

# RegenerOss® Synthetic

Synthetic Mineral-Collagen Composite Bone Graft



Moldable And Space Maintaining By Design



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# RegenerOss<sup>®</sup> Synthetic

Synthetic Mineral-Collagen Composite Bone Graft

**RegenerOss Synthetic** is a calcium phosphate-based mineral with a carbonate apatite structure similar to natural bone combined with type I collagen derived from bovine achilles tendon. The mineral particles are dispersed within collagen fibers forming a 3-dimensional matrix. It is supplied dry and is moldable upon hydration. It is fully resorbed during the natural process of bone formation and remodeling.

RegenerOss Synthetic is indicated for use in oral surgical applications involving bone repair such as augmentation or reconstructive treatment of the alveolar ridge and for the filling of periodontal defects in conjunction with products intended for guided tissue regeneration and guided bone regeneration. Clinical studies of similar bone graft materials have shown improved results when used in conjunction with a barrier membrane<sup>1</sup>.



Product dyed with Trypan Blue 0.4% solution to show surface topography

## Product Features And Benefits:

Features	Benefits
Carbonate Apatite Structure	Resorption and remodeling profiles of carbonate apatite mimic natural bone mineral. <sup>2</sup> Higher osteoconductive properties and earlier bioresorption, compared to HA samples. <sup>3,4,5</sup>
5% Bovine Type I Collagen By Composition <sup>6</sup>	Collagen provides 3-Dimensional structure and porosity to the bone graft.
Moldable Upon Hydration	Can be placed in bone defect sites of different shapes and sizes. Graft stays in place at the defect site.



## Key Indications:

- Filling of extraction sockets
- Sinus floor elevation
- Filling of infrabony periodontal defects

## Resorption Profile<sup>6</sup>:

In vitro dissolution study of the mineral particles was conducted. As a first order of approximation, an extrapolation of the curves revealed that the time course of total mineral dissolution in vitro is about 15 months. The experiment was conducted in a static condition (i.e. the dissolved mineral would slow down the rate of additional mineral dissolution) as opposed to in vivo condition in which there is a constant turnover of calcium phosphate ion (dynamic condition), therefore this dissolution time may be considered as the upper limit. In vitro testing may not be representative of clinical outcome due to limitations of the testing.

## Implant Placement<sup>7</sup>:

Generally, in augmented areas, the placement of titanium fixtures should take place once the bone has sufficient strength and integrity for dental implant placement, which is typically greater than 6 months after implantation of a bone graft material.

Procedure	General Guidelines For Implant Placement
Extraction Sockets	6 months after implantation of bone graft
Sinus Floor Elevation	9-12 months should be allowed after implantation of bone graft material

## Ordering Information:

Item Number	Description	Volume and Size
ROSBGP05	RegenerOss Synthetic Mineral Collagen Composite Bone Graft	0.5 cc (9 mm x 8 mm)
ROSBGP10	RegenerOss Synthetic Mineral Collagen Composite Bone Graft	1.0 cc (11 mm x 10.5 mm)
ROSBGP20	RegenerOss Synthetic Mineral Collagen Composite Bone Graft	2.0 cc (11 mm x 21 mm)

<sup>1</sup> Cornelini R, Cangini F, Martuscelli G, Wennstrom J. Deproteinized bovine bone and biodegradable barrier membranes to support healing following immediate placement of transmucosal implants: a short-term controlled clinical trial. *Int J Periodontics Restorative Dent* 2004; 24:555-563

<sup>2</sup> Rey, C., Renugopalakrishnan, V., Collins, B. and Glimcher, M., Fourier transform infrared spectroscopic study of the carbonate ions in bone mineral during aging. *Calcif. Tissue Int.*, 1991, 49, 251-258.

<sup>3</sup> Landi E, Celotti G, Logroschino G, Tampieri A. Carbonated hydroxyapatite as bone substitute. *J Eur Cer Soc* 2003;23: 2931-2937.

<sup>4</sup> Doi Y, Shibutani T, Moriwaki Y, Kajimoto T, Iwayama Y. Sintered carbonate apatites as bioresorbable bone substitutes. *J Biomed Mater Res* 1998;39:603-610.

<sup>5</sup> Hasegawa M, Doi Y, Uchida A. Cell-mediated bioresorption of sintered carbonate apatite in rabbits. *J Bone Joint Surg [Br]* 2003;85:142-147.

<sup>6</sup> Data on File with Collagen Matrix, Inc.

<sup>7</sup> X-rays should be taken to confirm the bone integrity prior to dental implant placement.



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