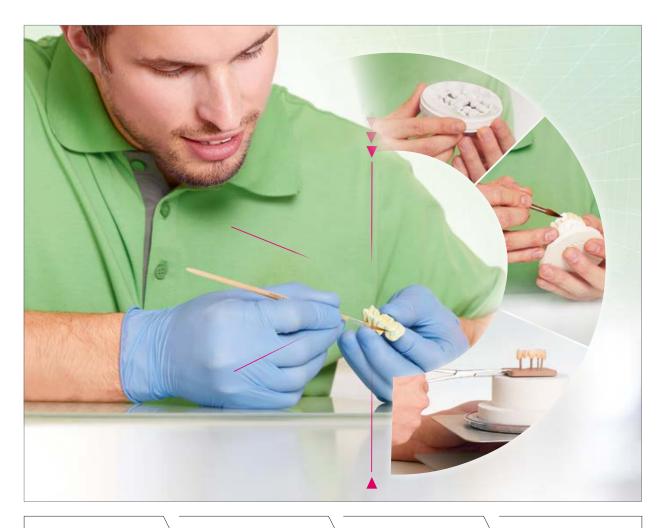
VITA YZ® SOLUTIONS

Instructions for use



VITA shade determination

VITA shade communication

VITA shade reproduction

VITA shade control

Date of issue: 2022-06

VITA – perfect match.



The system solution for precise, efficient and true-to-shade zirconia reconstructions



Dear Customers,

Congratulations and thank you for choosing VITA YZ SOLUTIONS!

VITA YZ SOLUTIONS is a coordinated material system made from zirconia blanks and accompanying system components. This enables a precise and accurate shade production of veneered and monolithic restorations.

To process all **VITA YZ** SOLUTIONS system components safely and simply, please read these instructions all the way through before the first use.

For detailed information on the accompanying system components, please read all instructions for use provided in the relevant chapters for the system component. I hope you enjoy your VITA products and materials and achieve great results!

Marion Baumgartner

Product manager for CAD/CAM materials

Explanation of symbols:







Process

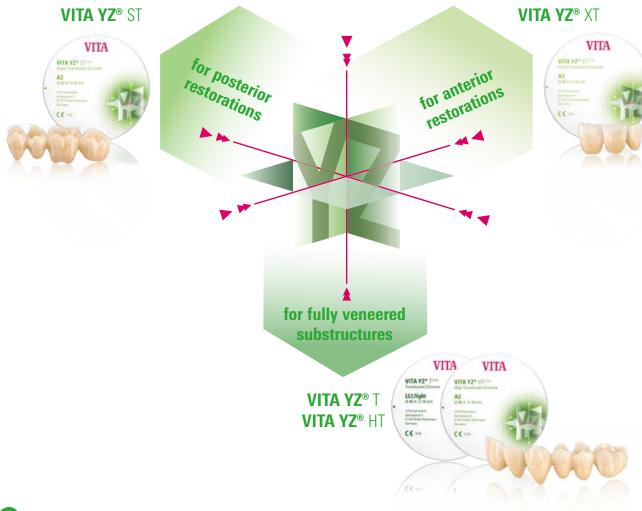






1. Material system/processes

> 1. Material system/processes 2. CAD process/design guidelines



- Note:
 - What? VITA YZ SOLUTIONS includes zirconia blanks in four degrees of translucency with matched system components for reliable shade reproduction.
 - What for? VITA YZ blanks can be used for the production of fully/partially veneered reconstructions and monolithic bridge restorations in the anterior and posterior tooth regions.
 - With what? VITA YZ blanks come in many different versions: T (Translucent), HT (High Translucent), ST (Super Translucent), XT (Extra Translucent), White (uncolored), Color (monochrome, tooth-shaded), Multicolor (polychrome, tooth-shaded)

1.1 Restoration concepts and processing variants

Material type	Manual	Monolithic solution	Partially/fully veneered solutions					
	coloring technique	Staining technique	Partial veneering	Full veneering Layering technique	Full veneering Press-to technique			
VITA YZ XT	Brush technique	•	•	0	×			
VITA YZ ST	Brush technique	•	•	0	×			
VITA YZ HT	Brush technique	0	0	•	0			
VITA YZ T	Immersion technique	_	0	•	•			
recommended	0	possible	× not possible	— not recomm	nended			



- Available VITA materials for the above processing options:
 - Shading technique: VITA YZ XT SHADE LIQUID, VITA YZ ST SHADE LIQUID, VITA YZ HT SHADE LIQUID and

VITA YZ EFFECT LIQUID primarily for brush technique and VITA YZ T COLORING LIQUID for

immersion technique (each one to be applied prior to sintering).

• Staining technique: VITA AKZENT Plus STAINS and GLAZE for shade characterization and

glazing of VITA YZ restorations.

o Partial veneering (layering technique):

VITA VM 9 ADD-ON for the partial veneering of previously manually colored, anatomically reduced crowns and bridges made of VITA YZ^{White}; VITA VM 9 for the partial veneering of pre-colored, anatomically reduced restorations made of VITA YZ^{Color}/YZ^{Multicolor}.

• Full veneering (layering technique):

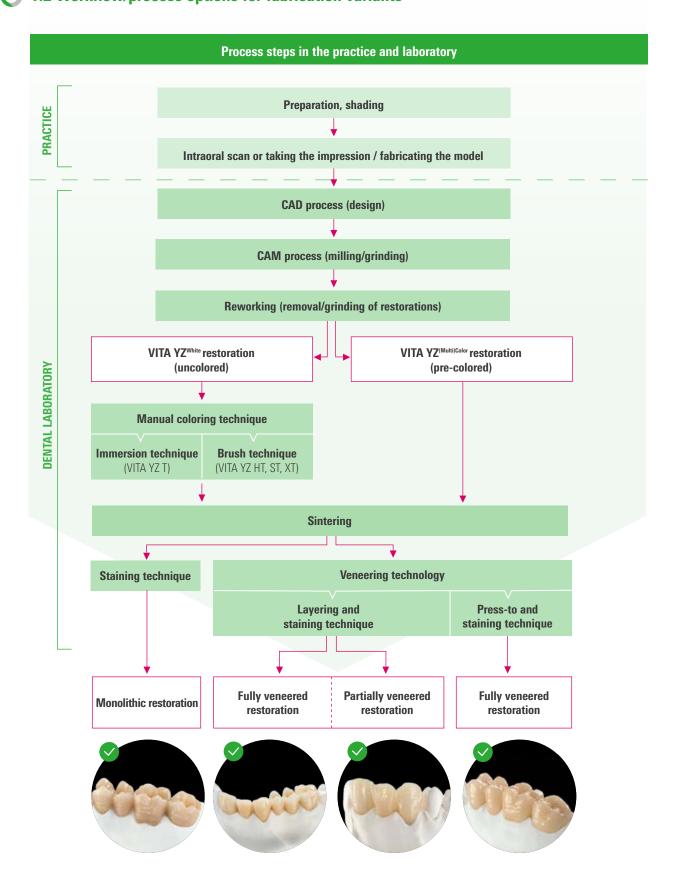
VITA VM 9 for the full veneering of crowns and bridge substructures.

 \circ Full veneering (press-to technique):

VITA PM 9 for pressing to VITA YZ T substructures.

1.2 Workflow/process options for fabrication variants

> 1. Material system/processes 2. CAD process/design guidelines





2. CAD process/design guidelines

1. Material system/processes > 2. CAD process/design guidelines 3. CAM process/reworking

2.1 Design parameters

All information refers to		Minimum	wall thickne	ess in mm		Connector cross-sections in mm ²			
sintered restorations		VITA YZ	VITA YZ HT	VITA YZ ST**	VITA YZ XT	VITA YZ	VITA YZ HT	VITA YZ ST	VITA YZ XT
Inlay, onlay, veneer	incisal occlusal circumfer- ential	0.5 0.5 0.4	0.5 0.5 0.4	0.6 0.6 0.5	0.8 0.8 0.7	_	_	_	_
Anterior and posterior crowns (fully anatomical or substructure)	incisal occlusal circumfer- ential	0.5 0.5 0.4	0.5 0.5 0.4	0.6 0.6 0.5	0.8 0.8 0.7	_	_	_	_
Fully anatomical anterior bridges and substructures with one pontic*	incisal circumfer- ential	0.5 0.5	0.5 0.5	0.6 0.6	1.0 0.8	7	7	9	9
Fully anatomical posterior bridges and substructures with one pontic*	occlusal circumfer- ential	0.6 0.5	0.6 0.5	0.7 0.6	1.2 1.0	9	9	12	12
Fully anatomical multi- unit anterior bridges and substructures with two pontics	incisal circumfer- ential	0.6 0.5	0.6 0.5	0.8 0.6	_	9	9	12	_
Fully anatomical multi- unit posterior bridges and substructures with two pontics	occlusal circumfer- ential	0.7 0.6	0.7 0.6	0.8 0.6	_	12	12	15	_
Cantilever bridges with one extension	incisal occlusal circumfer- ential	0.7 0.7 0.5	0.7 0.7 0.5	0.8 0.8 0.6	_	12	12	15	_

Note:

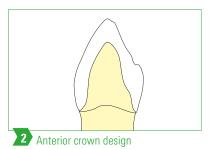
- The minimum wall thicknesses refer to fully sintered restorations.
- The cantilever bridge unit should be modeled approximately one-third narrower in its mesiodistal dimension.

^{*)} VITA YZ XT is limited to a maximum of three units.

**) VITA YZ ST is limited in Canada, to bridges with six units.

2.2 CAD: design of fully anatomical restorations





Note:

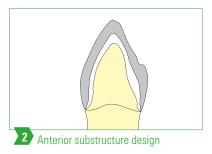
- The applicable minimum wall thicknesses for the respective material variant must be observed.
- The goal is to obtain a uniform wall thickness.

Note

• You will find information on ceramic-compatible preparation in the brochure "Clinical Aspects," No. 1696.

2.3 CAD: Substructure design for veneered restorations



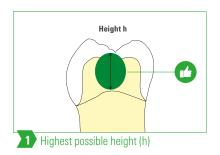


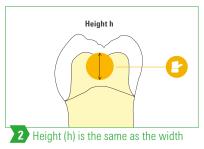
Note:

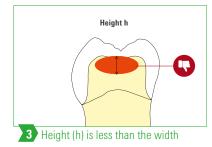
- Sharp edges on the substructure should generally be avoided.
- Minimum wall thicknesses for substructures must be observed.
- When designing substructures, an anatomically reduced tooth shape must be observed.
- The cusp should be supported according to the anatomical progression.
- When preparing 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, is not to exceed 2 mm (the optimum layer thickness ranges from 0.7 to 1.2 mm).



2.4 CAD: design of the connectors



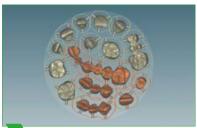




Note:

- The height of the connector surfaces is the highest possible that can be selected (Fig. 1).
- The height should be at least as high as the width (Figs. 1 and 2).
- Sharp corners and edges are to be avoided.

