



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

TECHNICAL DATA SHEET

CAPTAL[®] ACP 1.67

AMORPHOUS CALCIUM PHOSPHATE

Captal[®] ACP 1.67 is the medical-grade, high purity, pre-crystalline precursor to our bioactive hydroxyapatite material prepared to the latest ISO 13779-6 standards. It will fully resolve into high purity, highly crystalline HA under an appropriate sintering regime due to its Ca:P ratio of 1.67.

Captal[®] ACP 1.67 is an advantageous biomaterial for regenerative orthodontal and orthopaedic implants. The non-crystalline structure allows for rapid resorption by the body, providing resources for osteo-neogenesis and inducing differentiation pathways preferable for bone repair. ACP 1.67 as an unsintered material is appropriate for use in biomaterial manufacture and can form crystalline Hydroxyapatite in composite materials when sintered.

Chemical Specification (Typical Values)

Phase Purity (once sintered)	Ca ₅ (PO ₄) ₃ OH	> 95 %
Ca:P Ratio		1.66-1.72
Heavy Metals	Arsenic (As)	< 1 ppm
	Cadmium (Cd)	< 1 ppm
	Mercury (Hg)	< 1 ppm
	Lead (Pb)	< 3 ppm
Other Impurities	Magnesium (MgO)	< 3500 ppm
	Silicon (SiO ₂)	< 850 ppm
	Aluminium (Al ₂ O ₃)	< 500 ppm
	Strontium (SrO)	< 500 ppm
	Sodium (Na ₂ O)	< 300 ppm
	Iron (Fe ₂ O ₃)	< 200 ppm
	Manganese (Mn ₃ O ₄)	< 100 ppm

Physical Properties (Typical Values)

Morphology	Spherical (Spray Dried)
Colour	White
Particle Size Distribution	D _v (10) = > 1 µm
	D _v (50) = 15 – 25 µm
	D _v (90) = < 40 µm
Surface Area (BET)	> 30 m ² /g
Moisture Content (Loss on Drying at 110 °C)	< 2.5 wt%

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

Storage and Handling

Captal[®] ACP 1.67 is stable when stored under the correct conditions. Ensure the container is correctly sealed and store in a cool, dry environment. Captal[®] ACP 1.67 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 & handling of Captal[®] ACP 1.67 material.

Further Information

For more information on this or any other Plasma Biototal products, please either go to the website: www.plasma-biototal.com or send an enquiry via the contact form at [Plasma Biototal - Contact Us \(plasma-biototal.com\)](mailto:Plasma Biototal - Contact Us (plasma-biototal.com))

