUCENT ceramic materials.

Please note

When reducing the substructure in the incisal area, the manufacturer's specifications on minimum wall thickness must be observed!

5. Partial veneering after cut-back

5.2 Washbake plus characterization

1 Anatomically reduced restoration.

2 Application of wash material …

3 … Step 2.

4 Then glaze / characterize the restoration.

5 Result after the firing.

- Use ENAMEL for the washbake; in cases of thin layers, VITA AKZENT PLUS GLAZE LT is also possible as an alternative for the washbake.
- To intensify the shade in the cervical area, for example, apply VITA AKZENT Plus CHROMA STAINS.
- For the reproduction of individual shade characteristics, for example, apply VITA AKZENT Plus EFFECT STAINS.

Please note

This process is not necessary for lithium disilicate substructures, but can be performed as an option.

Firing:

Recommended firing for zirconia substructures					
Pre-dry °C	**→ min.**	**↗ °C/min.**	**Temp. approx. °C**	**→ min.**	**VAC**
400	4.00	50	800	1.00	on

Recommended firing for glass ceramic					
Pre-dry °C	**→ min.**	**↗ °C/min.**	**Temp. approx. °C**	**→ min.**	**VAC**
400	4.00	50	760	1.00	on

5.3 Application of ENAMEL

1 Completed application of ENAMEL.

2 Restoration after finishing.

Apply several small portions of ENAMEL to complete the crown mould, beginning from the middle third of the crown. To compensate for firing shrinkage, the size of the mould should be prepared somewhat larger.

Learn more in Tutorial Videos now:

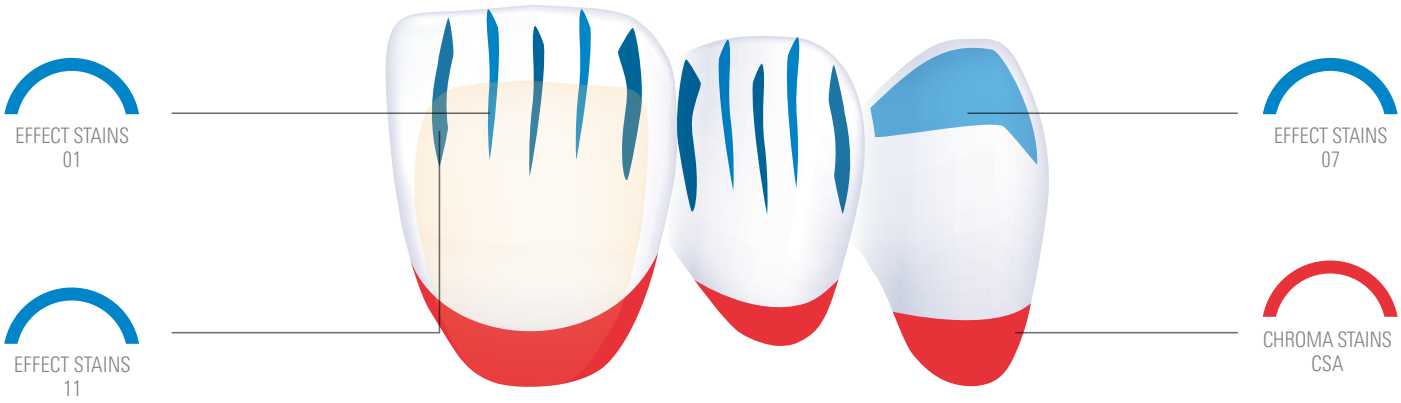
Firing:

Recommended firing first dentine firing*					
Pre-dry °C	**→ min.**	**↗ °C/min.**	**Temp. approx. °C**	**→ min.**	**VAC**
400	6.00	50	760	1.00	on

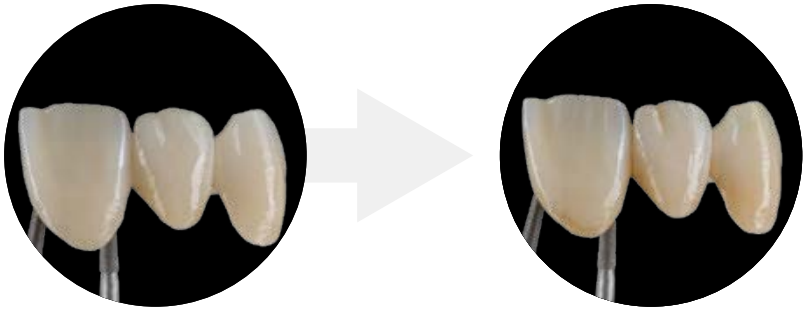
*) Applies for both zirconia and glass ceramic substructures.

5. Partial veneering after cut-back

5.4 Characterization / glazing of the restoration



Example of pattern for characterization.



1 Result after glaze application.

2 Result after stain application.

- Glaze the entire restoration with VITA AKZENT PLUS GLAZE LT as needed.
- To intensify the shade in the cervical area, for example, apply VITA AKZENT Plus CHROMA STAINS.
- For the reproduction of individual shade characteristics, for example, apply VITA AKZENT Plus EFFECT STAINS.

Please note

The use of glazing materials is optional; see Firing - Glaze Firing, chapter "Shade reproduction / firing."

