Trusted Clinical Solutions

Biomaterials

Portfolio

ZimVie

Trusted Clinical Solutions.

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The Power of Puros® Allografts

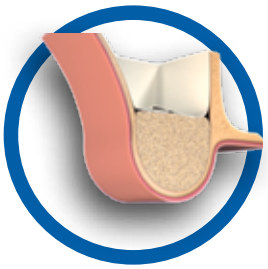
Clinicians around the globe have counted on the Puros® family of allografts for hard tissue augmentation procedures for years.

The brand's renowned reputation is based on:*

- Predictable processing and configuration
- Clinical use in dentistry since 1999[1-3]
- Collectively backed up by more than 400 scientific articles[1-5]
- Supporting creation of healthy, vital bone[6-9]
- Predictable remodeling shown in human clinical studies[10-15]
- Ease of use and terminal sterilization[16]
- Quick hydration, five-year shelf life, and storage at room temperature[16]

More Studies Than Any Other Allograft[5]

Up to **23.7%** more vital bone formation with Puros Cancellous Particulate Allograft and Puros Cortical Particulate Allograft (1:1 ratio) – compared to freeze-dried allograft bone in sinus lift procedures.[20]



Visual Comparison of Puros Cancellous Allograft to Natural Bone in SEM Image

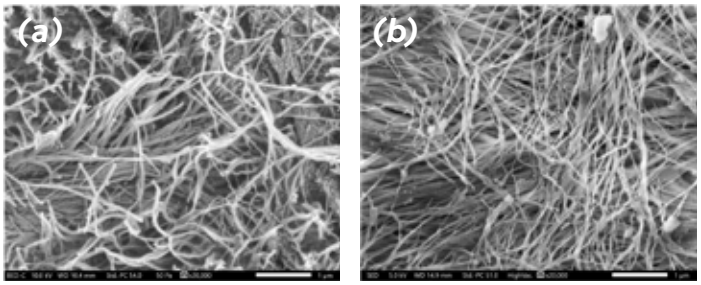


Fig. 1

SEM images at 20,000x magnification of:
(a) Bone**
(b) Puros Cancellous Allograft

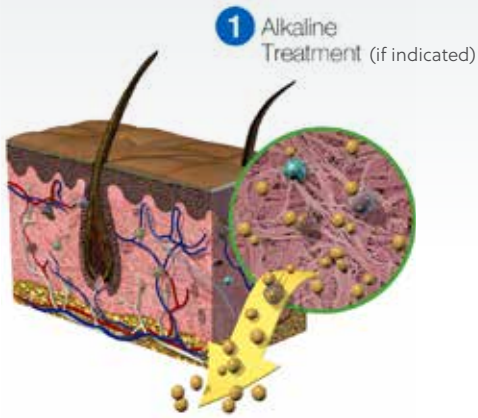
** Osteoclast-resorbed surface of human bone received unfixed, disinfected in 70% ethanol, air-dried, and rinsed in PBS.

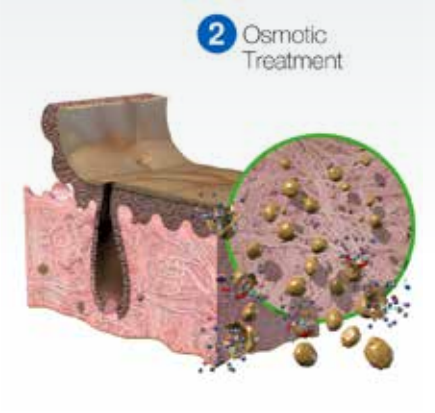
The collagen fibrils are visible for Puros Cancellous Allograft following Tutoplast® Processing and are similar to those seen in natural bone.[19]

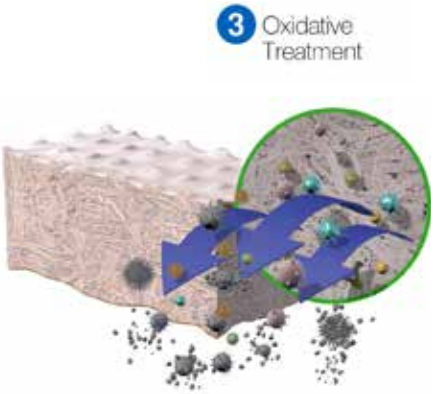
*Claims referenced apply to Tutoplast processed grafts. [1] Gambini A. et al. Chir Organi Mov (1999) 84:359-66. [2] Rocci A. et al. Quintessence International, Edizione Italiana (1999) 15:373-380. [3] Semergidis T. et al. Int. J. Oral Maxillofac Surg (1999) 28:91. [4] Baldi D. et al. Implant Dent (2019) 28:472-477. [5] Pubmed search (May 2024). [6] Tsao Y.P. et al. J Periodontol (2006) 77:416-25. [7] Leonetti J.A. et al. Implant Dent (2003) 12:217-226. [8] Keith J.D. et al. Int J Periodont Rest (2006) 26:321-327. [9] La Monaca G. et al. Case reports in dentistry (2019) 8, Article ID 6725351. [10] Froum S.J. et al. Int J Periodont Rest (2006) 26:543-51. [11] Noumbissi S.S. et al. J Oral Implantol (2005) 31:171-9. [12] Block M.S. et al. J Am Dent Assoc (2002) 133:1631-1638. [13] Minichetti J.C. et al. J Oral Implantol (2004) 30:74-82. [14] Schmitt C.M. et al. Clin Oral Implants Res (2013) 24:576-85. [15] Soardi C.M. et al. Int J Oral Maxillofac Implants (2016) 31:352-8. [16] Puros Allograft IFU latest revision. [17] Data on File with RTI Surgical Inc. [18] Tadic D. et al. Biomaterials (2004) 25:987-94. [19] Ajami E, et al. J Oral Implantol (2023) 38: 169-180. [20] Monje A. et al. Int J Oral Maxillofac Implants (2017) 32:121-127.

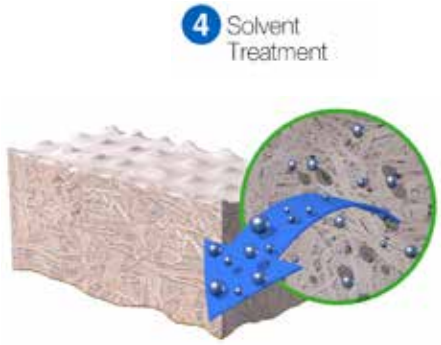
The Proprietary Tutoplast Process

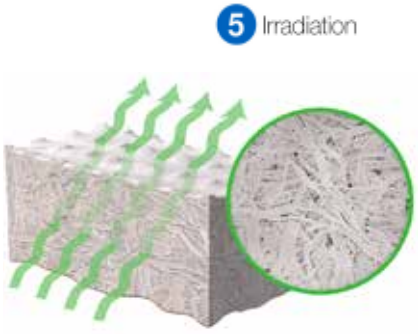
In 1969 the Tutoplast Tissue Sterilization Process was developed to sterilize and preserve tissue for implantation. More than 7 million grafts have been sterilized through the Tutoplast Process with zero confirmed incidence of graft-associated infection.[17]











The Benefits of the Multi-Step Tutoplast Process

For allograft bone grafts, the process preserves the valuable bone mineral, collagen matrix, and tissue integrity[18] while inactivating pathogens and gently removing unwanted materials, such as cells, antigens, and viruses[17] – resulting in predictable, reliable, sterile, and safe tissue.[17]

*Images depict dermal processing

Puros Cancellous

Particulate Allograft

With a history of well-documented clinical results, Puros Cancellous is an easy-to-handle choice for predictable bone reconstruction and acts as an osteoconductive scaffold for new bone formation.[1-8]

Clinical Evidence

- Up to 127% more vital bone formation compared to non-resorbable xenograft in sinus-lift procedures[2, 3, 9]
- Newly formed vital bone after 3 to 5 months[4,8,10] in extraction sockets
- 56% more graft-to-bone contact compared to non-resorbable xenograft[3]
- 9.7 mm vertical gain after 4 to 5 months when using Puros Allograft particulate with tenting screws[11]
- Retains osteoconductive properties due to the preservation of the natural bone matrix collagen and mineral composition, trabecular pattern, and original porosity;[1-6, 8, 12-14] enabling the ingrowth of vascular and cellular connective tissue[4]

Clinically successful in procedures for:

- Repair of periodontal bone and furcation defects[21, 26, 35]
- Reconstruction of extraction sockets[24, 27, 28, 30, 22, 30, 31]
- Reconstruction of gaps around block grafts[32, 33]
- Horizontal and vertical alveolar ridge augmentation[36, 39]
- Sinus augmentation[22, 29, 40, 41]

PUROS CANCELLOUS PARTICULATE ALLOGRAFT

Item Number	Description
68210	Puros Cancellous Particulate, 0.5 cc / 0.25 – 1 mm
68211	Puros Cancellous Particulate, 1 cc / 0.25 – 1 mm
68209	Puros Cancellous Particulate, 2 cc / 0.25 – 1 mm
68212	Puros Cancellous Particulate, 0.5 cc / 1 – 2 mm
68213	Puros Cancellous Particulate, 1 cc / 1 – 2 mm
68214	Puros Cancellous Particulate, 2 cc / 1 – 2 mm

Shelf-life: Five (5) years

[21] Tsao Y.P. et al. J Periodontol (2006) 77:416-25. [22] Froum S.J. et al. Int J Periodontics Restorative Dent (2006) 26:543-51. [23] Noumbissi S.S. et al. J Oral Implantol (2005) 31:171-9. [24]Minichetti J.C. et al. J Oral Implantol (2004) 30:74-82. [25] Data on File with Rti Surgical Inc. [26] Dayi E. et al. J Int Med Res (2002) 30:168-73. [27] Baldi D. et al. Implant Dent (2019) 28:472-477. [28] Block M.S. et al. J Am Dent Assoc (2002) 133:1631-1638. [29] Schmitt C.M. et al. Clin Oral Implants Res (2013) 24:576-85. [30] Beck T.M. et al. J Periodontol (2010) 81:1765-72. [31] Le B. et al. J Oral Maxillofac Surg (2010) 68:428 435. [32] Keith J.D. et al.Int J Periodontics Restorative Dent (2006) 26:321-327. [33] Leonetti J.A. et al. Implant Dent. (2003) 12:217-226. [34] Tadic D. et al. Biomaterials (2004) 25:987-94. [35] Reddy B. et al. Journal of International Society of Preventive and Community Dentistry (2016) 6:248-253. [36]Block M.S. et al. J Oral Maxillofac Surg (2004) 62:67-72. [37] Le B. et al. Implant Dent (2008) 17:40-50. [38] Ronda M. et al. Clin Oral Implants Res (2014) 25:859-66. [39] La Monaca G. et al. Case reports in dentistry (2019) 8, Article ID 6725351. [40] Soardi C.M. et al. Int J Periodontics Restorative Dent (2020) 40:757–764. [41] Monje A. et al. Int J Oral Maxillofac Implants (2017) 32:121-127.

