

# DENTAL CERAMICS



FDA ISO 13485 CE 1639

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## SCIENCE & ART



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FDA/MDML/ CFDA/ CE/ ISO/ Patent
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BAOT Works Gallery

# CERTIFICATES



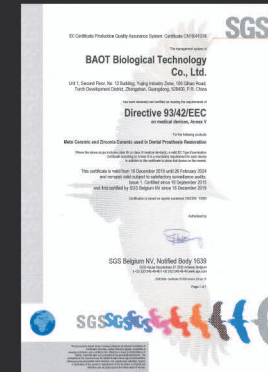
FDA



Medical Device Manufacturing License



CFDA



CE



ISO 13485



Patent

*Easy build up, low sintering shrinkage, tight integration of each layer  
ISO standard flexural strength, chemical solubility & biocompatibility*





# PRODUCT SERIES

## Metal Ceramic - JC

Type	Packages	Shades	Code
JC BOND (wash opaque)		1	BOND(▲WO)
OPAQUE		16+26	A1/A2/A3/A3.5/A4/B1/B2/B3/B4/C1/C2/C3/C4/D2/D3/D4 B1M1/B1M2/B2L1.5/B2L2.5/B2M1/B2M2/B2M3/B2R1.5/B2R2.5 B3L1.5/B3L2.5/B3M1/B3M2/B3M3/B3R1.5/B3R2.5/B4L1.5/B4L2.5 B4M1/B4M2/B4M3/B4R1.5/B4R2.5/B5M1/B5M2/B5M3
OPAQUE (bleach shades)		4	B1M1 BL1/B1M1 BL2/B1M1 BL3/B1M1 BL4
OPACIOUS DENTINE		16	A1/A2/A3/A3.5/A4/B1/B2/B3/B4/C1/C2/C3/C4/D2/D3/D4
DENTINE		16+26	A1/A2/A3/A3.5/A4/B1/B2/B3/B4/C1/C2/C3/C4/D2/D3/D4 B1M1/B1M2/B2L1.5/B2L2.5/B2M1/B2M2/B2M3/B2R1.5/B2R2.5 B3L1.5/B3L2.5/B3M1/B3M2/B3M3/B3R1.5/B3R2.5/B4L1.5/B4L2.5 B4M1/B4M2/B4M3/B4R1.5/B4R2.5/B5M1/B5M2/B5M3
DENTINE (bleach shades)		4	B1M1 BL1/B1M1 BL2/B1M1 BL3/B1M1 BL4
ENAMEL		3	E-1A(Light)/E-1B(Medium)/E-1C(Dark)
TRANSPARENT		2	T-1(Medium)/▲T-1(High)
CERVICAL		4	C-1A(Reddish-brown)/C-1B(Reddish-yellow) C-1C(Grey)/C-1D(Reddish-grey)
MARGIN		4	M-1A(Reddish-brown)/M-1B(Reddish-yellow) M-1C(Grey)/M-1D(Reddish-grey)
STAIN		17	S-1A(Reddish-brown)/S-1B(Reddish-yellow)/S-1C(Grey)/S-1D(Reddish-grey) S-1A 011(White)/S-1A 012(Transpa white) S-1B 021(Bright yellow)/S-1B 022(Yellow)/S-1B 023(Champagne)/S-1B 024(Orange) S-1C 031(Pink)/S-1C 032(Smoke) S-1D 041(Bright blue)/S-1D 042(Blue)/S-1D 043(Red)/S-1D 044(Dark brown) S-1D 045(Black)
GINGIVA		6	GIN-1A(Light)/GIN-1B(Medium)/GIN-1B 073(Dark)/GIN-1B 074(Pink) GIN-1B 076(Orange-red)/GIN-1B 077(Light orange-red)
GLAZE		2	G-1/G-1 A (fluorescent)
<b>EFFECT:</b>			
T BLUE 1		1	T-1 061
OPAL 1		1	T-1 062
NATURAL		1	T-1 063
OPAL 3		1	T-1 064
CREAMY		1	T-1 065
T BLUE 2		1	T-1 068
AUREOLA		1	T-1 071
SUN BRIGHT		1	T-1 075
OCCLUSAL		1	C-1C 003

