

kuraray

Noritake

KATANA™ ZIRCONIA RESTORATION SYSTEM

APPROPRIATE MATCHING MATERIALS. TRUE-TO-LIFE ZIRCONIA RESTORATIONS.



BORN IN JAPAN

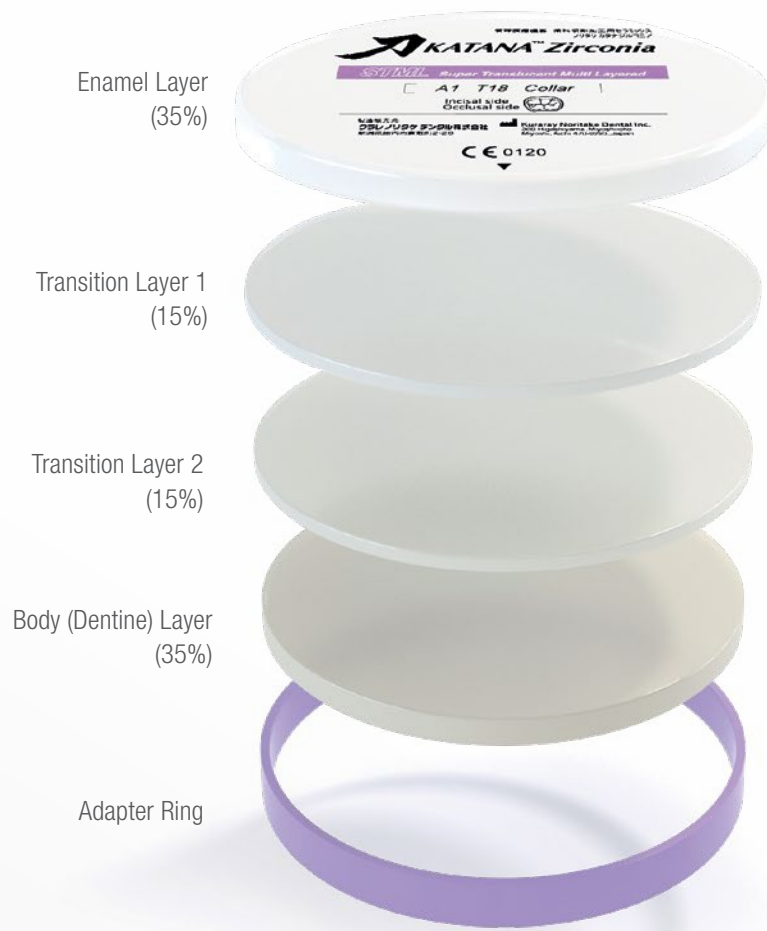
KATANA™ Zirconia: One family. All indications.



4 TYPES OF DENTAL ZIRCONIA COVERING ALL YOUR NEEDS

Dental zirconia is no longer just the opaque framework material introduced two decades ago. Nowadays, it offers the high strength needed for long-span bridges or ultra-translucency required for anterior restorations – depending on its composition and structure. KATANA™ Zirconia have 3 multi-layered types UTML, STML, HTML and 2 Mono colored types HT. It was the cubic multi-layered zirconia revolutionizing in the dental world.

Kuraray Noritake offers an ideal solution for every indication. The four types of zirconia developed for monolithic restorations are different in their translucency and mechanical properties. Three of them are multi-layered with chroma / translucency gradation created using powder coloring technological process.



OUR 4 LAYER STRUCTURE

All three types of zirconia have the original innovative multi-layer technology that creates a smooth transition of color gradation, which equals a natural tooth.



BENEFITS

NATURAL COLOR GRADIENT

All three types of KATANA™ Zirconia are ideal for full contour monolithic restorations ensuring that, in their final shape, occlusal details are established.

HIGHLY TRANSLUCENT

KATANA™ Zirconia STML offers an esthetic equivalent to lithium disilicate with far greater resistance. This is why many professionals love to use KATANA™ Zirconia for their posterior restorations. The great advantage of KATANA™ Zirconia in comparison to lithium disilicate is that it can also easily be used for bridges in the posterior area.



SUPERIOR FLEXURAL STRENGTH

557 **MPa**
KATANA™ Zirconia UTML

TRANSLUCENCY

43 %

748 **MPa**
KATANA™ Zirconia STML

38 %

1125 **MPa**
KATANA™ Zirconia HTML / HT

31 %

CERABIEN

The most beautiful restorations are obtained after the application of products from the CERABIEN™ ZR line-up.