Puros Cortical

Particulate Allograft

Puros Cortical can be used in space maintenance and volume enhancement procedures.[1, 2] It is slow-resorbing and maintains an open network for the proliferation of bone-forming cells.[42, 44]

Clinical Evidence

- Without sacrificing ridge contour, cortical particles remodel into a dense, lamellar structure as well as viable bone – with similar density to native bone[45]
- 2 mm in buccal bone thickness when used in a "sandwich" technique for the treatment of localized buccal dehiscence defects[45]
- 40% mineralized bone and 0.47% residual grafting materials after 4 months healing time in sinus lift procedures[46]
- Clinical and radiographic graft stability after 5 years follow up in sinus lift procedures[47]
- Reduced vertical and horizontal bone resorption when used in immediate implant placement extraction sites[48]

Clinically successful in procedures for:

- Sinus augmentation[44, 46,49, 50]
- Alveolar ridge augmentation[43, 51, 52]
- "Tenting" and "sandwich" grafting techniques[12-16]
- Immediate implant post extraction sockets[48]

PUROS CORTICAL PARTICULATE ALLOGRAFT

Item Number	Description
68271	Puros Cortical Particulate, 0.5 cc / 0.25-1 mm
68272	Puros Cortical Particulate, 1 cc / 0.25-1 mm
68273	Puros Cortical Particulate, 2 cc / 0.25-1 mm
68274	Puros Cortical Particulate, 0.5 cc / 1 – 2 mm
68275	Puros Cortical Particulate, 1 cc / 1 – 2 mm
68276	Puros Cortical Particulate, 2 cc / 1 – 2 mm

Shelf-life: Five (5) years

[42] Wang H.L. et al. Implant Dent (2006) 15:8-17. [43] El Chaar E. et al. Int J Periodontics Restorative Dent (2019) 39:491-500. [44] Berberi A. et al. Journal of Maxillofacial and Oral Surgery (2015) 14:624-629. [45] Park S.H. et al. Int J Periodont. Rest (2006) 26:589-95. [46] Berberi A. et al. Implant Dent. (2016) 25:353-60. [47] Annibali S. et al. Implant Dent (2011) 20:445-54. [48] Orti V. et al. J Periodontal Implant Sci (2016) 46:291-302. [49] Soardi C.M. et al. Int J Periodontics Restorative Dent (2020) 40:757–764. [50] Monje A. et al. Int J Oral Maxillofac Implants (2017) 32:121-127. [51] Abed P.F. et al. J Int Acad Periodontol (2020) 22:11-20. [52] Wen S. et al. Int J Periodontics Restorative Dent (2018) 38:79. [53] Leong D.J. et al. Implant Dent (2015) 24:4-12. [54] Fu J.H. et al. Clin Oral Implants Res (2014) 25:458-67. [55] Fu J.H. et al. Clin Oral Implants Res (2014) 26:1150-7. [56] Fu J.-H. et al. Clin Adv Periodontics (2012) 2:172-177. [57] Lee A. et al. Implant Dent (2009) 18:282-90.

Puros Cortico-Cancellous

Particulate Allograft

An anatomic-based mix of 70% cortical and 30% cancellous bone particulate. This mixture combines the clinical advantages of both Puros Cortical and Puros Cancellous Particulate Allograft materials.

Key Attributes

- Ideal for filling large and small volume bony voids
- Retains osteoconductive properties due to the preservation of the natural bone matrix collagen and mineral composition, trabecular pattern, and original porosity[1]
- Pre-mixed formulation, no need to mix on site
- Easy handling – quick hydration, five-year shelf life, and room-temperature storage
- Bone from single donor[17]

Clinically successful in procedures for:

- Maxillary sinus floor augmentation[58]
- Vertical ridge augmentation around dental implants[59]
- Immediate implant placement into extraction sockets[60]

PUROS CORTICO-CANCELLOUS PARTICULATE ALLOGRAFT

Item Number	Description
68800	Puros Cortico-Cancellous Particulate, 0.5 cc / 0.25 – 1 mm
68801	Puros Cortico-Cancellous Particulate, 1.0 cc / 0.25 – 1 mm
68802	Puros Cortico-Cancellous Particulate, 2.0 cc / 0.25 – 1 mm
68803	Puros Cortico-Cancellous Particulate, 0.5 cc / 1 – 2 mm
68804	Puros Cortico-Cancellous Particulate, 1.0 cc / 1 – 2 mm
68805	Puros Cortico-Cancellous Particulate, 2.0 cc / 1 – 2 mm

Shelf-life: Five (5) years

[58] Soardi et al. (2011). Atrophic maxillary floor augmentation by mineralized human bone allograft in sinuses of different size: an histologic and histomorphometric analysis. Clin Oral Implants Res 22, 560-566. [59] Ronda et al. (2013). Expanded vs. dense polytetrafluoroethylene membranes in vertical ridge augmentation around dental implants: a prospective randomized controlled clinical trial. Clin Oral Implants Res 25, 859-866. [60] Sarnachiaro et al. (2016). Immediate Implant Placement into Extraction Sockets with Labial Plate Dehiscence Defects: A Clinical Case Series. Clin Implant Dent Relat Res 18, 821-829.

Puros DBM and Puros Ci

Particulate Allograft

Puros Ci Particulate combines DBM Particulate with Cortico-Cancellous bone for an optimal blend of scaffold and osteoinductive potential.

Key Attributes

- Puros Ci is a combination of mineralized and demineralized allograft bone (DBM)
- Only DBM with verified osteoinductive (OI) potential is used in processing
- Mineralized component acts as a scaffold; mineralized particles include both cancellous and cortical bone chips
- Proprietary Tutoplast Processing preserves the native collagen matrix of the mineralized particles
- Proprietary Cancelle SP® Sterilization Process preserves OI potential
- Single donor source for mineralized and demineralized particles
- Terminally sterilized to SAL 10^{-6}
- Convenient handling: quick hydration and room temperature storage[62]

PUROS DBM PARTICULATE ALLOGRAFT

Item Number	Description
DBMPART025	Puros DBM Particulate Allograft, 0.25 cc
DBMPART050	Puros DBM Particulate Allograft, 0.5 cc
DBMPART100	Puros DBM Particulate Allograft, 1.0 cc

Shelf-life: Two (2) years

PUROS CI PARTICULATE ALLOGRAFT

Item Number	Description
69800	Puros Ci Particulate Allograft, 0.5 cc / 0.25 – 1 mm
69801	Puros Ci Particulate Allograft, 1.0 cc / 0.25 – 1 mm
69802	Puros Ci Particulate Allograft, 2.0 cc / 0.25 – 1 mm
69803	Puros Ci Particulate Allograft, 0.5 cc / 1 – 2 mm
69804	Puros Ci Particulate Allograft, 1.0 cc / 1 – 2 mm
69805	Puros Ci Particulate Allograft, 2.0 cc / 1 – 2 mm

Shelf-life: Five (5) years

*DBM is evaluated for bone formation utilizing an in-vivo athymic rat model. Findings from an animal model are not necessarily predictive of human clinical results. [61] Data on file with RTI Surgical, Inc. [62] Refer to labeling for specific storage parameters.

Puros Customized Blocks

Bone Allograft

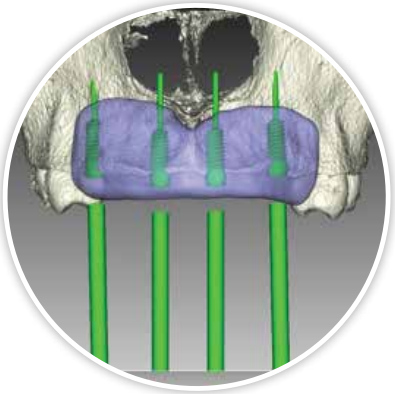
Custom-made blocks of Tutoplast-processed cancellous bone are processed using CAD/CAM technology based on a CBCT/CT scan of the defect area. This makes the procedure more comfortable for your patient by reducing surgery time.[63]

Clinical Evidence

- Customized block fits precisely and congruently to the defect[64]
- Large contact surface area improves ingrowth of blood vessels and revascularization[65]
- Additional manual adjustment of the defect and of the customized block is seldomly required, allowing for reduced surgery time and reduced morbidity[66]
- Clinical reports have shown stable bone levels up to 2 years follow-up after implant placement [67, 68]

Clinically successful in procedures for:

- Horizontal and vertical ridge reconstruction [64, 67, 68]



PUROS ALLOGRAFT CUSTOMIZED BLOCK

Item Number	Description
68217	Puros Allograft Customized Block Standard, 27 x 15 x 15 mm (max)
68218	Puros Allograft Customized Block Large, 60 x 30 x 30 mm (max)

Shelf-life: Five (5) years

[63] Schlee M. et al. Implant Dent (2013) 22:212-8. [64] Würzler K.K. et al. Implantologie Journal (2015) 5:30-36. [65] Mcallister B.S. et al. J Periodontol (2007) 78:377-96. [66] Parthasarathy J. Ann Maxillofac Surg (2014) 4:9-18. [67] Engler-Hamm D. Implantologie (2018) 26:231-242. [68] Blume O. et al. J Esthet Restor Dent (2018) 30:474-479.