**\* Note:**  
1. JC Bond: 7g package for paste or powder  
2. Opaque: 5g package for paste

## Zirconia Ceramic - ZCG

Type	Packages	Shades	Code
DENTINE		16+26	A1/A2/A3/A3.5/A4/B1/B2/B3/B4/C1/C2/C3/C4/D2/D3/D4 B1M1/B1M2/B2L1.5/B2L2.5/B2M1/B2M2/B2M3/B2R1.5/B2R2.5 B3L1.5/B3L2.5/B3M1/B3M2/B3M3/B3R1.5/B3R2.5/B4L1.5/B4L2.5 B4M1/B4M2/B4M3/B4R1.5/B4R2.5/B5M1/B5M2/B5M3
DENTINE (bleach shades)		4	B1M1 BL1/B1M1 BL2/B1M1 BL3/B1M1 BL4
ENAMEL		4	E-2A(Light)/E-2B(Medium)/E-2C(Dark)/E-2A 201(Low-transparent)
TRANSPARENT		2	T-2(Medium)/▲T-2(High)
STAIN		17	S-2A(Reddish-brown)/S-2B(Reddish-yellow)/S-2C(Grey)/S-2D(Reddish-grey) S-2A 211(White)/S-2A 212(Transpa white) S-2B 221(Bright yellow)/S-2B 222(Yellow)/S-2B 223(Champagne)/S-2B 224(Orange) S-2C 231(Pink)/S-2C 232(Smoke) S-2D 241(Bright blue)/S-2D 242(Blue)/S-2D 243(Red)/S-2D 244(Dark brown) S-2D 245(Black)
GINGIVA		3	GIN-2A(Light)/GIN-2B(Medium)/GIN-2B 273(Dark)
GLAZE		2	G-2/G-2 A (fluorescent)
<b>EFFECT:</b>			
OPAL EFFECT 1		1	T-2 262
OPAL EFFECT 3		1	T-2 264
TRANSPA BLUE		1	T-2 268
OCCLUSAL DENTINE		1	C-2C 203

## Formative Liquid

Type	Packages	Code
MODELING LIQUID	240ml	CFS
OPAQUE LIQUID	50ml/240ml	OF
GLAZE & STAIN LIQUID	50ml	GY





# OPERATIONAL GUIDELINE

## Metal Ceramic - JC



### Firing Parameters for Calibrated Furnaces

Condition	Firing					
	Wash Opaque	Opaque	Margin	Body*	Add on	Glaze & Stain
Drying temp.(°C)	550	550	550	550	550	550
Drying time (min)	2	3	3	3	2	2
Heating time (min)	2	3	3	3	2	2
Heating rate (°C/min)	60	60	55	55	55	55
Firing temp.(°C)	960	940	930	920	910	890
Holding time (min)	1	1	1	1	1	1
Cooling time (min)	4	4	4	4	4	4
Cooling temp.(°C)	550	550	550	550	550	550
Vacuum start (°C)	550	550	550	550	550	-
Vacuum end (°C)	960	940	930	920	910	-

**Note:**

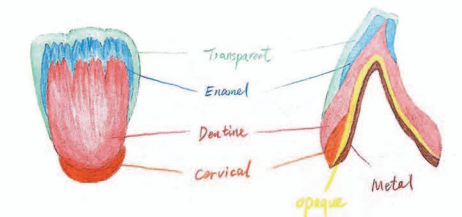
- (1)\*"Body" includes Cervical, Opacious Dentine, Dentine, Enamel, Transparent, Effect, Gingiva.
- (2) Our recommendation for firing temperature is based on numerous tests.  
This firing parameters may be adjusted according to the peculiarities of different furnaces.  
It is essential to test firing before production.
- (3) Please refer to "Instruction for Use" for details.

