

# **KATANA™ Zirconia**

**YML** *Yttria Multi Layered*

**UTML** *Ultra Translucent Multi Layered*

**STML** *Super Translucent Multi Layered*

**HTML PLUS** *High Translucent Multi Layered*

**HT** *High Translucent*

**LT** *Low Translucent*



## **CERABIEN™**

*Zirconia Finishing Solutions*

**CERABIEN™ ZR**  
*FC Paste Stain & Glazes*

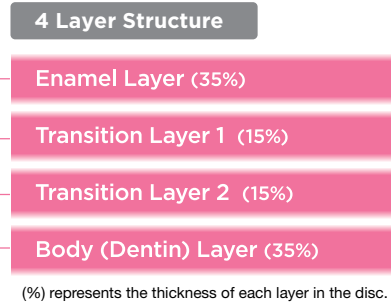
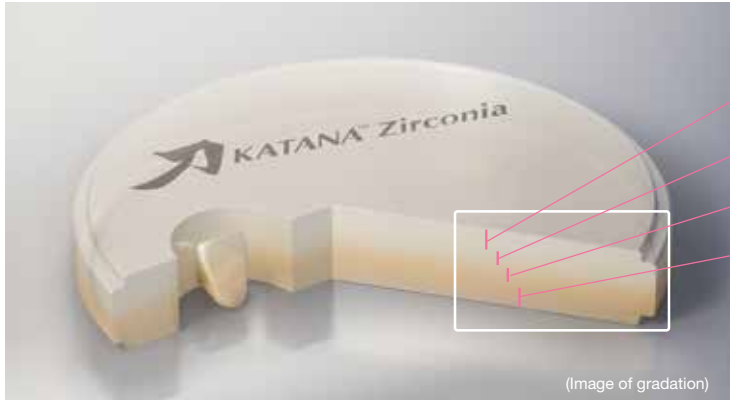




## High Esthetic Potential for Zirconia Dental Restorations\*

Introducing the KATANA™ series of high translucent multi layered YML, HTML PLUS, superior translucent multi layered STML, and ultra translucent multi layered UTML, ideal for efficient esthetic anterior restorations.

\*Comparison with our conventional products.



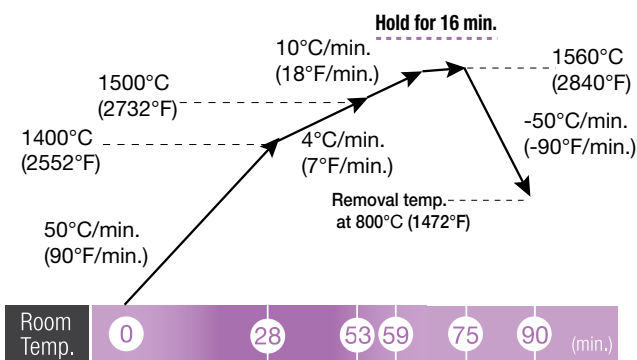
(Image of gradation)

## 90-minute Sintering for Single Restorations

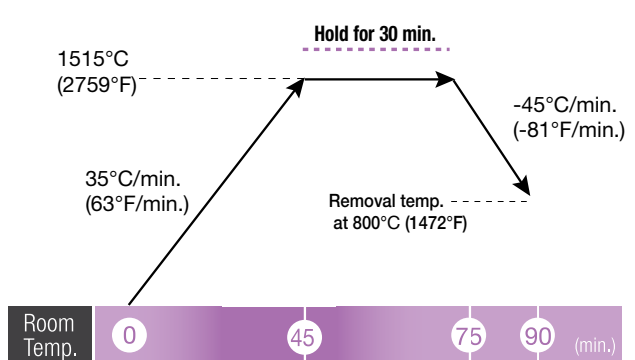
In addition to the usual sintering time (approximately 7 hours), under our proprietary zirconia technology, KATANA™ Zirconia can be sintered in approximately 90 minutes\* without any compromise of translucency or mechanical strength.

\*The material is removed from the furnace at 800°C, and is only for single restorations.