EXPERT IN DENTAL CERAMICS

CHOOSE KATANA™ ZIRCONIA FROM THE EXPERT IN DENTAL CERAMICS

More than 30 years ago, Kuraray Noritake launched Noritake Super Porcelain EX-3, a high-quality porcelain system for the production of laminate veneers and porcelain-fused-to-metal restorations. Nowadays, the system is still being used successfully all over the world – an undoubtable proof of its great value.

Quickly, the family of dental ceramics started to grow. Kuraray Noritake focused on developing dental zirconia as a framework material, and on providing the desired products for refinement processes, such as porcelain layering.



END-TO-END IN-HOUSE PROCESS

Zirconia materials from Kuraray Noritake are exceptional in that they are produced in an end-to-end in-house process – from powder production using exclusive powder technology to disc pressing, pre-sintering and labelling. This enables the company to control every step in the procedure and to ensure unparalleled purity of the materials, leading to the highest possible product quality. In addition, it facilitates a rapid development of new formulations as soon as the need for them is expressed in the market.

As a result, a complete series of dental zirconia for the production of frameworks and monolithic restorations is available today. This series is embedded into a complete system of products for polishing, staining, glazing, porcelain veneering and cementation. Developed and produced by the same manufacturer, these products are designed to complement each other for outstanding treatment outcomes.

EVERYTHING YOU NEED

KATANA™ ZIRCONIA

Kuraray Noritake offers three different types of multi-layered dental zirconia to cover every indication as well as an HT option for the production of frameworks and long-span bridges:



Laminate veneer
Inlay/Onlay



Anterior
Crown



Posterior
Crown



3-unit
Bridge



Long-span
over 4-unit Bridge



90 MINUTES SINTERING

The beauty of milling KATANA™ Zirconia is based on its economics, speed and precision. Speed refers to the option of high-speed sintering: it allows you to reduce the total sintering time for KATANA™ Zirconia restorations¹ to approximately 90 minutes².

The great properties of the material will get you a beautiful result even directly after sintering. With the introduction of our translucent series: UTML, STML and HTML, we have created a new standard for anterior prosthetics.

¹ For up to 3-unit bridges; ² The material is removed from the furnace at 800°C, the total sintering time may be affected by: furnace condition; surrounding temperature; voltage; and electrical current, etc.

Compatible furnaces include:

- Austromat 674i (Dekema Dental-Keramiköfen)
- inFire HTC speed (Dentsply Sirona)
- Sintra Plus (Shenpaz Dental)



More technical details are available online in the new technical guide that may be downloaded here:
kuraraynoritake.eu/katana_technical.pdf

UTML

FOR TRUE-TO-LIFE SINGLE-UNIT ANTERIOR RESTORATIONS



KATANA™ Zirconia UTML

Is zirconia suitable for the production of lifelike monolithic anterior restorations, even veneers? KATANA™ Zirconia UTML with its predominantly cubic crystal structure is. Inspired by enamel, the material offers a light transmittance of 43 percent and with it, same as lithium disilicate LT ingot. Consequently, light passes through to the underlying natural tooth structure to reveal its original shade. This leads to simply beautiful results!

Recommended finishing method

Characterization with CERABIEN™ ZR FC Paste Stain

Recommended indications

- ✓ Veneer
- ✓ Inlay or onlay
- ✓ Anterior crown

Additional indications

- ✓ Anterior 2- or 3-unit bridges
- ✓ Premolar 2- or 3-unit bridges

	Minimum wall thickness	Minimum connector cross section
Veneer	0.4 mm	-
Anterior crown	0.8 mm	-
Inlay/onlay	1.0 mm	-
Posterior crown	1.0 mm	-
Anterior 2- or 3-unit bridges	0.8 mm	12 mm ²
Premolar 2- or 3-unit bridges	1.0 mm	16 mm ²

Translucency



43%

Flexural Strength



557 MPa

Wavelength of light: 700 nm - sample thickness: 0.5 mm.
Source: Kuraray Noritake Dental Inc.

Three point bending test according to ISO 6872:2015
- sample size 3 x 4 x 40 mm. Source: Kuraray Noritake Dental Inc.

STML

FIRST CHOICE FOR CROWNS UP TO THREE-UNIT BRIDGES



KATANA™ Zirconia STML

What are the material properties needed to produce a beautiful monolithic restoration? The material should have a medium to high flexural strength and different levels of translucency in the incisal and cervical area. This is because a lot of light is transmitted in the enamel area, while the color of the abutment tooth should not be revealed. KATANA™ Zirconia STML with its mainly cubic formulation offers exactly these well-balanced properties.