2.5 CAD: positioning of restorations in the blank







The printed side corresponds to the incisal or occlusal side

Note:

• It must be ensured that the milling area limits of the objects overlap, but do not project into other restorations (exception: the restorations have common connectors).

- For wide-span bridge constructions, position the dental arch parallel to the edge of the disc.
- The color-printed side of a multicolor disc corresponds to the incisal/occlusal and the opposite side to the cervical (chromatic) side.
- The multicolor discs must be positioned in the CAM unit so that the color printed side is aligned with the incisal/occlusal side of the restoration.
- The normal positioning of the restoration in the multicolor disc (relative to the disc height) is centered.

 This captures the entire color gradient. For restorations made of multicolor discs to have a clearly visible enamel area, they must be positioned in the CAM software as high as possible in the top of the disc.

2.6 CAD: use of connectors



Anterior tooth restoration with horizontally aligned connectors



Posterior tooth restoration with connectors

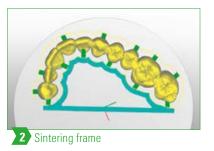
Note:

- For multi-unit restorations, the connectors should be attached orally and vestibularly.
- For each single-tooth restoration, ideally three connectors should be attached.

- The connectors should not be placed in the interdental area.
- So that no indentations or undercuts occur, the connectors should be placed in the area of the anatomical equator.
- The specifications of the respective software manufacturer must be observed.

2.7 CAD: use of the sintering support







skeletonization

1 Sintering tongue and sintering drops

Note:

• Sintering drops, sintering pins

- These are occlusal auxiliary overlays where the restoration can be stored horizontally during the sintering process.
- These are especially recommended for small, thin-walled and highly arched bridges as a supporting element.

• Sintering frames (software-dependent)

• Frame structure with strut recommended for bridges of seven or more units.

Sintering tongue (software-dependent)

- o However, the sintering tongue should always be skeletonized before sintering. This can be done by filling with other restorations within the sintering tongue.
- The cross-connection must not be interrupted by a restoration in the case of terminal pontics.

1. Material system/processes > 2. CAD process/design guidelines 3. CAM process/reworking

- For more than five-unit constructions made of VITA YZ T/HT/ST, a sintering support must already be constructed in the CAM process.
- If the sintering support consists of the remainder of the blank, its volume must be reduced to the extent (e.g., by inserting additional restorations) that uniform heating can be ensured during the sintering process.
- In doing so, the maximum thickness of the thickest bridge unit must not be exceeded.
- Care must be taken to insert as many connectors as possible.
- The specifications of the respective software manufacturer for the design of the sintering support must be observed.



3. CAM process/reworking

3.1 CAM fabrication/enlargement factor

2. CAD process/design guidelines > 3. CAM process/reworking 4. Coloring/sintering



Example: for assembly of CAM unit with blank



2 Enlargement factor as plain text on disc





4 Molar before and after sintering; sintering shrinkage of about 20 percent

Note:

- VITA YZ ST and XT materials must be milled absolutely dry, as this is the only way to ensure ideal light-optical properties (translucency).
- VITA YZ T and HT materials can be ground or milled both wet and dry.
- VITA Zahnfabrik determines the enlargement factor in all three spatial dimensions (X-, Y-, Z- direction) and integrates the information as plain text or barcode in the print on the blank.
- Depending on the software, the enlargement factor is queried for discs (e.g., 1.2264) or the
 corresponding X-, Y- (e.g., VGF: X, Y = 22.64) and Z-value (e.g., Z = 22.40). The corresponding value is
 then entered into the respective CAM software.
- For blocks, the barcode is scanned in the device. If this is not possible, the code can also be entered as plain text (e.g., *Z24809F).

Please note:

• If VITA YZ HT is processed wet, a cleaning firing must be conducted before further processing.

3.2 Reworking of restorations without sintering support



Milled restoration with connectors.



Detachment by tapering of the connectors.



Cut through tapered connector.



4 Grind connector with diamond or carbide burr.



5 Reduce marginal edges.



6 Careful, re-contouring of the fissures.



Slightly smoothing the surface.



8 Pre-polishing with a silicone-free rubber polisher.

Note:

- After the CAM process, for single crowns and bridge restorations without sintering support, cut all connectors halfway with a diamond or cross-cut carbide burr.
- In the next step, completely cut the connectors which attach to the retainers first, and only after that, cut the pontics.

- - Bridge restorations may not be separated approximally using a diamond separating disc, since this may result in breaking points on the connectors.
 - Functional surfaces are completely retained in the zirconia when using the cut-back technique, or else they need to be generously removed and then fully coated.
 - The manufacturer's instructions regarding minimum wall thicknesses must be observed.

3.3 Reworking of restorations with sintering support

2. CAD process/design guidelines > 3. CAM process/reworking 4. Coloring/sintering



1 Bridges with skeletonized sinter support following the milling process.



Tapering of the connectors on the vestibular side of the restoration.





vestibular connectors.



5 Separated and reworked restoration with sintering support.



- Bridges with eight or more units are not separated from the sintering support prior to sintering.
- Cut the connectors to be removed to half with an appropriate grinding instrument (tapering).
- Finally, carefully separate all vestibular connectors and the outer arch with a cutting disc.
- Carefully grind the outer connector shoulders.

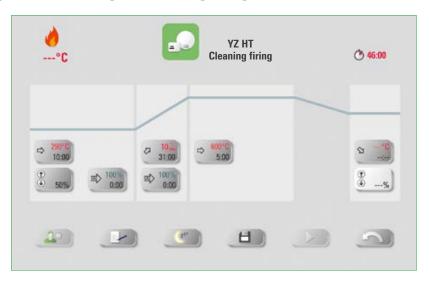
Please note:

- The reworking of VITA YZ restorations should always be carried out in the unsintered state.
- Only use suitable milling tools (e.g., fine-grain diamonds, fine-toothed carbide burs, zirconia stones), low speed (\leq 20,000 1/min) and little pressure. Avoid overheating the ceramic.
- Make sure that the minimum wall and connector thicknesses are maintained when reworking (see page 9).
- If the restoration is colored with liquids, the entire occlusal surface is easy to grind with a fine diamond, and the fissures are carefully traced to open the surface for liquid absorption.
- Before sintering, remove all milling dust from the restoration with a brush or oil-free compressed air.
- The restorations must not be sandblasted or cleaned with a steam jet before sintering!

- Tips:

- In order to facilitate high-gloss polishing of fully anatomical restorations, it is recommended to smooth the milled restoration before hard sintering with a smoothing instrument or to pre-polish the restoration with silicone-free polishers.
- For restorations that are manually colored, only coarse rubber polishers should be used to avoid "densification" of the surface and uneven staining.
- For pre-polishing, we recommend a PU-bonded rubber polisher.

3.4 Conducting the cleaning firing



Firing parameters/ program name	%	Predry. °C	→ min.	min.	°C/min.	T °C	→ min.	VAC min.
YZ T cleaning firing	50	500	3:00	6:00	33	700	5:00	_
YZ HT cleaning firing	50	290	10:00	31:00	10	600	5:00	_

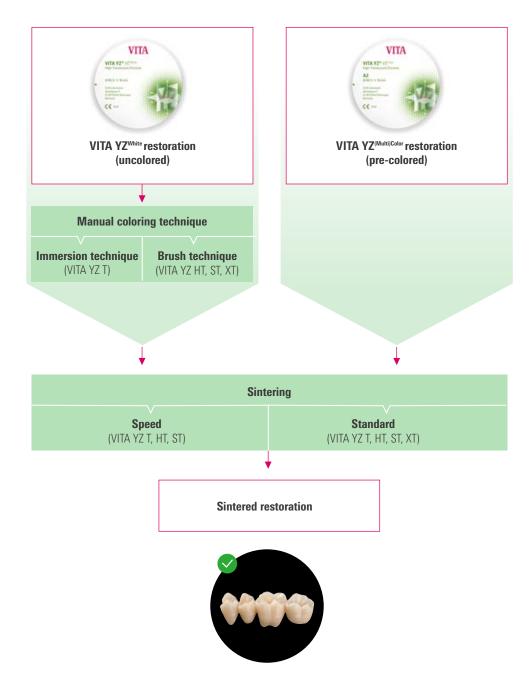
Note:

- Remove any traces of milling residue before sintering to avoid inaccuracy of fit caused by sintered on milling dust.
- If restorations made of VITA YZ HT are processed wet, a cleaning firing must be conducted prior to further processing in order to avoid unwanted turbidity.
- Cleaning firing after wet processing is generally recommended for thick restorations and restorations with sharp edges, in particular for implant-supported bridge structures, so that the moisture introduced by the abrasive does not cause sintering issues.
- Since VITA YZ ST and XT are dry milled, there is no cleaning firing.

4. Coloring/sintering



3. CAM process/reworking > 4. Coloring/sintering 5. Monolithic restoration





- VITA YZ TWhite variant is colored prior to sintering using immersion technique.
- VITA YZ HT, ST, XTWhite variants are colored before sintering using the brush technique.
- VITA YZ^{(Multi)Color} variants are already pre-colored and can be immediately sintered.

4.2 Manual coloring using immersion technique



Prepared substructure.



2 Immerse substructure in the coloring liquid with metal-free pincers ...

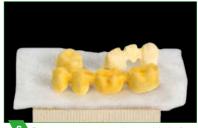




Then drain the restoration on a paper tissue.



Remove excess liquid.



6 Dry the restorations thoroughly before sintering.

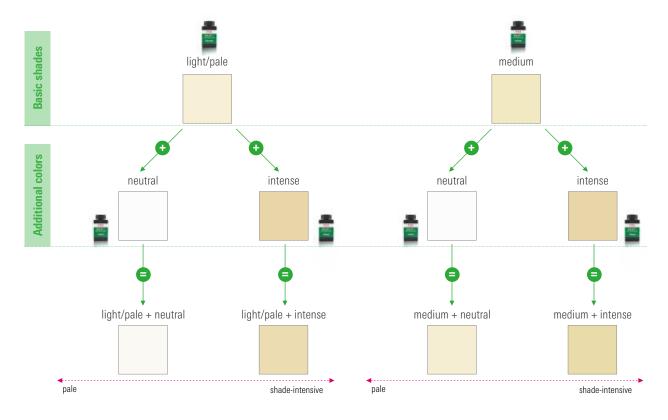


7 Substructure after sintering.

- The immersion technique is used for substructures made of VITA YZ TWhite using VITA YZ T COLORING LIQUID coloring liquids.
- The pontics of a reconstruction absorb more color pigments due to their high volume of material and may therefore have a more intense color.
- In order to counteract an increased color intensity of the pontics, they can be moistened slightly with distilled water using a brush before immersion.
- Information on drying restorations can be found on page 25.