### YML / UTML / STML / HTML PLUS



### HT / LT



Use only fast sintering furnaces capable of reaching the desired high temperature and heat rate.



Multi Layered

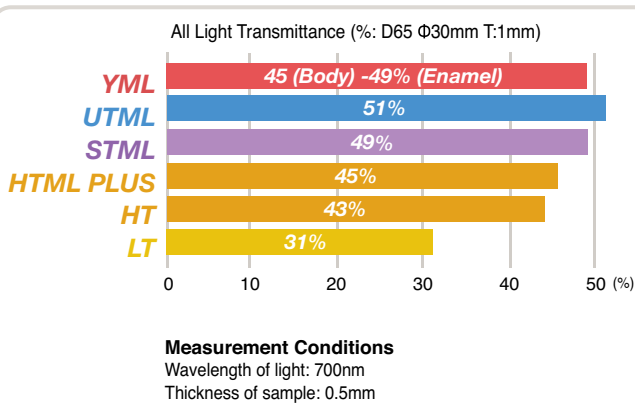


Monochromatic

## Extended Shade Selection

	Series	Shade									Size (Diameter/Thickness)
Multi Layered	<b>YML</b>	NW	A1	A2	A3	A3.5	A4	B1	B2	B3	98.5mm/ 14, 18, 22mm
		C1	C2	C3	D2	D3					
	<b>UTML</b>	A1	A2	A3	A3.5	A4	B1	B2	B3	B4	98.5mm/ 14, 18mm
		C1	C2	C3	C4	D2	D3	D4			
ENW		EA1	EA2	EA3							
<b>STML</b>	NW	A1	A2	A3	A3.5	A4	B1	B2	B3	98.5mm/ 14, 18, 22mm	
	C1	C2	C3	D2	D3						
<b>HTML PLUS</b>	NW	A1	A2	A3	A3.5	A4	B1	B2	B3	98.5mm/ 10, 14, 18, 22, 26, 30mm	
	C1	C2	C3	D2	D3						
Mono-Chromatic	<b>HT</b>	HT10	HT12	HT13							98.5mm/ 10, 14, 18, 22, 26mm
	<b>LT</b>	LT10	LT12	LT13							

### Translucency (raw zirconia material)



### Mechanical Properties

Flexural Strength (MPa)

**750-1100 MPa**  
**557 MPa**  
**748 MPa**  
**1150 MPa**  
**1125 MPa**  
**1125 MPa**

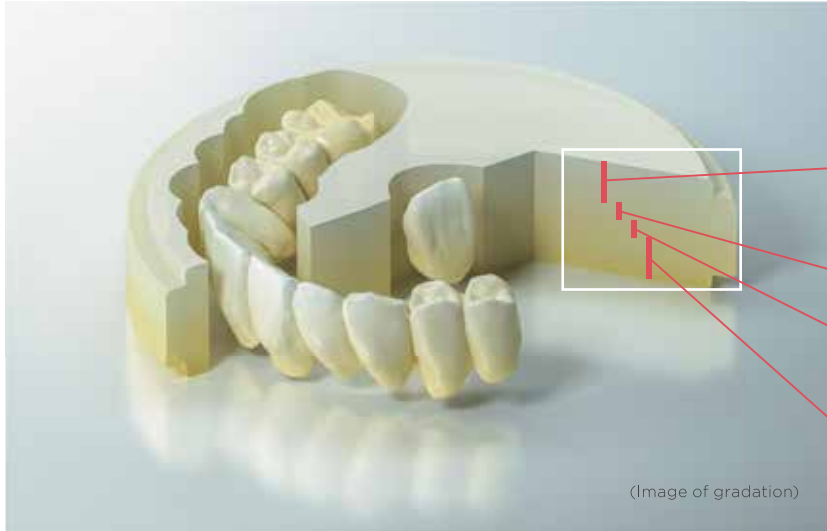
**Measurement Conditions**

ISO 6872: 2015 (Three-point bending test)  
 Distance: 30mm  
 Sample size: 40mm x 4mm x 3mm

Data Source: Kuraray Noritake Dental Inc. The numerical value varies according to the conditions.