Recommended indications

- ✓ Anterior crown or bridge
- ✓ Posterior crown or bridge

Additional indications

- ✓ Inlay or onlay
- ✓ Veneer

Recommended finishing method

Characterization with CERABIEN™ ZR FC Paste Stain

	Minimum wall thickness	Minimum connector cross section
Veneer	0.4 mm	-
Anterior crown	0.8 mm	-
Inlay/onlay	1.0 mm	-
Posterior crown	1.0 mm	-
Anterior 2- or 3-unit bridges	0.8 mm	12 mm ²
Posterior 2- or 3-unit bridges	1.0 mm	16 mm ²

Translucency



38%

Flexural Strength



748 MPa

Wavelength of light: 700 nm - sample thickness: 0.5 mm.
Source: Kuraray Noritake Dental Inc.

Three point bending test according to ISO 6872:2015
- sample size 3 x 4 x 40 mm. Source: Kuraray Noritake Dental Inc.

HTML

THE ALL-ROUNDER



KATANA™ Zirconia HTML

A high flexural strength is the most important precondition for the production of long-span bridges. With a strength of 1.125 MPa, the latest evolution in high-translucency zirconia from Kuraray Noritake – KATANA™ Zirconia HTML – offers the required property, and it offers it throughout the whole blank. This is important in that it gives you maximum design flexibility. Uniform strength enables you to place the connectors wherever they are needed for ideal esthetics and function, while the high strength values allow for small connector diameters. The result is a delicate framework or monolithic bridge with a beautiful shape fitting the patient's natural dentition.

Recommended indications

- ✓ Anterior crown or bridge
- ✓ Posterior crown or bridge

Additional indications

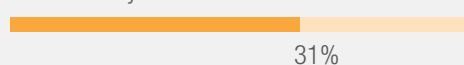
- ✓ Veneer
- ✓ Inlay or onlay

Recommended finishing method

Characterization with CERABIEN™ ZR FC Paste Stain & Cut-Back Solution in combination with CERABIEN™ ZR Porcelain

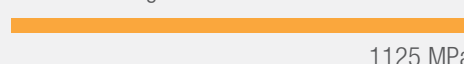
	Minimum wall thickness	Minimum connector cross section
Veneer	0.4 mm	-
Anterior crown	0.4 mm	-
Inlay/onlay	0.5 mm	-
Posterior crown	0.5 mm	-
Anterior 2- or 3-unit bridges	0.4 mm	7 mm ²
Anterior more than 4-unit bridges	0.4 mm	9 mm ²
Posterior 2- or 3-unit, more than 4-unit bridges	0.5 mm	9 mm ²

Translucency



Wavelength of light: 700 nm - sample thickness: 0.5 mm.
Source: Kuraray Noritake Dental Inc.

Flexural Strength



Three point bending test according to ISO 6872:2015 - sample size 3 x 4 x 40 mm. Source: Kuraray Noritake Dental Inc.

HT

FOR PORCELAIN FUSED ZIRCONIA RESTORATIONS.



KATANA™ Zirconia HT

Due to its versatility, zirconia can even be the material of choice for complex cases with unbalanced jaw situations and patients with significant gingival recession or bone atrophy. The material that has been specifically developed for the production of the required full-arch frameworks or restorations with gum and bone parts is KATANA™ Zirconia HT. It offers an extremely high flexural strength of 1125 MPa and is now available in six disc thicknesses – 10, 14, 18, 22, 26 mm and even 30 mm – for virtually unlimited design flexibility.

Recommended indications

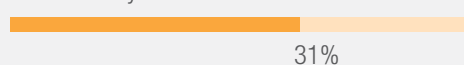
- ✓ Anterior crown or bridge
- ✓ Posterior crown or bridge

Recommended finishing method

Characterization with CERABIEN™ ZR porcelain

	Minimum wall thickness	Minimum connector cross section
Veneer	0.4 mm	-
Anterior crown	0.4 mm	-
Inlay/onlay	0.5 mm	-
Posterior crown	0.5 mm	-
Anterior 2- or 3-unit bridges	0.4 mm	7 mm ²
Anterior more than 4-unit bridges	0.4 mm	9 mm ²
Posterior 2- or 3-unit, more than 4-unit bridges	0.5 mm	9 mm ²

Translucency



Wavelength of light: 700 nm - sample thickness: 0.5 mm.
Source: Kuraray Noritake Dental Inc.

Flexural Strength



Three point bending test according to ISO 6872:2015 - sample size 3 x 4 x 40 mm. Source: Kuraray Noritake Dental Inc.

KATANA™ WHAT ELSE!

