



 **Purgo** Dental  
Biologics  
Solution



## Leading the New Standard of Regeneration

Founded in 1999, Purgo Biologics strives to become one of the leading global companies in oral health care with its focus on safe biomaterials for soft tissue and bone regeneration.

Based on the specialized experiences accumulated by our outstanding research personnel, Purgo Research and Development Center based in Seoul is thriving to become the best in the world, specifically in the expertise of oral biomaterials for soft tissue and bone regeneration. All members in Research and Development Center are pursuing the optimized technical developments with various clinical studies, cooperative research with the governments, clinicians and educational institutions.

The solutions manufactured by Purgo are gaining fame throughout the world and Purgo's solutions are widely accepted by global dentists from more than 30 countries.

Our production site is complying with the most international quality standards and regularly inspected by international agencies. Each production stage of our biologics solutions are controlled from the selection of the raw material to the final product.

Purgo Biologics is not just a manufacturer of bone grafting biomaterials.  
Our commitment goes far beyond products: we develop high-performance biological solutions designed to support optimal regeneration of both hard and soft tissues.

At Purgo Biologics, every innovation is guided by one fundamental principle : respect for biology.  
Our solutions are biocompatible, effective, and developed without biological compromise, supporting natural regenerative processes and delivering reliable, long-lasting outcomes.

Because regeneration is not about filling, but about rebuilding, Purgo Biologics stands as the biological choice in bone and tissue regeneration.  
Purgo Biologics – THE Right Choice !

Purgo Biologics



## THE Graft™

Natural bone graft  
Page 4 to 9

## THE Graft Collagen

Collagenated bone block  
Page 10 to 13

## THE Cover™ [Flex-Stiff]

Natural resorbable collagen membrane  
Page 14 to 17

## THE Cover™ X<sup>tend</sup>

Peritoneum resorbable collagen membrane  
Page 18 to 21

## THE Cover™ Pericardium

Pericardium resorbable collagen membrane  
Page 22 to 25

## OpenTex®

Non-resorbable PTFE membrane  
Page 26 to 29

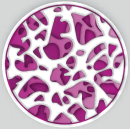
## OpenTex® -TR

Non-resorbable PTFE titanium reinforced membrane  
Page 30 to 33

## Botex®

Non resorbable PTFE suture  
Page 34 to 37

## Bone Graft Inspired by Biology



# THE Graft™



THE Graft™ is a natural, porcine bone mineral matrix for bone reconstruction. It is produced by removal of all organic components from porcine bone. Due to its native structure THE Graft™ likens the physical and chemical aspects of mineralized matrix of human bone. When packed into a bone defect, THE Graft™ gradually resorbs and replaced with bone during the healing process. It is available in cancellous granules packaged in vial and syringe. THE Graft™ is sterilized using gamma irradiation.

Unique proprietary manufacturing process removes very effectively potential immunogenic organic elements keeping the natural structure of the matrix.

THE Graft™ quality and safety have been scientifically demonstrated with in-vitro, in-vivo studies, large case study reports and international randomized clinical research. Systematic review and meta-analysis are conducted on THE Graft™ worldwide.<sup>[1-2]</sup>

THE Graft™ has established its fame throughout the world, both scientifically and clinically, becoming a popular bone regeneration material.



[1] Alveolar ridge regeneration of damaged extraction sockets using deproteinized porcine versus bovine bone minerals: A randomized clinical trial. 100 patients Clin Implant Dent Relat Res 2018 Jul 27. Epub 2018 Jul 27.

[2] Randomized clinical trial of maxillary sinus grafting using deproteinized porcine and bovine bone mineral. 16 Patients clin implant dent relai Res. 2017; 19[1]: 140-150



## Specifications

Description	Item NO.	Size / Volume ~	
THE Graft (S*) Granule 0.25 - 1,00mm	BG-A15	0.36cc	0.15g
	BG-A25	0.60cc	0.25g
	BG-A05	1.20cc	0.50g
	BG-A10	2.40cc	1,00g
	BG-A20	4.80cc	2,00g
	TG-AS25	0.25cc	-
	TG-AS05	0.50cc	-
TG-AS10	1.00cc	-	
THE Graft (L*) Granule 1.00 - 2,00mm	BG-B05	1.80cc	0.50g
	BG-B10	3.60cc	1,00g
	TG-BS05	0.50cc	-
	TG-BS10	1.00cc	-

