

# VITA AKZENT® Plus

## Working Instructions



VITA shade taking

VITA shade communication

VITA shade reproduction

VITA shade control

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VITA shade, VITA made.

**VITA**

CTE-independent stains  
for finishing, coloring and glazing.  
Available as a powder, paste and spray.



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VITA AKZENT Plus materials are fluorescent ceramic stains which can be used for internal coloring during layering or external finishing and glazing independent of the CTE. All types of restorations can be easily and safely optimized thanks to the homogeneous formula and the wide temperature range.

The new finishing BODY STAINS feature particular translucency and are used especially for surface staining if the shade effect of the base material is to be changed. The BODY STAINS produce the effect of a thin color filter. Thanks to their thixotropic consistency, the BODY STAINS can be easily applied across large areas.

The extremely fine-grained masking stains (EFFECT STAINS) offer excellent coverage thanks to the intensive appearance of each shade. They are recommended for applying natural surface effects.

Depending on the requirements, three different glaze materials are available for homogeneous glazing.

GLAZE is suitable to produce a glass-like surface.

A special low-melting glaze material is now available for ceramics with firing temperatures below 800 °C: VITA AKZENT Plus Glaze LT (Low Temperature).

FINISHING AGENT is the perfect material to create a silky matte veneer surface.

Whether as a powder, paste or spray - VITA AKZENT Plus stains are available in different forms.

### **Range of applications**

- For internal shade modification and external characterization
- Can be thinned and mixed with one another or used in the pure form
- For shade adaptation and shade adjustment towards reddish, yellowish and brownish
- Compatible with all dental ceramic materials:
  - CAD/CAM materials (such as VITABLOCS)
  - All-ceramics (such as VITA VM 9)
  - Metal ceramics (such as VITA VM 13)
  - Press ceramics (such as VITA PM 9)
- Suitable for firing temperatures from 780 °C to 950 °C.
- CTE independent











VITA AKZENT Plus materials can be used individually:

- To imitate cracks in the enamel or calcification.
- To prepare secondary dentin of abrasion surfaces.
- To increase the translucency by using violet and blue shades.
- To imitate effects of depth and height by using darker and lighter shades.
- To increase or reduce the lightness value.






**VITA AKZENT Plus EFFECT STAINS**

- Highly chromatic and opaque stains
- To reproduce individual shades and to adapt the shade to the characteristics of a natural shade
- When applied thickly, they will cover the underlying base shade completely.

ES01	white	
ES02	cream	
ES03	lemon-yellow	
ES04	sunshine yellow	
ES05	orange	
ES06	russet	
ES07	khaki	
ES08	pink	
ES09	dark red	
ES10	lilac	
ES11	blue	
ES12	grey-blue	
ES13	grey	
ES14	black	

**VITA AKZENT Plus BODY STAINS**

- Translucent finishing materials that have the effect of a thin color filter on the base material
- Especially for subtle characterization
- Color changes and color shifts towards reddish, yellowish, orange, brownish or grey-greenish
- If applied several times, the intensity of the color is increased.

BS01	yellow	
BS02	yellow-brown	
BS03	orange	
BS04	olive-grey	
BS05	grey-brown	



**VITA AKZENT Plus BODY STAINS POWDER**

- Consistency can be adjusted by adding different quantities of liquid.
- The powder materials are perfectly suitable for mixing with the ceramic layering materials (add max. 5 % of stain powder) and for intensifying the shade of these materials.
- The AKZENT Plus materials can all be mixed with one another.
- Unlimited flexibility and cost-effectiveness since materials have unlimited shelf life.



Mixing the powder materials:

The powder is mixed with POWDER FLUID to obtain a creamy consistency.  
 Mixing ratio: approx. 1 measuring spoon: approx. 2 drops of POWDER FLUID  
 (consistency can be individually adjusted)



Perfect consistency (center of the photo)

- The material has been homogeneously mixed with the liquid and has a creamy consistency (to the right: too liquid; to the left: too firm and lumpy).
- The materials should be mixed at least 12 hours before first use. This will ensure that all stain particles are completely saturated with liquid.



Highly liquid consistency (to the right)

After some time the material settles and only liquid can be seen on the surface. The original consistency can be obtained by mixing again with a glass spatula.

Lumpy consistency (to the left)

- The stain particles are not completely mixed.
- Several stain particles form lumps so that homogeneous processing is no longer possible. Shades with undesired spots may result after firing.