D.CORTELLINI and A.CANALE

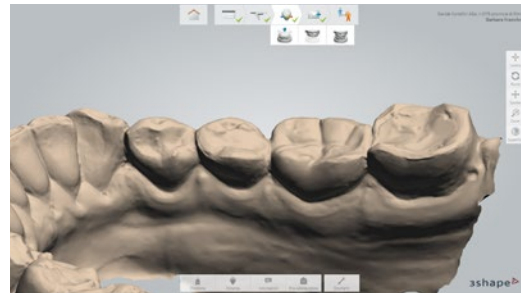
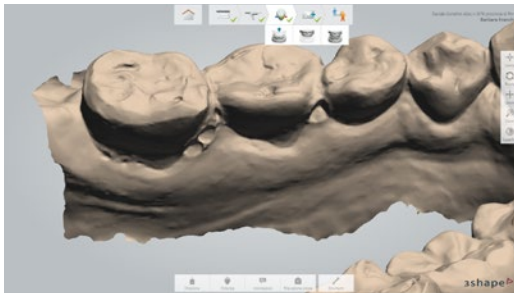
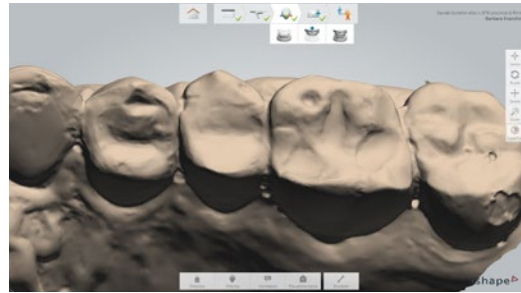
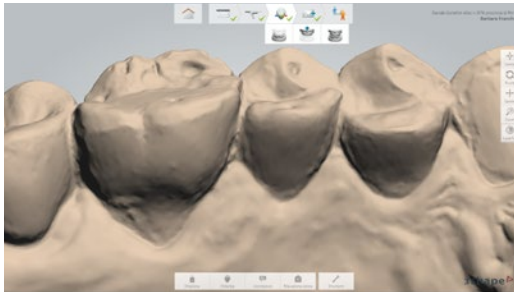


FULL MOUTH REHABILITATION

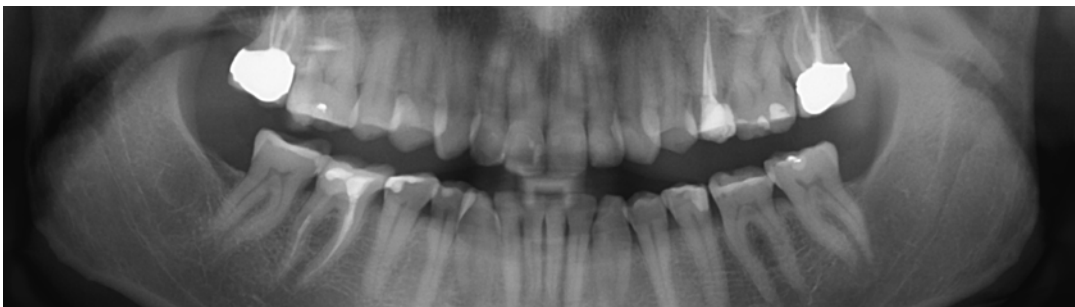
This patient came to the clinic to improve her chewing ability and aesthetic level. The physical examination revealed the presence of several endogenous erosive lesions that made chewing difficult, in addition to partly affecting the esthetics due to decrease in enamel thickness and the presence of dyschromic composite restorations.

The possibility of using the new types of both tetragonal and cubic multilayer zirconia made it possible for us to plan the complete covering of all the elements with extremely conservative crowns with thicknesses between 0.5 and 1 mm in the axial and occlusal areas.





Considerable loss of occlusal enamel



Traditional wax-up



Very conservative vertical preparations were carried out in the enamel without anesthesia. In the upper arch, the front group was prepared for full-veneer crowns, while the lower front group was treated with conventional lithium disilicate veneers without interproximal separation. In this case too, vertical preparations were carried out without finishing line.

The impression was made using a 3Shape TRIOS intraoral scanner. The technician modeled the zirconia restorations that were then completed by the ceramist.





Close-up of the tooth preparations



FIRST TEMPORARY SET

A few days before the final impression.