\* S : small / L : large

## Indications

BONE REPLACEMENT MATERIALS	GR/CC	Extraction socket with intact socket	Extraction socket with defective socket	Minor bone augmentation	Major bone augmentation	Sinur floor elevation	Peri-implantitis
THE Graft™ Granules 0,25-1mm	0.25g~0,6cc	•	•	•			•
THE Graft™ Granules 0,25-1mm	0.50g~1,2cc	•	•	•			•
THE Graft™ Granules 0,25-1mm	1.00g~2,4cc	•	•	•	•	•	•
THE Graft™ Granules 1-2mm	0.50g~1,8cc				•	•	
THE Graft™ Granules 1-2mm	1.00g~3,6cc				•	•	

## «Safety and purity are an important concern when using a biomaterial»

### THE Graft™ Purity [3-4-5]

#### Is THE Graft™ safety material?

##### Proprietary virus inactivation process technology.

Thanks to highly efficient manufacturing process, THE Graft™ is free from any organic components that might be potential causes of infection or immune reaction. In addition the unique process helps preserve the physical properties of THE Graft™ with its native osseous structure. A large surface area is a key requirement for graft materials, and not only results in a larger surface region available for osteoblast cells attachment but also facilitates the exchange of nutrients and waste products, it allows greater amounts of blood, proteins, and growth factors to be absorbed onto the scaffold.

##### THE Graft™ has a high purity.

The analysis result minimal residual protein, soft tissue, and organic bone matrix, proves that THE Graft™ is deproteinized enough for safe use.

Other than THE Graft™, such low values for organic residues are only found with bone graft material treated at high temperatures which may cause the detriment of the natural bone structure.



These results show that organic substances, including collagen and other organic compounds, were successfully removed from THE Graft™, which is thus not affected by issues associated with organic content. [3]

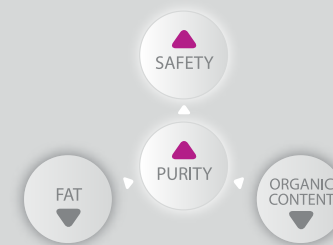


#### Is porcine bone safer than bovine?



THE Graft™ demonstrated a protein content lower than that of the natural bovine bone graft material. Bovine cancellous bone is Not Free of Zoonoses, such as BSE-Bovine Spongiform Encephalopathy. Porcine bone has a relatively low risk of zoonosis.

### Less residual organic content for High purity



High purity means low organic matters

- ▶ High Surface Energy
- ▶ High Hydrophilicity



[3] Physicochemical characterization of porcine bone-derived grafting material and comparison with bovine xenografts for dental applications. Jung Heon Lee, Gyu Sung Yi, Jin Woong Lee, Deug Jeong Kim, School of Advanced Materials Science and Engineering, Sungkyunkwan University, Suwon, Korea 2SKKU Advanced Institute of Nanotechnology, Sungkyunkwan University, Suwon, Korea

[4] Process Development of a virally-safe dental xenograft material from porcine bones, Dong-Myon Kim, Ho-Chang Kang, Hyung-Joon Cha, Jung Eun Bae, and In Seop Kim, Korean Journal of Microbiology [2016] Vol. 52, No.2, pp. 140-147

## THE Graft™ Biocompatibility [3-4-5]

### « Getting closer to human bone »

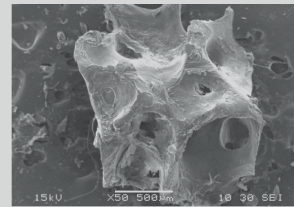
THE Graft™ is structurally similar to human bone. It has high possible level of porosity combined with a natural interconnectivity.