Scheme for coloring with the immersion technique

3. CAM process/reworking > 4. Coloring/sintering 5. Monolithic restoration

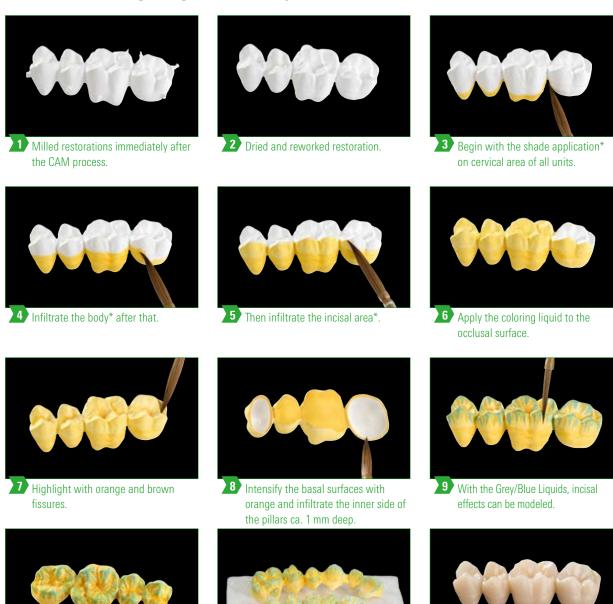


Note:

- VITA YZ T COLORING LIQUIDS are coloring liquids for coloring substructures made of VITA YZ T prior to the sintering process and are available in four different shades.
- The basic colors light/pale and medium are matched for shade reproduction with VITA VM 9.
- The additional "neutral" shade is suitable for the reduction of intensity (less chromatic) of light/pale
- The shade "Intense" intensifies (increases chromaticity) of both the basic shades light/pale and medium.
- The additional shades can also be used alone.

- Wet ground restorations should be freed of cooling and lubricating fluids before coloring with a cleaning firing (see page 51); otherwise, the porous structure will not be able to absorb any liquid.
- A substructure shade different from the basic shades (light/pale, medium) can influence the shade effect of the final result.
- In doing so, the shades can be controlled differently from the shade guide individually.

4.3 Manual coloring using brush technique



Note

• Shake the bottles of coloring liquid well before each use!

10 Finished, colored workpiece before

sintering.

• Dip a metal-free brush (e.g., YZ BRUSH) briefly into the appropriate liquid and then wipe off on the edge of the bottle or dab with a paper tissue.

Restoration on firing tray, ready for

pre-drying.

12 Bridge after sintering.

- For each brushstroke always proceed exactly the same way and paint according to the given pattern (see scheme for coloring with brush technique).
- In order to prevent the liquid from being thinned out and to avoid contamination, always wash and dry the brush completely after use and whenever a different color is used.
- Seal the bottle again tightly after using the fluid.

^{*)} For the shade reproduction using the brush technique, there are corresponding shade reproduction tables in the Chapter "Shade reproduction/firing."

Please note:

• For uniform coloring results, the restorations must be free of dust and oil.

3. CAM process/reworking > 4. Coloring/sintering 5. Monolithic restoration

- The restoration must not be moistened before coloring, as most areas will take up less of the coloring liquid. This can lead to an uneven shade result.
- The surface of the restoration should have a residual roughness. Therefore, it should not be too smooth, as this can hinder the penetration of the liquid.
- When using coolants and lubricants during the CAM process, a cleaning cycle should be conducted before coloring to remove them.

Example scheme for coloring using brush technique

SHADE LIQUID	Brush strokes	buccal	occlusal
A2	1x 2x 3x 4x		
A2	1x 2x 3x		
A2	1x 2x		
Chroma A	1x		
Blue	1x 2x		
Grey	1x		



• For coloring restorations made of VITA YZ HTWhite, VITA YZ STWhite or VITA YZ XTWhite, use the respective VITA YZ SHADE LIQUIDS harmonized to the translucency level.

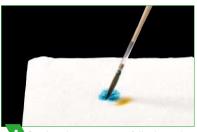
4.4 Notes on the use of coloring liquids



Alternatively, Pental brand brushes cal

Alternatively, Pentel brand brushes can also be used.

Always wash brushes out after use and when changing shades.



Brushes that are not carefully cleaned may contaminate other liquid colors.





Note:

- Keep the brush and the liquids away from metal (e.g., modeling instruments, devices, etc.) to prevent contamination.
- When using the additional colors, be sure to thoroughly clean the brush to avoid contamination with other colors.
- For EFFECT LIQUIDS, use of a separate brush is recommended.
- For brush infiltration, it is recommended to wear protective gloves.
 This prevents the formation of an oil film on the restoration, which can impair the infiltration of the coloring liquid.
- The indicator shade pigments that have been mixed with the product in order to achieve improved perceptibility of the dentin shade may evaporate after some time (e.g., if stored in a too bright location).
- These shade pigments can be added again using VITA YZ EFFECT LIQUID (1 cm of liquid each in the bottle corresponds to approx. one to two drops of VITA YZ EFFECT LIQUID Indicator).

- Constructions must not be sintered in a moist state.
- Follow the appropriate instructions on high-speed sintering!
- Do not refill any used liquid into the bottle as it may be contaminated with ceramic dust.
- Store the liquid in the working container for a maximum of one week, then dilute it and dispose of it through the sewer system, and use new liquid.
- For reconstructions made of VITA YZ HT, ST and XT, coloring with the brush technique using the respective
 VITA YZ SHADE LIQUIDS is recommended. Immersion technique can also be optionally used with these coloring liquids.

4.5 Drying the restorations

4. Coloring/sintering





Pre-Dry YZ SOLUTIONS

2 Drying the restorations under the infrared lamp.

3 Pre-Dry program.

Drying with an infrared lamp (250 watt)							
Time required for each type of restoration	Temperature ~ 70 °C						
Single tooth restorations	≥20 min.						
Restorations with two to four units	≥45 min.						
Restorations with five or more units	≥60 min.						

Drying with the Pre-Dry program									
Programs	%	TO °C	min.	°C/min.	T1 °C	→ min.	°C	%	
Pre-Dry	50	25	7.21	17	150	30:00	-	50	

Note:

- Before drying, the restoration must be free of dust and milling residue.
- · Before the sintering process, restorations must be sufficiently dry; otherwise, this could lead to damage to the sintering furnace or the restoration.
- For drying, either an infrared lamp (250 watt power) or the Pre-Dry program of the VITA ZYRCOMAT 6000 MS/6100 MS can be used.
- The drying time is dependent on the temperature and size of the restoration.

- If VITA YZ restorations have been infiltrated with liquids prior to the sintering process or wet grinding of VITA YZ T/HT reconstructions, subsequent drying is absolutely necessary.
- In the case of large, massive restorations, a prolongation of the pre-drying time is recommended.
- A pre-drying temperature above 100 °C cannot be recommended, since this may lead to defects in the restoration.

4.6 Preparation for sintering process



VITA
200-bats
WYEAV2
Linearing
150g
150g

Fill the sintering dish MS with sintering pearls (a pearl bed of at least three layers).



4 Use a second sintering dish MS with sintering stack supports for stacking or covering.



5 Sintering dish MS filled with restorations.



6 Stack sintering of color/multicolor restorations.



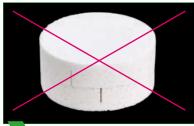
Stacks of sintering dishes MS for manually colored restorations.



8 Optional: covering of manually colored restorations.



 Simultaneous sintering of pre-colored color/multicolor and manually colored restorations.



Do not lay one sintering dish directly on top of the other.

Note:

- Place the sintering pearls in three layers in the sintering dish MS or directly in the sintering platform.
- To sinter several restorations at the same time (stack sintering), place a second sintering dish on top of the first sintering dish using sintering stack supports. Use a maximum of two sintering dishes. To do this, distribute the sintering dish supports evenly on the sintering dish or sintering platform and place the sintering dish MS on top of this.
- The sintering dish MS must only be stacked when using the appropriate universal programs! Stacking during speed sintering is not possible.

Recommendation for positioning of restorations in a sintering dish

3. CAM process/reworking > 4. Coloring/sintering 5. Monolithic restoration

Recommended **Possible** Not possible >Anterior crowns Place anterior crowns Place anterior restorations **NEVER** place restorations on the labial surface. on the oral surface. on the crown edges. Posterior crowns Place restorations on the **NEVER** place restorations occlusal surface. on the crown edges. > Anterior bridges Place restoration on the incisal edges Labial positioning of the bridges NEVER place restorations on and always support the bridge units, the crown edges. is possible. pressing in slightly, if necessary. Posterior bridges Place restorations on the Press restorations with occlusal Do not support restorations surfaces slightly into the pearl bed. labial or oral surface on the crown edges. Restorations > with sintering support Do not place restorations in the Place bridges vertically, directly Place bridges horizontally sintering dish with a sintering on the firing base. on the sintering support.

- · Always support crown and bridge constructions sufficiently over the entire surface with the bed of sintering beads.
- As an alternative to the use of sintering pearls, bridge constructions can be supported with sintering drops.
- The restorations must not touch each other.
- Larger workpieces or several units can be placed directly on the sintering platform, filled with sintering pearls or with the sintering support directly on the base.
- The sintering pearls must not be jammed into the connector area of the bridges.

4.7 Sintering programs of the VITA ZYRCOMAT 6000 MS/6100 MS



Note:

Universal program

o This is a conventional sintering program for all non-colored VITA YZ restorations.

• Universal Pre-Dry Program

• This is a conventional sintering program for all manually colored VITA YZ restorations with an integrated pre-drying phase for drying liquids.

Speed Program

This is for sintering in 80 minutes (for VITA YZ T and HT only). Speed sintering in less than 60 minutes for VITA YZ ST.

• Speed Pre-Dry Program

o This is a rapid sintering program for all manually pre-colored VITA YZT and HT restorations, including a pre-drying phase.

• Pre-Dry Program

• This is a drying program for manually colored VITA YZ restorations for drying liquids.

• YZ One for all

• This is a sintering program for the simultaneous sintering of various VITA YZ materials.

Please note:

- VITA YZ T and VITA YZ ST are sintered at 1530 °C, and VITA YZ HT and VITA YZ XT are sintered at 1450 °C.
- Only VITA YZ T and VITA YZ HT are approved for speed sintering (for bridges with up to 14 units).
 VITA YZ ST is approved for speed sintering (for bridges with up to three units).
 VITA YZ XT, on the other hand, is not approved for speed sintering.
- Only the sintering dish MS with sintering pearls is to be used in speed mode.
- Detailed information on the firing programs can be found in Chapter 8, "Shade reproduction/firing."

Note:

You can find information on operating the VITA ZYRCOMAT 6000 MS/6100 MS in Instruction Manual No. 1859.