SCANNING SEQUENCE



1. Temporary



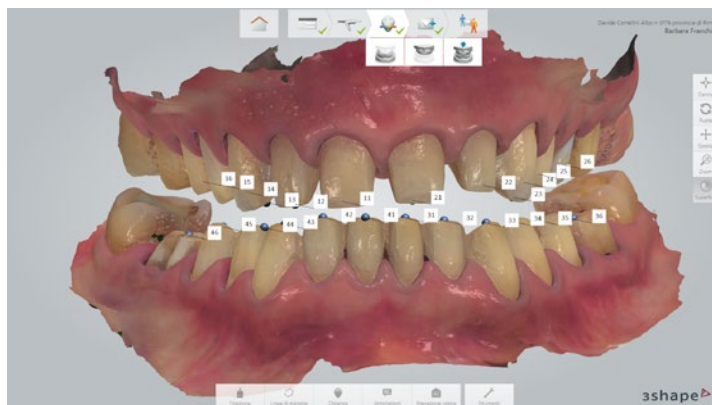
2. Lower arch



3. Upper arch



4. Bite

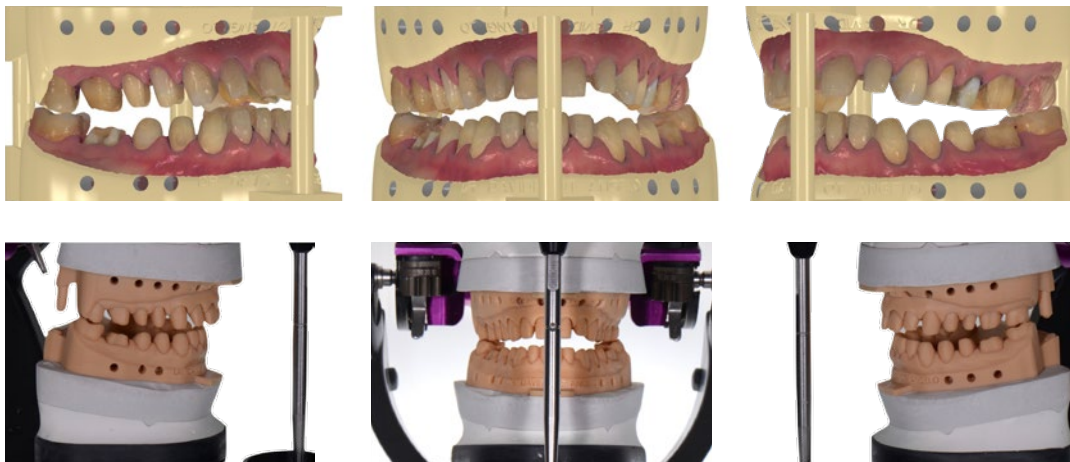


Digital DV models
of temporary teeth

PHASE - CAD



STEREOLITHOGRAPHIC MODELS

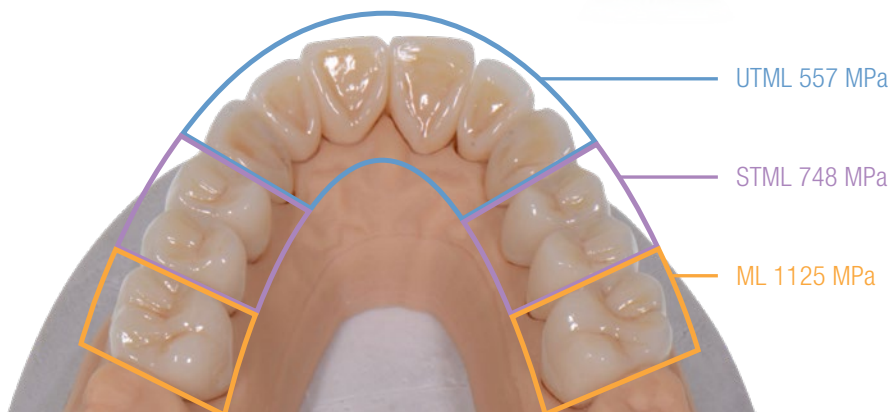


The three different materials were selected on the basis of the specific positions inside the mouth:

UTML for the anterior teeth

STML for the premolars

HTML for the molars



The final result shows excellent integration between the 3 different types of zirconia and a good natural feeling.