### Safe & Biocompatible

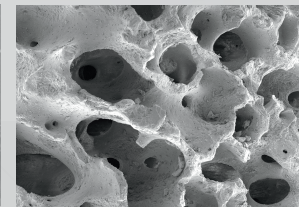
The combination of porcine origin with the high level of purity enables predictable bone growth without risking an immunogenic reaction. In an In-Vitro study THE Graft™ was shown to encourage cell adhesion to the same extent as the compared DBBM (Deproteinized bovine bone matrix), and therefore offering optimal conditions for vital cell growth.



Porosity is an important factor in determining tissue-implant material integration. High porosity leads to a quicker absorption of liquids and cells spreading. THE Graft™ provides the optimized bone architecture for cells adhesions and tissue regeneration.

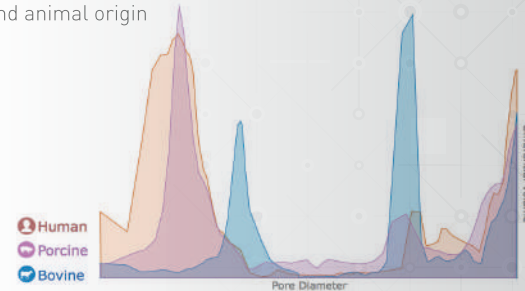


Human bone



THE Graft™

Comparison of bone structure and composition from human and animal origin



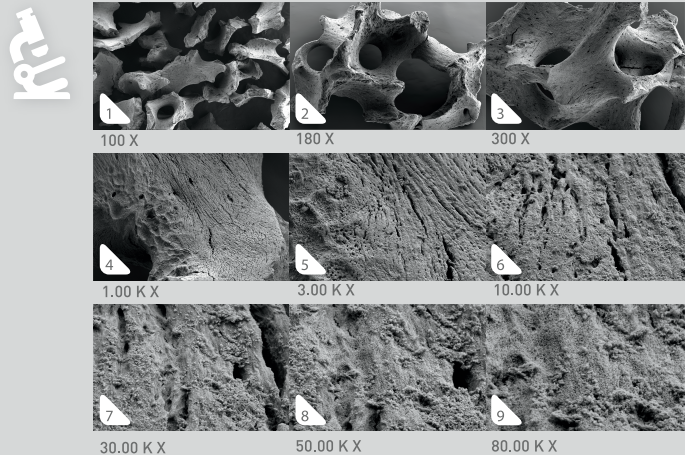
[5] Effect of the calcination temperature on the composition and microstructure of hydroxyapatite derived from human and animal bone, M. Figueiredo, A. Fernando, G. Martins, J. Freitas, F.Judas, H. Figueiredo - Ceramics International Volume 36, Issue 8, December 2010, Pages 2383-2393 [2016]140-147

## THE Graft™ High Porosity [3-4-5-6]

High porosity and early remodelling improve clinical performance.

The high porosity of THE Graft™ means a quicker absorption of fluids (e.g; blood) in comparison with DBBM. This not only facilitates the application of the material but also leads to early remodelling and improved clinical performance.

High level of porosity was demonstrated with particle pore structure test, particle size distribution test and total porosity tests.



## THE Graft™ Structure :

- 1 Macropores (diameter  $\rightarrow$  100 $\mu$ m), are necessary to form blood vessels and induce both bone growth and reorganization around the graft material.
- 2 Micropores (diameter  $\leftarrow$  10  $\mu$ m), are required for the penetration of body fluids, ion transportation, the attachment of osteoblasts, and the precipitation of newly formed HA.
- 3 Nanopores are characterized by dimension of less than 100 nanometers pores size between grains. Nano-porosity increases bone graft permeability to the physiological fluids and cells adhesion.



### Global porosity analysis :

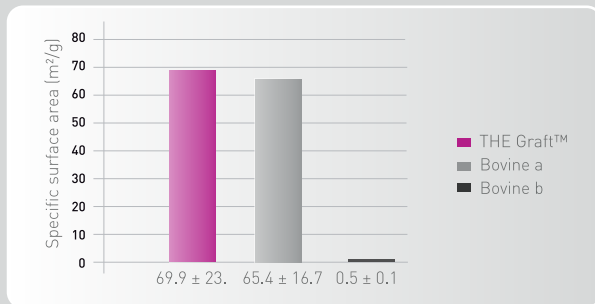


## THE Graft™ Hydrophilicity [3]

THE Graft™ consists of a unique inter-connecting pore system that ensures an efficient fluid intake and permits the migration of cells. This pore system and high surface energy enhance the osteoconduction process.