4.8 Speed sintering after manual coloring

3. CAM process/reworking > 4. Coloring/sintering 5. Monolithic restoration







Alternatively, the restorations can also be covered.



3 Stacking the sintering dishes in speed mode is not possible.

When speed sintering manually colored reconstructions (see VITA YZ SHADE LIQUIDs), these can be covered with an MS sintering dish as a lid.

Please note:

- VITA YZ XT cannot be sintered in speed mode!
- The supports for sintering dishes may only be used for supporting the MS sintering dish as a cover.
- Stacking several dishes (double-stacked sintering) is not possible in speed mode.

4.9 Sintering in OEM devices

Note:

- VITA YZ materials can be sintered in all high-temperature sintering devices, which can be operated with the sintering parameters indicated.
- The respective manufacturer's specifications must be observed.
- VITA does not grant a warranty or accept any liability for damage resulting from processing VITA YZ materials in furnaces from other manufacturers.
- VITA YZ HT and VITA YZ ST can be sintered in the CEREC SpeedFire (Sirona Dental Systems GmbH). With a drying program integrated in the CEREC SpeedFire, restorations infiltrated with VITA YZ HT SHADE LIQUIDS can also be processed. Please read the instructions for the CEREC SpeedFire.

4.10 Reworking after the sintering process







2 Carefully separate the bridge construction.

Note

- After the sintering process and a cooling phase of at least 10 minutes at 200 °C, remove the restoration and carefully fit to the stump.
- For a bridge construction with sintering support, remove it very slowly and carefully after it has completely cooling down, ideally with a turbine and water cooling.

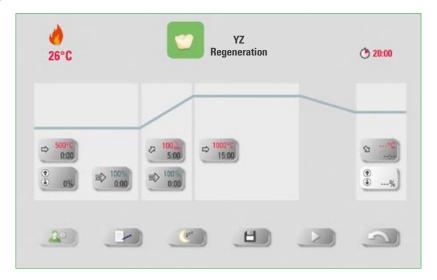
Please note:

- The separation and finishing after hard sintering, must take place under sufficient water cooling.
- Since the surface quality of ceramic materials is decisive for its flexural strength, reworking of the sintered restoration should generally be avoided or kept to a minimum.
- Unavoidable reworking must be done with fine-grain diamonds with red color coding (fine: 27 76 μm) or less (yellow, extra-fine: 10 – 36 μm or white, ultra-fine: 4 – 14 μm) using wet-grind turbines with water cooling and with low grinding pressure.
- It is also possible to process the substructure using soft, diamond-coated rubber polishers and a handpiece with slow speeds and low pressure.
- Minimum wall thicknesses must be ensured when reworking the restoration.
- When finishing frameworks, make sure that no sharp edges are created.
- Subsequent processing of sintered VITA YZ restorations with abrasive instruments must be avoided, particularly
 in the area of bridge connectors.

Tip:

- Work exclusively with PU-bonded (polyurethane) polishers. Residues of these polishers can be easily removed and burned out without leaving any residue.
- When using silicone-bonded polishers, there is a danger that the abraded silicone cannot be removed without residue.
 This may negatively affect the bonding area towards the veneering ceramic or glazing material.

4.11 Regeneration firing after reworking



3. CAM process/reworking > 4. Coloring/sintering 5. Monolithic restoration

Regeneration firing									
Pre-dry °C	min.	min.	°C/min.	approx. temp. °C	→ min.	VAC min.			
500	0.00	5.00	100	1000	15.00	_			

Note:

• When veneering VITA YZ after a mechanical surface treatment (grinding), a regeneration firing is recommended in order to reduce any surface tensions that may have occurred.

As a result, any phase transformations that have taken place on the surface can be reversed.

Please note:

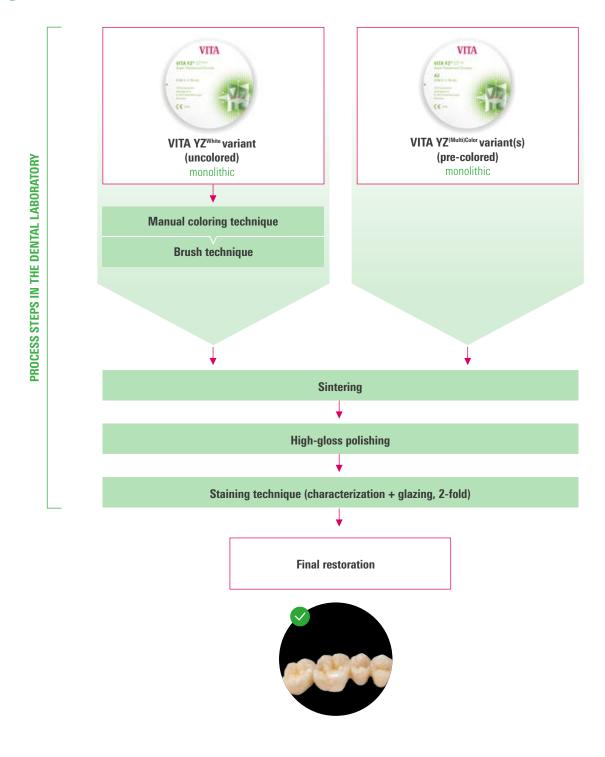
• Micro-cracks caused by processing cannot be undone.



5. Monolithic restoration

5.1 Workflow (options) for monolithic restoration

4. Coloring/sintering > 5. Monolithic restoration 6. Partially veneered restoration





• Workflow for monolithic restorations made from pre-colored VITA YZ^{Color} or VITA YZ^{Multicolor} materials and for manually colored VITA YZWhite variants using brush technique.

5.2 High-gloss polishing prior to characterization/glazing





technical (extraoral)

clinical (intraoral)

- The pre-polishing of ground areas is done with the pink rubber polishers containing diamonds of the VITA SUPRINITY Polishing Set technical/clinical at a speed of 7,000 to 12,000 rpm.
- High-gloss polishing is then carried out with the diamond-coated, gray rubber polishers at a reduced speed of 4,000 to 8,000 rpm.

- The polishing of the occlusal surface, especially of the areas that are in direct contact with the antagonist, is particularly important in monolithic restorations.
- After functional grinding, repolish the surfaces of the ground occlusal surface very carefully.
- In general, if the surface is polished to a high gloss, it is significantly less or even not abrasive, according to laboratory tests. As a result, the high-gloss polish protects the antagonist from unwanted abrasion.

5.3 Finalization using characterization/glazing

4. Coloring/sintering > 5. Monolithic restoration 6. Partially veneered restoration



Sintered restoration.



High-gloss polishing of the areas in direct contact with the antagonist.



For better surface wettability, a separate application of GLAZE LT Spray is recommended.



To avoid fitting problems, free the inside of the crown from glaze materials.



Restoration after the first glaze firing.



Characterization with VITA AKZENT Plus EFFECT STAINS in the second application of glaze.



Final restoration from the buccal view.



Final restoration from the oral view.

- Using the staining technique, reconstructions made of VITA YZ can be individually characterized after sintering by painting and glazing.
- Before painting VITA YZ ST and XT restorations, the fabrication of plastic stumps is recommended in order to simulate the natural stump shade.
- For shade reproduction, you will find the corresponding shade reproduction tables for the selection of blanks, brush, immersion, layering and staining techniques under "Shade reproduction/firing" in Chapter 8.

Please note:

- For monolithic VITA YZ restorations manually colored with VITA YZ SHADE LIQUID, the glaze firing should not be performed at a temperature over 850 °C. The use of VITA AKZENT Plus GLAZE LT/FLU0GLAZE LT is recommended here.
- For monolithic VITA YZ restorations, a high-gloss polishing of the surfaces in occlusion is absolutely necessary. After that, a two-fold application of glaze is done.

Note:

Information on bonding of VITA YZ restorations in the patient's mouth can be found at www.vita-zahnfabrik.com/adiva

> 5.4 Recommendations on characterization and glazing



Characterization with VITA AKZENT Plus EFFECT STAINS in the second application of glaze.



Finished glazed work from the occlusal view.



3 Glazed work from the buccal view.

Note:

• Characterization with stains

- The restoration must be free of dirt and oils before the stain and characterization firing.
- o Intensive shading is achieved with repeated painting and firing and not with a thicker application of color.
- For the additional imitation of the incisal edge and the translucency in the incisal and occlusal region, the VITA AKZENT Plus EFFECT STAINS (e.g., ES10, ES11, ES12, ES13) can be used.
- For the individual characterization of the cusps and fissures, the VITA AKZENT Plus EFFECT STAINS ES05–ES07 can be used.
- o To intensify the shade in the body of the tooth, the VITA AKZENT Plus CHROMA STAINS and BODY STAINS are available.

• Glaze firing with glazing materials

- The glaze firing can be done with either powder, pastes or spray materials.
- VITA AKZENT Plus FLUOGLAZE LT Spray is available for increasing fluorescence.
- Approximal contacts that are too weak or missing can be filled with VITA AKZENT Plus FINISHING AGENT.
- o Glaze material on the inner surface of the restoration must be removed with a brush BEFORE firing.

Please note:

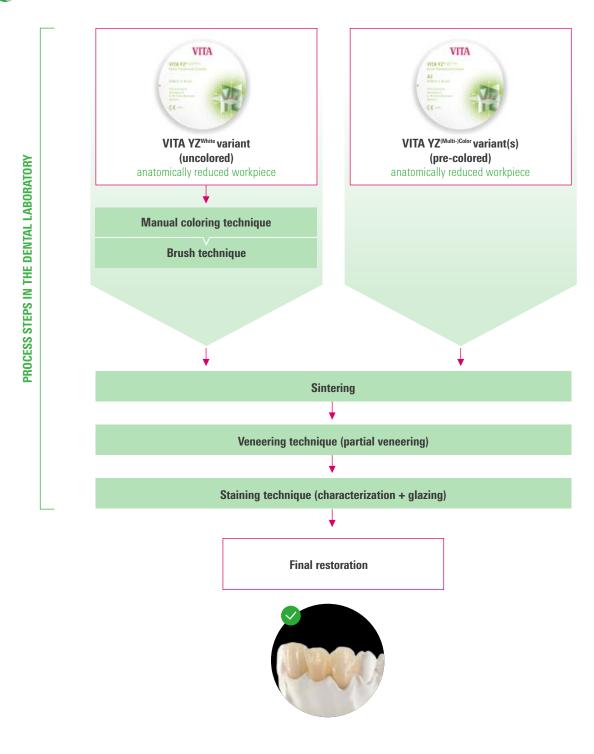
You can find the appropriate stain and glazing firings in Chapter 8, "Shade reproduction/firing."