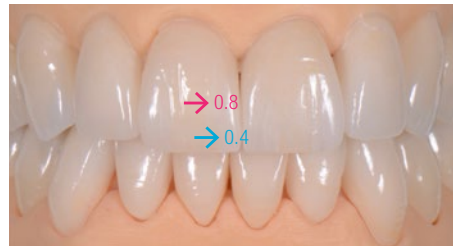
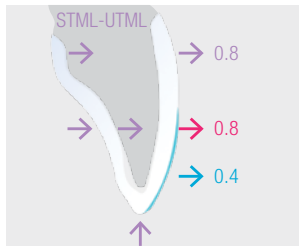


Buccal-lingual thickness: 0.6 mm



Interproximal thickness: 0.5 mm

MINIMAL PREP KATANA™ (MINIMAL LAYERING)

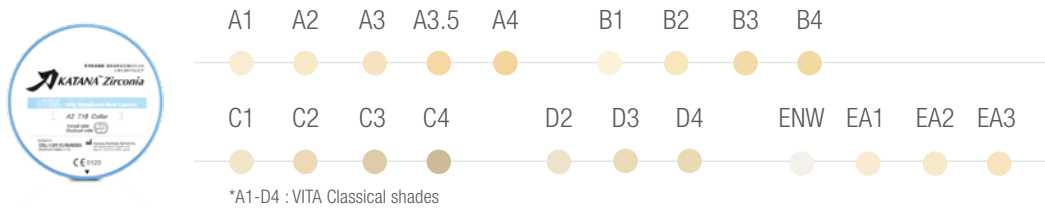


FINAL RESULT

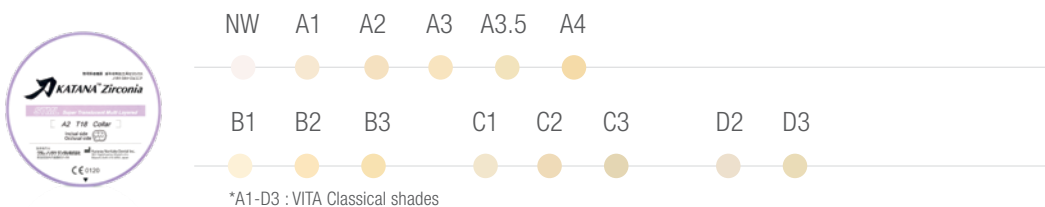


SHADE SELECTION

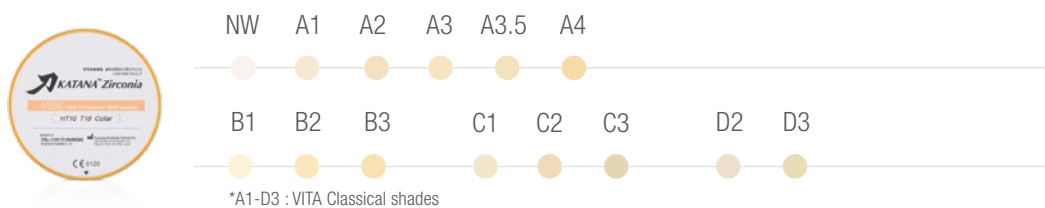
KATANA™ Zirconia UTML SHADES*



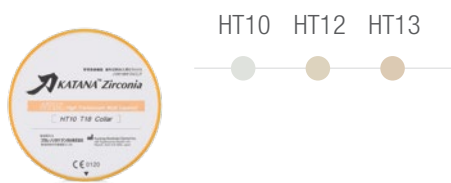
KATANA™ Zirconia STML SHADES*



KATANA™ Zirconia HTML SHADES*



KATANA™ Zirconia HT SHADES



KATANA™ COLOR SIMULATION APP

Kuraray Noritake Dental offers an App that has been developed for dental care workers. It provides the latest news, product information and product usage guidelines for dental professionals. Under the LAB-SIDE section you will find the KATANA™ COLOR SIMULATION tool. Valuable support in selecting the most suitable type of KATANA™ Zirconia for each individual situation you encounter. In addition it even provides you with recipes for micro layering with CERABIEN™ ZR FC Paste Stain and Guidelines for the framework design. App is available in your Apple App store or on Google Play for Android.



SCAN ME!

Find the KATANA™ Color Simulation App in the your Apple App store or on Google Play for Android.



CERABIEN™ ZR FC PASTE STAIN

OPTIMIZING THE ESTHETIC OUTCOME

Glazing, characterization or individualization? Kuraray Noritake offers perfectly matching products for every possible finishing procedure. In most cases, the best option to obtain beautiful results with KATANA™ Zirconia UTML, STML or HTML restorations is micro layering using paste ceramics. The recommended material developed for this specific form of post-sintering characterization is Kuraray Noritake's CERABIEN™ ZR FC Paste Stain.

FC Paste Stain ceramic emulsions are applied in ultra-thin layers in the micron range. Hence, although being additive, the technique allows for a monolithic (full-contour) design without any reduction or cutback. The process is highly efficient and very well controllable, leading to predictable outcomes.