Puros Block

Bone Allograft

By eliminating the need to excise an autogenous block graft, these prefabricated blocks may save time and shorten the patient's rehabilitation period.

Clinical Evidence

- Retains osteoconductive properties due to the preservation of the natural bone matrix collagen and mineral composition, trabecular pattern, and original porosity [70, 71]
- Implants can be placed 5 to 6 months after grafting [70, 72]
- Prospective studies showing comparable results to grafting with autogenous bone blocks [69, 73, 74]
- Restores volume to severely resorbed ridges effectively as shown after 9 years follow up [69, 70, 72, 75]

Clinically successful in procedures for:

- Horizontal bone grafting [69, 70, 76, 77]
- Vertical bone grafting [72, 73]

PUROS BONE BLOCK ALLOGRAFT

Item Number	Description
68220	Puros Bone Block Allograft, 10 x 18 x 8 mm
68221	Puros Bone Block Allograft, 15 x 18 x 8 mm

Shelf-life: Five (5) years

[69] Schlee M. et al. Head & Face Medicine (2014) 10:21. [70] Keith J.D. et al. Int J Periodontics Restorative Dent (2006) 26:321-327. [71] Tadic D. et al. Biomaterials (2004) 25:987-94. [72] Leong D.J. et al. Implant Dent (2015) 24:4-12. [73] Laino L. et al. Biomed Res Int (2014) 2014:982104. [74] Motamedian S.R. et al. Ann Maxillofac Surg (2016) 6:78-90. [75] Bauchet T. Implant (2020) 26:1-8. [76] Jacotti M. et al. Implant Dent (2012) 21:444-8. [77] Tresguerres F.G.F. et al. Clin Implant Dent Relat Res (2019) 21:1087-1098.

RegenerOss® CC

Cortico-Cancellous Particulate

An anatomic-based mix of cortical and cancellous particulate that can be used to fill bony voids in a variety of dental applications. The graft has been sterilized using the validated Cancelle SP® Sterilization Process, lyophilized, and terminally sterilized.

Key Attributes

- Graft has a natural donor-based mix of cortical and cancellous particles
- Sourced from a single donor
- The proprietary Cancelle SP Sterilization Process inactivates and/or removes bacteria, viruses, fungi, and spores without the use of antibiotics
- Designed to preserve biological integrity and natural collagen structure of bone
- Scientifically proven and clinically successful[78]
- Low-dose gamma irradiation is applied terminally

Clinical applications:

- Reconstruction of extraction sockets
- Ridge augmentation and reconstruction
- Repair of periodontal and peri-implant defects
- Sinus floor elevation

REGENEROSS CC CORTICO-CANCELLOUS PARTICULATE

Item Number	Description
RMCCS050	Cortico-Cancellous Particulate, Small, 0.5 cc / 0.125 – 1.0 mm
RMCCS100	Cortico-Cancellous Particulate, Small, 1.0 cc / 0.125 – 1.0 mm
RMCCS200	Cortico-Cancellous Particulate, Small, 2.0 cc / 0.125 – 1.0 mm
RMCCL050	Cortico-Cancellous Particulate, Large, 0.5 cc / 1.0 – 2.0 mm
RMCCL100	Cortico-Cancellous Particulate, Large, 1.0 cc / 1.0 – 2.0 mm
RMCCL200	Cortico-Cancellous Particulate, Large, 2.0 cc / 1.0 – 2.0 mm

Shelf-life: Five (5) years

[78] Data on file at ZimVie Dental.

RegenerOss

Particulate Allograft

An allograft particulate that is aseptically-processed with a proprietary technique that removes unwanted cells, yet preserves valuable lipids. Available in a broad range of configurations for regenerating a variety of sites.

REGENEROSS CANCELLOUS PARTICULATE ALLOGRAFT

Item Number	Description
RMCA205	Cancellous, Mineralized, 0.5 cc / 200 – 300 µm
RMCA305	Cancellous, Mineralized, 0.5 cc / 300 – 500 µm
RMCA505	Cancellous, Mineralized, 0.5 cc / 500 – 800 µm
RMCA210	Cancellous, Mineralized, 1 cc / 200 – 300 µm
RMCA310	Cancellous, Mineralized, 1 cc / 300 – 500 µm
RMCA510	Cancellous, Mineralized, 1 cc / 500 – 800 µm
RMCA220	Cancellous, Mineralized, 2 cc / 200 – 300 µm
RMCA320	Cancellous, Mineralized, 2 cc / 300 – 500 µm
RMCA520	Cancellous, Mineralized, 2 cc / 500 – 800 µm

Shelf-life: Five (5) years

REGENEROSS CORTICAL PARTICULATE ALLOGRAFT

Item Number	Description
RMCO205	Cortical, Mineralized, 0.5 cc / 200 – 300 µm
RMCO305	Cortical, Mineralized, 0.5 cc / 300 – 500 µm
RMCO505	Cortical, Mineralized, 0.5 cc / 500 – 800 µm
RMCO210	Cortical, Mineralized, 1 cc / 200 – 300 µm
RMCO310	Cortical, Mineralized, 1 cc / 300 – 500 µm
RMCO510	Cortical, Mineralized, 1 cc / 500 – 800 µm
RMCO220	Cortical, Mineralized, 2 cc / 200 – 300 µm
RMCO320	Cortical, Mineralized, 2 cc / 300 – 500 µm
RMCO520	Cortical, Mineralized, 2 cc / 500 – 800 µm
RDCO205	Cortical, Partially Demineralized, 0.5 cc / 200 – 300 µm
RDCO305	Cortical, Partially Demineralized, 0.5 cc / 300 – 500 µm
RDCO505	Cortical, Partially Demineralized, 0.5 cc / 500 – 800 µm
RDCO210	Cortical, Partially Demineralized, 1 cc / 200 – 300 µm
RDCO310	Cortical, Partially Demineralized, 1 cc / 300 – 500 µm
RDCO510	Cortical, Partially Demineralized, 1 cc / 500 – 800 µm
RDCO220	Cortical, Partially Demineralized, 2 cc / 200 – 300 µm
RDCO320	Cortical, Partially Demineralized, 2 cc / 300 – 500 µm
RDCO520	Cortical, Partially Demineralized, 2 cc / 500 – 800 µm

Shelf-life: Five (5) years

RegenaVate®

Formable DBM

This allograft putty contains demineralized bone matrix (DBM) and mineralized cortical cancellous bone chips with a porcine gelatin carrier. The graft is available in two forms: Room Temperature (RT) and Frozen, to meet clinician preference.

Key Attributes

Induces bone formation and facilitates bone growth*

- The DBM is tested for osseoinductivity* in a scientifically-proven in vivo rat assay
- Unique DBM provides handling flexibility
- Mineralized chips provide for osteoconductivity
- Clinician can control graft consistency: gel, paste, or putty

Clinically successful in procedures for:

- Filling extraction sockets
- Alveolar ridge augmentation
- Sinus floor elevation

ROOM TEMPERATURE

Item Number	Description
005301Z	RegenaVate Formable DBM, RT, 1 cc
005302Z	RegenaVate Formable DBM, RT, 2 cc

Shelf-life: Two (2) years

FROZEN

Item Number	Description
001504Z	RegenaVate Formable DBM, 1 cm x 1 cm x 0.5 cm, 0.5 cc
001505Z	RegenaVate Formable DBM, 1 cm x 2 cm x 0.5 cm, 1 cc
001510Z	RegenaVate Formable DBM, 1 cm x 4 cm x 0.5 m, 2 cc

Shelf-life: Two (2) years

*These implants were evaluated in a human clinical study and were shown to induce bone formation. Each lot is tested using the athymic nude rat assay to verify osteoinductivity potential.

RegenerOss

Allograft Putty Plus

Comprised of a mixture of DBM and mineralized allograft to facilitate the regeneration of new bone. The plant-based carrier leaves no residual soy proteins.

Key Attributes

- Encourages bone growth potential by incorporating a high bone-to-carrier ratio without sacrificing its handling characteristics[79]
- Contains 48% bone graft material by weight (28% cortical DBM and 20% cancellous mineralized bone chips)
- Moldable, non-toxic, lecithin carrier that is highly resistant to irrigation
- Osseoinductivity of every lot is validated by a cell proliferation assay
- Ergonomic design features a smaller diameter syringe with a curved tip to treat hard-to-reach defects

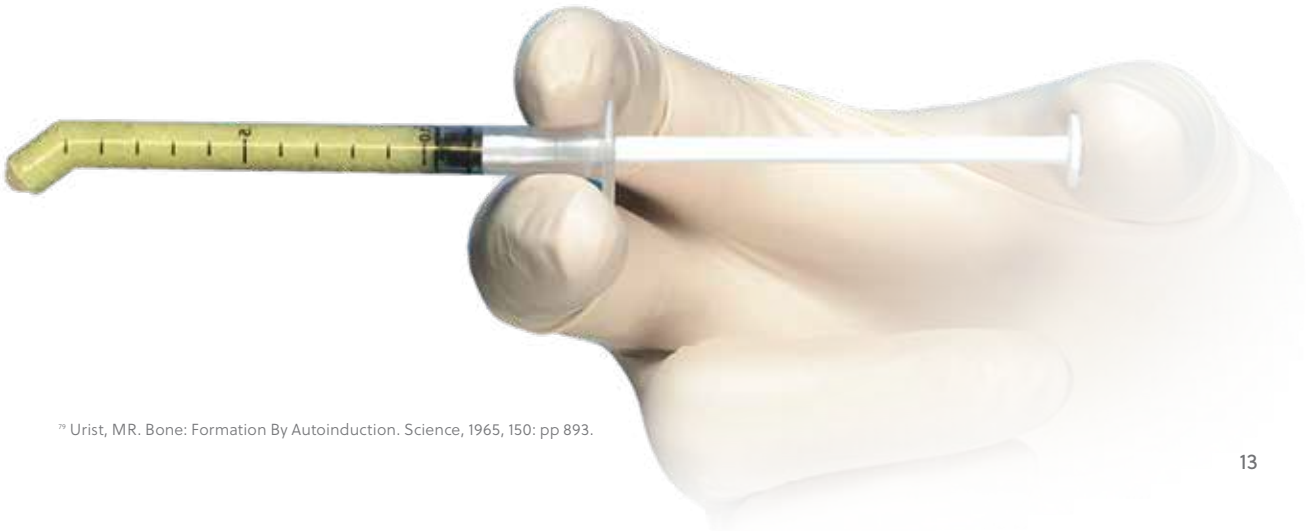
Indications

- Pre-implant defects
- Extraction sockets
- Localized ridge augmentation
- Sinus augmentation

REGENEROSS ALLOGRAFT PUTTY PLUS

Item Number	Description
ROAPM05	0.5 cc Syringe
ROAPM10	1 cc Syringe
ROAPM20	2 cc (Four 0.5 cc Syringes) Value Pack

Shelf-life: Two (2) years



[79] Urist, MR. Bone: Formation By Autoinduction. Science, 1965, 150: pp 893.