## Properties

Properties	JC	ISO standard	SEM after acid etching
CTE*(10 <sup>-6</sup> ·K <sup>-1</sup> )	12.7-13.7	-	
Glass transition(°C)	575	-	
Flexual strength(MPa)	118	>50	
Bonding strength(MPa)	39.5	>25	
Chemical solubility(µg·cm <sup>-2</sup> )	31.8	<=100	

\*CTE(Coefficient of thermal expansion)

## Basic Operation



<b>1.</b>	Metal framework treatment		-Grinding & Sand blasting -Ultrasonic/Steam cleaning & oxidization -WASH OPAQUE & OPAQUE PASTE application & firing
<b>2.</b>	Body build-up		-DENTINE build-up 10% larger to compensate the firing shrinkage -ENAMEL build-up, applying to the incisal 1/3 -TRANSPARENT build-up, applying to the incisal 2/3
<b>3.</b>	Glaze & Stain application		-After firing, contouring -Applying GLAZE & STAIN & firing

# OPERATIONAL GUIDELINE

## Zirconia Ceramic - ZCG



### Firing Parameters for Calibrated Furnaces

Condition	Firing			
	Liner	Body*	Add on	Glaze & Stain
Drying temp.(°C)	500	500	500	500
Drying time (min)	2	3	2	2
Heating time (min)	2	3	2	2
Heating rate (°C/min)	50	50	50	50
Firing temp.(°C)	960	920	910	890
Holding time (min)	1	1	1	1
Cooling time (min)	4	4	4	4
Cooling temp.(°C)	550	550	550	550
Vacuum start (°C)	500	500	500	-
Vacuum end (°C)	960	920	910	-

**Note:**

- (1)\*"Body" includes Cervical, Opacious Dentine, Dentine, Enamel, Transparent, Effect, Gingiva.
- (2) Our recommendation for firing temperature is based on numerous tests.  
This firing parameters may be adjusted according to the peculiarities of different furnaces.  
It is essential to test firing before production.
- (3) Please refer to "Instruction for Use" for details.

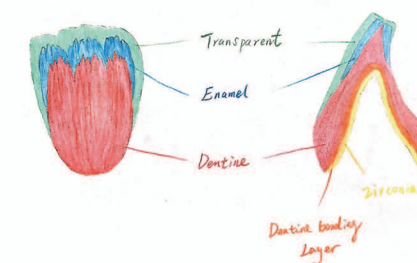
## Properties

Properties	ZCG	ISO standard	SEM after acid etching
CTE*(10 <sup>-6</sup> ·K <sup>-1</sup> )	9.5-10.5	-	
Glass transition(°C)	590	-	
Flexual strength(MPa)	106	>50	
Chemical solubility(µg·cm <sup>-2</sup> )	20	<= 100	

\*CTE(Coefficient of thermal expansion)

## Basic Operation

1. **Liner**  -0.2mm-0.3mm DENTINE bonding layer build-up & firing
2. **Body build-up**  -DENTINE/ENAMEL/TRANSPARENT build-up & firing
3. **Add-on build-up**  -DENTINE/ENAMEL/TRANSPARENT build-up & firing
4. **Glaze & Stain Application**  -After contouring, Applying GLAZE & STAIN & firing

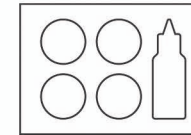






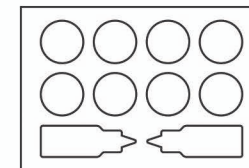
# TRIAL KITS

## Metal Ceramic Kit



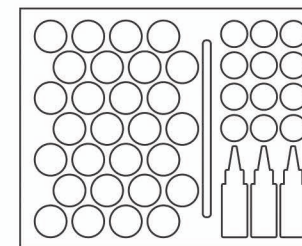
Opaque: A2 (2g/pc)  
 Dentine: A2 (5g/pc)  
 Enamel: E-1B (5g/pc)  
 Transparent: ▲T-1 (5g/pc)  
 Modeling Liquid: CFS (15ml/pc)

### Mini Kit



JC Bond: BOND (2g/pc)  
 Opaque: A2/A3 (2g/pc)  
 Dentine: A2/A3 (5g/pc)  
 Enamel: E-1B (5g/pc)  
 Transparent: ▲T-1 (5g/pc)  
 Glaze: G-1 (3g/pc)  
 Modeling Liquid: CFS (15ml/pc)  
 Glaze & Stain Liquid: GY (15ml/pc)