#### **VITA AKZENT Plus BODY STAINS PASTE**

- Ready-to-use pastes with constant consistency and homogeneous pigmentation
- Thixotropic properties to ensure simple and accurate application.
- Can be mixed with one another to achieve individual shade effects.



- The STAINS PASTE should be stirred thoroughly with the enclosed spatula before first use.
- PASTE FLUID is mixed with dried pastes to obtain the original consistency.



#### **VITA AKZENT Plus BODY SPRAY**

- The spray stains are ready for use and easy to apply.
- Ideal for staining large surfaces, especially for monolithic restorations.



- Thanks to the special spray head, controlled and efficient spraying is enabled.
- Accordingly, uniform application and a homogeneous surface are ensured.





**VITA AKZENT Plus GLAZE**

- Glaze material for a brilliant, glass-like, homogeneous and dense surface after firing.



**VITA AKZENT Plus GLAZE LT**

- LT = Low temperature
- Low-melting glaze material especially for ceramics with firing temperatures below 800 °C
- The firing temperature of the EFFECT and BODY STAINS can be changed by adding GLAZE LT.



**VITA AKZENT Plus FINISHING AGENT**

- For a natural surface texture
- Can be used as a neutral-colored carrier material for thinning all Effect Stains.
- Perfectly suited for mixing a creamy, moldable material that can be used for minor adjustments, such as creating a contact.



**VITA AKZENT Plus POWDER KIT**

- POWDER FLUID can be used to mix all VITA AKZENT Plus powder materials and obtain a moldable mixture with a paste-like consistency.



**VITA AKZENT Plus PASTE FLUID**

- The PASTE FLUID has been especially adjusted to maintain the consistency of the pastes.
- It is used to mix almost dried and dried pastes again without changing the physical properties of the pastes.
- The paste fluid can also be used to obtain a thinner consistency of the pastes. As a result, the viscosity and flowability of the pastes can be changed.
- If the pastes are thinned excessively, the pastes will have a reduced degree of gloss after firing since the mixture does not contain enough glass powder.



**VITA AKZENT Plus mixing plate**

- 22 depressions for mixing all powder stains and glaze materials
- One large depression as a liquid reservoir with small ring-shaped sponge



**VITA AKZENT Plus shade sample disc**

- Disc with printed shade samples to assess the shade effect of the stains after firing
- 14 EFFECT STAINS
- 5 BODY STAINS



### VITA AKZENT Plus POWDER KIT

Quantity	Contents	Material
14	3 g	EFFECT STAINS POWDER, ES01-ES14
5	3 g	BODY STAINS POWDER, BS01-BS05
1	5 g	GLAZE
1	5 g	GLAZE LT
1	5 g	FINISHING AGENT
1	20 ml	POWDER FLUID
1	Quantity	Mixing plate incl. shade sample disc
1	Quantity	Glass spatula
1	Quantity	Measuring spoon (0.1 ml)
1	Quantity	Brush No. 3/0
1	Quantity	Advertising material



### VITA AKZENT Plus PASTE KIT

Quantity	Contents	Material
14	4 g	EFFECT STAINS PASTE, ES01-ES14
5	4 g	BODY STAINS PASTE, BS01-BS05
1	4 g	GLAZE PASTE
1	4 g	GLAZE LT PASTE
1	4 g	FINISHING AGENT PASTE
1	15 ml	PASTE FLUID
1	Quantity	Shade sample disc
1	Quantity	Mixing plate, crystal glass
1	Quantity	Glass spatula
1	Quantity	Flat brush
1	Quantity	Brush No. 3/0
1	Quantity	Advertising material



### VITA AKZENT Plus SPRAY KIT

Quantity	Contents	Material
5	75 ml	BODY SPRAY, BS01-BS05
1	75 ml	GLAZE SPRAY
1	Quantity	Shade sample disc
1	Quantity	Advertising material

Similar to the art of painting, the dental technician's task is to create various shade effects by applying stains to light surfaces when individualizing restorations. The creation of the various shade effects can be explained using the method of subtractive mixing of colors. In this context, subtractive means that, by applying color, specific spectral elements are subtracted from the "white" daylight under which the restoration is viewed. The applied stain acts as a spectral filter - the spectral composition of light is changed by the applied stain and a modified color effect is achieved for the stained restoration. From color theory it is known that any conceivable color can be created by mixing a few base colors - the so-called primary colors.