RegenerOss Resorbable Xenograft

Porcine Anorganic Bone Mineral

RegenerOss Resorbable Xenograft has up to 95% porosity[80] enabling excellent osteoconductivity and adequate space for new bone formation.

Clinical Evidence

- Osteoconductive surface and interconnecting macro and microscopic porous structure that support the formation and ingrowth of new bone at the implantation site [81, 82]
- Clinical results showing new bone formation, both around and within the particles [83]
- Porcine-derived carbonate apatite shows superior osteoconductive potential than hydroxyapatite [84, 85]
- Resorption and remodelling profiles are closer to human bone than those of synthetic bone graft substitutes [85]

Clinically successful in procedures for:

- Augmentation around implants[82]
- Alveolar ridge augmentation/reconstruction [82, 86]
- Sinus lifts[82]
- Extraction sockets [83, 86-89]
- Periodontal defects [82]

REGENEROSS RESORBABLE XENOGRAFT

Item Number	Particle Size	Description
ROXR05	Small Particles	RegenerOss Resorbable Xenograft, 0.25 – 1 mm / 0.5 cc
ROXR10	Small Particles	RegenerOss Resorbable Xenograft, 0.25 – 1 mm / 1.0 cc
ROXR20	Small Particles	RegenerOss Resorbable Xenograft, 0.25 – 1 mm / 2.0 cc
ROXR40	Small Particles	RegenerOss Resorbable Xenograft, 0.25 – 1 mm / 4.0 cc
ROXRLG10	Large Particles	RegenerOss Resorbable Xenograft, 1 – 2 mm / 1.0 cc
ROXRLG20	Large Particles	RegenerOss Resorbable Xenograft, 1 – 2 mm / 2.0 cc
ROXRS025	Small Particles	RegenerOss Resorbable Xenograft, Syringe, 0.5 – 1 mm / 0.25 cc
ROXRS05	Small Particles	RegenerOss Resorbable Xenograft, Syringe, 0.5 – 1 mm / 0.5 cc

Shelf-Life Small and Large Particles: Three (3) years
Shelf-Life Syringe: Two (2) years

[80] Data on File with Collagen Matrix Inc. [81] Klenke F.M. et al. J Biomed Mater Res A (2008) 85A:777-786. [82] RegenerOss Xenograft IFU latest revision. [83] Guarnieri R. et al. Regen Biomater (2017) 4:125-128. [84] Spence G. et al. J Biomed Mater Res A (2009) 90A:217-224. [85] Ellies L.G. et al. J Biomed Mater Res (1988) 22:137-48. [86] Cucchi A. et al. J. Oral Implantol. (2019) 45:59-64. [87] Guarnieri R. et al. J Oral Maxillofac Res (2019) 10:e3. [88] Guarnieri R. et al. J Oral Maxillofac Res (2017) 8:e5. [89] Lai V.J. et al. J Periodontol (2020) 91:361-368.

Endobon® Xenograft

Bovine Granules

An essentially non-resorbable material that is ideally suited for regeneration of defects when effective space maintenance is required.[90]

Clinical Evidence

- Fully deproteinized bovine-derived hydroxyapatite[91]
- Non-resorbable for predictable volume stability and maintenance[92]
- Using this in a buccal onlay tunnel technique showed 2-year ridge width after restoration was 9.8 +-1.2 mm (range, 8.0 – 11.2 mm)[90]
- Xenograft particles will be surrounded by newly formed vital bone[93]

Clinically successful in procedures for:

- Alveolar ridge augmentation, including aesthetic contouring defects[90, 94, 95]
- Extraction socket grafting[96]
- Sinus elevation[93, 97]

ENDOBON XENOGRAFT GRANULES

Item Number	Description
ROX05	Endobon Xenograft Granules, 0.5 – 1 mm, 0.5 ml
ROX10	Endobon Xenograft Granules, 0.5 – 1 mm, 1 ml
ROX20	Endobon Xenograft Granules, 0.5 – 1 mm, 2 ml
ROXLG20	Endobon Xenograft Granules, 1 – 2 mm, 2 ml
ROXLG50	Endobon Xenograft Granules, 1 – 2 mm, 5 ml (5 units @ 1 ml each)
ROXLG80	Endobon Xenograft Granules, 1 – 2 mm, 8 ml (8 units @ 1 ml each)

Shelf-life: 18 months

[90] Block M.S. et al. J Oral Maxillofac Surg (2013) 71:1513-1519. [91] Tadic D. et al. Biomaterials (2004) 25:987-94. [92] Block M.S. et al. J Oral Maxillofac Surg (2012) 70:1321-1330, [93] Nevins M. et al. Int J Periodontics Restorative Dent (2011) 31:227-35. [94] Barone A. et al. Int J Periodontics Restorative Dent (2013) 33:795-802. [95] Castillo R.a.D. Inside Dent (2011) 7:94-96. [96] Fischer K.R. et al. Int J Periodontics Restorative Dent (2018) 38:549-556. [97] Testori T. et al. Int J Periodontics Restorative Dent (2012) 32:295-301.

RegenerOss

Bone Graft Plug

An easy-to-use grafting solution for filling extraction sockets and periodontal defects. The Plug features a combination of 80% graft particulate and 20% Type I bovine collagen that adapts to the shape of the defect once hydrated.

Key Attributes

- Plug-shaped form mimics the shape of extraction sockets for easy placement
- Combines 80% carbonate apatite granules with 20% type I collagen from bovine Achilles tendon
- Mineral component of the graft has macro- and microstructures similar to human bone
- Collagen holds graft particles in place within the defect site
- Plug can be placed dry and takes the shape of the defect once hydrated

Clinical Applications

- Reconstruction of extraction sockets
- Ridge augmentation
- Repair of periodontal and peri-implant defects

REGENEROSS BONE GRAFT PLUG

Item Number	Description
RGP0625	RegenerOss Bone Graft Plug, 6 x 25 mm, Box of 5
RGP1020	RegenerOss Bone Graft Plug, 10 x 20 mm, Box of 5

Shelf-life: Three (3) years

IngeniOs® HA and IngeniOs ß-TCP Bioactive

Synthetic Bone Particles

IngeniOs® HA is a long-lasting hydroxyapatite (HA) with a composition similar to HA found in naturally-occuring bone.[98] IngeniOs ß-TCP Bioactive is a resorbable graft that is silicated, providing the potential for increased bioactivity.[101-103]

Clinical Evidence

- Significantly higher cell attachment was seen with IngeniOs HA compared to Geistlich Bio-Oss at all time points in an in-vitro study[99]
- IngeniOs HA features up to 80% interconnected porosity allowing for vascularized bone formation, osseointegration, and the natural remodeling process to occur within the graft framework[100, 101]
- IngeniOs ß-TCP Bioactive has higher osteoconductive properties and earlier bioresorption compared to HA samples [101, 102, 103]

Clinically successful in procedures for:

- Alveolar ridge augmentation/reconstruction[98, 101, 103]
- Sinus lifts [98, 101, 103]

INGENIOS HA SYNTHETIC BONE PARTICLES

Item Number	Description
0-802501	IngeniOs HA Synthetic Bone Particles, 0.25 – 1 mm / 0.25 cc
0-800501	IngeniOs HA Synthetic Bone Particles, 0.25 – 1 mm / 0.5 cc
0-801001	IngeniOs HA Synthetic Bone Particles, 0.25 – 1 mm / 1 cc
0-802001	IngeniOs HA Synthetic Bone Particles, 0.25 – 1 mm / 2 cc
0-900501	IngeniOs HA Synthetic Bone Particles, 1 – 2 mm / 0.5 cc
0-901001	IngeniOs HA Synthetic Bone Particles, 1 – 2 mm / 1 cc
0-902001	IngeniOs HA Synthetic Bone Particles, 1 – 2 mm / 2 cc

Shelf-life: Five (5) years

INGENIOS ß-TCP BIOACTIVE SYNTHETIC BONE PARTICLES

Item Number	Description
0-602501	IngeniOs ß -TCP Bioactive Synthetic Bone Particles, 0.25 – 1 mm, 0.25 cc
0-600501	IngeniOs ß -TCP Bioactive Synthetic Bone Particles, 0.25 – 1 mm, 0.5 cc
0-601001	IngeniOs ß -TCP Bioactive Synthetic Bone Particles, 0.25 – 1 mm, 1 cc
0-602001	IngeniOs ß -TCP Bioactive Synthetic Bone Particles, 0.25 – 1 mm, 2 cc
0-700501	IngeniOs ß -TCP Bioactive Synthetic Bone Particles, 1 – 2 mm, 0.5 cc
0-701001	IngeniOs ß -TCP Bioactive Synthetic Bone Particles, 1 – 2 mm, 1 cc
0-702001	IngeniOs ß -TCP Bioactive Synthetic Bone Particles, 1 – 2 mm, 2 cc

Shelf-life: Five (5) years

[98] Holweg A. et al. EDI Journal (2012) 3:64-73. [99] Bernhardt A. et al. Clin Oral Implants Res (2011) 22:651-7. [100] IngeniOs HA Synthetic Bone Particles IFU latest revision. [101] Data on File with Curasan Ag. [102] Pietak A.M. et al. Biomaterials (2007) 28:4023-32. [103] IngeniOs ß-TCP Bioactive Synthetic Bone Particles IFU latest revision.