Note:

 You can find detailed information on characterization and glazing in the VITA AKZENT Plus Instructions for Use, No. 1925. 6. Partially veneered restoration

6.1 Workflow (options) for partially veneered restorations

5. Monolithic restoration > **6. Partially veneered restoration** 7. Fully veneered restoration





• Workflow for partially veneered restorations (after cut-back) made of pre-colored VITA YZ^{Color} or VITA YZ^{Multicolor} materials, as well as for manually colored VITA YZ^{White} variants using brush technique

6.2 Cut-back and partial veneering



Anatomically reduced restoration (cut-back) after the CAM process.



pre-colored VITA YZ^{Color} after sintering.



3 Application of the wash material.



Result after washbake.



5 Filling out the shape with enamel and translucency materials



6 Restoration ready for the first dentin firing.



7 Restoration after firing. Apply VITA AKZENT Plus stains and glazes afterwards.



Note:

- For partial veneering, incisal and translucency materials are applied in the incisal and occlusal areas to an anatomically reduced VITA YZ restoration (cut-back = targeted reduction of the vestibular surface for a small amount of veneering), and then the firing is carried out.
- The cut-back must already be done in the CAD design or manually worked out after the grinding/milling process.
- An unevenly applied reduction improves the natural play of light in the restoration.

Please note:

- When doing the cut-back, observe the manufacturer's instructions on minimum wall thicknesses.
- For a good bond between veneer and substructure material, a washbake should be performed before the partial veneering.
- Make sure not to damage the substructure when separating the interdental spaces of veneered VITA YZ restorations.
- Before the glaze firing, the entire surface must be ground evenly, and grinding particles must be removed carefully.

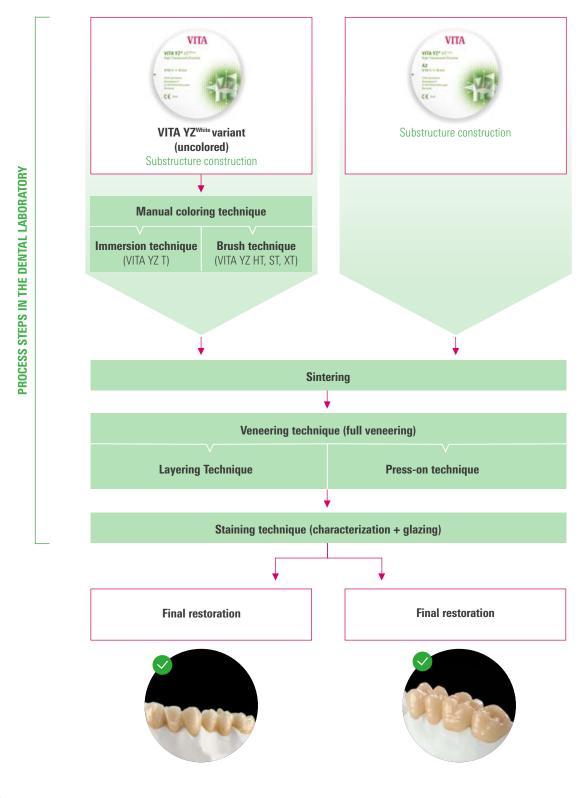
Note:

- You can find detailed information on veneering with VITA VM 9 in the VITA VM 9 Instructions for Use, No. 1190.
- Information on bonding of VITA YZ restorations in the patient's mouth can be found at www.vita-zahnfabrik.com/adiva

7. Fully veneered restorations

7.1 Workflow (options) for fully veneered restoration

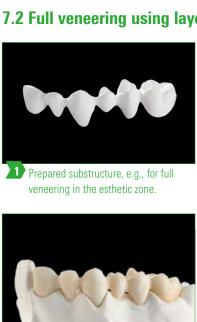
6. Partially veneered restoration > 7. Fully veneered restorations 8. Shade reproduction/firing



Note:

 Workflow for fully veneered substructures made of pre-colored VITA YZ^{Color} materials, as well as for manually colored VITA YZWhite variants using immersion or brush technique.

7.2 Full veneering using layering technique





3 Substructure after the sintering firing.

4 Uniformly thin wash application.

5 Result after washbake.

BASE DENTINE applied, with suggested mamelons.







a shape correction.









Coating ready for second dentin firing.



13 Finished workpiece after the second firing.



Restoration after characterization.

Note:

- Veneering is done with VITA VM 9 veneering ceramic.
- VITA YZ^{White} variants must be colored before veneering with the respective VITA YZ T COLORING LIQUIDS (immersion technique) or VITA YZ HT, ST, XT SHADE LIQUIDS (immersion and brush technique).

6. Partially veneered restoration > 7. Fully veneered restorations 8. Shade reproduction/firing

- When separating the interdental spaces of veneered VITA YZ restorations, take care that the substructure is not damaged in the process.
- Use EFFECT LINER to achieve greater fluorescence.

Please note:

- The material variants VITA YZ T and HT are recommended for full veneering. Full veneering of VITA YZ ST and XT
- With VITA YZ T reconstructions, colored tooth stumps and metallic abutment structures are well masked.

Note:

- You can find detailed information on veneering in the VITA VM 9 Instructions for Use, No. 1190.
- Information on bonding of VITA YZ restorations in the patient's mouth can be found at www.vita-zahnfabrik.com/adiva

7.3 Full veneering using press-to technique



VITA YZ T substructure and VITA CAD-Waxx veneering structures.



2 Milled substructure on model.



Milled substructure with veneer structures on the model.



4 Substructure and veneering structure attached to each other and waxed up on the pressing platform.



5 Pressed and blasted restoration on the press sprue.



6 Structure adjusted to the model, ready for characterization.



Structure moistened with fluid and application of VITA AKZENT Plus STAINS.



8 Completely spray with VITA AKZENT Plus GLAZE LT Spray and fire.



Final workpiece on the model.

Note:

- Full veneering using press-to technique is done with VITA PM 9 press ceramic.
- Previous liner or wash bake is not required.
- The wax-up can be done using CAD/CAM technology with VITA CAD-Waxx or manually with modeling wax (directly on the substructure).
- Crowns and bridges are always sprued at the thickest point.
- Each bridge unit requires at least one press sprue.
- · Press object and press sprue must ideally form a single line to allow for an unobstructed flow of the press ceramic.
- Separate the restoration carefully from the press sprue with a diamond grinding disc.

Please note:

- Use only fine-grit and sharp diamond tools for grinding.
- Work with low contact pressure and low speed.
- · Avoid the generation of heat and do not exceed minimum wall thicknesses.

Note:

• You can find detailed information on press-on technique in the VITA PM 9 Instructions for Use, No. 1450.

7.4 Finalization of fully veneered reconstruction



Finalized workpiece ready for characterization and glazing.



Painting and glazing with VITA AKZENT Plus.



Finished painted and glazed workpiece on the model.

Note:

- The restoration that is fully veneered with VITA PM 9 or overpressed with VITA PM 9 needs to be milled to obtain the final shape and milled completely.
- Before the glaze firing, thoroughly clean the restoration of milling dust.
- After this, the restoration can be characterized with VITA AKZENT Plus glazing materials and stains.

6. Partially veneered restoration > 7. Fully veneered restorations 8. Shade reproduction/firing

Note:

- You can find detailed information on characterization and glazing in the VITA AKZENT Plus Instructions for Use, No. 1925.
- Information on bonding of VITA YZ restorations in the patient's mouth can be found at www.vita-zahnfabrik.com/adiva



8. Shade reproduction/firing

8.1 Shade reproduction using brush technique

7. Fully veneered restorations > 8. Shade reproduction/firing 9. Technical data/information

Classification of liquids						
Substructure materials	Liquid	Additional colors				
VITA YZ HT	VITA YZ HT SHADE LIQUID	VITA YZ EFFECT LIOUID				
VITA YZ ST	VITA YZ ST SHADE LIQUID	Chroma A, Chroma B, Chroma C, Chroma D,				
VITA YZ XT	VITA YZ XT SHADE LIQUID	Brown, Orange, Blue, Grey, Light Pink, Pink, Dark Pink				

	VITA YZ HT/ST/XT	Nu (all brus					
Tooth shade	SHADE LIQUID	Neck 1 x inside each	Body	Incisal	EFFECT LIQUID		
A1	A1						
A2	A2						
A3	А3						
A3,5	A3,5						
A4	A4						
B1	B1						
B2	B2						
В3	В3			2 x outside			
B4	B4		3 x outside		Fissures, interdental and cervical area: Chroma A—D		
C1	C1						
C2	C2		Brown				
C3	C3				Orange		
C4	C4						
D2	D2				occlusal areas: Blue, Grey		
D3	D3					Gingival area:	
D4	D4				Light Pink, Pink, Dark Pink		
	VITA S	YSTEM 3D-MASTE	:R				
1M1	1M1						
1M2	1M2	3 x outside	2 x outside	1 x outside			
2L1.5	2L1.5	3 x outside	Z X OUTSIDE	i x outside			
2M2	2M2						
3M2	3M2	4	0	0			
3M3	3M3	4 x outside	3 x outside	2 x outside			
4M2	4M2	3 x outside	2 x outside	1 x outside			

- All information applies for VITA YZWhite. These are reference values that may vary depending on brush pressure, handling and the amount of liquid.
- You can find additional information in the Instructions for Use for VITA YZ SHADE LIQUID (920-01585M, Version 02).

8.2 Shade reproduction using staining technique (monolithic restorations)

Manually co	Manually colored VITA YZ HT, VITA YZ ST and VITA YZ XT restorations – VITA classical A1–D4						
Tooth shade	VITA YZ HT/ST/XT ^{White} with SHADE LIQUID	CHROMA STAINS (optional)	BODY STAINS (optional)	EFFECT STAINS			
A1	A1						
A2	A2						
А3	A3	CSA					
A3,5	A3,5						
A4	A4						
B1	B1			Individual application:			
B2	B2	CSB		ES0-ES07 Incisal:			
В3	B3		DC04 DC0F	ES10, ES11, ES12,			
В4	B4		BS01-BS05	ES13			
C1	C1			Cingival area:			
C2	C2	000		Gingival area: ES08, ES09			
C3	C3	CSC		,			
C4	C4						
D2	D2						
D3	D3	CSD					
D4	D4						

Pre-colo	Pre-colored VITA YZ HT, VITA YZ ST and VITA YZ XT restorations – VITA classical A1–D4						
Tooth shade	VITA YZ HT*/ ST/XT ^{Color} or ^{Multicolor}	CHROMA STAINS (optional)	BODY STAINS (optional)	EFFECT STAINS			
A1	A1						
A2	A2						
А3	А3	CSA					
A3,5	A3,5						
A4	A4			Individual applications			
B1	B1			Individual application: ES01—ES07			
B2	B2	000					
В3	В3	- CSB	D004 D005	Incisal:			
B4	B4		BS01 BS05	ES10, ES11, ES12, ES13			
C1	C1			2010			
C2	C2			Gingival area:			
C3	C3	CSC		ES08, ES09			
C4	C4						
D2	D2						
D3	D3	CSD					
D4	D4	1					