BENEFITS

Easy-to-control paste-type external stain gives desirable appearance of full zirconia characterization

Can be baked at 750°C/1382°F, lower than conventional external stain temperatures

Suitable for a wide range of clinical applications, including both CERABIEN™ ZR layered and CZR PRESS crowns



CERABIEN

KURARAY NORITAKE DENTAL PORCELAINS ARE APPRECIATED
IN OVER 100 COUNTRIES FOR OVER 30 YEARS.

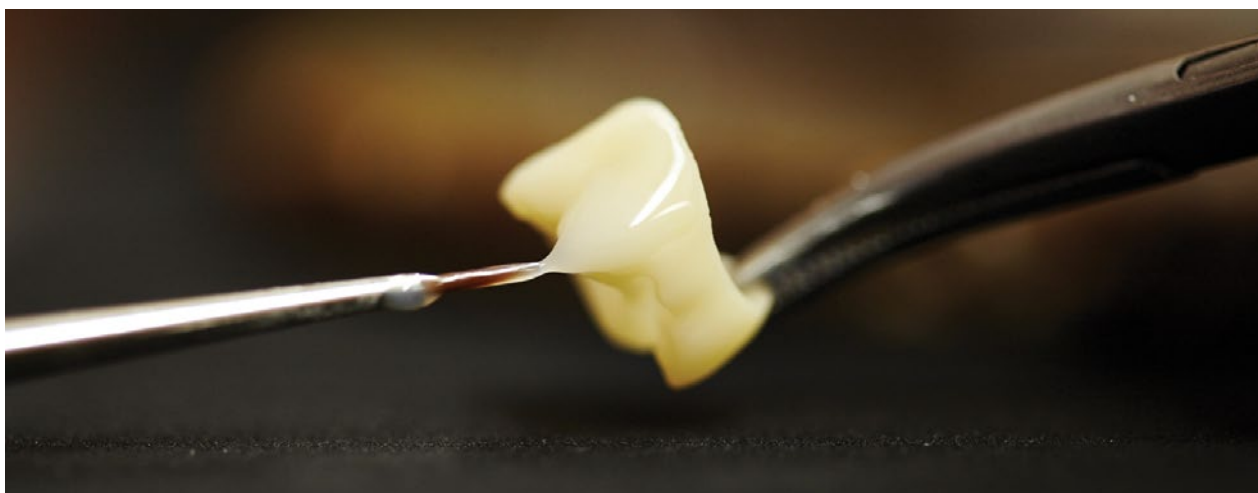
TRUE COLORS

AVAILABLE IN 27 SHADES

CERABIEN™ ZR FC Paste Stain is available in 27 shades for post-sintered characterization, a full complement of blue and gray, and two types of glaze. The perfect combination with KATANA™ Zirconia UTML, STML or HTML to optimize your esthetic outcomes for full-zirconia restorations.



Glaze	Clear Glaze	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			



NORITAKE BUILD-UP BRUSHES

Extremely well facilitating precise build-up (made from Kolinsky Hair) for excellent firmness and tapered to a very fine point.

FULL ZIRCONIA HTML A1 & FC PASTE STAIN

CERABIEN™ ZR FC PASTE STAIN CLINICAL CASE

By DT. Daniele Rondoni

Enamel



Fluoro Glaze Clear Glaze Value

Dentine



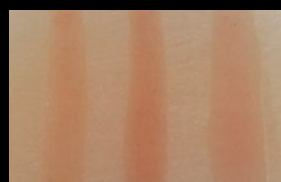
A+ B+ C+ D+

Body effect Mamelons-Characterizations



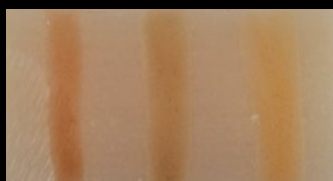
Green 1 Green 2 Yellow MO1 MO2 E.B. R.B.

