

BloomRebeupo™

Calcium Hydroxyapatite

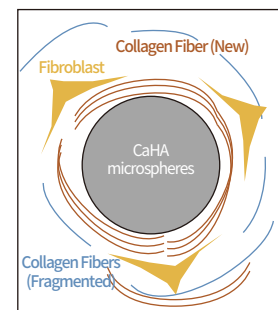
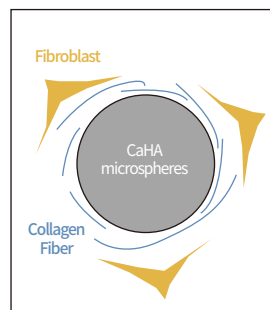
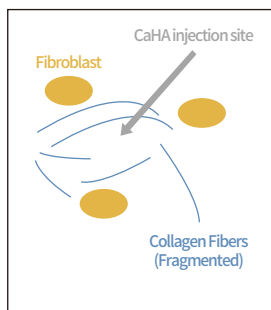
(Medical Device Grade)

- Uniform Spherical Morphology
- Controllable Particle Size

Product Introduction

Calcium Hydroxyapatite (CaHA), also known as Hydroxyapatite (HAP), is a compound formed by calcium and phosphate. As a naturally apatite mineral, it constitutes the primary inorganic component of biological bones and teeth, with the chemical formula $\text{Ca}_{10}(\text{PO}_4)_6(\text{OH})_2$. BloomRebeupo™ CaHA microspheres are prepared through high-temperature calcination and microsphere screening technology, featuring the narrow particle-size distribution and excellent sphericity and offering the dual benefits of high biocompatibility and long-lasting filling. The product is produced in the facility in compliant with ISO 9001/ISO 13485 and GMP, fully meeting the quality requirements for the injectable-grade material of dermal filler.

Mechanism of Action



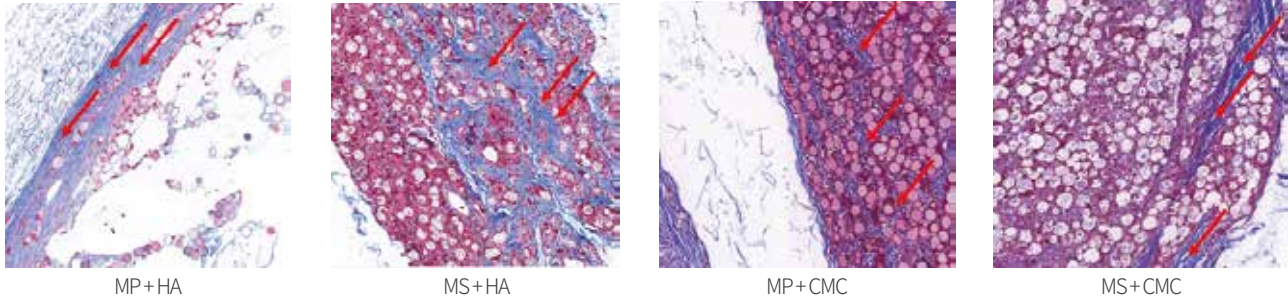
The intervention of CaHA microspheres can partially restore the mechanical tension capacity of fragmented collagen fibers along with crawling and migratory abilities of fibroblasts.

These fibroblasts reorganize their actin cytoskeleton to align along tension lines. Simultaneously, stretched fibroblasts increase the production of connective tissue's components (Type I and Type III collagen), encapsulating the microspheres.

Efficacy Test

Collagen regeneration

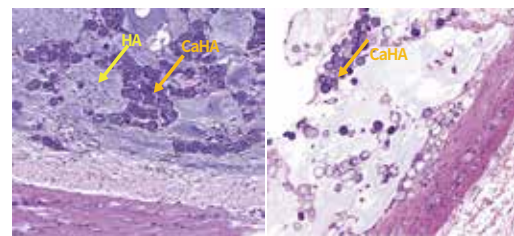
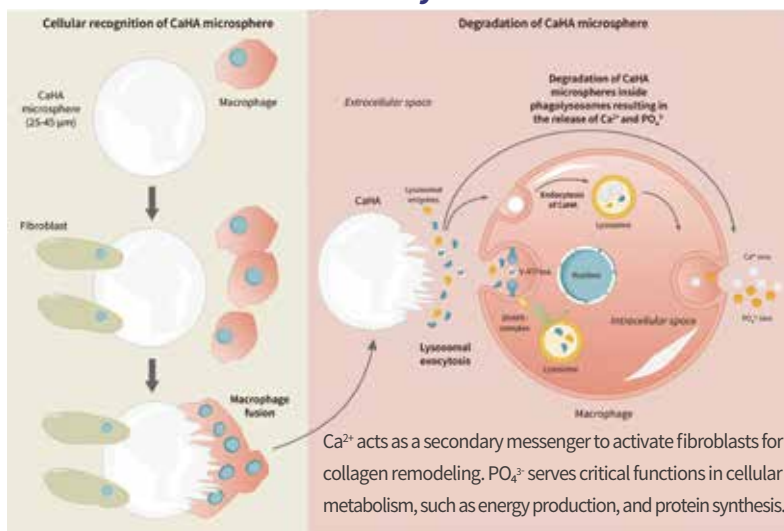
Model: Rabbit
Period: 6-month



A significant amount collagen fibers (blue-stained part) was observed around the microspheres, with the HA carrier gel type exhibiting relatively higher collagen production compared to the CMC carrier gel type. (MP: MP model, MS: MS model, HA: Sodium hyaluronate, CMC: Sodium carboxymethyl cellulose)

Metabolism of CaHA in Body

Model: Rabbit



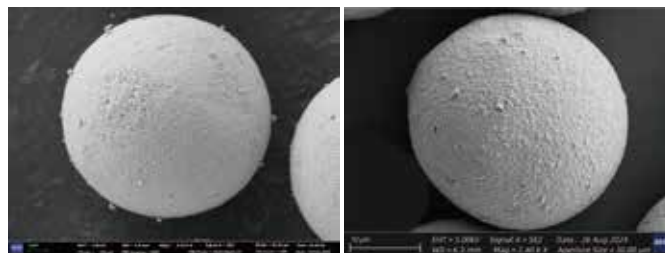
MP + HA (1-month)

MP + HA (6-month)

At 6 months, the HA gel showed progressive degradation with partial reduction of microspheres, and no inflammatory response was detected in adjacent tissues.

Image from article: van Loghem J. Calcium Hydroxylapatite in Regenerative Aesthetics: Mechanistic Insights and Mode of Action. *Aesthet Surg J.*

Application of BloomRebeupo™ CaHA Microspheres



Electron microscopy of MP model

Electron microscopy of MS model

Model	Particle Size	Feature	Applications	Biodegradable Period
MP	25-45 μm	High porosity, large surface area	Dermal filler, suitable for tissue filling	8-12 months
MS	25-45 μm	Dense polygonal structure, low porosity	Dermal filler, suitable for contour shaping	18-24 months



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