^{*)} VITA YZ $\mbox{HT}^{\mbox{\tiny Color}}$ only available in A1, A2 and A3

S	REPRODU
	<u> </u>
TECHNICAL DATA/	INFORMATION

	Manually colored VITA YZ HT restorations – VITA SYSTEM 3D-MASTER						
Tooth shade	VITA YZ HTWhite with SHADE LIQUID	CHROMA STAINS mixture 1:1	BODY STAINS (optional)	EFFECT STAINS			
1M1	1M1	-					
1M2	1M2	-					
2L1,5	2L1,5	-					
2L2,5	2L1,5	CSL					
2M2	2M2	_					
2M3	2M2	CSM3		Individual application: ES01–ES07			
2R2.5	2M2	CSM3 + CSR		Incisal:			
3L2.5	3M2	CSM3 + CSL	BS01-BS05	ES10, ES11, ES12,			
3M2	3M2	-		ES13			
3M3	3M3	_		Gingival area: ES08, ES09			
3R2.5	3M3	CSM3 + CSR		2000, 2000			
4L2.5	4M2	(CSM3 + 1/5 CSIO) + CSL					
4M2	4M2	_					
4M3	4M2	CSM3					
4R2.5	4M2	(CSM3 + 1/5 CSIO) + CSL					

7. Fully veneered restorations > 8. Shade reproduction/firing 9. Technical data/information

	Pre-colored VITA YZ HT restorations – VITA SYSTEM 3D-MASTER						
Tooth shade	VITA YZ HT ^{color}	CHROMA STAINS (mixture 1:1)	BODY STAINS (optional)	EFFECT STAINS			
1M2	1M2	_					
2L2.5	2M2	CSM3 + CSL					
2M2	2M2	_		Individual application: ES01–ES07			
2M3	2M2	CSM3		Incisal:			
2R2.5	2M2	CSM2 + CSR	BS01- BS05	ES10, ES11, ES12,			
3L2.5	3M2	CSM3 + CSL		ES13			
3M2	3M2	_		Gingival area: ES08, ES09			
3M3	3M2	CSM3		2333, 2000			
3R2.5	3M2	CSM3 + CSR					

Please note:

• The shade classifications serve only as reference values!

8.3. Shade reproduction via layering technique with VITA VM 9 (full, partial veneering)

	VITA VM 9 in VITA classical A1–D4								
Tooth shade	VITA YZ T COLORING LIQUID	VITA YZ HT Shade Liquid	VITA YZ T ^{Color} /HT ^{Color}	VITA VM 9 BASE DENTINE	VITA VM 9 ENAMEL				
A1	light/pale	A1	LL1/light/A1	A1	ENL				
A2	medium	A2	LL1/light/A2	A2	ENL				
А3	medium	A3	LL2/medium/A3	A3	ENL				
A3.5	medium	A3.5	LL2/medium/-	A3.5	END				
A4	medium	A4	LL3/intense/-	A4	END				
B1	light/pale	B1	LL1/light/—	B1	END				
B2	medium	B2	LL2/medium/-	B2	END				
В3	medium	В3	LL2/medium/-	В3	END				
B4	medium	B4	LL3/intense/-	B4	END				
C1	light/pale	C1	LL1/light/—	C1	END				
C2	medium	C2	LL2/medium/-	C2	END				
C3	medium	C3	LL2/medium/-	C3	ENL				
C4	medium	C4	LL3/intense/-	C4	ENL				
D2	medium	D2	LL2/medium/-	D2	END				
D3	medium	D3	LL2/medium/-	D3	END				
D4	medium	D4	LL2/medium/-	D4	END				

Please note:

• The shade classifications serve only as reference values!

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VITA VM 9 in VITA SYSTEM 3D-MASTER							
Tooth shade	VITA YZ T Coloring Liquid	VITA YZ HT Shade Liquid	VITA YZ T ^{Color} /HT ^{Color}	VITA VM 9 BASE DENTINE	VITA VM 9 ENAMEL		
0M1	_	_	_	0M1	ENL		
0M2	_	-	_	0M2	ENL		
0M3	_	-	_	0M3	ENL		
1M1	light/pale	1M1	LL1/light/-	1M1	ENL		
1M2	light/pale	1M2	LL1/light/1M2	1M2	ENL		
2L1.5	light/pale	2L1.5	LL1/light/-	2L1.5	ENL		
2L2.5	medium	-	LL2/medium/-	2L2.5	ENL		
2M1	light/pale	-	LL1/light/-	2M1	ENL		
2M2	light/pale	2M2	LL1/light/2M2	2M2	ENL		
2M3	light/pale	-	LL1/light/-	2M3	ENL		
2R1.5	light/pale	_	LL1/light/-	2R1.5	ENL		
2R2.5	medium	-	LL2/medium/-	2R2.5	ENL		
3L1.5	medium	-	LL2/medium/-	3L1.5	ENL		
3L2.5	medium	-	LL2/medium/-	3L2.5	ENL		
3M1	light/pale	-	LL2/medium/-	3M1	ENL		
3M2	medium	3M2	LL2/medium/3M2	3M2	ENL		
3M3	medium	3M3	LL2/medium/-	3M3	ENL		
3R1.5	medium	_	LL2/medium/-	3R1.5	ENL		
3R2.5	medium	_	LL2/medium/-	3R2.5	ENL		
4L1.5	medium	_	LL2/medium/-	4L1.5	END		
4L2.5	medium	_	LL3/intense/-	4L2.5	END		
4M1	light/pale	-	LL2/medium/-	4M1	END		
4M2	medium	4M2	LL3/intense/-	4M2	END		
4M3	medium	-	LL3/intense/-	4M3	END		
4R1.5	medium	-	LL2/medium/-	4R1.5	END		
4R2.5	medium	-	LL3/intense/-	4R2.5	END		
5M1	medium	-	LL3/intense/-	5M1	END		
5M2	medium	-	LL3/intense/-	5M2	END		
5M3	medium	_	LL3/intense/-	5M3	END		

7. Fully veneered restorations > 8. Shade reproduction/firing 9. Technical data/information

Please note:

• The shade classifications serve only as reference values!

8.4 Shade reproduction via layering technique with VITA VM 9 ADD-ON and VITA VM 9 (partial veneering)

	VITA VM 9/VITA VM 9 ADD-ON in VITA classical A1–D4							
Tooth shade	VITA YZ ST/XT SHADE LIQUID	VITA YZ ST/XT ^{Color} / ST/XT ^{Multicolor}	VITA VM 9/ VM 9 ADD-ON ENAMEL	VITA VM 9/ VM 9 ADD-ON				
A1	A1	A1	ENL/ADD2					
A2	A2	A2	ENL/ADD2					
А3	A3	А3	ENL/ADD2					
A3.5	A3.5	A3.5	END/ADD3					
A4	A4	A4	END/ADD3					
B1	B1	B1	END/ADD3	Individual application:				
B2	B2	B2	END/ADD3	WIN/ADD1				
В3	В3	В3	END/ADD3	NT/ADD4				
B4	B4	B4	END/ADD3	ES01-ES07; ES10-ES13				
C1	C1	C1	END/ADD3	and				
C2	C2	C2	END/ADD3	ADD5-ADD8				
C3	C3	C3	ENL/ADD2					
C4	C4	C4	ENL/ADD2					
D2	D2	D2	END/ADD3					
D3	D3	D3	END/ADD3					
D4	D4	D4	END/ADD3					

Note:

- For restorations manually colored with SHADE LIQUIDS, the use of VITA VM 9 ADD-ON materials is recommended, since the firing temperature in this case is under 850 °C.
- The shade classifications serve only as reference values!

8.5 Cleaning firing

Parameters for cleaning firing							
Programs	Predry. °C	min.	min.	°C/min.	T °C	→ min.	Vac. min.
YZ T cleaning firing	500	3:00	6:00	33	700	5:00	_
YZ HT cleaning firing	290	10:00	31:00	10	600	5:00	_

Note:

• In order to avoid undesired turbidity due to wet processing in restorations made of VITA YZ T/HT, a suitable cleaning firing must be carried out before further processing.

7. Fully veneered restorations > 8. Shade reproduction/firing 9. Technical data/information

Please note:

- Restorations made of VITA YZ ST and VITA YZ XT may only be dry milled.
- The turbidity due to wet processing cannot be removed by a cleaning firing in VITA YZ ST and VITA YZ XT, and has an influence on the translucency and on the final esthetic result.

8.6 Sintering parameters

Pre-Dry parameters when using COLORING LIQUID/SHADE LIQUID									
Programs	%	TO °C	min.	°C/min.	T1 °C	→ min.	°C	%	
Pre-dry	50	25	7:21	17	150	30:00	_	50	

Sintering parameters for VITA YZ T											
Programs	%	% T0 °C min. °C/min. T1 °C min. °C %									
YZ T Universal	100	25	88:32	17	1530	120:00	200	100			
YZ T Speed	F	Restorations of up to 14 units can be sintered in the VITA ZYRCOMAT 6000 MS/6100 MS in speed mode in 80 minutes.									

Sintering parameters for VITA YZ HT									
Programs	%	TO °C	min.	°C/min.	T1 °C	min.	°C	%	
YZ HT Universal	100	25	83:49	17	1450	120:00	200	100	
YZ HT Speed	F	Restorations of up to 14 units can be sintered in the VITA ZYRCOMAT 6000 MS/6100 MS in speed mode in 80 minutes.							

Sintering parameters for VITA YZ ST									
Programs	%	TO °C	min.	°C/min.	T1 °C	→ min.	°C	%	
YZ ST Universal	100	25	188:08	8	1530	120:00	200	100	
YZ ST Speed	Re	Restorations of up to three units can be sintered in the VITA ZYRCOMAT 6000 MS/6100 MS in speed mode in less than 60 minutes.							

Sintering parameters for VITA YZ XT									
Programs	%	TO °C	min.	°C/min.	T1 °C	→ min.	°C	%	
YZ XT Universal	100	25	356:15	4	1450	120:00	200	100	

	Sintering parameters for VITA YZ T, HT, ST, XT										
Programs	%	TO °C	min.	°C/min.	T1 °C	min.	°C/min.	T2 °C	→ min.	°C	%
YZ One for all	100	25	51:28	17	900	137:30	4	1450	120:00	200	100

Note:

- All program parameters for the processing of the materials VITA YZ T, VITA YZ HT, VITA YZ ST and VITA YZ XT are already
 pre-installed in the software of the operating element VITA vPad for the sintering furnace VITA ZYRCOMAT 6000 MS/6100 MS.
- For optimal shade reproduction, we recommend the material-specific Universal Sintering Program of the respective material.
- For the simultaneous sintering of different materials, the sintering program "YZ One for all" is available.
- In the sintering program "YZ One for all," minimal shade deviations are possible due to the sintering parameters not being optimally adjusted to each material.

