

# ZIRCONIA

## ■ BSZ & ZTA/ATZ PRODUCTS RANGES

Baikowski® Stabilized Zirconia

Zirconia Toughened Alumina / Alumina Toughened Zirconia

Standard Zirconia products (Typical values)		BSZ3Y	BSZ8Y	ZTA80	ATZ80
Specificity		3%mol Ytria	8%mol Ytria	80%vol Al <sub>2</sub> O <sub>3</sub>	80%vol BSZ3Y
Crystalline phase		Tetragonal Monoclinic	Cubic	-	-
Particle Size Distribution (µm) <i>Laser diffraction Horiba LA950</i>	d <sub>50</sub>	0.15		0.12 - 0.20	
Spray dried particle size (µm)	d <sub>50</sub>	50 - 60			
Chemical Composition (ppm)	Ca	≤ 30			
	Cr	≤ 2			
	Fe	≤ 10			
	K	≤ 30			
	Na	≤ 40			
	Si	≤ 100			
Examples of applications		Orthopedic & Dental Bioceramics			

➤ Zirconia products ranges characteristics:

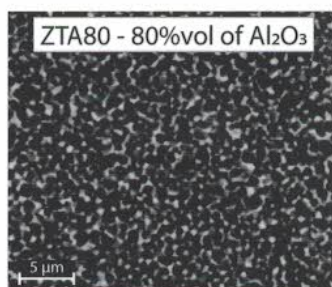
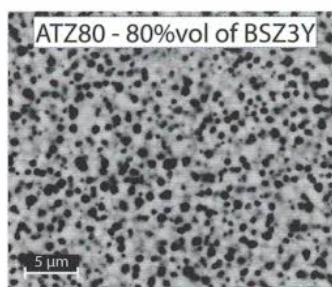
- High chemical purity
- Controlled in particle size and size distribution
- Homogeneous distribution between Al<sub>2</sub>O<sub>3</sub>/BSZ3Y
- Homogeneous in phase
- Controlled in stabilizer rate and homogeneously distributed
- High firing reactivity leading to a low firing temperature (good mechanical properties)

*BSZ product range contains uniformly from 0 to 10%mol of Ytria.  
Particles of ZTA/ATZ products are **homogeneously spread over** between Al<sub>2</sub>O<sub>3</sub>/BSZ3Y which gives a **high sintering reactivity** at a **lower temperature**.*

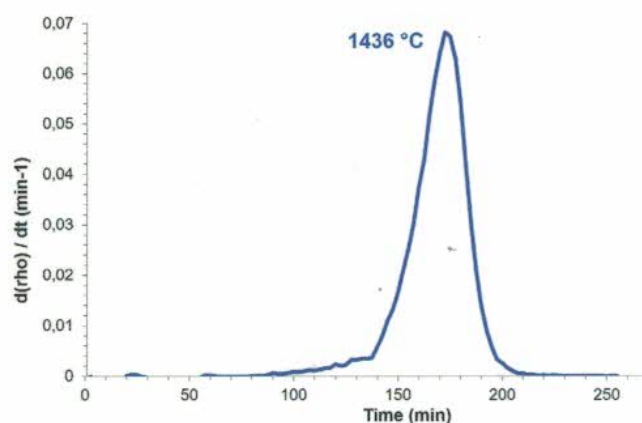
## PRODUCTS DESIGN

Baikowski® serves also doped ZTA/ATZ products to introduce colored dopants extremely resistant to high temperatures for several applications like:

- Luxury
- Mechanical parts



## DENSIFICATION RATE AS FUNCTION OF TIME



**Baikowski**  
PSB INDUSTRIES