



P L A S M A   B I O T A L   L I M I T E D

## TECHNICAL DATA SHEET

### CAPTAL<sup>®</sup> β-TRICALCIUM ORTHOPHOSPHATE (β-TCP)

Captal<sup>®</sup> β-TCP is a medical grade, synthetic, high-purity, highly crystalline bio-resorbable bone substitute material. It is provided in 2 standard sizes with d(50) = 2-6 μm and d(50) = 15-30 μm. (Custom sizes are available on request). Captal<sup>®</sup> β-TCP can be sold as material compliant with ASTM F1088 - 04a if required.

#### Chemical Specification (Typical values in parentheses)

<b>Phase Purity</b>	Ca <sub>3</sub> (PO <sub>4</sub> ) <sub>2</sub>	> 95 %	(99)
<b>Crystallinity</b>		> 95 %	(99)
<b>Ca:P Ratio</b>		1.48-1.52	(1.5)
<b>Heavy Metals</b>	Arsenic (As)	< 3 ppm	(< 1)
	Cadmium (Cd)	< 5 ppm	(< 1)
	Mercury (Hg)	< 5 ppm	(< 1)
	Lead (Pb)	< 30 ppm	(< 3)
	Silicon (SiO <sub>2</sub> )	0.02 %	
<b>Other Impurities (Typical Values)</b>	Magnesium (MgO)	< 3000 ppm	
	Iron (Fe <sub>2</sub> O <sub>3</sub> )	< 500 ppm	
	Manganese (Mn <sub>3</sub> O <sub>4</sub> )	< 100 ppm	
	Aluminium (Al <sub>2</sub> O <sub>3</sub> )	< 500 ppm	
	Strontium (SrO)	< 500 ppm	
	Sodium (Na <sub>2</sub> O)	< 300 ppm	

#### Physical Properties (Typical Values)

<b>Morphology</b>	Angular	Angular/Spherical
<b>Colour</b>	White	White
<b>Particle Size Distribution</b>	d(10) = < 3 μm	d(10) = < 15 μm
	d(50) = 2-6 μm	d(50) = 15-30 μm
	d(90) = 5-15 μm	d(90) = > 25 μm
<b>Surface Area (BET)</b>	> 5 m <sup>2</sup> /g	> 2 m <sup>2</sup> /g

Custom Particle Size distributions available on request – please contact us.

#### Storage and Handling

Captal<sup>®</sup> β-TCP is stable if stored under the correct conditions. Ensure the container is correctly sealed and store in a cool, dry environment. Captal<sup>®</sup> β-TCP is sold as non-sterile material and is not packaged in a clean room environment. Please refer to the safety data sheet for more information on the storage and handling of Captal<sup>®</sup> β-TCP materials

#### Further Information

For more information on this or any other Plasma Biototal products, please either go to the website: [www.plasma-biototal.com](http://www.plasma-biototal.com) or contact us via email: [info@plasma-group.co.uk](mailto:info@plasma-group.co.uk)