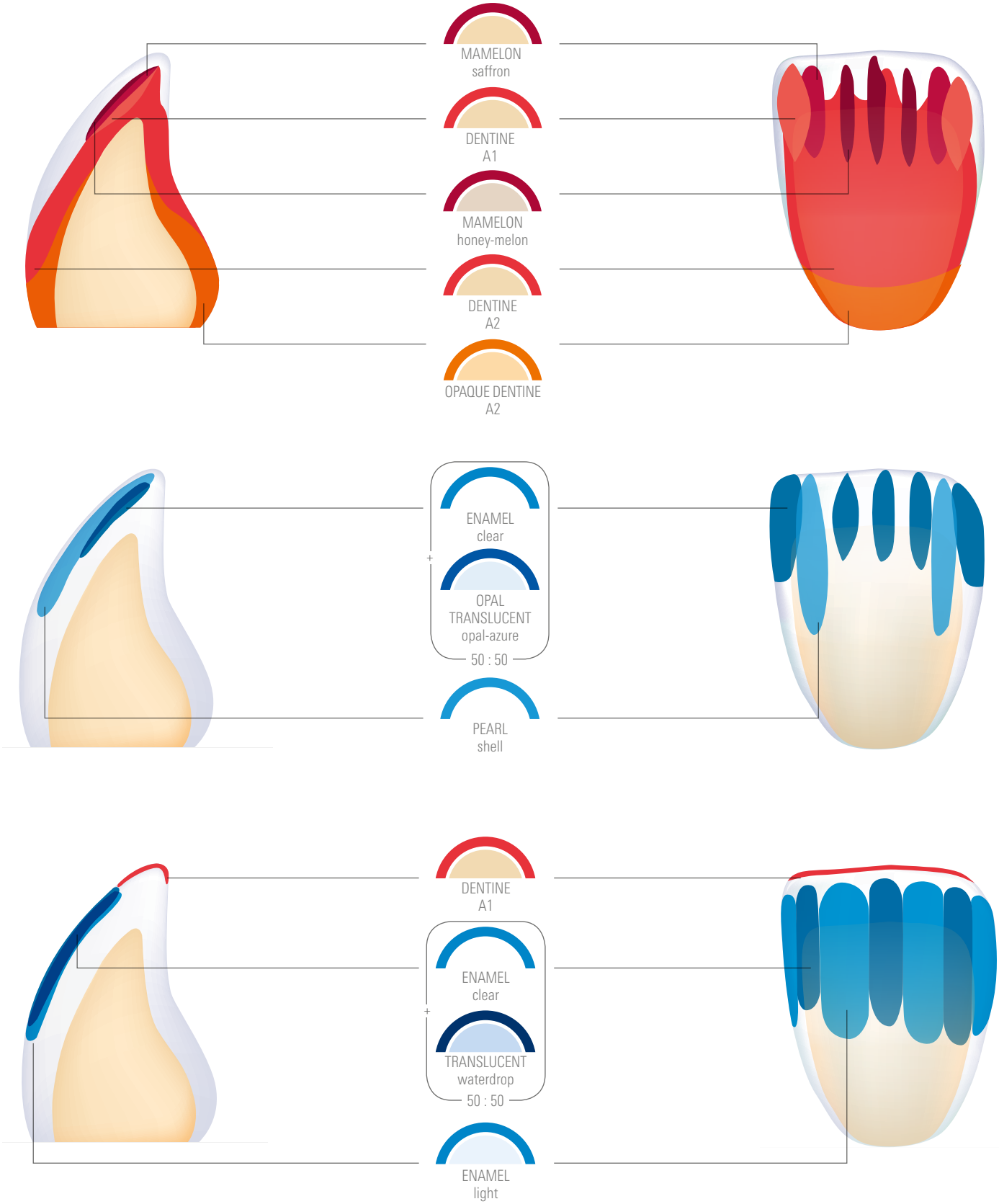
Firing:

Recommended firing - glaze firing with VITA AKZENT® Plus Glaze LT Powder*					
Pre-dry °C	→ min.	↗ °C/min.	Temp. approx. °C	→ min.	VAC
400	4.00	80	750	1.00	–

*) Applies for both zirconia and glass ceramic substructures.

6. Individual full veneering

6.1 Layering pattern: example of young anterior tooth in A2



6. Individual full veneering

6.2 Individual veneering: young anterior tooth

1 Prepared substructure on model.

2 Result after the washbake with DENTINE A1.

3 Result after OPAQUE DENTINE application.

4 Apply DENTINE.

5 Perform cut-back.

6 Result after cut-back.

7 Apply MAMELON materials.

8 Apply EFFECT materials.

9 Apply ENAMEL.

10 Restoration after completion of layering.

11 Restoration after firing.

12 Restoration after finishing.

Tip

- In the present example, the cervical area was intensified with VITA AKZENT Plus and also dusted with FLUO INTENSE materials.
- The advantage of dusting the surfaces with FLUO INTENSE is that it provides a porous surface, where the light penetrating the restoration breaks down naturally.

Firing:

Recommended firing first dentine firing*					
Pre-dry °C	**→ min.**	**↗ °C/min.**	**Temp. approx. °C**	**→ min.**	**VAC**
400	6.00	50	760	1.00	on

*) Applies for both zirconia and glass ceramic substructures.

Recommended firing - glaze firing with VITA AKZENT® Plus Glaze LT Powder*					
Pre-dry °C	**→ min.**	**↗ °C/min.**	**Temp. approx. °C**	**→ min.**	**VAC**
400	4.00	80	750	1.00	–

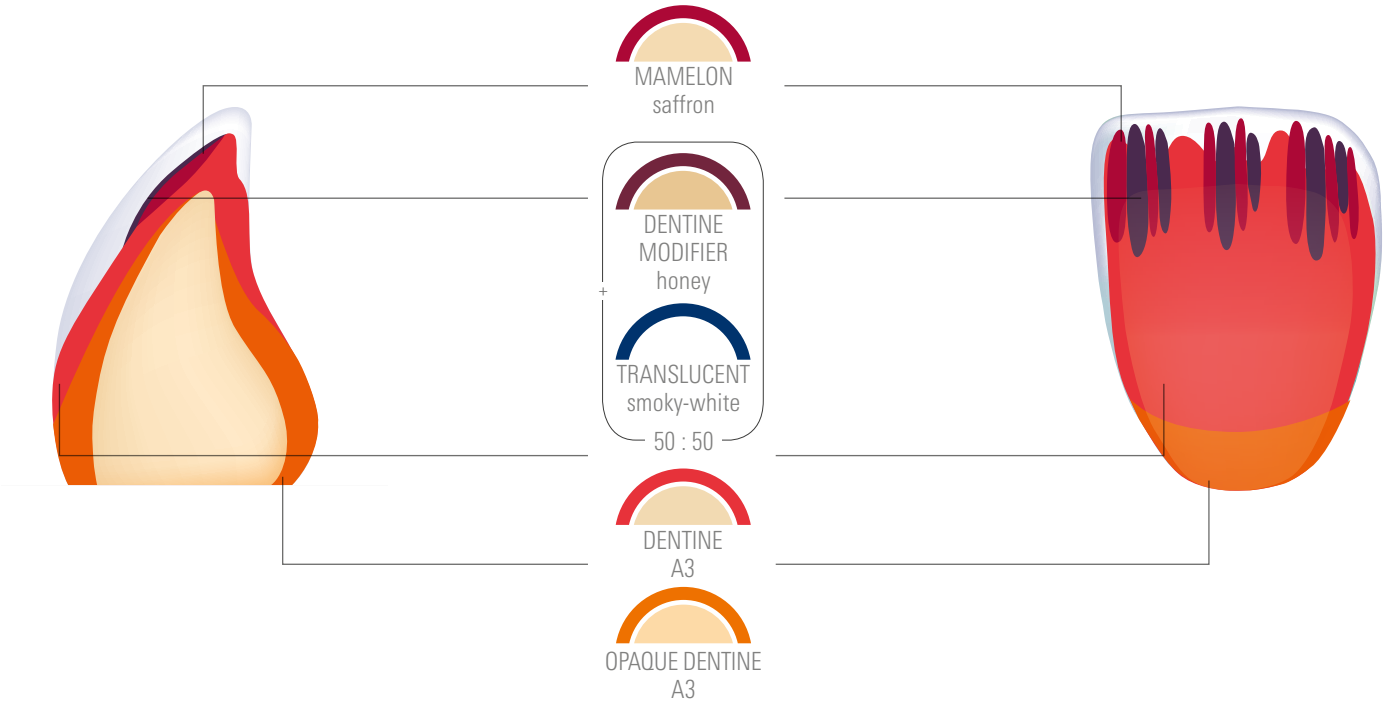
*) Applies for both zirconia and glass ceramic substructures.