Biotivity® A/C Plus Membrane

Growth-factor charged barrier

Consisting of the amnion, intermediate, and chorion layers, Biotivity A/C Plus is a minimally manipulated growth-factor rich membrane.

Clinical Evidence

- Contains growth factors and cytokines which may contribute to healing[104-106]
- Sterile product never delaminated and minimally manipulated to retain the natural tissue structure architecture and layers[105]
- No antibiotics utilized during processing[105]
- Intermediate structural layer enhances handling and stretchability[108]
- Provides additional collagen and biological enhancers like hyaluronic acid, shown to facilitate wound healing[107-109]

Clinically successful in procedures for:

- Peri-implant infections[114, 115]
- GTR and GBR procedures[110-113]
- Ridge augmentation[112, 113, 114]

Sample of growth-factors included[74]:

- BMP-4, BMP-7
- bFGF, GDF-15
- PDGF-AA, PIGF
- TGFa, TGFb3, VEGF

ORDERING INFORMATION

Item Number	Description
BAC0808	Biotivity A/C Plus Membrane 8 x 8 mm
BAC1212	Biotivity A/C Plus Membrane 12 x 12 mm
BAC1020	Biotivity A/C Plus Membrane 10 x 20 mm

Item Number	Description
BAC1520	Biotivity A/C Plus Membrane 15 x 20 mm
BAC1525	Biotivity A/C Plus Membrane 15 x 25 mm
BAC2030	Biotivity A/C Plus Membrane 20 x 30 mm

Amnion Layer

- Provides tensile strength[108]

Intermediate Layer

- Rich in hyaluronic acid[108]
- Allows the amnion layer to glide along chorion[108]
- Provides additional growth factors[108]

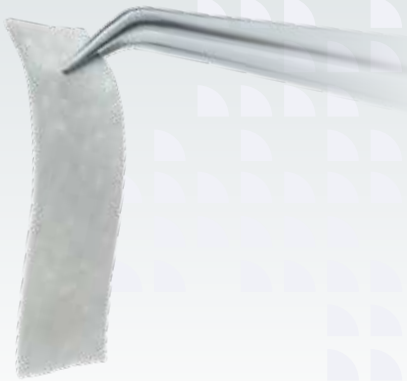
Chorion Layer

- Contributes to elasticity and stability[108]

[104] Koizumi N et al. Curr Eye Res (2000) 20:173-177. [105] Data on file with manufacturer. [106] Lee SB et al. Curr Eye Res (2000) 20:325-34. [107] Malak TM et al. Placenta (1993) 14:385-406. [108] Roy A et al. J Tissue Eng Regen Med (2020) 14:1126-1135. [109] Bryant-Greenwood GD. Placenta (1998) 19:1-11. [110] Kothiwale SV et al. Cell Tissue Bank (2009) 10:317-26. [111] George AK et al. Periodontics and Prosthodontics (2018) 04. [112] Miller RJ et al. Int J Periodontics Restorative Dent (2021) 41:657-662. [113] Esteves J et al. J Periodontol (2015) 86:941-4. [114] Bhide VM et al. Int J Periodontics Restorative Dent (2022) 42:e59-e66. [115] Maksoud MA. Int J Oral Dent Health (2020) 6:105.

Puros Dermis

Allograft Tissue Matrix



A high-quality, natural, biocompatible dermal matrix used in horizontal and vertical soft-tissue augmentation.[116-118]

Clinical Evidence

- After 5 years follow-up, no statistical significant differences in tissue thickening and gain of clinical attachment level compared to autogenous connective tissue graft when used to treat multiple gingival recessions [116]
- Superior tissue characteristics due to solvent dehydration processing compared to freeze-dried grafts [119]
- Not cross-linked compared to a xenogeneic soft-tissue graft [120]
- 100% free of antibiotics: Puros Dermis tissue matrix is not treated with antibiotics like a certain freeze dried human dermis graft [121]
- Rehydration in a single bath reduces preparation time [122]

Clinically successful in procedures for:

- Horizontal and vertical soft-tissue augmentation [116-118, 123]
- Periodontal and peri-implant soft tissue management [124-128]

PUROS DERMIS ALLOGRAFT TISSUE MATRIX - THIN

Item Number	Description - Thin
68794	Puros Dermis Tissue Matrix, 10 x 10 mm, 0.3 – 0.8 mm
68795	Puros Dermis Tissue Matrix, 10 x 20 mm, 0.3 – 0.8 mm
68796	Puros Dermis Tissue Matrix, 10 x 40 mm, 0.3 – 0.8 mm
68797	Puros Dermis Tissue Matrix, 20 x 40 mm, 0.3 – 0.8 mm

Shelf-life: Five (5) years

PUROS DERMIS ALLOGRAFT TISSUE MATRIX - THICK

Item Number	Description - Thick
68793	Puros Dermis Tissue Matrix, 10 x 10 mm, 0.8 – 1.8 mm
68790	Puros Dermis Tissue Matrix, 10 x 20 mm, 0.8 – 1.8 mm
68791	Puros Dermis Tissue Matrix, 10 x 40 mm, 0.8 – 1.8 mm
68792	Puros Dermis Tissue Matrix, 20 x 40 mm, 0.8 – 1.8 mm

Shelf-life: Five (5) years

[116] Kroiss S. et al. Quintessence Int. (2019) 50:278-285. [117] Petrungaro P. Inside Dent (2007) 3:2-4. [118] Petrungaro P.S. Inside Dent (2010) 2-9. [119] Hinton R. et al. Am J Sports Med (1992) 20:607-12. [120] Geistlich Fibro-Gide® IFU 08/2017. [121] Alloderm IFU 11/2017. [122] Puros Dermis Allograft Tissue Matrix IFU 06/2017. [123] Abou-Arraj R.V. et al. Int J Periodontics Restorative Dent (2017) 37:571-579. [124] Aroni M.a.T. et al. Rev Odontol UNESP (2016) 45:78-84. [125] Wang H.L. et al. J Periodontol (2014) 85:1693-701. [126] Alasmari D.S. J Am Sci (2014) 10:97-99. [127] Farina V. et al. Int J Oral Maxillofac Implants (2015) 30:909-17. [128] Puisys A. et al. Clin Oral Implants Res (2015) 26:123-9.

Puros Pericardium

Allograft Membrane

Allograft membrane provides a long-lasting barrier when an optimum balance of strength and handling for graft containment are necessary.[129, 130, 132, 134]

Clinical Evidence

- Functions as a barrier during the critical part of wound healing and helps stabilize and maintain bone growth material in the defect space [129, 130, 132, 134]
- Retains the natural collagen matrix and mechanical properties of native pericardium due to the proprietary Tutoplast Process
- Exhibits multi-directional strength
- Rehydrates quickly
- Three convenient sizes can be cut to shape for specific procedures
- Drapeable membrane adapts to the defect or grafted site

Clinically successful in procedures for:

- Guided bone regeneration procedures [131, 132]
- General surgery applications [135]

PUROS PERICARDIUM MEMBRANE

Item Number	Description
68770	Puros Pericardium Allograft Membrane, 15 x 20 mm
68771	Puros Pericardium Allograft Membrane, 20 x 30 mm
68772	Puros Pericardium Allograft Membrane, 30 x 40 mm

Shelf-life: Five (5) years

[129] Sohn DS, Shin HI, Ahn MR, Lee JS. Piezoelectric vertical bone augmentation using the sandwich technique in an atrophic mandible and histomorphometric analysis of mineral allografts: a case report series. Int J Periodontics Restorative Dent. 2010;30(4):383-391. [130] Taskonak B, Ozkan Y. An alveolar bone augmentation technique to improve esthetics in anterios ceramic FPDs: a clinical report. J Prosthodont. 2006;15(1):32-36. [131] Petrungaro PS, Amar S. Localized ridge augmentation with allogenic block grafts prior to implant placement: case reports and histologic evaluations. Implant Dent. 2005;14(2):139-148. [132] Rocci A, Martignoni M. Local enlargement of the alveolar ridge using a mineralized allogenic cortical- cancellous block graft: a clinical case study. Quintessence Int. 1999;11(12):373-380. (Italian Edition). [133] Paolantonio M. Combined periodontal regenerative technique in human intrabody defects by collagen membranes and anorganic bovine bone. A controlled clinical study. J Periodontol. 2002 Feb;73(2):158-166. [134] Shin HI, Sohn DS. A method of sealing perforated sinus membrane and histologic finding of bone substitutes: a case report. Implant Dent. 2005;14(4): 328-335. [135] Keith JD, Salama MA. Ridge preservation and augmentation using regenerative materials to enhance implant predictability and esthetics. Compend Contin Educ Dent. 2007 Nov;28(11):614-621; quiz 622-624.

