



PLASMA BIOTAL LIMITED

TECHNICAL DATA SHEET

CAPTAL® β-TRICALCIUM ORTHOPHOSPHATE (β-TCP)

Captal® 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® β-TCP can be sold as material compliant with ASTM F1088 - 04a if required.

Chemical Specification (Typical values in parentheses)

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

Physical Properties (Typical Values)

Morphology	Angular	Angular/Spherical
Colour	White	White
Particle Size Distribution	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
Surface Area (BET)	> 5 m ² /g	> 2 m ² /g

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

Storage and Handling

Captal® β-TCP is stable if stored under the correct conditions. Ensure the container is correctly sealed and store in a cool, dry environment. Captal® 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® 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 or contact us via email: info@plasma-group.co.uk