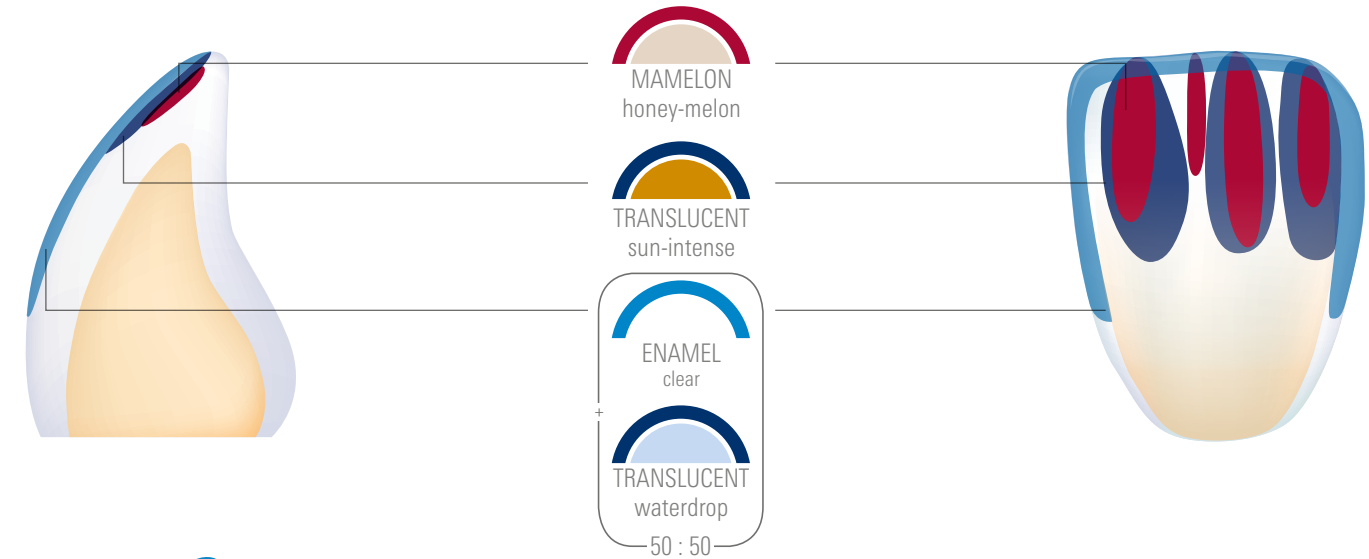
13 Restoration characterized with VITA AKZENT Plus.

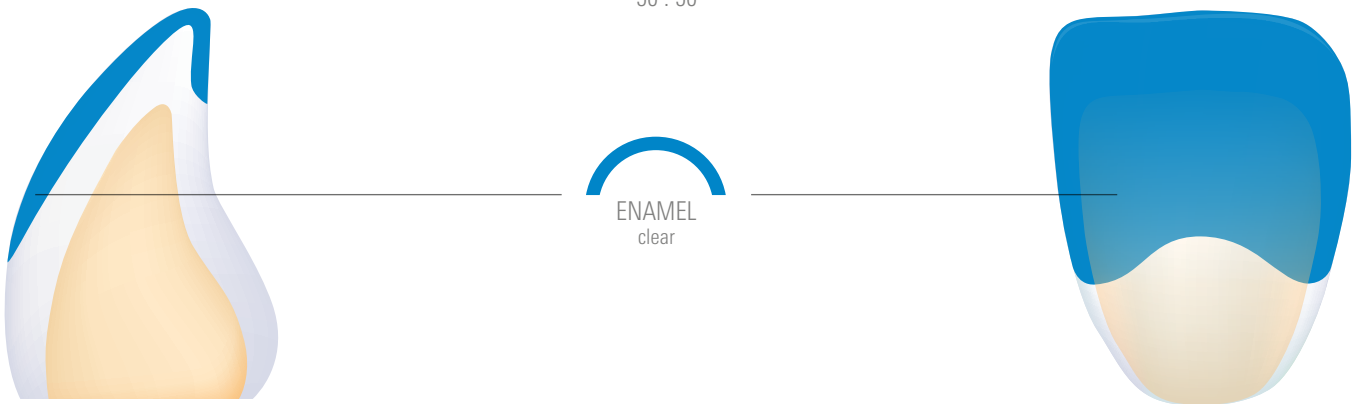
Learn more in Tutorial Videos now:

6. Individual full veneering

6.3 Layering pattern: example of older anterior tooth in A3







6. Individual full veneering

6.4 Individual veneering of older anterior tooth

1 Applying wash material.

2 Result after washbake.

3 Apply OPAQUE DENTINE.

4 Build up the tooth shape using DENTINE.

5 Perform cut-back.

6 Apply effect materials …

7 … Second step.