# YML Yttria Multi Layered

KATANA™ Zirconia YML is redefining zirconia in esthetic dentistry. This product is characterized by a unique raw material combination of highly translucent zirconia and high strength, integrated by advanced manufacturing technology.



Layer	Flexural Strength* <sup>1</sup>	Translucency* <sup>2</sup>
Enamel (35%)	750 MPa	49%
Body 1 (15%)	1000 MPa	47%
Body 2 (15%)	1000 MPa	47%
Body 3 (35%)	1100 MPa	45%

High translucency (top) and High strength (bottom) are indicated by arrows on the right side of the table.

Measurement Conditions: Evaluated by base material (white color)  
 \*1 According to ISO 6872: 2015, Sample Size: 3 x 4 x 40mm  
 \*2 All Light Transmittance, Illuminant: D65, Thickness of Sample: 1.0mm

Percentage is the thickness of each in a disc

Data Source: Kuraray Noritake Dental Inc.  
 The numerical value varies according to the conditions.

## KATANA™ Zirconia YML FOR 90-MINUTE SINTERING



KATANA™ Zirconia YML displays superior optical properties after 90-minute sintering as compared to discs of major competitors\*.

\*This sintering program is not recommended for competitors' zirconia discs.

## Versatility of Application Range

Expect exceptional design flexibility - from veneers to full-arch restorations.



- Laminate Veneer
- Inlay, Onlay
- Anterior / Posterior Crown
- Long-span Bridge
- Framework

# Revolutionary All-In-One Disc Design



Based on KATANA™ Zirconia YML A3 with CERABIEN™ ZR FC Paste Stain  
Photo Courtesy of DT Marco Stoppaccioli - L'Aquila

## Features

### FAST PROCESSING

1

### ALL-IN-ONE SOLUTION

2

### SIMPLE ESTHETICS

3

### CONTROLLED FIRING DEFORMATION

4

## Benefits

High-speed sintering (90-minute) offers completely new possibilities. Waiting time is reduced to a minimum. For re-make and rush cases, it is now possible to finish the work easily within one day. In addition, the minimized over-night-sintering cycles enable **shorter delivery time** to increase your business efficiency.

Due to the high translucency and high strength combined within one disc, the entire indication spectrum can be covered. This **minimizes your inventory** of different zirconia discs.

A seamless multi layered technology eliminates visible transition lines, emphasizes natural color and translucency, and ensures a simplified, **time-saving** procedure.

Improving the fitting accuracy of restorations after the final sintering process reduces risk of re-manufacturing, an added benefit for dental labs. **No wasted time or materials.**

# UTML *Ultra Translucent Multi Layered*

UTML has the most translucency among the KATANA™ Zirconia series, and is recommended for fabrication of anterior crowns and laminate veneers. Two different shade types are available: Standard Shade and Enamel Shade.

## Concept of Color and Translucency

<p><b>Standard Shade</b> (A1 - D4)</p> <p><b>Translucency</b></p> <p>High translucency through all the disc layers.</p> <p><b>Color</b></p> <p>Color of shade guide*</p>		<p><b>Enamel Shade</b> (ENW, EA1, EA2 &amp; EA3)</p> <p><b>Translucency</b></p> <p>High translucency through all the disc layers.</p> <p><b>Color</b></p> <p>Reduced chroma from incisal to the middle layer (1) part</p>
<p>Color and translucency of the layers after sintering (Image of gradation)</p>		

\*VITA Classical Shade Guide

<p><b>Example of Staining</b></p>	<p><b>CERABIEN™ ZR FC Paste Stain</b></p>	<p>By applying external stains, the translucency is more clearly enhanced. The <b>Enamel Shade</b> version has reduced color intensity in one half of the disk from the incisal edge ((1) part), giving you the ability to characterize and express color variations with stains.</p>
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## Monolithic Anterior Crowns made from KATANA™ Zirconia UTML