Gum effect tissue



Red Pink Pink Salmon

Cervical modifier



CV1 CV2 CV3

Incisal effect Opalescence-Intensive



White Blue Greyish Blue Gray Greyish Dark Black

Full Zirconia HTML A1 & FC Paste Stain



CERABIEN™ ZR PORCELAIN FOR CUT-BACK SOLUTIONS

CERABIEN™ ZR PORCELAIN CLINICAL CASE

By DT. Nondas Vlachopoulos

INITIAL SITUATION



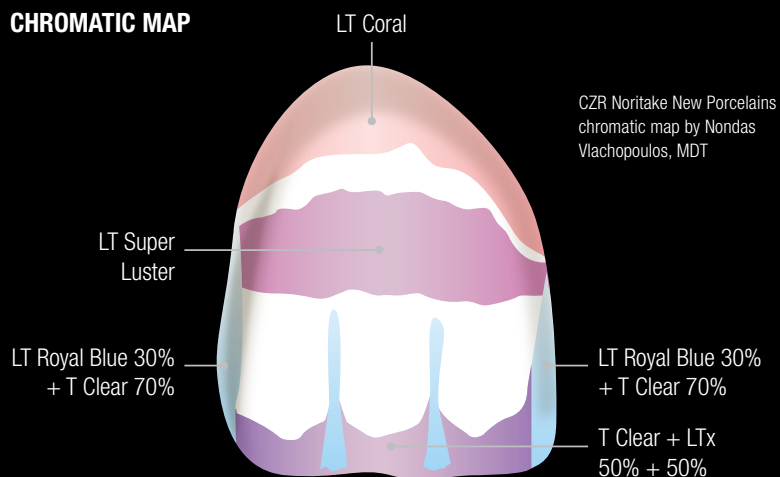
LAYERING BEFORE BAKING



POSTOPERATIVE VIEWS



CHROMATIC MAP



PANAVIA™ V5, THE MASTER OF BOND STRENGTH AND ESTHETICS

PANAVIA™ V5 is the go-to product for dental practitioners or situations demanding the highest possible bond strength. It is the strongest cement Kuraray Noritake ever developed, and with five shades, it is the most esthetic one, too.



INDICATION RANGE

Cementation of crowns, bridges, inlays and onlays

Cementation of veneers

Cementation of adhesion bridges and splints

Cementation of prosthetic restorations on implant abutments and frames

Cementation of posts and cores

Amalgam bonding

PANAVIA™ SA CEMENT UNIVERSAL ESTABLISHING A LASTING BOND

An esthetic and reliable luting material that is designed to work perfectly with the selected zirconia is not only required in the dental office, but also in every laboratory.

The ideal solution for cementing crowns to implant abutments etc. is PANAVIA™ SA Cement Universal. The self-adhesive resin cement contains the unique LCSi monomer. LCSi delivers a strong, durable chemical bond to porcelain, lithium disilicate and composite resin without the need for a separate primer, while the original MDP monomer also present in the paste allows for chemical reactivity with zirconia, dentin and enamel.

Thanks to its extraordinary properties, PANAVIA™ SA Cement Universal is perfectly suited for use in the clinical environment, too. Neither the tooth nor the restoration needs a separate etching or priming pre-treatment before the restoration is seated.



INDICATION RANGE

Cementation of crowns, bridges, inlays and onlays

Cementation of adhesion bridges and splints

Cementation of prosthetic restorations on implant abutments and frames

Cementation of posts and cores

Amalgam bonding

ACCESSORIES



KATANA™ Cleaner

KATANA™ Cleaner removes contamination to optimise adhesive procedures. It has a high cleaning effect due to the surface active characteristic of MDP Salt. In contrast to other cleaners, KATANA™ Cleaner has a pH value of 4.5¹ which allows usage not only extra-orally but also intra-orally.

1. Measuring method: JIS Z 8802:2011

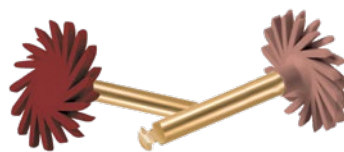
BENEFITS

Intra- and extra-oral use

High cleaning effect

Easy procedure – rub, rinse and dry

Fast application – 10 seconds of rubbing



KATANA™ ZIRCONIA TWIST DIA

KATANA™ ZIRCONIA TWIST DIA has an innovative shape with flexible polishing spirals offering various application benefits to the lab technician and dentist for excellent polishing results.

BENEFITS

For refining all types of tooth surfaces

Highly suitable for occlusions

Modelling of zirconia restoration is maintained

Sterilizable, reusable and economically efficient

YOUR CONTACT

Kuraray Europe GmbH

BU Medical Products

Philipp-Reis-Strasse 4

65795 Hattersheim am Main
Germany

Phone +49 (0)69 305 35 835

E-Mail centralmarketing@kuraray.com

Website www.kuraraynoritake.eu

- Before using this product, be sure to read the Instructions for Use supplied with the product.
- The specifications and appearance of the product are subject to change without notice.
- Printed color can be slightly different from actual color.

"KATANA" and "CERABIEN" are trademarks of NORITAKE CO.,LIMITED
"PANAVIA" and "CLEARFIL" are trademarks of KURARAY CO.,LTD



Kuraray Noritake Dental Inc.

300 Higashiyama, Miyoshi-cho, Miyoshi, Aichi 470-0293, Japan
Website www.kuraraynoritake.com