8 Apply ENAMEL.

9 Result after the firing.

10 Result after glaze application.

11 Result after characterization.

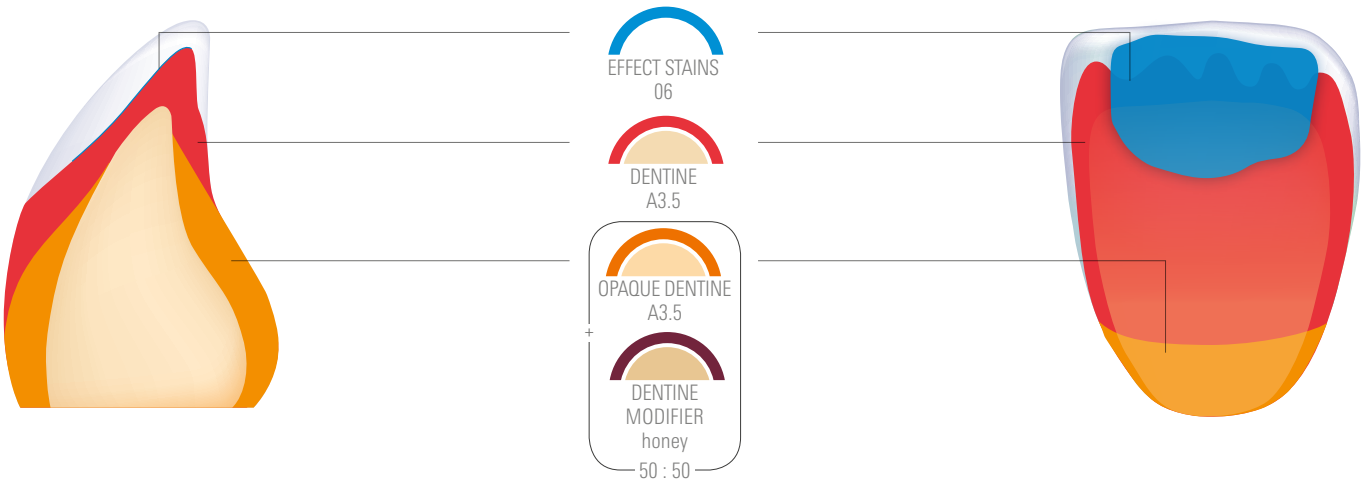
Firing procedure:

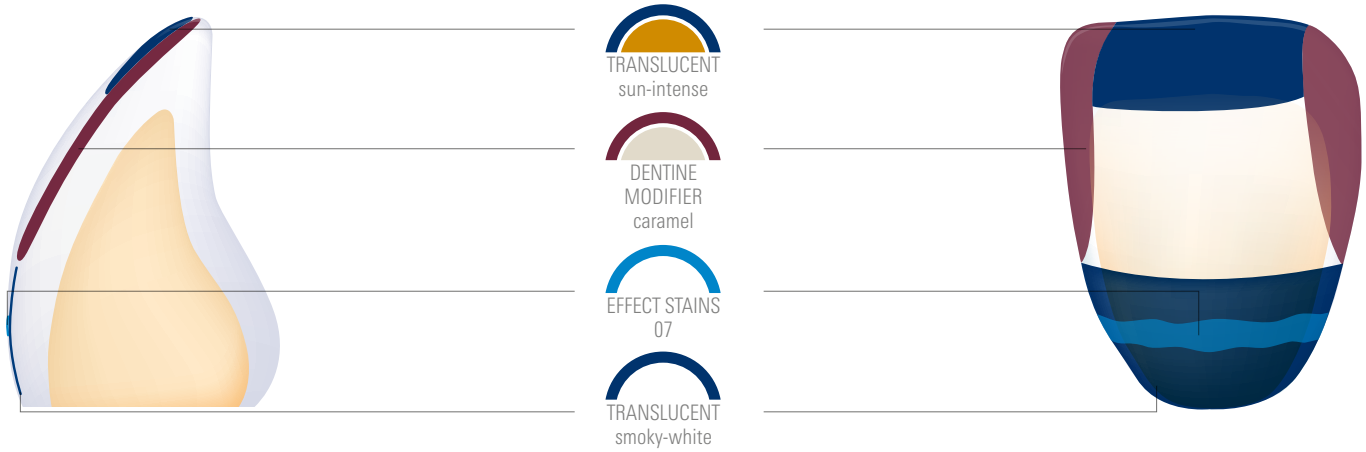
For information on the dentine and glaze firings, see 6.2.

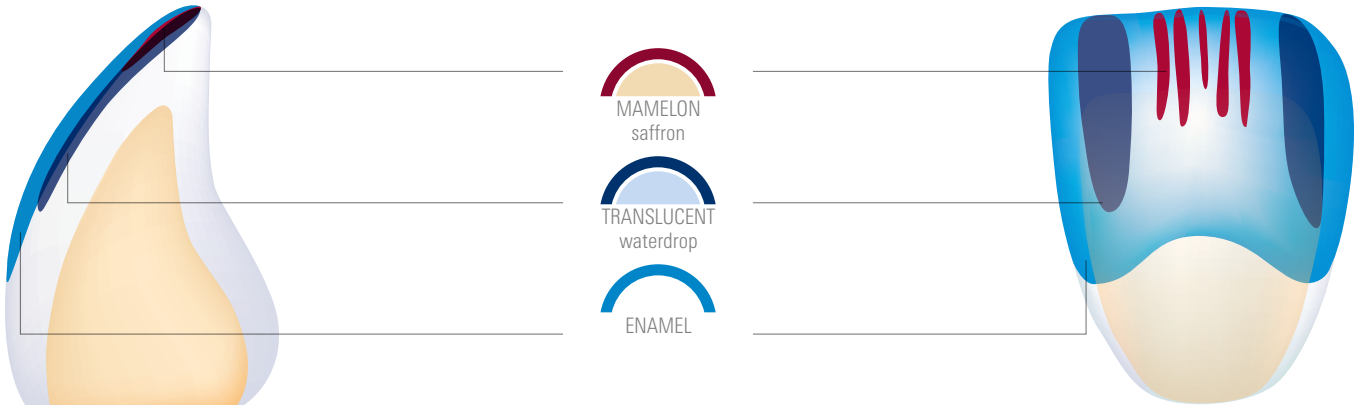
Learn more in Tutorial Videos now:

6. Individual full veneering

6.5 Layering patterns: example of old anterior tooth in A3.5







Learn more in Tutorial Videos now:

6. Individual full veneering

6.6 Individual veneering of old anterior tooth

1 Applying wash material.

2 Result after washbake.

3 Apply OPAQUE DENTINE.

4 Dentine application after cut-back.

5 Insert VITA AKZENT Plus stains.

6 Apply effect materials.

7 Apply effect materials.

8 Apply ENAMEL.

9 Result after the firing.

10 Result after the finishing.

11 Result after glaze application.

12 Result after characterization.

Tip

VITA AKZENT Plus stains are ideal for insertion during layering in order to achieve natural effects from the depth.