CopiOs® Pericardium

Xenograft Membrane

A long-lasting, conformable barrier – strong enough to meet most clinical needs and supple enough to adapt to challenging graft contours.[136- 139]

Key Attributes

- Processed from bovine pericardium[140]
- Barrier time 8–24 weeks: for longer graft protection and stabilization[136, 141, 142]
- Not side specific for convenient handling[143]
- Retains the structure and composition of natural pericardial tissue due to the proprietary Tutoplast Process[144, 145]
- High tensile strength and suture pull-out force may be useful in guided bone regeneration techniques[142]
- Clinically demonstrated performance in guided bone regeneration procedures where ease of manipulation and adaptability to surface contours is essential[146-149]
- Shown to provide a stable, long-lasting barrier during healing and integration of bone graft materials, and staged or immediately placed implants[147, 150-152]
- Significantly thicker buccal bone plate when using CopiOs Pericardium Membranes to cover bone graft during implant placement[147, 153]

Clinically successful in procedures for:

- Guided tissue regeneration (GTR) in periodontology[140, 154]
- Covering and protecting bone graft material, e.g. in guided bone regeneration procedures (GBR)[140, 146, 147]

COPIOS PERICARDIUM MEMBRANE

Item Number	Description
77776	CopiOs Pericardium Membrane, 15 x 20 mm
77777	CopiOs Pericardium Membrane, 20 x 30 mm
77778	CopiOs Pericardium Membrane, 30 x 40 mm

Shelf-life: Five (5) years

[136] Rothamel D. et al. Clin Oral Implants Res (2005) 16:369-78. [137] Data on file with RTI Biologics Inc, USA. [138] Leong D.J. et al. Implant Dent (2015) 24:4-12. [139] Berberi A. et al. J Maxillofac Oral Surg (2015) 14:263-70. [140] CopiOs Pericardium Membrane IFU latest revision. [141] Siar C.H. et al. Clin Oral Implants Res (2011) 22:113-20. [142] Gasser A. et al., Mechanical stability of collagen membranes: an in vitro study, in AADR/CADR Meeting. 2016: Los Angeles. [143] Data on File with Zimmer Biomet Dental. [144] Marashdeh M.Q.M., Characterization and Development of Optimization Strategy for the Processing of Allogenic and Xenogenic Bone and Pericardium. 2007, Thesis, University of Erlangen-Nürnberg. [145] Kasaj A. et al. Head Face Med (2008) 4:22. [146] El Chaar E. et al. J Oral Implantol (2017) 43:114-124. [147] Fu J.H. et al. Clin Oral Implants Res (2014) 25:458-67. [148] Soardi C.M. et al. Clin Adv Periodontics (2013) 4:1-7. [149] Fu J.-H. et al. Clin Adv Periodontics (2012) 2:172-177. [150] Sterio T.W. et al. Int J Periodontics Restorative Dent (2013) 33:499-507. [151] Le B. et al. J Oral Maxillofac Surg (2016) 74:1552-61. [152] Laino L. et al. Biomed Res Int (2014) 2014:982104. [153] Garaicoa C. et al. Clin Implant Dent Relat Res (2015) 17:717-23. [154] Schlee M. et al. Head Face Med (2012) 8:6.

CopiOs Extend

Collagen Membrane

CopiOs Extend Membrane is a long-lasting, resorbable collagen membrane designed to allow implant placement while providing ample time for regeneration.

Clinical Evidence

- Made of highly purified porcine dermis [155]
- Barrier time 6 – 9 months [155]
- Not side specific for convenient handling [155]
- Cell-occlusive – allows nutrients to permeate while occluding epithelial cells [156]
- Convenient handling – conformable and easy to reposition in the defect
- Performs when primary closure has not been achieved [157]

Clinically successful in procedures for:

- Augmentation around implants placed in immediate and delayed extraction sockets [155]
- Localized ridge augmentation for later implantation [155]
- Alveolar ridge reconstruction for prosthetic treatment [155]
- Filling of bone defects [155]
- Guided bone regeneration in dehiscence defects [155]
- Guided tissue regeneration procedures in periodontal defects [155]

COPIOS EXTEND MEMBRANE

Item Number	Description
0190Z	CopiOs Extend Membrane, 15 x 20 mm
0191Z	CopiOs Extend Membrane, 20 x 30 mm
0192Z	CopiOs Extend Membrane, 30 x 40 mm

Shelf-life: Two (2) years

[155] CopiOs Extend Membrane IFU latest revision. [156] Data on file with Regenity Biosciences. [157] Data on file with ZimVie, Inc.

Socket Repair
Membrane

Designed to assist wound healing in alveolar facial plate repair following atraumatic, flapless single-root tooth extraction.

Clinical Evidence

- Made of bovine Achilles tendon [158]
- Barrier time 26-38 weeks [158] (accelerated resorption will occur if exposed)
- Flapless approach preserves marginal soft-tissue contours [159] and does not compromise buccal bone tissue. Maintaining this tissue and the vascular supply to the area is important for achieving highly aesthetic results [160]

Clinically successful in procedures for:

- 3-wall extraction sockets [160-162]

SOCKET REPAIR MEMBRANE

Item Number	Description
0154	Zimmer Socket Repair Membrane, 10 x 20 mm

Shelf-life: Three (3) years

[158] Zimmer Socket Repair Membrane IFU latest revision [159] Danesh-Meyer M. Australasian Dental Practice (2008) 150-158. [160] Elian N. et al. Pract Proced Aesthet Dent (2007) 19:99-104. [161] Eskow A.J. et al. J Periodontol (2014) 85:514-24. [162] Hoang T.N. et al. J Periodontol (2012) 83:174-81.

OsseoGuard and OsseoGuard Flex®

Collagen Membranes

Two levels of drapability for ease of use in various clinical procedures.

Clinical Evidence

- Made of bovine Achilles tendon (OsseoGuard®) [163] and highly purified bovine dermis (OsseoGuard Flex) [164]
- Barrier time 6 – 9 months [163-165]
- Not side specific for convenient handling [166]
- Can be trimmed, placed dry, or hydrated and finally sutured in place [163, 164]
- Performs when primary closure has not been achieved (OsseoGuard Flex®) [166]
- Space maintaining (OsseoGuard) [167]

OsseoGuard clinically successful in procedures for:

- Periodontal and/or dental surgery procedures [163]
- In the area of periodontal defects, dental implant, bone defect, or ridge reconstruction [163, 168-171]

OsseoGuard Flex clinically successful in procedures for:

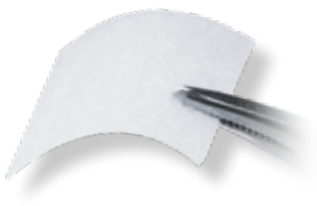
- Augmentation around implants placed in immediate extraction sockets, delayed extraction sockets [164, 172-174]
- Localized ridge augmentation for later implantation [164, 175]
- Alveolar ridge reconstruction for prosthetic treatment [164]
- Filling of bone defects [146]
- Guided bone regeneration in dehiscence defects [164]

OsseoGuard

OSSEOGUARD MEMBRANE

Item Number	Description
OG1520	OsseoGuard Resorbable Collagen Membrane, 15 x 20 mm
OG2030	OsseoGuard Resorbable Collagen Membrane, 20 x 30 mm
OG3040	OsseoGuard Resorbable Collagen Membrane, 30 x 40 mm

Shelf-life: Three (3) years



OsseoGuard Flex

OSSEOGUARD FLEX MEMBRANE

Item Number	Description
OGF1520	OsseoGuard Flex Resorbable Collagen Membrane, 15 x 20 mm
OGF2030	OsseoGuard Flex Resorbable Collagen Membrane, 20 x 30 mm
OGF3040	OsseoGuard Flex Resorbable Collagen Membrane, 30 x 40 mm

Shelf-life: Three (3) years

[163] OsseoGuard Membrane IFU latest revision. [164] OsseoGuard Flex Membrane IFU latest revision. [165] Data on File with Regenity Biosciences. [166] Data on File with ZimVie. [167] Block M.S. et al. J Oral Maxillofac Surg (2013) 71:1513-1519. [168] Fischer K.R. et al. Int J Periodontics Restorative Dent (2018) 38:549-556. [169] Tan-Chu J.H. et al. Int J Periodontics Restorative Dent (2014) 34:399-403. [170] Block M.S. et al. J. Oral Maxillofac. Surg. (2012) 70:1321-1330. [171] Nevins M. et al. Int J Periodontics Restorative Dent (2011) 31:227-35. [172] Chasioti E. et al. Case reports in dentistry (2015) Article ID 439706:8pages. [173] Castillo R.a.D. Inside Dent (2011) 7:94-96. [174] Felice P. et al. Eur J Oral Implantol (2015) 8:375-84. [175] Chasioti E. et al. Quintessence Int (2013) 44:763-71.

BioMend® and BioMend Extend®

Collagen Membranes

Resorbable collagen membranes made of bovine Achilles tendon that are rigid enough to create and maintain space.[176]

Clinical Evidence

- Two different options of barrier time: 8 weeks max. (BioMend), 18 weeks max. (BioMend Extend) [177]
- Not side specific for convenient handling [178]
- Cell-occlusive – serves as barrier to prevent epithelial cell migration and allows passage of essential nutrients [177]
- Up to 54% more horizontal bone gain when using BioMend Extend membranes to cover bone graft during implant placement [179]

*Compared to a Porcine Membrane**

- Significantly higher tensile strength in wet and dry state may be useful for guided bone regeneration techniques [184]
- 34% more new bone fill and 28% more bone-to-implant contact when using BioMend Extend Membranes for treatment of implant dehiscence defects [176]

Clinically successful in procedures for:

- Guided tissue regeneration procedures in periodontal defects [177]
- Periodontal surgery [177, 180, 181]
- Use in dental surgery procedures as a material for placement in the area of an implant, bone defect, or ridge construction [177, 182]
- Sinus lift procedures [183]

BIOMEND MEMBRANE

Item Number	Description
0103Z	BioMend Resorbable Collagen Membrane, 15 x 20 mm
0105Z	BioMend Resorbable Collagen Membrane, 20 x 30 mm
0107Z	BioMend Resorbable Collagen Membrane, 30 x 40 mm

Shelf-life: Three (3) years

BIOMEND EXTEND MEMBRANE

Item Number	Description
0140Z	BioMend Extend Resorbable Collagen Membrane, 15 x 20 mm
0141Z	BioMend Extend Resorbable Collagen Membrane, 20 x 30 mm
0142Z	BioMend Extend Resorbable Collagen Membrane, 30 x 40 mm

Shelf-life: Three (3) years

*Bio-Gide Membrane, Edward Geistlich Sohne AG. [176] Oh T.J. et al. Clin Oral Implants Res (2003) 14:80-90. [177] BioMend and BioMend Extend Absorbable Collagen Membrane IFU latest revision. [178] Data on File with Regenity Biosciences. [179] Park S.H. et al. Clin Oral Implants Res (2008) 19:32-41. [180] Wang H.L. et al. J Periodontol (1994) 65:1029-36. [181] Wang H.-L. et al. Periodontol 2000 (2012) 59:140-157. [182] Saravanan P. et al. J Oral Implantol (2013) 39:455-62. [183] Ranaan J. et al. Clin Oral Implants Res (2018). [184] Coïc M. et al. Rev Stomatol Chir Maxillofac Chir Orale (2010) 111:286-290.

