



PLASMA BIOTAL LIMITED

TECHNICAL DATA SHEET

CAPTAL® 'HT' HYDROXYAPATITE MICROSPHERES

CAPTAL® 'HT' is a high-performance spherical form of our medical-grade, synthetic, high-purity, high-crystallinity hydroxyapatite, engineered for flowability. Available immediately in two standard sizes - Captal 20 'HT' (< 20 microns) and Captal 50 'HT' (> 50 microns).

Our novel manufacturing technique maintains the high purity and crystallinity of Biotal's Hydroxyapatite while outperforming conventional spray dried powders in density and sphericity.

CAPTAL® 'HT' powder is comprised of high-density beads of bioactive hydroxyapatite, making the powder ideal for use in injectable therapies requiring high flowability, such as cosmetic procedures or drug delivery; reducing tissue damage and inflammation. It may also be suited to additive manufacturing and selective laser sintering where controlled flow is vital.

All CAPTAL® 'HT' hydroxyapatite meets the requirements of the ISO 13779-6 international standard.

Chemical Specification (Typical values)

Phase Purity (%)	$Ca_{10}(PO_4)_6(OH)_2$	> 95
Crystallinity (%)		> 75
Ca:P Ratio		1.66-1.72
Heavy Metals (ppm)	Arsenic (As)	< 1
	Cadmium (Cd)	< 1
	Mercury (Hg)	< 1
	Lead (Pb)	< 3
Other Impurities (%) (Typical Values)	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
Colour	Pale Grey-Blue
Surface Area (BET) (m²/g)	0.07
Bulk Density (g/cm³)	1.65
Tapped Density (g/cm³)	1.90
True Density (g/cm³)	> 3.00

Particle Size Specification (µm)

Custom sizes available from < 25µm / > 50µm.
Please enquire about particle size specification.

Storage and Handling

CAPTAL® 'HT' Hydroxylapatite is stable if stored under the correct conditions. Ensure the container is correctly sealed and store in a cool, dry environment. CAPTAL® 'HT' HA is sold as non-sterile material. Please refer to the Safety Data Sheet for more information on the storage & handling of CAPTAL® HA 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 sent an enquiry via the contact form at [Plasma Biototal - Contact Us \(plasma-biototal.com\)](#).