Firing:

For information on dentine and glaze firings, see 6.2.

7. Shade reproduction/firing

7.1 Overview of ceramic / stain firings

Firing parameters								
Programs	**Pre-dry °C**	**→ min.**	**↗ °C/min.**	**Temp. approx. °C**	**→ min.**	**↘ °C**	**→ min.**	**VAC**
Cleaning firing YZ-T	500	03:00	33	700	05:00	–	–	–
Cleaning firing YZ-HT	290	10:00	10	600	05:00	–	–	–
Washbake with zirconia (e.g., with POWERWASH)	400	04:00	50	800	01:00	–	–	on
Washbake - lithium disilicate	400	04:00	50	760	01:00	–	–	on
Opaque firing with OPAQUE (on ZrO_2 + titanium)	400	04:00	50	800	01:00	–	–	on
Shoulder firing with MARGIN (on ZrO_2 + titanium)	400	06:00	50	770	01:00	–	–	on
First dentine firing	400	06:00	50	760	01:00	500*	–	on
Second dentine firing	400	06:00	50	755	01:00	500*	–	on
Glaze firing	400	00:00	80	750	01:00	500*	–	–
Stains fixation firing with VITA AKZENT Plus	400	04:00	80	700	01:00	500*	–	–
Glaze firing with VITA AKZENT Plus GLAZE LT Powder	400	04:00	50	750	01:00	500*	–	–
Glaze firing with VITA AKZENT Plus GLAZE LT Paste	400	08:00	50	750	01:00	500*	–	–
Glaze firing with VITA AKZENT Plus FLUOGLAZE LT Spray	400	06:00	50	750	01:00	500*	–	–
Corrective firing with CORRECTIVE	400	04:00	50	725	01:00	500*	–	on

* Long-term cooling down to the corresponding temperature is recommended for the respective last planned firing cycle of the veneering ceramic. The lift position for VITA VACUMAT furnaces should be > 75%. The items to be fired must be protected from a direct supply of air.

Based on the poor thermal conductivity of both materials (Y-TZP and veneering ceramic), higher residual stress can occur in this compound system than is known to typically occur in metal ceramics. This residual thermal stress in the veneering ceramic can be counteracted by means of slow cooling in the final firing process, to below the transformation temperature of the veneering ceramic during the last firing cycle (approx. 550° C for VITA LUMEX AC).

Please note

- The user should consider this information only as a reference. If the surface quality or the degree of transparency or glaze does not correspond to the firing result that is achieved under optimum conditions, the firing procedure must be adjusted accordingly.
- The critical factors for the firing procedure are not the firing temperature indicated on the furnace display, but rather the appearance and the surface quality of the firing object after firing.
- Low-fusing ceramics are generally more sensitive to residual moisture during the firing process. Too much residual moisture after pre-drying can, for example, influence the shade effect of the final restoration. Depending on the size of the restoration and the individual workflow, extending the preheating time may lead to an improved firing result.
- To achieve an optimum firing result on multi-unit bridge substructures (especially with voluminous pontics), an extension of the heating time is recommended.

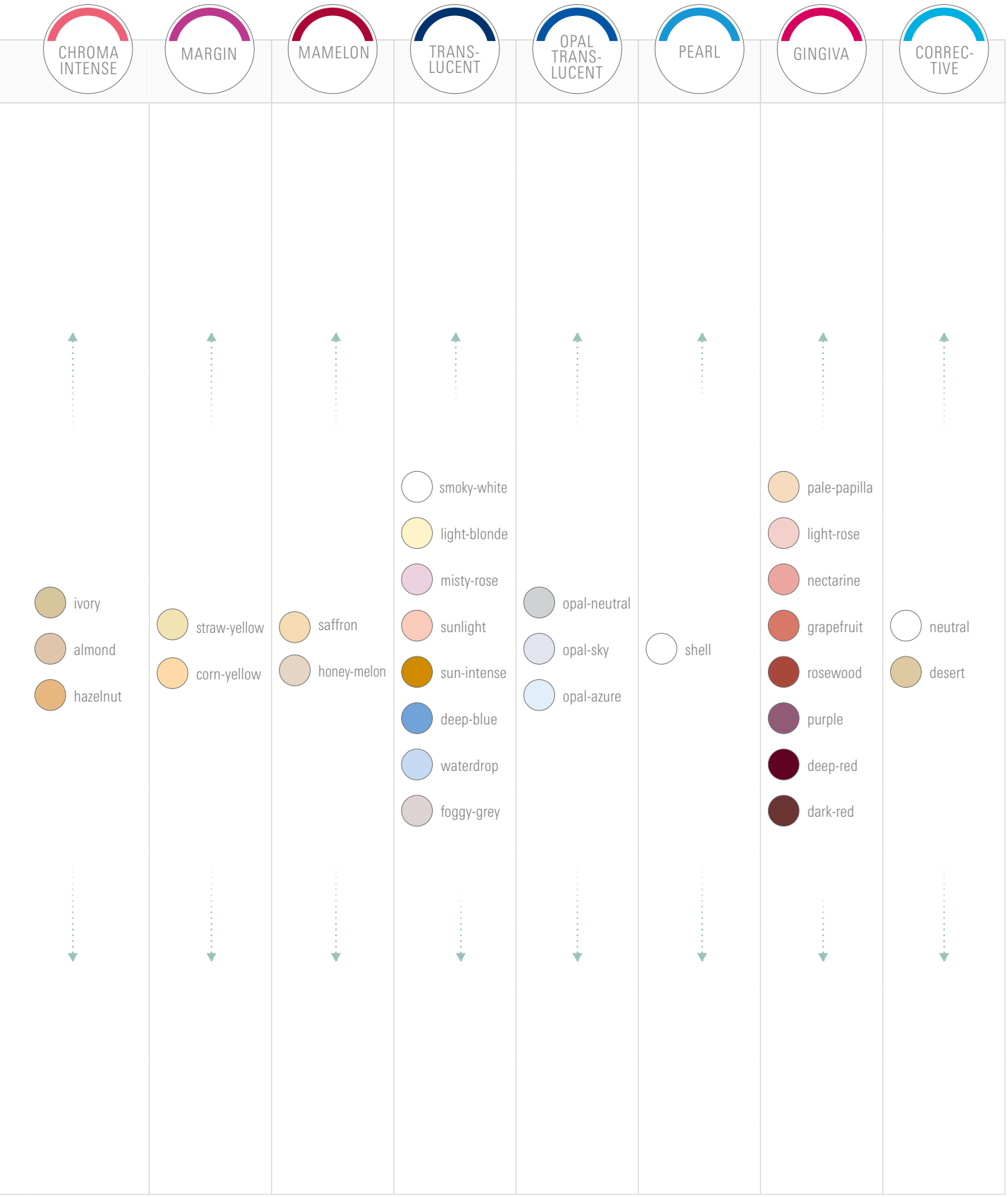
Explanation of Symbols							
Pre-dry °C	**→ min.**	**↗ °C/min.**	**Temp. approx. °C**	**→ min.**	**↘ °C**	**→ min.**	**VAC**
Start temperature	Pre-drying time in minutes, closing time	Heating time in minutes, temperature rise rate in degrees Celsius per minute	Final temperature	Holding time for end temperature	Long-term cooling	Hold time for long-term cooling	Vacuum holding time in minutes