OsseoGuard PTFE

Titanium Reinforced Membrane

OsseoGuard PTFE Titanium Reinforced High-Density PTFE Membranes are designed for periodontal applications, large defects, and defects missing adequate bony architecture.

The traditional frame design, incorporating delicate and strategically-placed titanium "struts", has more than 25 years of clinical history and successful use in GBR. This innovative, hybrid design consists of a thin layer of expanded PTFE (e-PTFE) laminated to a textured d-PTFE membrane. In between these two layers lies a titanium framework. The titanium framework is a grade of titanium that has little to no memory. Once formed, the titanium-reinforced membrane will remain in that shape until mechanically altered.

Key Attributes[185]

- Less titanium bulk
- Grade 1 titanium, lightweight framework
- Textured surface, d-PTFE backing
- Can be molded and shaped for tenting and space maintenance
- May be easily cut with scissors to custom-fit various defects

Benefits[185]

- Less is more - less titanium bulk allows for greater versatility in shaping and placement
- Easy to form in three dimensions and retains no memory, allowing for passive fit
- Easy to trim and is compliant with the overlying soft tissues
- Prevents migration of bacteria into wound if exposed. Edges remain soft and supple to prevent flap complications
- Prevents tissue ingrowth making removal of membrane easier when compared to removal of titanium mesh

Two Different Handling Options

OsseoGuard d-PTFE Titanium-Reinforced is available in two handling options: TR250 or TR150. TR150 membranes are 40% thinner than TR250 membranes, providing clinicians another handling option in titanium-reinforced membranes.

[185] Data on file with manufacturer.

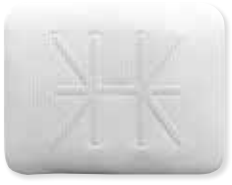
OSSEOGUARD PTFE TITANIUM REINFORCED MEMBRANES

Description	Item Number		Units (per box)
	TR250 (250 µm thick)	TR150 (150 µm thick)	
Anterior Extraction 12 mm x 24 mm	TR250AE-N-1	TR150AE-N-1	1
	TR250AE-N-2	TR150AE-N-2	2
Anterior Extraction 14 mm x 24 mm	TR250AEY-N-1	TR150AEY-N-1	1
	TR250AEY-N-2	TR150AEY-N-2	2
Large Facial 17 mm x 25 mm	TR250LF-N-1	TR150LF-N-1	1
	TR250LF-N-2	TR150LF-N-2	2
Posterior Extraction 20 mm x 25 mm	TR250PE-N-1	TR150PE-N-1	1
	TR250PE-N-2	TR150PE-N-2	2
Posterior 25 mm x 30 mm	TR250P-N-1	TR150P-N-1	1
	TR250P-N-2	TR150P-N-2	2
Small-T 25 mm x 36 mm	TR250SMT-N-1	TR150SMT-N-1	1
	TR250SMT-N-2	TR150SMT-N-2	2
Large-T 30 mm x 41 mm	TR250LGT-N-1	TR150LGT-N-1	1
	TR250LGT-N-2	TR150LGT-N-2	2
Ridge Augmentation X 30 mm x 40 mm	TR250RAX-N-1	TR150RAX-N-1	1
	TR250RAX-N-2	TR150RAX-N-2	2
Ridge Augmentation K 30 mm x 40 mm	TR250RAK-N-1	TR150RAK-N-1	1
	TR250RAK-N-2	TR150RAK-N-2	2
Ridge Augmentation K 40 mm x 50 mm	TR250RAKL-N-1	TR150RAKL-N-1	1
	TR250RAKL-N-2	TR150RAKL-N-2	2
Perio Narrow 13 mm x 19 mm	TR250PN-N-1	TR150PN-N-1	1
	TR250PN-N-2	TR150PN-N-2	2
Perio Wide 13 mm x 18 mm	TR250PW-N-1	TR150PW-N-1	1
	TR250PW-N-2	TR150PW-N-2	2
Trans Crestal 24 mm x 38 mm	TR250TCS-N-1	TR150TCS-N-1	1
	TR250TCS-N-2	TR150TCS-N-2	2
Trans Crestal 38 mm x 38 mm	TR250TCL-N-1	TR150TCL-N-1	1
	TR250TCL-N-2	TR150TCL-N-2	2
Posterior Ridge 38 mm x 38 mm	TR250PR-N-1	TR150PR-N-1	1
	TR250PR-N-2	TR150PR-N-2	2

Shelf-life: Four (4) years

Anterior Extraction
12 x 24 mm

Trans Crestal
38 x 38 mm



Ridge Augmentation K
40 x 50 mm

OsseoGuard Titanium Mesh

Titanium Nitride-Coasted Mesh

Key Attributes[186]

- Ultra-thin; 0.2 mm thick
- 0.5 mm pore size
- Highly inert, non-reactive, non-stick nitride coating
- Can be repeatedly sterilized by autoclave

OSSEOGUARD TITANIUM MESH

Item Number	Description	Units (per box)
TIM2534-1	Titanium Mesh 25 mm x 34 mm	1
TIM4545-1	Titanium Mesh 45 mm x 45 mm	1

Shelf-life: Four (4) years

Benefits[186]

- 0.5 mm pore size contains graft material while allowing tissue ingrowth
- High coating density with no pores to hold contaminants. Unused portions are not wasted.
- Designed to make primary closure easier to achieve, and to improve tissue release upon removal
- Outstanding wear resistance material will not stain or corrode, and withstands acids, bases, solvents, and high temperatures

OsseoGuard PTFE

Textured and Non-Textured Membranes

Key Attributes[186]

- Non-Resorbable, can be left exposed
- 100% dense (non-expanded) PTFE
- Soft tissue attaches, but doesn't grow through the membrane

Benefits[186]

- Does not resorb prematurely – you dictate healing time
- Impervious to bacteria (pore size less than 0.3 µm)
- Preservation of the soft-tissue architecture and keratinized mucosa
- Exposed membrane allows for non-surgical removal; no anesthesia

OSSEOGUARD PTFE TEXTURED MEMBRANES

Item Number	Description	Units (per box)
TXR1224-1 TXR1224-10	Textured 12 x 24 mm	1 10
TXR2530-1 TXR2530-4	12 x 24 mm 25 x 30 mm	1 4

OSSEOGUARD PTFE NON-TEXTURED MEMBRANES

Item Number	Description	Units (per box)
NTXR1224-10	Non-Textured 12 x 24 mm	10
NTXR2530-4	Non-Textured 25 x 30 mm	4

Shelf-life: Four (4) years

[186] Data on file with manufacturer.

Collagen Matrices

Plug, Tape, and Patch

Highly porous, absorbable Collagen Wound Dressings to protect, heal, and repair oral wounds.

Key Attributes

- Made of porcine collagen [187]
- Holds up to 30x own weight in fluid [188]
- No removal needed – resorbs in fewer than 30 days [188]
- Greater than 90% open pores [188]
- Protects wound bed – adheres and provides coverage to oral wounds and sores
- Designed to aid healing – porous, absorbable matrix supports delicate new tissue

Clinically successful in procedures for:

- Periodontal surgical wounds [187]
- Suture sites [187]
- Extraction sites [187]
- Surgical wounds [187]
- Traumatic wounds [187]

COLLAGEN MATRICES: PLUG, TAPE, AND PATCH

Item Number	Description
0100Z	Zimmer Collagen Tape, 25 x 75 x 1 mm, 10 u/pk
0101Z	Zimmer Collagen Patch, 20 x 40 x 3 mm, 10 u/pk
0102Z	Zimmer Collagen Plug, 10mm x 20 mm, 10 u/pk

Shelf-life: Three (3) years

Collagen Plug
10 x 20 mm

Collagen Tape
25 x 75 mm, 1 mm thick

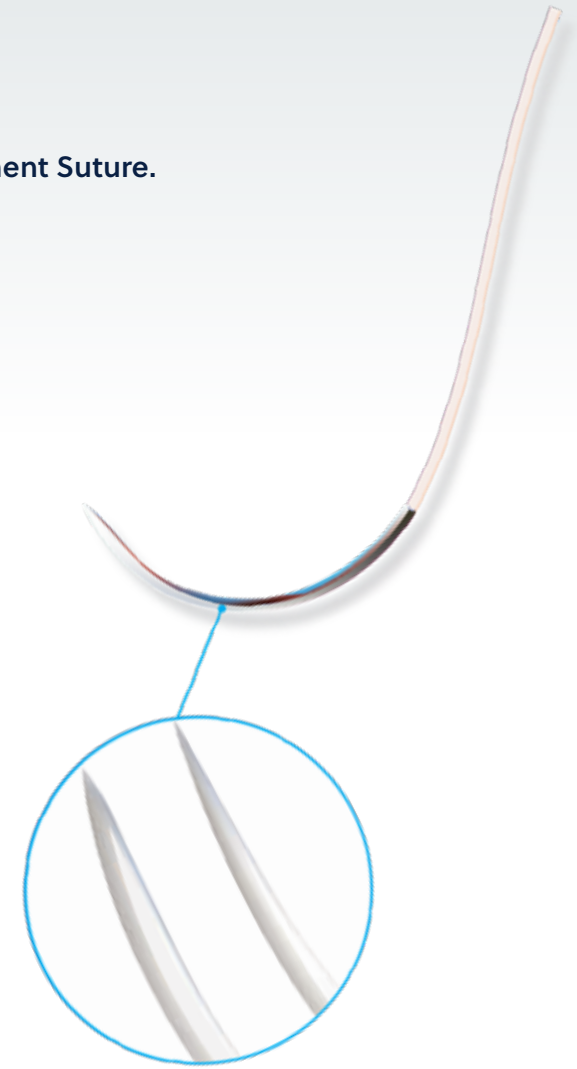
Collagen Patch
20 x 40 mm, 3 mm thick

[187] ZimVie Collagen Absorbable Wound Dressings IFU latest revision. [188] Data on file with Regenity Biosciences.