Please note:

• Sintering in the CEREC SpeedFire

- VITA YZ ST and VITA YZ HT are approved for sintering in the CEREC SpeedFire.
- VITA YZ HT restorations colored with VITA YZ HT SHADE LIQUID can also be pre-dried and then sintered
 with the CEREC SpeedFire.
- For glazing, only the VITA AKZENT Plus powder stains, VITA AKZENT Plus GLAZE LT Powder and VITA AKZENT Plus GLAZE LT Spray are approved.
- o Please observe the instructions for use of the CEREC SpeedFire (Sirona Dental Systems GmbH).

8.7 Stain firing

Stains fixation firing with VITA AKZENT Plus STAINS									
Programs	Predry. °C	→ min.	min.	°C/min.	T °C	→ min.	Vac. min.	°C	
Stains fixation firing	500	4:00	3:15	80	760	1:00	_	_	

7. Fully veneered restorations > 8. Shade reproduction/firing 9. Technical data/information

Glaze firing with VITA AKZENT Plus GLAZE LT/FLUOGLAZE LT									
Programs	Predry. °C	→ min.	min.	°C/min.	T °C	→ min.	Vac. min.	ů	
GLAZE LT Powder/Spray	400	4:00	5:36	80	850	1:00	_	-	
FLUOGLAZE LT Spray	400	4:00	5:36	80	850	1:00	_	-	
GLAZE LT Paste	400	6:00	5:36	80	850	1:00	_	-	

Note:

- For monolithic VITA YZWhite restorations colored manually with SHADE LIQUIDs, the glaze firing must not be carried out above 850 °C.
- For this purpose, the use of VITA AKZENT Plus GLAZE LT and FLUOGLAZE LT is recommended.
- The stains fixation firing can be carried out with every material combination.

8.8 Firings for partial veneering with VITA VM 9 ADD-ON

	Firing para	meters for _l	partial vene	ering with	VITA VM 9	ADD-ON		
Programs	Predry. °C	→ min.	min.	°C/min.	T °C	→ min.	Vac. min.	°C
Regeneration firing	500	0:00	5:00	100	1000	15:00	_	_
Washbake	500	2:00	6:22	55	850	1:00	8:11	_
dentine firing	500	6:00	5:05	55	780	1:00	6:14	500*
GLAZE LT Powder/Spray	500	4:00	3:30	80	780	1:00	_	500*
FLUOGLAZE LT Spray	500	4:00	3:30	80	780	1:00	_	500*
GLAZE LT Paste	500	6:00	3:30	80	780	1:00	_	500*
Corrective firing with COR	400	4:00	4:20	60	760	1:00	4:20	500*

^{*} Long-term cooling down to the respective temperature is recommended for the respective last firing cycle of the veneering ceramic; the lift position for VITA VACUMAT 6000 M furnaces should be > 75%. The fired items must be protected from drafts after opening the furnace.

8.9 Firings for full veneering with VITA VM 9

7. Fully veneered restorations > 8. Shade reproduction/firing 9. Technical data/information

	Firing parameters for full veneering with VITA VM 9										
Programs	Predry. °C	→ min.	min.	°C/min.	T °C	→ min.	Vac. min.	°C			
Regeneration firing	500	0:00	5:00	100	1000	15:00	_	-			
Washbake	500	2:00	8:11	55	950	1:00	8:11	-			
MARGIN firing	500	6:00	8:21	55	960	1:00	8:21	_			
EFFECT LINER firing	500	6:00	7:49	55	930	1:00	7:49	-			
First dentine firing	500	6:00	7:27	55	910	1:00	7:27	600*			
Second dentine firing	500	6:00	7:16	55	900	1:00	7:16	600*			
Glaze firing	500	0:00	5:00	80	900	1:00	_	600*			
GLAZE Powder/Spray	500	4:00	5:00	80	900	1:00	_	600*			
GLAZE Paste	500	6:00	5:00	80	900	1:00	_	600*			
Corrective firing with COR	500	4:00	4:20	60	760	1:00	4:20	500*			

^{*} Long-term cooling down to the respective temperature is recommended for the respective last firing cycle of the veneering ceramic; the lift position for VITA VACUMAT 6000 M furnaces should be > 75%. The fired items must be protected from drafts after opening the furnace.

Please note:

- All information is to be used as reference values only.
- If the surface, transparency or degree of gloss does not correspond to the firing result that is achieved under optimum conditions, the firing procedure must be adjusted accordingly.
- The crucial factors for the firing procedure are not the firing temperature indicated on the furnace display, but the appearance and the surface quality of the firing object after firing.



9. Technical data/information

8. Shade reproduction/firing > 9. Technical data/information

9.1 Technical/physical data

Property	Unit	VITA YZ T	VITA YZ HT	VITA YZ ST	VITA YZ XT
Coefficient of thermal expansion (20 - 500 °C)	10 ⁻⁶ K ⁻¹	approx. 10.5	approx. 10.5	approx. 10.3	approx. 10.0
Chemical solubility (ISO 6872)	μg/cm²	< 20	< 20	< 20	< 20
Density after sinter firing	g/cm³	approx. 6.05	approx. 6.08	approx. 6.05	approx. 6.03
3-point flexural strength* (ISO 6872)	MPa	approx. 1,200	approx. 1,200	> 850	> 600
Sintering temperature	°C	1530	1450	1530	1450
Type/class*	_	11/5	11/5	11/5	II/4a

^{*} Type II Class 4a > 500 MPa according to DIN EN ISO 6872:2015 Minimum requirements for up to three-unit bridges

9.2 Chemical composition

Material Component	VITA YZ T	VITA YZ HT	VITA YZ ST	VITA YZ XT
_	3Y-TZP	3Y-TZP	4Y-TZP	5Y-TZP
ZrO ₂	90 – 95	90 – 95	88 – 93	86 – 91
Y_2O_3	4 – 6	4-6	6 – 8	8 – 10
HfO ₂	1-3	1-3	1-3	1-3
Al ₂ O ₃	0 – 1	0 – 1	0 – 1	0 – 1
Pigments	0 – 1	0 – 1	0 – 1	0 – 1

- 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.

Note:

• Additional technical/physical data can be found in the Technical and Scientific Documentation for VITA YZ SOLUTIONS, No. 10160.

Type II Class 5 > 800 MPa according to DIN EN ISO 6872:2015 Minimum requirements for bridges with four or more units ° VITA YZ ST is limited in Canada to bridge indications with a maximum of six units, with a maximum of two adjoining bridge pontics

9.3 Intended purpose

• VITA YZ SOLUTIONS products are ceramic materials for dental treatments.

9.4 Patient target group

No restrictions

9.5 Intended users

· Dental professionals only: dentist and dental technician

9.6 Indication overview

Note:

- VITA YZ Discs and Blocks are milling blanks for the fabrication of dental restorations.
- Depending on the indication, they are suitable for the fabrication of substructures or fully anatomical restorations.

VITA YZ T is approved for:

- o fully anatomical crowns and bridges* with up to 14 units in the anterior and posterior tooth regions,
- o fully and partially veneered single teeth and bridge substructures* of up to 14 units in the anterior and posterior tooth regions,
- single tooth restorations and bridges* with up to 14 units on directly screwed implant abutments in the anterior and posterior tooth regions,
- o primary telescopes,
- ∘ inlays***, onlays***, veneers***, partial crowns***, occlusal veneers (Table Top)***.

VITA YZ HT is approved for:

- o fully-anatomical crowns and up to 14-unit bridges* in the anterior and posterior tooth regions,
- o fully and partially veneered single-tooth and up to 14-unit bridge substructures* in the anterior and posterior tooth regions,
- single tooth restorations and up to 14-unit bridges* on directly screwed implant abutments in the anterior and posterior tooth regions,
- o primary telescopes,
- ∘ inlays***, onlays***, veneers***, partial crowns***, occlusal veneers (Table Top)***.

VITA YZ ST is approved for:

- o fully-anatomical crowns and up to 14-unit** bridges* in the anterior and posterior tooth regions,
- o fully and partially veneered single-tooth and up to 14-unit bridge** substructures in the anterior and posterior tooth regions,
- single tooth restorations and up to 14-unit** bridges* on directly screwed implant abutments in the anterior and posterior tooth regions,
- o inlays***, onlays***, veneers***, partial crowns***, occlusal veneers (Table Top)***.

VITA YZ XT is approved for:

- o fully anatomical single tooth crowns and up to three-unit bridges,
- o fully and partially veneered single-tooth crowns and up to three-unit bridge superstructures in the anterior and posterior tooth region,
- ∘ inlays***, onlays***, veneers***, partial crowns***, occlusal veneers (Table Top)***.

^{*)} Bridges and bridge superstructures with a maximum of two adjoining bridge pontics.

^{**)} VITA YZ ST is limited in Canada to bridge indications with a maximum of six units with a maximum of two adjoining bridge pontics.

^{***)} For adhesive bonding only.

9.7 Contraindication

Contraindication

for VITA YZ T, VITA YZ HT, VITA YZ ST and VITA YZ XT

- o in cases of more than two contiguous bridge units
- o in cases of two or more cantilever bridge units
- o in cases of parafunctions for veneered restorations, especially for "crunchers" and "pressers"
- o in cases of insufficient oral hygiene
- o in cases of insufficient preparation results
- o in cases of insufficient hard tooth substance
- o in cases of patients who have allergies or sensitivities to the contents
- o provisional integration of veneered restorations
- o conventional or self-adhesive insertion of inlays, onlays, veneers, partial crowns and occlusal veneers (Table Top)

also with VITA YZ XT

- o in cases of bridge restorations with more than three units
- o in cases of cantilever bridges
- o provisional integration

Please note:

- With the following limitations, successfully working with VITA YZ is not guaranteed:
 - o exceeding the necessary minimum wall and connector thicknesses,
 - o processing of discs and blocks in non-compatible CAD/CAM systems,
 - o sintering in a non-compatible sintering furnace,
 - \circ veneering with veneering ceramics that are not suitable for the veneering of zirconia substructures, with a CTE of 10.0 10.5 \cdot 10.8/K.
- In the event of non-compliance with the Instructions for Use of the products in use, the product
 characteristics cannot be ensured, so that product failure and irreversible damage to the natural hard
 tooth substance, pulp and/or oral soft tissues may result.

9.8 Product safety

- 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 htpps://www.vita-zahnfabrik.com/product_safety.
- The safety data sheets can be downloaded at www.vita-zahnfabrik.com or requested by fax at (+49) 7761-562-233.





9.9 General notes on handling

Note:

- VITA YZ discs and blocks are delivered in a pre-sintered state. In this state, the material can be processed very well, but does not yet have the properties it has after sintering.
- Careful handling in this state is necessary for this reason.
- Please check the packaging and the material immediately upon receipt to ensure that they are intact and in good condition.
- The packaging must be sealed, the product must not show any ruptures, cracks or color irregularities.
- The manufacturer's name, VITA Zahnfabrik and the CE marking must be present on the packaging.