7. Shade reproduction/firing

7.2 Shade reproduction according to VITA classical A1–D4

	OPAQUE	POWER WASH	OPAQUE DENTINE	DENTINE	ENAMEL**		FLUO INTENSE	DENTINE MODIFIER
A1	opaque-1	A1	A1	A1	light			
A2	opaque-2	A2	A2	A2	light			
A3	opaque-2	A3	A3	A3	light			
A3.5	opaque-3	A3.5	A3.5	A3.5	medium			
A4	opaque-3	A4	A4	A4	medium			
B1	opaque-1	B1	B1	B1	medium			
B2	opaque-1	B2	B2	B2	medium		arctic-white	cloudy-white
B3	opaque-3	B3	B3	B3	medium	intense	cream	caramel
B4	opaque-3	B4	B4	B4	medium	clear	cappuccino*	honey
C1	opaque-3	C1	C1	C1	medium	fog	sand	copper
C2	opaque-2	C2	C2	C2	medium		sesame	brown
C3	opaque-3	C3	C3	C3	light			
C4	opaque-4	C4	C4	C4	light			
D2	opaque-2	D2	D2	D2	medium			
D3	opaque-3	D3	D3	D3	medium			
D4	opaque-3	D4	D4	D4	medium			

Note: The material classifications are only intended to provide reference values!



* Mixing ratio 1:1

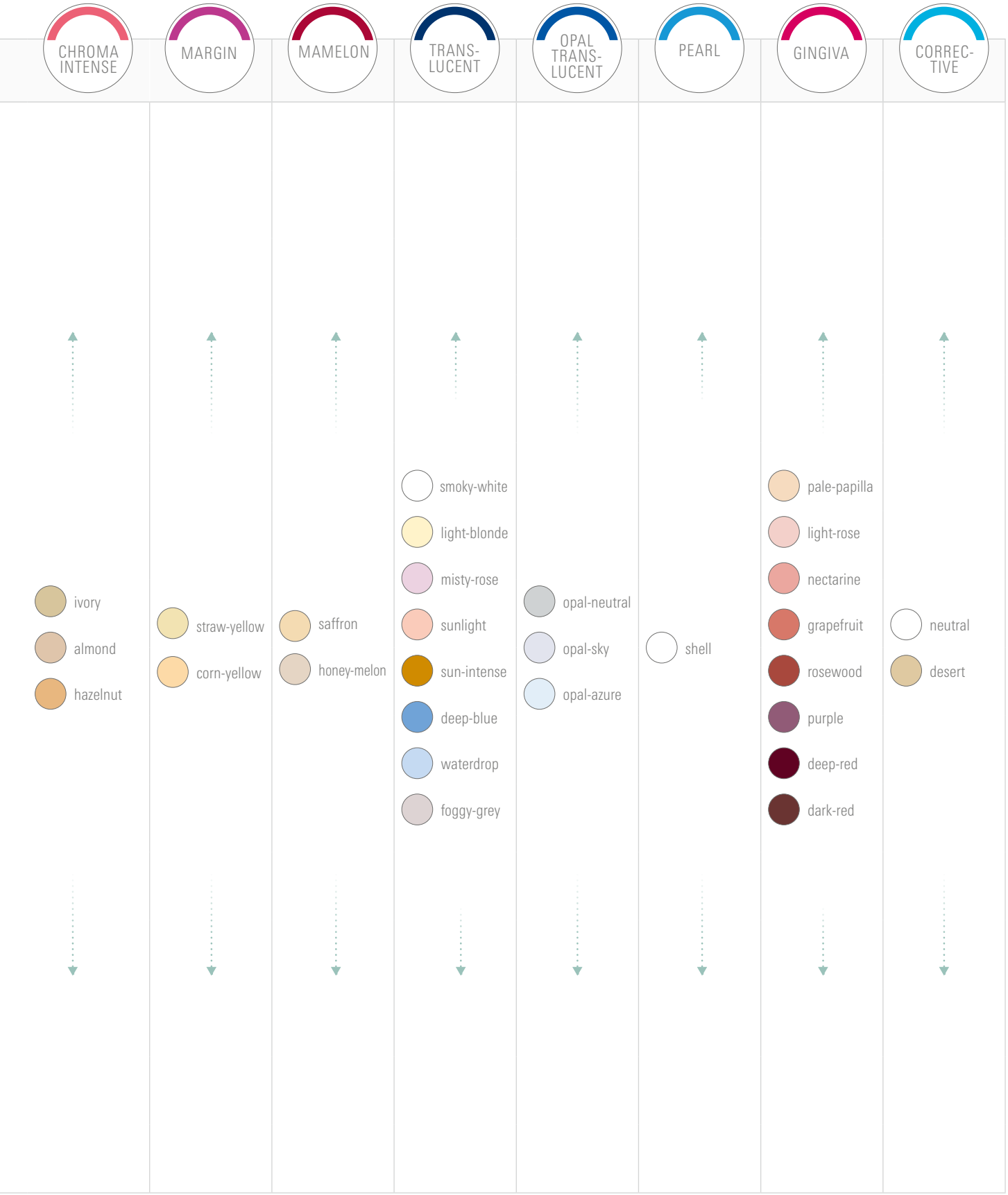
** ENAMEL light is intended to achieve a translucent effect of the incisal edge. If a higher opacity is desired, TRANSLUCENT light-blonde, for example, can be used for lighter tooth shades, and TRANSLUCENT smoky-white for bleach shades.