If the colors that are used are translucent, the three primary colors cyan, magenta and yellow will be sufficient to create all visible colors. The characteristic of translucency allows the creation of the same color effect through sequential application of various stains in lieu of mixing the stains together first and applying the resulting mixture. The desired shades can be achieved both by mixing and "layering" of the stains. Repeated application of the same stain or mixture increases the shade effect of the stain; in terms of color theory, the shade intensity is increased. In addition to hue and intensity (chroma), lightness is particularly important since human eyes are particularly sensitive to differences in lightness. In addition to a large number of various shades, the VITA AKZENT Plus system includes the neutral stains black, white and grey to enable technicians to adapt the lightness easily and quickly. The use of these neutral-colored stains does not change the shade of the underlying surface but modifies the lightness and the intensity.

To achieve the desired shade effect quickly and with a minimized number of mixing or staining processes, the EFFECT STAINS include eleven different colors - instead of the three primary colors considered to be sufficient in color theory - which can be combined to create any type of characterization.

The concept of the VITA AKZENT Plus stains enables multistage individualization, allows fast customization of temporaries and meets highest expectations on esthetic permanent restorations. In a first step, the technician can adapt the base shade of the restoration to the natural tooth shade. The translucent BODY STAINS are particularly suited for this objective. By combining them with the EFFECT STAINS white, grey and black, they provide full coverage of the color space of natural teeth and all natural base shades can be prepared. If the suitable base shade is obtained, the EFFECT STAINS offer numerous options for local characterization and adapting the shade. The shade effect of the individual EFFECT STAINS depends on the base shade to which they are applied; regardless of that, the laws of color theory apply. A color can be neutralized, for example, by coating it with the corresponding complementary color. The most important complementary colors are, for example, cyan to red (cyan is formed by the overlap of green and blue) and blue to yellow.



**Mixtures of EFFECT STAINS + FINISHING AGENT**

First the FINISHING AGENT powder is mixed with POWDER FLUID to obtain a creamy consistency.

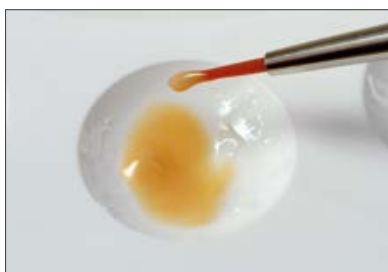
Then the desired and mixed EFFECT STAINS material is added drop by drop ...



... and mixed with the FINISHING AGENT.



Different mixing ratios allow control of the intensity of the shade.



If the mixed material is very creamy, contacts, for example, can be very easily applied.

**Adapting tooth shades**

- The shade can be adapted through the use of the three complementary stains.
- If the restoration is too green, a reddish stain (ES08 or ES09) can be used to reduce the effect.
- If the restoration is too red, the green stain (ES07) can be used to reduce the effect.
- White, grey or black stains, for example, can be used to adapt the lightness.



From too yellow towards reddish  
Example: Base shade 4L2.5 + BS03  $\approx$  4R2.5



From red towards yellowish  
Example: Base shade 2R1.5 + BS01  $\approx$  2L1.5



From greyish towards reddish-brownish  
Example: Base shade C3 + BS01/BS03  $\approx$  A3



### Influence of the color of the stump

When using glass-ceramic blocks, the color of the stump has considerable influence on the final result. The final result may be changed significantly depending on the selected stain.

To the left in the photo: VITABLOCS Mark II 2M2 without color of the stump: to the right: with color of the stump.

The color of the stump may affect the result significantly.



### Use of BODY SPRAY

Base material: 2M2 VITABLOCS

BODY SPRAYS can be used to change the base shade significantly. Depending on the base shade, more or less influence on the final result is possible.



BS01



BS02



BS03



BS04



BS05



Base material: white VITA In-Ceram YZ

The BODY SPRAY stains can be used to adapt the zirconium dioxide to the remaining teeth.

Their use enables shade approximation in the lightness levels 1 and 2 for white VITA In-Ceram YZ.

The shade results shown below were produced using two layers of BS. To obtain shade results with even higher intensities, additional layers of BS can be sprayed on. For lightness level 3 or higher, the use of a precolored block or manual coloring of the restoration prior to sintering is recommended.