<p>3</p>	<p>4</p>	
<p>1</p>	<p>2</p>	<ol style="list-style-type: none"> <li>1. Shade taking</li> <li>2. Applying the glaze and the stain</li> <li>3. Checking the restorations on the model</li> <li>4. Seating in the mouth</li> </ol>
<p>Clinical cases contributed by Keiko Okubo, DDS, Restorations fabricated by Kazunobu Yamada, RDT</p>		

# STML *Super Translucent Multi Layered*

KATANA™ Zirconia STML has a well-balanced combination of translucency, mechanical properties and masking effect in the cervical area which can obtain the desired shades to accommodate the variety found in prepared tooth conditions.

## Concept of Color and Translucency

Standard Shade

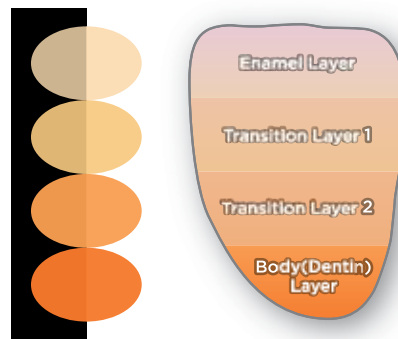
Translucency

Translucency is gradually decreased from the incisal to the cervical region to increase the masking level in the cervical region.

Color

Color of shade guide\*

\*VITA Classical Shade Guide



Color and translucency of the layers after sintering (Image of gradation)

Range of Masking Level

Abutment color examples

<b>HTML PLUS</b>	
<b>STML</b>	
<b>UTML</b>	

- Select a shade tab that corresponds to the final desired color.
- Select a shade tab one level brighter than the final color (it will be necessary to complete using stains).

## Monolithic Posterior Crown made with KATANA™ Zirconia STML\*

\* with staining



1. Preparation
2. Wax up
3. Checking the restoration on the model
4. Seating in the mouth  
(Left: Buccal view, Right: Occlusal view)

# HTML PLUS *High Translucent Multi Layered*

With the highest mechanical strength, KATANA™ Zirconia HTML PLUS features veneering ceramic on top and a natural color gradient. Use KATANA™ Zirconia HTML PLUS as a dentin-like base, suitable for full-contour crowns and bridges.

## Concept of Color and Translucency

Standard Shade

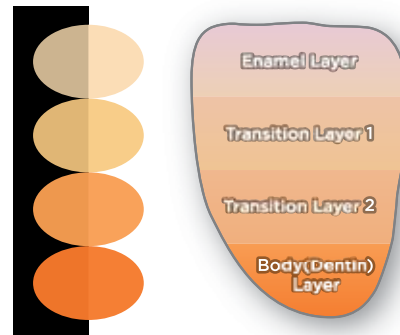
Translucency

Translucency is gradually decreased from the incisal to the cervical region to increase the masking level in the cervical region.

Color

Color of shade guide\*

\*VITA Classical Shade Guide



Color and translucency of the layers after sintering (Image of gradation)

Range of Masking Level

Abutment color examples

<b>HTML PLUS</b>	
<b>STML</b>	
<b>UTML</b>	

- Select a shade tab that corresponds to the final desired color.
- Select a shade tab one level brighter than the final color (it will be necessary to complete using stains).

### KATANA™ HTML PLUS Sample Case



### Comparisons of Translucency and Color





**HT** High Translucent

**LT** Low Translucent

**Monochromatic translucency options of KATANA™ Zirconia HT (High Translucent) and LT (Low Translucent) series have different levels of translucency, making them especially suitable for porcelain layering.**

Different levels of translucency allow you to choose between HT and LT to fabricate a highly esthetic porcelain-fused zirconia restoration with minimal laboratory effort. Porcelain-fused zirconia restorations tend to have a thin framework; their appearance may be affected by the color of the abutment. Select HT if you want to reflect the color of the abutment or LT to mask the color of the metal or discolored abutment. These options make it easier to achieve an esthetic color adjustment.

## Selecting The Right Framework Translucency

By properly using HT or LT, you can accurately utilize or mask various abutment colors.

