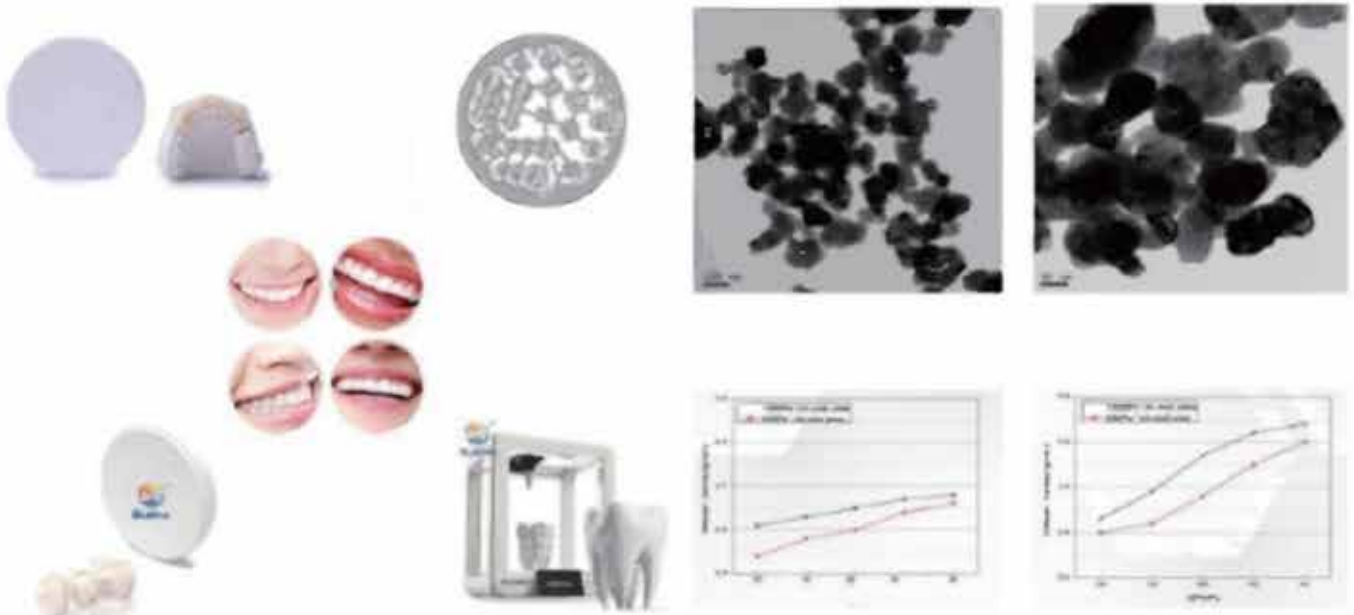


# Dental Yttrium stabilized Zirconia

歯科用イットリウム安定化ジルコニア

Yttrium Stabilized Zirconia has High Hardness, Better Penetration, Uniform Particle Size and Better Toughness when used in dentistry.

## Application



## Zirconia powders for dental use

### Technical Data Sheet

INDEX	UNITE	SY-3YB-1	SY-3YB-3	SY-3YB-Y	SY-3YB-P	SY-3YS-G	SY-4YB	SY-4YB-Y	SY-4YB-P	SY-4YS-G	SY-5YB	SY-5YB-Y	SY-5YB-P	SY-5YS-G	METHOD
LOI	wt.%	<3.0	<3.0	<3.0	<3.0	<1.0	<3.0	<3.0	<3.0	<1.0	<3.0	<3.0	<3.0	<1.0	Tu-DSC
Binder	wt.%	2.5	2.5	2.5	2.5	---	2.5	2.5	2.5	---	2.5	2.5	2.5	---	---
Y2O3	wt.%	5.5±0.2	5.5±0.2	5.5±0.2	---	5.5±0.2	7.2±0.2	7.2±0.2	---	7.2±0.2	9.2±0.2	9.2±0.2	---	9.2±0.2	XF
Al2O3	wt.%	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	XF
SiO2	ppm	<300	<150	<150	<150	<150	<150	<150	<150	<150	<150	<150	<150	<150	ICP
Fe2O3	ppm	<300	<100	---	<100	<100	<100	---	<100	<100	<100	---	<100	<100	ICP
Seer	mf/g	13±1	11±1	8±1	8±1	8±1	10±1	8±1	8±1	8±1	8±1	8±1	8±1	8±1	---
Bulk Density	g/cm <sup>3</sup>	1.3±0.2	1.3±0.1	1.3±0.1	1.3±0.1	1.2±0.1	1.3±0.1	1.3±0.1	1.3±0.1	1.2±0.1	1.3±0.1	1.3±0.1	1.3±0.1	1.2±0.1	ISO 14701: 2011
Sintered Density	g/cm <sup>3</sup>	>6.05	>6.05	>6.05	>6.30	>6.06	>6.05	>6.04	>6.34	>6.03	>6.04	>6.02	>6.40	>6.02	ISO 6872: 2015
Bending Strength	MPa	>1100	>1100	>950	>950	>1100	>900	>850	>1750	>900	>600	>550	>550	>600	ISO 14704: 2016
Hardness	Hv5	>1200	>1200	>1200	>1200	>1200	>1200	>1200	>1200	>1200	>1200	>1200	>1200	>1200	ISO 14705: 2016
Translucency	%	39	41	---	---	---	44	---	---	---	48	---	---	---	ISO 13469-2: 2006
Color	---	White	White	Yellow	Pink	Gray	White	Yellow	Pink	Gray	White	Yellow	Pink	Gray	---
Sintering Temperature	°C	1500	1500	1500	1500	1500	1480	1480	1480	1480	1500	1500	1500	1500	---
Rapid Sintering	---	X	O	O	O	O	O	O	O	O	O	O	O	O	---
Multilayer Block	---	X	O	O	O	O	O	O	O	O	O	O	O	O	---

SYB: Powder with binder  
SY-S: Powder without binder