BS01 (yellowish)



BS02 (yellowish-brownish)



BS03 (orange)



BS04 (olive-greyish)



BS05 (greyish brownish)



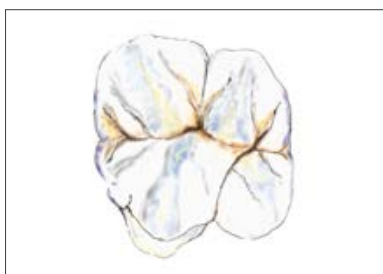
**Juvenile anterior tooth**  
Neck area: BS01 and BS02  
Incisal area: ES10 and ES11



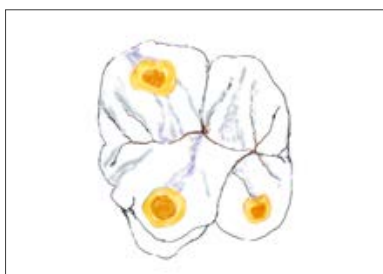
**Older anterior tooth**  
Neck area: BS04 and ES02  
Body area: ES02  
Incisal area: ES12 and ES13



**Aged anterior tooth**  
Neck area: ES07  
Body area: BS05  
Incisal area: ES01, BS03, ES13



**Juvenile posterior tooth**  
Fissures: ES07  
Cusps: ES03, ES10, ES11, ES12



**Aged posterior tooth**  
Abrasion spots: ES04 and ES05  
Fissures: ES06 and ES07  
Cusps: ES10 and ES11





For stains fixation firing, the stains are applied to the respective areas of the restoration and fired subsequently.

**Recommended firing temperature - stains fixation firing**

	Predry. °C	min	min	°C/min	Temp. approx. °C	min	Vac. min
Ceramic firing temperature $\geq 880$ °C	500	4.00	4.23	80	850	1.00	–
Ceramic firing temperature $< 880$ °C	400	4.00	3.45	80	700	1.00	–



After fixation firing, the shade can be verified and intensified in a second firing process if required.

Then the glaze material is spread across the entire restoration and fired.



The completed restoration has a surface with a natural gloss.



### **VITA AKZENT® Plus GLAZE/BODY SPRAY**

GLAZE SPRAY can be used as an alternative to the powder and paste materials.

Observe the following procedure:

- Prepare the restoration for stains and glaze firing as usual (surface texture, shape, etc.).
- Clean the restoration with ultrasound in a water bath and/or with a steam jet.
- If you wish to characterize the restoration, apply a small quantity of glaze and stain liquid to the surface in a preparatory step to improve wetting of the stains.
- Hold the restoration with tweezers.
- In the case of bridges, make sure not to apply any material to the inner surfaces of the anchor crowns.
- Shake spray can well immediately before use.
- A distance of approx. 10 cm between the spray head and the surface to be sprayed is required.
- Spray from all sides to apply a uniform layer of GLAZE SPRAY to the (characterized) restoration.  
Shake the spray can well between individual bursts!
- The can should be held upright during spraying.
- Wait briefly until the glaze layer is dry and a uniform whitish layer can be seen. If required, spray again.
- If glaze material has been applied to the inner surfaces of the restoration, it should be removed with a dry short-haired brush.
- Place the restoration on a firing tray for (stains firing and) glaze firing and fire according to the firing parameters.
- If spray needs to be applied again after firing, spraying and firing can be carried out in the same way.



Optimal layer thickness

The prepared surface texture is fully preserved if the spray is applied once. The gloss of the restoration is identical to the one of a natural surface.



If the spray is applied too thinly, the shade of the restoration will shine through. A matte surface may result.



If the spray is applied too thickly or repeatedly, the surface texture will be affected.

It will be no longer visible after firing. The restoration exhibits a strong unnatural gloss and bubbles may form on the surface.

## VITA AKZENT® Plus Firing parameters

The firing table below shows initial values based on glaze firing of various materials.

Owing to different characteristics of the various furnaces, the temperatures indicated may slightly vary depending on the type of furnace and the heating muffle. Previous tests should be carried out to achieve the desired result.

- The temperature depends on the respective material and furnace (age, type, etc.)
- Depending on the consistency used, this will also influence the predrying temperature.
- If additional stains or glaze material need to be applied to a fired crown, the temperature for stains firing may be slightly reduced while the other parameters remain unchanged.