### Basic Kit



Opaque: A2/A3/B2/B1M1 BL1 (5g/pc)  
 JC Bond: BOND (7g/pc)  
 Stain: S-1A/B/C/D/A 011/  
 B 022/C 032 (3g/pc)  
 Opaque Dentine: A2/A3/B2 (15g/pc)  
 Dentine: A2/A3/B2/B1M1 BL1 (15g/pc)  
 Enamel: E-1A/B/C (15g/pc)  
 Transparent: T-1/▲T-1 (15g/pc)  
 Gingiva: GIN-1A/B/B 073 (15g/pc)  
 Glaze: G-1 (15g/pc)  
 Cervical: C-1A/B (15g/pc)  
 Margin: M-1A (15g/pc)  
 T Blue 1: T-1 061 (15g/pc)  
 Opal 1: T-1 062 (15g/pc)  
 Natural: T-1 063 (15g/pc)  
 Opal 3: T-1 064 (15g/pc)  
 Creamy: T-1 065 (15g/pc)  
 T Blue 2: T-1 068 (15g/pc)  
 Aureola: T-1 071 (15g/pc)  
 Sun Bright: T-1 075 (15g/pc)  
 Occlusal: C-1C 003 (15g/pc)  
 Modeling Liquid: CFS (50ml/pc)  
 Glaze & Stain Liquid: GY (50ml/pc)  
 Opaque Liquid: OF (50ml/pc)  
 Brush-No.7