Recommended Indications

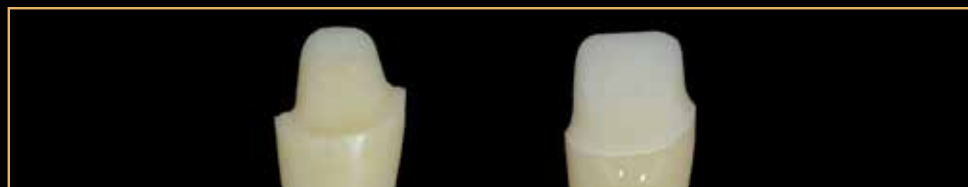
Abutment color	Image
<b>HT</b>	
<b>LT</b>	



## Masking degree comparison between HT and LT on the metal abutment

(Frame thickness 0.4mm)

**HT**



Non discolored Abutment

Non discolored Abutment  
+ HT12

**LT**



Metal Abutment

Metal Abutment  
+ HT12

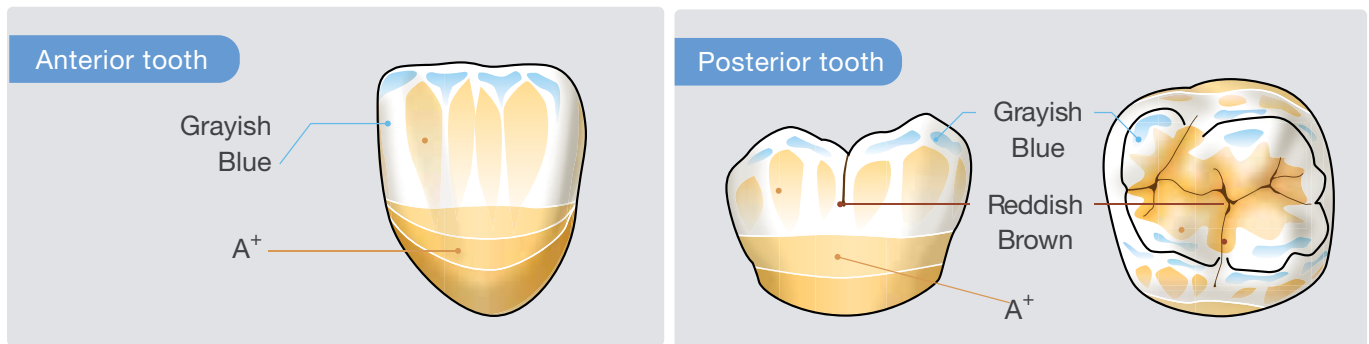
Metal Abutment  
+ LT12



The addition of a new paste-type FC Paste Stain (a surface stain) to the CERABIEN™ ZR line allows the easy characterization of full-zirconia restorations. FC Paste Stain is available in a total of 27 shades for the reproduction of a wide variety of shades.

### Examples of The Use of Stain

The full complement of blue and gray shades (Light Gray, Dark Gray, Grayish Blue, & Blue) makes it possible to easily reproduce blue-grayish transparency effects for the incisal area. Two types of glaze (Glaze & Clear Glaze) make it easier to control the appearance of transparency across the entire crown.



### The FC Paste Stain Color Composition List / Product Number

Category	Color Name	Product Number
Translucent	Glaze	104-5851KA
	Clear Glaze	104-5861KA
Enamel	Light Gray	104-5611KA
	Dark Gray	104-5621KA
	Grayish Blue	104-5631KA
	Blue	104-5641KA
Dentin	Cervical 1	104-5701KA
	Cervical 2	104-5711KA
	Cervical 3	104-5721KA
	A+	104-5781KA
	B+	104-5791KA
	C+	104-5801KA
	D+	104-5811KA
Enhancement	White	104-5821KA
	Mamelon Orange 1	104-5681KA
	Mamelon Orange 2	104-5691KA
	Earth Brown	104-5731KA
	Reddish Brown	104-5741KA
Adjustment	Value	104-5831KA
	Black	104-5601KA
	Green 1	104-5651KA
	Green 2	104-5661KA
	Yellow	104-5671KA
	Salmon Pink	103-5751KA
	Pink	104-5761KA
Red	104-5771KA	
Fluoro	104-5841KA	

### Baking Schedule for The Fabrication of Full-Zirconia Restorations

FC Paste Stain can be baked at 750°C during the fabrication of full-zirconia restorations. This is a lower temperature than that used for conventional external stains.