OsseoGuard

Non-Resorbable Sutures

Non-Resorbable PTFE Soft Monofilament Suture.



Key Attributes

- 100% medical grade PTFE
- Very low package memory
- Biologically inert
- Does not allow bacteria wicking into the surgical site
- Comfortable for patients
- Excellent handling, knots securely
- Keeps the surgical site reliably closed

OSSEOGUARD NON-RESORBABLE SUTURES

Item Number	Description
OS2019	USP 2-0, 19 mm, 3/8 circle precision, reverse cutting
OS3016	USP 3-0, 16 mm, 3/8 circle precision, reverse cutting
OS3019	USP 3-0, 19 mm, 3/8 circle precision, reverse cutting
OS3016B	USP 3-0, 16 mm, 3/8 circle precision, reverse cutting black
OS3019B	USP 3-0, 19 mm, 3/8 circle precision, reverse cutting black
OS4013PE	USP 4-0, 13 mm, 1/2 circle round body, taper point
OS4013PR	USP 4-0, 13 mm, 3/8 circle precision, reverse cutting
OS4016	USP 4-0, 16 mm, 3/8 circle precision, reverse cutting

Shelf-life: Four (4) years

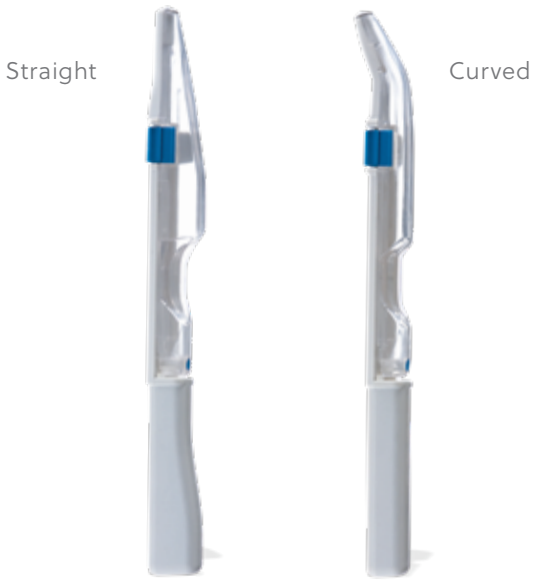
Safescraper Twist

Cortical Bone Collector

Effectively harvesting autogenous bone which contains viable bone cells which might contribute to the outcome of bone grafting procedures.[189]

Key Attributes

- Provides 160° cutting area to effectively harvest up to 5 cc of cortical bone
- Available in curved and straight designs facilitating access to hard-to-reach posterior regions
- Harvested bone is contained in a sterile chamber
- Harvested bone contains viable bone cells and shows high osteogenic potential [189, 190]
- Higher cell viability, cell proliferation, osteogenic potential, and release of growth factors compared to other harvesting methods [190, 191]



SAFESCRAPER TWIST BONE COLLECTOR

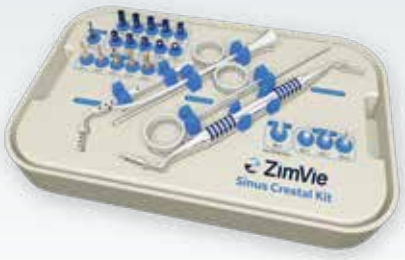
Item Number	Description
3598	Disposable Cortical Bone Collector, 3 Units/pk, Straight
3987	Disposable Cortical Bone Collector, 3 Units/pk, Curved

Shelf-life: Three (3) years

[189] Zaffe D. et al. Clin Oral Implants Res (2007) 18:525-533. [190] Miron R.J. et al. J Dent Res (2011) 90:1428-33. [191] Miron R.J. et al. Clin Implant Dent Relat Res (2013) 15:481-489.

Sinus Crestal Lift
Instrument Kit

Crestal sinus lifts without fear of membrane damage.



Key Attributes

- Precisely control drilling depth in increments of 1 mm
- Intuitive layout designed for efficient workflow
- Extended drill sizes with diameter range of 2.4 mm to 4.4 mm

SINUS CRESTAL LIFT KIT

Item Number	Description
SCAKITV2	Sinus Crestal Approach Kit Version 2
SCINTDRILL	Sinus Crestal Initial Drill
SCDRILL24	Sinus Crestal Drill, 2.4 mm
SCDRILL28	Sinus Crestal Drill, 2.8 mm
SCDRILL32	Sinus Crestal Drill, 3.2 mm
SCDRILL36	Sinus Crestal Drill, 3.6 mm
SCDRILL44	Sinus Crestal Drill, 4.4 mm
SCINSERTER	Sinus Crestal Inserter
SCBONESYR	Sinus Crestal Bone Syringe
SCBONECNDSR	Sinus Crestal Bone Condenser
SCDPTHGAUGE	Sinus Crestal Depth Gauge
SCSPRDR27	Sinus Crestal Spreader, 2.7 mm
SCSPRDR31	Sinus Crestal Spreader, 3.1 mm
SCSPRDR39	Sinus Crestal Spreader, 3.9 mm

SINUS CRESTAL LIFT KIT

Item Number	Description
SCSTOPPER02	Sinus Crestal Stopper, 2 mm
SCSTOPPER03	Sinus Crestal Stopper, 3 mm
SCSTOPPER04	Sinus Crestal Stopper, 4 mm
SCSTOPPER05	Sinus Crestal Stopper, 5 mm
SCSTOPPER06	Sinus Crestal Stopper, 6 mm
SCSTOPPER07	Sinus Crestal Stopper, 7 mm
SCSTOPPER08	Sinus Crestal Stopper, 8 mm
SCSTOPPER09	Sinus Crestal Stopper, 9 mm
SCSTOPPER10	Sinus Crestal Stopper, 10 mm
SCSTOPPER11	Sinus Crestal Stopper, 11 mm
SCSTPRHLDR	Sinus Crestal Stopper Holders (10 pack)
SCACASE	Sinus Crestal Kit Case

Sinus Lateral Lift
Instrument Kit

A minimally invasive approach to lateral sinus lift.

- Unique angles and tip on the drill allow for faster and more stable drilling compared to previous generation[1]
- Three auxiliary slots provided for placing additional drills
- Specially designed drills allow for small lateral window and minimal flap size[1]

SINUS LATERAL LIFT KIT

Item Number	Description
SLAKITV3	Sinus Lateral Approach Kit Version 3
SLELV1	Sinus Lateral Elevator 1
SLELV2	Sinus Lateral Elevator 2
SLELV3	Sinus Lateral Elevator 3
SLACASE	Sinus Lateral Kit Case
SLBUR6	Sinus Lateral Number 6 Bur

SINUS LATERAL LIFT KIT

Item Number	Description
SLDR2065	Sinus Lateral Drill, 2mm, 6.5 mmD
SLDR2075	Sinus Lateral Drill, 2mm, 7.5 mmD
SLDR2085	Sinus Lateral Drill, 2mm, 8.5 mmD
SLDR3565	Sinus Lateral Drill, 3.5mm, 6.5 mmD
SLDR3575	Sinus Lateral Drill, 3.5mm, 7.5 mmD
SLDR3585	Sinus Lateral Drill, 3.5 mm, 8.5 mmD

Screw Fixation
Instrument Kit

A solution for the temporary fixation and stabilization of bone transplants, suitable resorbable and non-resorbable bone replacement materials, and membranes for ridge augmentation procedures.

Key Attributes

- Power grip connection for secure and stable transfer of the screws to the surgical site
- Two color coded systems, Ø 1.5 mm MICRO (blue) and Ø 2.0 mmD MINI (red) screws, for easy and rapid identification of the parts possible and simplifies parts matching
- Modular storage system permits individual configuration
- Autoclavable metal storage tray [192]

ASSEMBLED START-UP KIT, ITEM 69.01.10Z

Item Number	Description
69.01.11Z	Tray
69.01.09Z	Pilot Drill, Micro, 14mmL
69.01.16Z	Pilot Block Drill, Micro
75.23.19Z	Screw Driver Insert, Micro, Long
75.23.23Z	Screw Driver Insert, Micro, Short
75.23.52Z	Screw Driver Handle

ADDITIONAL PARTS

Item Number	Description
69.01.15Z	Pilot Drill, Mini, Short
69.01.17Z	Pilot Block Drill, Mini
75.23.21Z	Screw Driver Insert, Mini, Short
75.23.22Z	Screw Driver Insert, Mini, Long

FIXATION SCREWS

Item Number	Description
68.85.83Z	Screws, Micro, 1.5 mmD Self Drilling, 3.5 mmL, 10 pack
68.85.84Z	Screws, Micro, 1.5 mmD Self Drilling, 4 mmL, 10 pack
68.85.85Z	Screws, Micro, 1.5 mmD Self Drilling, 5 mmL, 10 pack
68.85.87Z	Screws, Micro, 1.5 mmD Self Drilling, 7 mmL, 10 pack
68.85.49Z	Screws, Micro, 1.5 mmD Self Tapping, 9 mmL, 10 pack
68.85.51Z	Screws, Micro, 1.5mmD Self Tapping, 11 mmL, 10 pack

Please contact ZimVie for a full list of available replacement parts and optional items.

[192] Screw Fixation System IFU latest revision.

For more information, visit ZimVie.com

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