### Master Kit

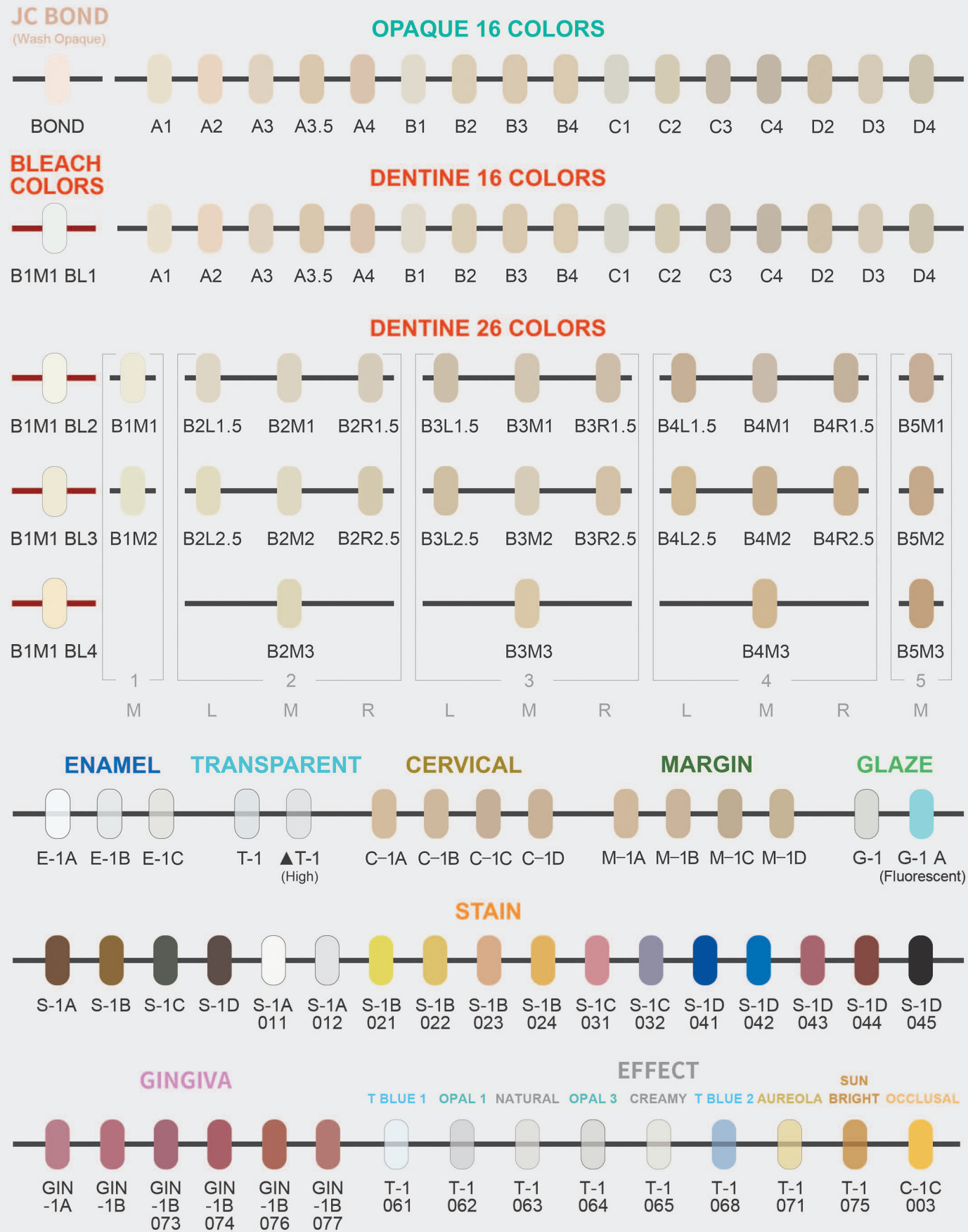
## Zirconia Ceramic Kit

Dentine: A2/A3 (5g/pc)  
 Enamel: E-2B (5g/pc)  
 Transparent: ▲T-2 (5g/pc)  
 Modeling Liquid: CFS (15ml/pc)

Dentine: A2/A3/B1/C2/D3 (5g/pc)  
 Enamel: E-2B (5g/pc)  
 Transparent: ▲T-2 (5g/pc)  
 Glaze: G-2 (3g/pc)  
 Modeling Liquid: CFS (15ml/pc)  
 Glaze & Stain Liquid: GY (15ml/pc)

Dentine: A1/A2/A3/A3.5/A4/B1/B2/B3/  
 B4/C1/C2/C3/C4/D2/B1M1 BL1 (15g/pc)  
 Enamel: E-2A/B/C (15g/pc)  
 Transparent: T-2/▲T-2 (15g/pc)  
 Gingiva: GIN-2A/B/B 273 (15g/pc)  
 Glaze: G-2 (15g/pc)  
 Opal 1: T-2 262 (15g/pc)  
 Opal 3: T-2 264 (15g/pc)  
 T Blue 2: T-2 268 (15g/pc)  
 Occlusal: C-2C 203 (15g/pc)  
 Stain: S-2A/B/C/D/A 211/B 222/B 223/  
 B 224/C 232/D 242/D 243/D 244 (3g/pc)  
 Modeling Liquid: CFS (50ml/pc) x2  
 Glaze & Stain Liquid: GY (50ml/pc)  
 Brush-No.7

# COLOR CHART



# SHADE GUIDE







かわばた まさし  
Masashi Kawabata

Master in Japan for  
Running TEETH HAT Studio  
for **21 years** in Japan.  
Producing more than **150000**  
crowns.



*Christian Arias*  
Christian Arias

Master in Argentina for more than **28 years**,  
Director and owner of 5D DENTAL LAB.



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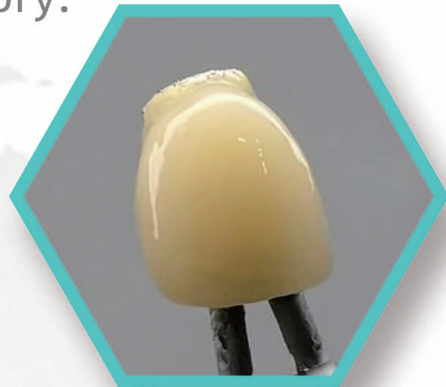




*Bruno Marquesini*

Bruno Marquesini

Master in Brazil for more than **13 years.**  
Owner of the Marquesini laboratory.



*Larios Montano*

Ernesto Larios Montano

Master in Salvador for more than **20 years.**  
With rich experience in dental porcelain.  
Good at giving works ingenious  
creativity, creating highly artistic works.



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*Michael Naseem*

Michael Naseem

Master in Egypt for over **15 years**.  
Work as a dental technologist since 2007.



*Evgeny Stotsky*

Evgeny Stotsky

More than **12 years** in dental industry,  
Professional in Morphology  
and Anatomy of living teeth (carving).



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