7. Shade reproduction/firing

7.3 Shade reproduction according to VITA SYSTEM 3D-MASTER

	OPAQUE	POWER WASH	OPAQUE DENTINE	DENTINE	ENAMEL**		FLUO INTENSE	DENTINE MODIFIER
0M1	opaque-0	LL0	0M1	0M1	light			
0M2	opaque-0		0M2	0M2	light			
0M3	opaque-0		0M3	0M3	light			
1M1	opaque-1	LL1	1M1	1M1	light			
1M2	opaque-1		1M2	1M2	light			
2L1.5	opaque-2	LL2	2L1.5	2L1.5	light			
2L2.5	opaque-2		2L2.5	2L2.5	light		arctic-white	cloudy-white
2M1	opaque-2		2M1	2M1	light	clear	cream	caramel
2M2	opaque-2		2M2	2M2	light	fog	cappuccino*	honey
2M3	opaque-2		2M3	2M3	light		sand	copper
2R1.5	opaque-2		2R1.5	2R1.5	light		sesame	brown
2R2.5	opaque-2		2R2.5	2R2.5	light			
3L1.5	opaque-3	LL3	3L1.5	3L1.5	medium			
3L2.5	opaque-3		3L2.5	3L2.5	medium			
3M1	opaque-3		3M1	3M1	light			
3M2	opaque-3		3M2	3M2	light			

Note: The material classifications are only intended to provide reference values!



* Mixing ratio 1:1

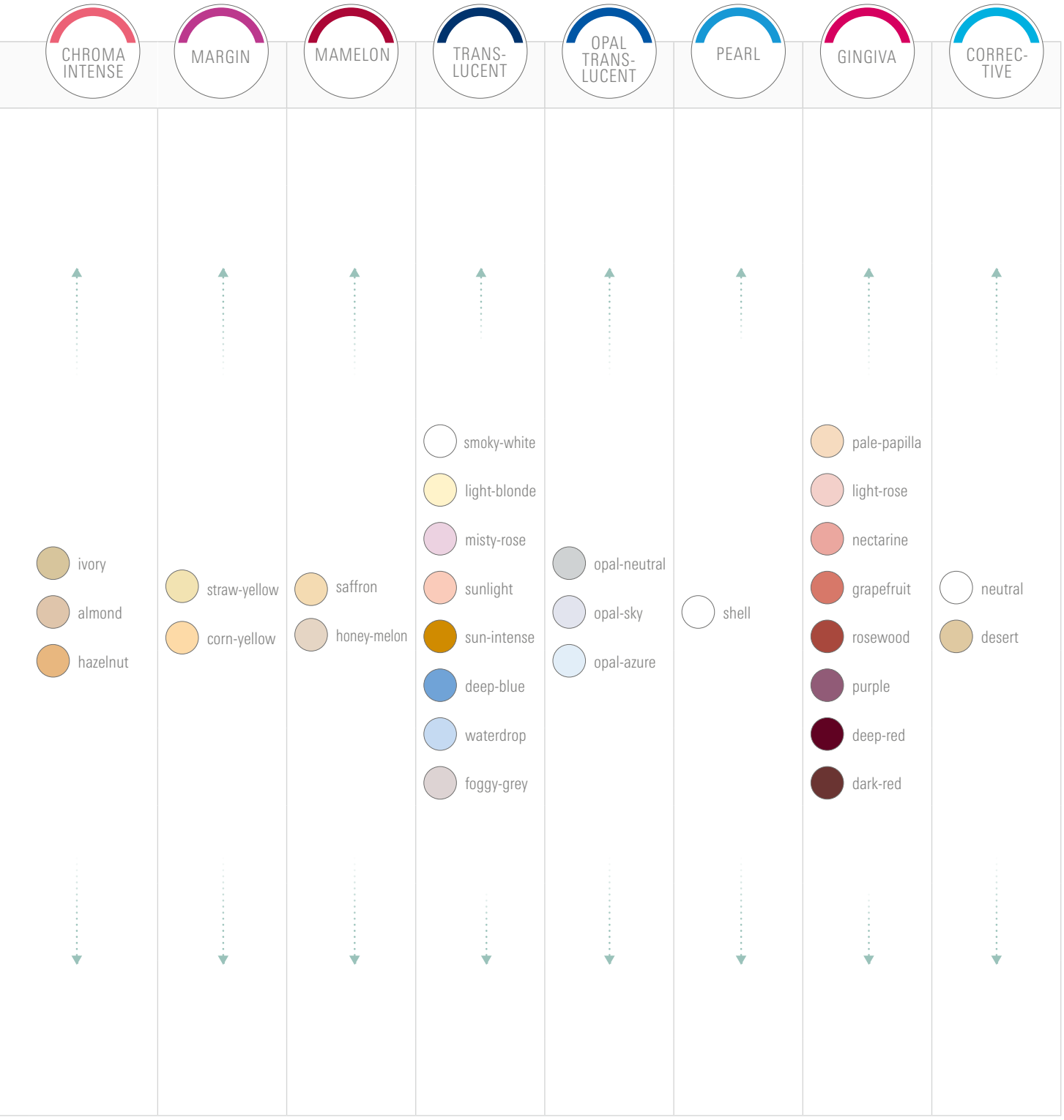
** ENAMEL light is intended to achieve a translucent effect of the incisal edge. If a higher opacity is desired, TRANSLUCENT light-blonde, for example, can be used for lighter tooth shades, and TRANSLUCENT smoky-white for bleach shades.