Dry-out Time		Predrying Temperature		Start Vacuum		Heat Rate		Vacuum Level	Release Vacuum		High Temperature		Hold Time (in the air)	Cool Time
min.	°C	°F	°C	°F	°C/min.	°F/min.	kPa	°C	°F	°C	°F	min.	min.	
5	500	932	600	1112	45	81	96*	750	1382	750	1382	1	4	

\*96kPa=72cmHg

## The Zirconia Glaze That Does It All!



Achieve the highest level of sheen or luster with CZR FC Glaze, with minimal application or layer thickness.

### Zirconia Finishing Solution Kit



#### CERABIEN™ ZR FC Paste Stain Kit 104-5590KA

- 5g each - Glaze, Clear Glaze
- 3g each - Light Gray, Dark Gray, Grayish Blue, Blue
- Cervical 1, Cervical 2, Cervical 3, A+, B+, C+, D+, White, Mamelon Orange 1, Mamelon Orange 2, Earth Brown, Reddish Brown, Value, Black, Green 1, Green 2, Yellow, Salmon Pink, Pink, Red, Fluoro
- Color Guide
- ES Liquid



#### CERABIEN™ ZR FC Paste Stain Basic Kit 104-5870KA

- 5g each - Glaze, Clear Glaze
- 3g each - Dark Gray, Grayish Blue, Cervical 2, Earth Brown, Salmon Pink, A+, White
- Color Guide
- ES Liquid



#### Pearl Surface Z 20g 221-0769KA

Designed for polishing zirconia and porcelain, Pearl Surface Z adds a natural luster to the surface without altering the subtleties in the texture. It is also suitable for polishing hard resin and denture-base acrylic resin.

## PANAVIA™ SA Cement Universal



Designed for all restorations without primers, PANAVIA™ provides superior luting for all hybrid cases. Titanium to zirconia bonding with no need for primers - this is the ideal lab cement.

*Legendary Adhesive Technology from Kuraray*

# Quality Materials, Just A Click-Away!



Efficiently fabricate full-zirconia esthetic restorations by combining FC Paste Stain with KATANA™ Zirconia YML, UTML, STML, or HTML PLUS\*.

\* FC Paste Stain can be used on restoration surfaces where CERABIEN™ ZR, CZR PRESS, or CZR PRESS LF is layered on KATANA™ Zirconia. Refer to Instructions for Use or the Paste Stain Technical Manual.

KATANA™ Zirconia HT (High Translucent) and LT (Low Translucent) series offer varied levels of translucency, making them especially suitable for porcelain layering.



KATANA™ Zirconia available at:

**KATANA**  
LabDirect

1-844-kuraray (1-844-587-2729)  
[www.katanalabdirect.com](http://www.katanalabdirect.com)

**ZAHN**  
A DIVISION OF HENRY SCHENK

1-800-496-9500  
[www.zahndental.com](http://www.zahndental.com)

## Get Vital Information At Your Fingertips!



### APP

#### Kuraray Noritake KATANA™ App for Lab and Chair-side

Get vital information at your fingertips with the Kuraray Noritake App featuring new KATANA™ Zirconia Color Simulation Shade Colors, 24/7 access to FAQs and valuable technical videos; Instructions For Use (IFU), and Comprehensive Cementation Guide for dentists.

### WEB

[www.katanazirconia.com](http://www.katanazirconia.com)

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Miyoshi, Aichi 470-0293 Japan  
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Before using this product, read the Instructions For Use supplied. The specifications and appearance of the product are subject to change without notice. Printed color can be slightly different from actual shades.