### POWDER glaze firing

BODY STAINS, EFFECT STAINS, GLAZE, GLAZE SPRAY, BODY SPRAY, FINISHING AGENT, GLAZE LT

	Predry. °C	min	min	°C/min	Temp. approx. °C	min	Vac. min	°C
VITABLOCS	500	4.00	5.37	80	950	1.00	–	–
VITA VM 7	500	4.00	5.00	80	900	1.00	–	–
VITA VM 9	500	4.00	5.00	80	900	1.00	–	600
VITA PM 9	500	4.00	3.15	80	780	1.00	–	–
VITA VM 9 ADD-ON	500	4.00	3.15	80	780	1.00	–	600
VITA VM 13	500	4.00	4.45	80	880	1.00	–	–
VITA VM 15	400	4.00	4.45	80	780	1.00	–	–
VITA TITANIUM PORCELAIN	400	4.00	4.00	93	770	1.00	5.00	400
VITA VMK Master	500	4.00	5.15	80	920	1.00	–	–
Glaze firing GLAZE LT powder	400	4.00	4.45	80	780	1.00	–	–

### PASTE glaze firing

BODY STAINS, EFFECT STAINS, GLAZE, FINISHING AGENT, GLAZE LT


	Predry. °C	min	min	°C/min	Temp. approx. °C	min	Vac. min	°C
VITABLOCS	500	6.00	5.37	80	950	1.00	–	–
VITA VM 7	500	6.00	5.00	80	900	1.00	–	–
VITA VM 9	500	6.00	5.00	80	900	1.00	–	600
VITA VM 13	500	6.00	4.45	80	880	1.00	–	–
VITA VMK Master	500	6.00	5.15	80	920	1.00	–	–
Glaze firing GLAZE LT paste	400	6.00	4.45	80	780	1.00	–	–

### Stains fixation firing


	Predry. °C	min	min	°C/min	Temp. approx. °C	min	Vac. min	°C
Ceramic firing temperature $\geq 880$ °C	500	4.00	4.23	80	850	1.00	–	–
Ceramic firing temperature $< 880$ °C	400	4.00	3.45	80	700	1.00	–	–

**Explanation of the firing parameters**

Predry. °C	Start temperature
→ min	Preheating time in minutes, closing time
↗ min	Heating time in minutes
↗ °C / min	Temperature rise rate in degrees Celsius per minute
Temp. approx. °C	End temperature
→ min	Holding time for end temperature
Vac. min.	Vacuum holding time in minutes
↘ °C	Cooling temperature

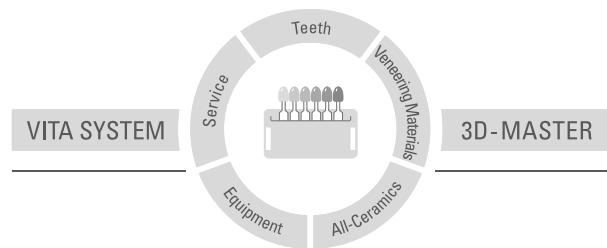
<p><b>VITA AKZENT Plus BODY SPRAY / GLAZE SPRAY</b></p>	<p><b>Extremely flammable aerosol.</b></p> <p>Spray-on ceramic glaze material. For dental applications only. Not for intraoral use.</p> <p>Shake well before use. Pressurized container: do not puncture or burn. Protect from direct sunlight and temperatures above 50 C°. Do not pierce or burn even after use. Do not spray into flames or onto glowing objects. Keep away from ignition sources. - No smoking. Keep away from heat, sparks, open flame and hot surfaces.</p>	
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For detailed information, please refer to the respective safety data sheet.

<p><b>Safety at work and health protection</b></p>	<p>In case of formation of dust, use an extraction system or wear a face mask.</p>	
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With the unique VITA SYSTEM 3D-MASTER, all natural tooth shades can be systematically determined and perfectly reproduced.



**Please note:** Our products should be used according to the working instructions. 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 applications. We cannot accept any liability if the product is used in conjunction with materials and equipment from other manufacturers which are not compatible or not authorized for use with our product. Furthermore, our liability for the correctness of this information is independent of the legal ground and, in as far as legally permissible, is limited to the invoiced value of the goods supplied excluding turnover tax. In particular, as far as legally permissible, we do not assume any liability for profit loss, for indirect damages, for consequential damages or for claims of third parties against the purchaser. Claims for damages based on fault liability (fault in making the contract, breach of contract, unlawful acts, etc.) can only be made in the case of intent or gross negligence. The VITA Module Box is not necessarily a component of the product.

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VITA Zahnfabrik is certified according to the Guideline for Medical Devices and VITA AKZENT Plus bears the CE mark  0124:

VITA AKZENT® Plus

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