7. Shade reproduction/firing

7.3 Shade reproduction according to VITA SYSTEM 3D-MASTER

	OPAQUE	POWER WASH	OPAQUE DENTINE	DENTINE	ENAMEL**		FLUO INTENSE	DENTINE MODIFIER
3M3	opaque-3	LL3	3M3	3M3	light	clear fog	arctic-white cream cappuccino* sand sesame	cloudy-white caramel honey copper brown
3R1.5	opaque-3		3R1.5	3R1.5	light			
3R2.5	opaque-3		3R2.5	3R2.5	medium			
4L1.5	opaque-4	LL4	4L1.5	4L1.5	light			
4L2.5	opaque-4		4L2.5	4L2.5	light			
4M1	opaque-4		4M1	4M1	light			
4M2	opaque-4		4M2	4M2	intense			
4M3	opaque-4		4M3	4M3	intense			
4R1.5	opaque-4		4R1.5	4R1.5	light			
4R2.5	opaque-4		4R2.5	4R2.5	intense			
5M1	opaque-5	LL5	5M1	5M1	light			
5M2	opaque-5		5M2	5M2	intense			
5M3	opaque-5		5M3	5M3	intense			

Note: The material classifications are only intended to provide reference values!



* Mixing ratio 1:1

** ENAMEL light is intended to achieve a translucent effect of the incisal edge. If a higher opacity is desired, TRANSLUCENT light-blonde, for example, can be used for lighter tooth shades, and TRANSLUCENT smoky-white for bleached shades.

8. Technical data/information

8.1 Technical / physical data

VITA LUMEX® AC		
Physical properties	**Unit of measure**	**Value**
CTE (25– 400 °C)	10^{-6} K^{-1}	approx. 8.8
Solubility in acids	µg/cm^2	approx. 10
3-point flexural strength	MPa	approx. 100

8.2 Chemical composition

VITA LUMEX® AC	Wt%
SiO_2	60–75
Al_2O_3	3–10
K_2O	5–12
Na_2O	4–11
B_2O_3	5–12
CaO	< 3
Li_2O	< 3
Pigments	< 10

- The technical/physical values given are typical measurement results and refer to in-house manufactured samples and measuring instruments in the company.
- If samples are prepared using different methods and measurement equipment, other measuring results may be obtained.

8. Technical data/information

8.3 Intended purpose

VITA LUMEX AC products are ceramic materials for dental treatments.

8.4 Patient target group

No restrictions

8.5 Intended users

Dental professionals only: dentist and dental technician (Rx only).

8.6 Indications

Indications:

- Full and partial veneering made from zirconia
- Full and partial veneering made from lithium disilicate
- Partial veneering made from feldspar ceramics
- Reconstruction without substructure
- Full and partial veneering made from titanium grade 1 - 5

Materials:

- Zirconia substructures (CTE approx. 10.0 to 10.5 x 10^{-6} K^{-1})
- Glass ceramic substructures (CTE approx. 9.0 bis 10.5 x 10^{-6} K^{-1})
- Titanium substructures (CTE approx. 9.0 to 10.5 x 10^{-6} K^{-1})

8.7 Notes on contraindications

- Substructures with unsuitable CTE values and material properties.
- Patients with allergies or sensitivities to the ingredients.
- Insufficient space available.

Please note

The veneering ceramic VITA VM 11 must be used for the product VITA SUPRINITY PC (zirconia reinforced lithium silicate ceramic).

8.8 Notes on layering patterns

- When preparing a ceramic veneer, a uniform layer thickness across the entire surface to be veneered must be ensured.
- The entire thickness of the ceramic layer, however, should not exceed 2 mm (the optimal layer thickness ranges from 0.7 to 1.2 mm).

8. Technical data/information

8.9 Symbol explanations

Manufacturer VITA Zahnfabrik		Manufacturing date	
Medical device	MD	Shelf life	
For professionals only	Rx only	Product number	REF
Refer to instructions for use		Lot number (batch)	LOT
Recycling symbol	21 PAP		

Information on reporting serious incidents in connection with medical devices, general risks associated with dental treatments, residual risks and (if applicable) short clinical safety and performance reports (SSCPs) can be found at: **www.vita-zahnfabrik.com/product_safety**[1)].

The corresponding safety data sheets can be downloaded at **www.vita-zahnfabrik.com/SDS**[2)]

Products labeled with a hazardous substances pictogram must be disposed of as hazardous waste. Recyclable waste (e.g., accessories, paper and plastics) must be disposed of using appropriate recycling systems. If necessary, contaminated product residues should be pretreated in accordance with regional regulations and disposed of separately.

1)

2)

8.10 Safety at work/health protection

Safety at work and health protection	When work is in progress, wear suitable safety goggles/ face protection, gloves and safety clothing.	

Suitable solutions for processes.

Shade determination

VITA Easyshade V/VITA Easyshade LITE
or VITA Shade Guides

Framework completion

VITA YZ ZIRCONIA, VITABLOCS feldspar ceramic
or VITA AMBRIA lithium silicate ceramic

Veneering

VITA LUMEX AC

Characterization

VITA AKZENT Plus Stains and Glaze Materials

Firing

VITA VACUMAT 6000 M

Polishing

VITA CERAMICS Polishing Set

Bonding

VITA ADIVA LUTING SOLUTIONS

We are happy to help.

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Please note:

Our products must be used according to the instructions for use. We cannot be held liable for damages resulting from incorrect handling or usage. The user is furthermore obliged to check the product before use with regard to its suitability for the intended area of application. We cannot accept any liability if the product is used in conjunction with materials and equipment from other manufacturers that are not compatible or not authorized for use with our product and this results in damage. The VITA Module Box is not a necessary part of the product.
Publication of this product brochure:2024-03

On publication of these instructions for use, previous versions will no longer be valid. The current version in each case is available at www.vita-zahnfabrik.com

VITA Zahnfabrik is certified, and the following products bear the mark CE 0124: **VITA LUMEX®** AC, **VITA AKZENT®** Plus

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Rx Only MD

References

Internal studies, VITA R&D:
VITA Zahnfabrik H. Rauter GmbH & Co. KG
Research and Development Division
Spitalgasse 3, 79713 Bad Säckingen, Germany
Dr. Berit Gödiker, project manager for VITA R&D,
VITA Zahnfabrik, Bad Säckingen

Detailed test data
See Technical and scientific documentation
VITA LUMEX AC
Download from www.vita-zahnfabrik.com

CH REP VITA Zahnfabrik H. Rauter GmbH & Co.KG,
Bad Säckingen (Germany)
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Max Kampf-Platz 1, 4058 Basel

Additional information on
VITA LUMEX AC
www.vita-zahnfabrik.com/lumex

VITA LUMEX® AC

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