Please note:



- Store the VITA YZ discs and blocks in the original packaging and in a dry place.
 Take care when handling that the VITA YZ materials are not exposed to any blows or vibrations.
 - Take care that the materials are not allowed to be touched with wet hands. Only use liquids that are approved for the products.
 - The materials must not be contaminated with foreign substances (e.g., during the CAM process).
 - Please read through the instructions for use carefully before you take the zirconia disc or blocks out of the packaging.
 They contain important information on processing that is useful for your safety and the safety of your patients.
 - If not all of the instructions in this leaflet are followed, the VITA YZ discs and blocks must not be used to make dentures.

9.10 Safety at work/health protection

Safety at work and health protection	 While work is in progress, wear suitable safety goggles/face protection. Only perform work under an extraction unit. Wear protective gloves. 	

9.11 Storage/disposal

- Store in original packaging at room temperature. Store in a dry location. Protect from direct sunlight.
- The products labelled with a pictogram for hazardous substances are to be disposed of as hazardous waste.
 Recyclable waste (such as attachments, 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.

9.12 Safety data sheets

VITA AKZENT Plus BODY Spray **VITA AKZENT Plus GLAZE Spray** VITA AKZENT Plus GLAZE LT Spray VITA AKZENT Plus FLUOGLAZE LT Spray

8. Shade reproduction/firing > 9. Technical data/information

Extremely flammable aerosol

Spray-on ceramic glaze material.

- For dental applications only.
- Not for intraoral use.
- · Shake well before use.
- · Pressurized container. May burst if heated. 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 / hot surfaces.



VITA YZ HT SHADE LIQUID VITA YZ ST SHADE LIQUID VITA YZ XT SHADE LIQUID VITA YZ EFFECT LIQUID

Danger

- · Causes severe skin burns and eye damage
- May cause respiratory irritation.
- Do not breathe dust/fume/gas/mist/vapors/spray.
- · Carefully wash hands, lower arms and face after use.
- Use only in the open air or in well-ventilated spaces.
- Wear protective gloves/protective clothing/eye and face protection.
- · Wash contaminated clothing before wearing again.
- Dispose of contents/container in accordance with local/regional/ national/international regulations.



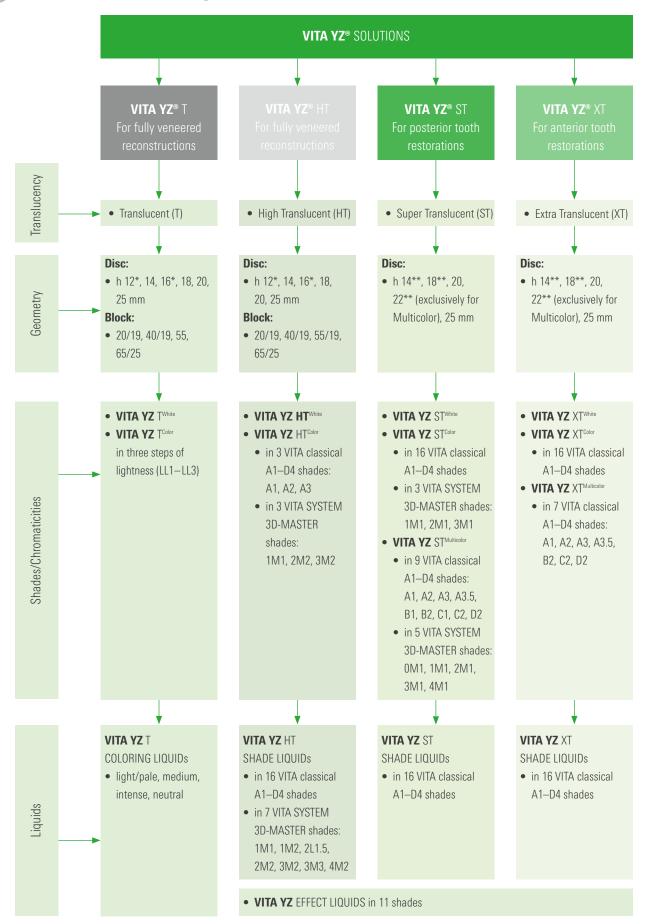


- You can find detailed information on the corresponding data safety sheet.
- The corresponding safety data sheets can be obtained at https://www.vita-zahnfabrik.com/downloadcenter or by fax at (+49) 7761-562-233.

Symbol explanations

Medical device	MD	Manufacturer	***
For dental users only	Rx only	Date of manufacture	М
Observe instructions for use	Ţ i	Expiration date	\subseteq
Store in a dry location	₩	Product number	REF
Lot number (batch)	LOT		

9.14 Overview of variants, geometries and shades



9.15 System compatibility



8. Shade reproduction/firing > 9. Technical data/information





(imes-icore GmbH)

Note:

• VITA YZ SOLUTIONS - SYSTEM SOLUTIONS:

VITA offers VITA YZ blanks with a specific holder system for the CAD/CAM system: o inLab MC XL family and CEREC MC XL family (Sirona Dental Systems GmbH)

• VITA YZ SOLUTIONS — UNIVERSAL SOLUTIONS:

VITA offers VITA YZ blanks in a universal disc geometry (Ø 98.4 mm) for CAD/CAM systems:

- CORiTEC Series (imes-icore GmbH),
- o DMG ULTRASONIC Series (DMG Mori AG),
- Röders RXD Series (Röders GmbH),
- ∘ N4/R5/S1/S2/Z4/R5 (vhf camfacture AG),
- o inLab MC X5 (Sirona Dental Systems GmbH),
- o Ceramill micro 4X/Ceramill micro 5X/Ceramill Motion 2 (Amann Girrbach AG),
- KaVo Everest (KaVo Dental GmbH).

Please note:

- · For optimal esthetic results (translucency), restorations made out of VITA YZ ST and VITA YZ XT must not be wet ground.
- VITA YZ ST and VITA YZ XT must be milled dry.
- The range of variants/geometries/shades of VITA YZ may vary for individual CAD/CAM system partners or systems.
- VITA YZ processing must be performed with a validated CAD/CAM system.

Note:

 You can find additional information on VITA CAD/CAM system partners at: www.vita-zahnfabrik.com/Systempartner.

9.16 VITA system solutions



^{*)} Optional: Coloring with VITA YZ COLORING LIQUIDs or VITA YZ SHADE LIQUIDs is an optional process step. This is not necessary with pre-colored VITA YZ blanks.

^{**)} Optional: Veneering with VITA LUMEX AC is an optional process step and is not necessary for the monolithic restoration concept.

Notes	

WE ARE HERE TO HELP

More information on products and processing is also available at www.vita-zahnfabrik.com

Hotline Sales Support

Mrs. Carmen Holsten and her team (Internal Sales Department) will be glad to assist you with orders or questions about the delivery, product data and marketing materials.

Phone +49 (0) 7761/56 28 84 Fax +49 (0) 7761/56 22 99 8 am to 5 pm CET Mail info@vita-zahnfabrik.com

▶ Technical Hotline

If you have technical questions concerning VITA product solutions, you can contact Dr. Tholey and his Technical Service team.

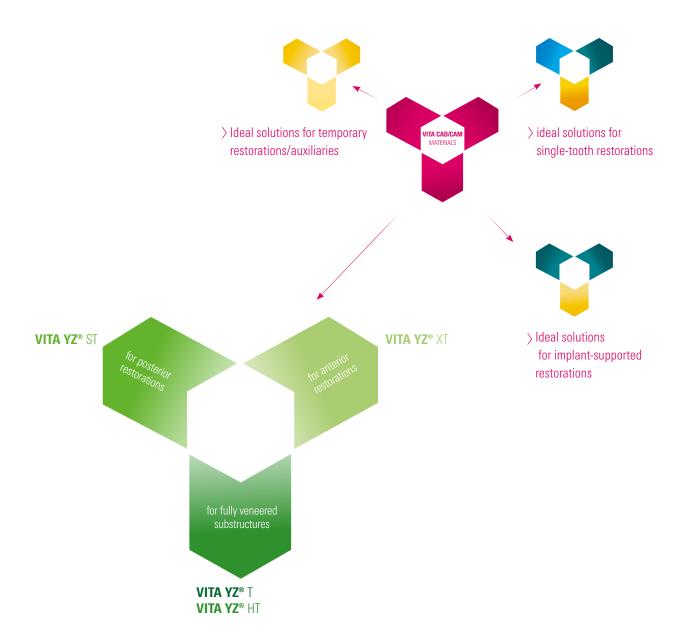
Phone +49 (0) 7761 / 56 22 22 Fax +49 (0) 7761 / 56 24 46 8:00 a.m. to 5:00 p.m. CET Email info@vita-zahnfabrik.com

Additional international contact information can be found at www.vita-zahnfabrik.com/contacts

More information about VITA YZ® SOLUTIONS is available at www.vita-zahnfabrik.com/cadcam

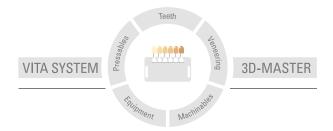


VITA CAD/CAM MATERIALS



Ideal solutions for monolithic, partially and fully veneered bridges

Practices and laboratories have been relying on VITA CAD/CAM materials for substructure fabrication for more than 15 years. In addition to the proven VITA YZ T/HT zirconias for fully veneered restorations, the range of products also includes the particularly translucent VITA YZ ST/XT for fully anatomical and partially veneered reconstructions. For all material solutions, coloring liquids, stains and veneering ceramics are available for maximum individuality, perfect matching and from a single source.



Please note: Our products must be used in accordance with the instructions for use. We accept no liability for any damage 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 that are not compatible or not authorized for use with our product and this results in damage. The VITA Modulbox is not necessarily a component of the product. Date of issue of these instructions for use: 2022-07

After the publication of this information for use, any previous versions become obsolete. The current version can be found under www.vita-zahnfabrik.com

VITA Zahnfabrik is certified, and the following products bear the mark

C€0124

VITA YZ° T, VITA YZ° HT, VITA YZ° ST, VITA YZ° XT, VITA YZ° T COLORING LIQUID , VITA AKZENT° PIUS, VITA LUMEX°AC,

Zirkonzahn Srl. Gais has been certified according to the Medical Device Directive, and the following products bear the CE mark:

C€0476

VITA YZ* HT SHADE LIQUID VITA YZ* ST SHADE LIQUID VITA YZ* XT SHADE LIQUID VITA YZ* EFFECT LIQUID

EVE Ernst Vetter GmbH has been certified in accordance with the Medical Device Directive, and the following product bears the CE mark:

C€0483

VITA SUPRINITY® Polishing Set clinical

🔟 MD Rx Only 🜴

CH REP VITA Zahnfabrik H. Rauter GmbH & Co.KG, Bad Säckingen (Germany) Zweigniederlassung Basel c/o Perrig AG, Max Kämpf-Platz 1, 4058 Basel

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