The SSA of THE Graft™ was similar with the values measured for the «bovine bone a» and significantly larger than the «bovine bone b». Considering that both THE Graft™ and «the bovine bone a» had a similar surface morphology and pore size distribution with a substantial amount of nanoscale pores, we believe that this difference in the SSA was closely related to the nano/microscale structure of the bone graft materials.

### Specific surface area

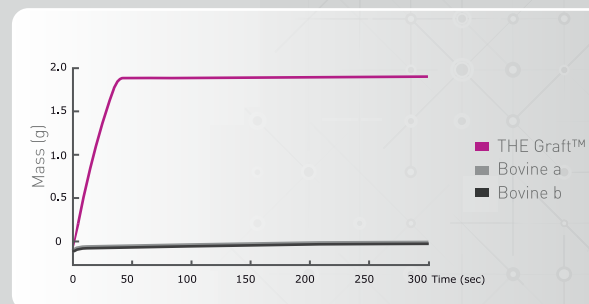


THE Graft™ has shown to have higher wettability than the compared xenografts. It suggests that THE Graft™ is relatively hydrophilic and can be easily wet by body fluids after implantation. Not only protein adsorption, but also the attachment, growth, and proliferation of various types of cells, including osteoblasts, have been reported to be significantly affected by the wettability of the material surface.

This high wettability of THE Graft™ suggests that it may have advantages in terms of protein adsorption and the resulting cell adhesion and proliferation processes after implantation.

The content of the organic component of THE Graft™ was somewhat lower than compared existing xenografts.

### Wetting mass of the graft materials as a function of time.



This result indicates that the wettability of THE Graft™ was significantly higher than the bovine bone.

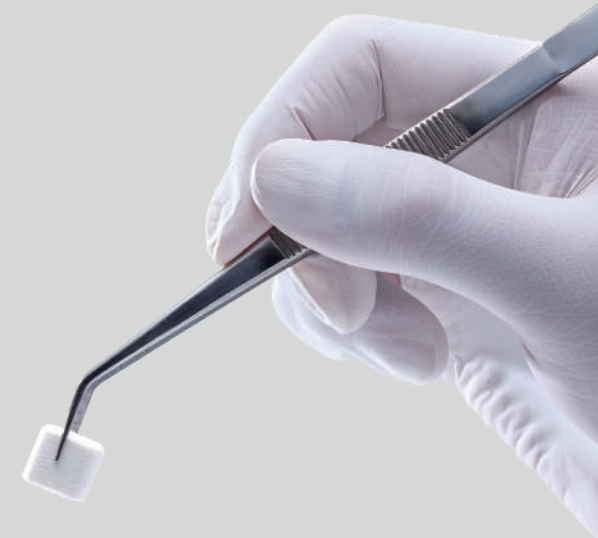
**Collagen bone block designed  
for superior handling and biological performance**



THE Graft™ Collagen block is composed of porcine derived bone mineral matrix from cancellous bone and atelocollagen from porcine tendon. THE Graft™ Collagen is a bone graft intended to fill, augment, and/or reconstruct periodontal, oral, and maxillofacial defects.

THE Graft™ Collagen bone mineral matrix is similar to physical and chemical aspects of human bone mineralized matrix. Hydrated collagen components have viscosity that facilitate for blending bone mineral matrix. With this characterization, THE Graft™ Collagen can be trimmed and/or molded to the various defect shapes and can be fixed in bone defect site.

As time passes, THE Graft™ Collagen is partially transformed by the osteoclast and osteoblast cells.



# THE Graft™ Collagen

## Manufactured using the proprietary technology of THE Graft™

### Exceptional volumetric stability

Maintains its shape perfectly during handling and placement, allowing precise adaptation to the defect.

### Easy to handle

Can be cut, shaped, and positioned effortlessly for accurate and predictable surgical results.



### Osteoconductive and biocompatible

Provides a scaffold for natural bone growth and gradually resorbs.

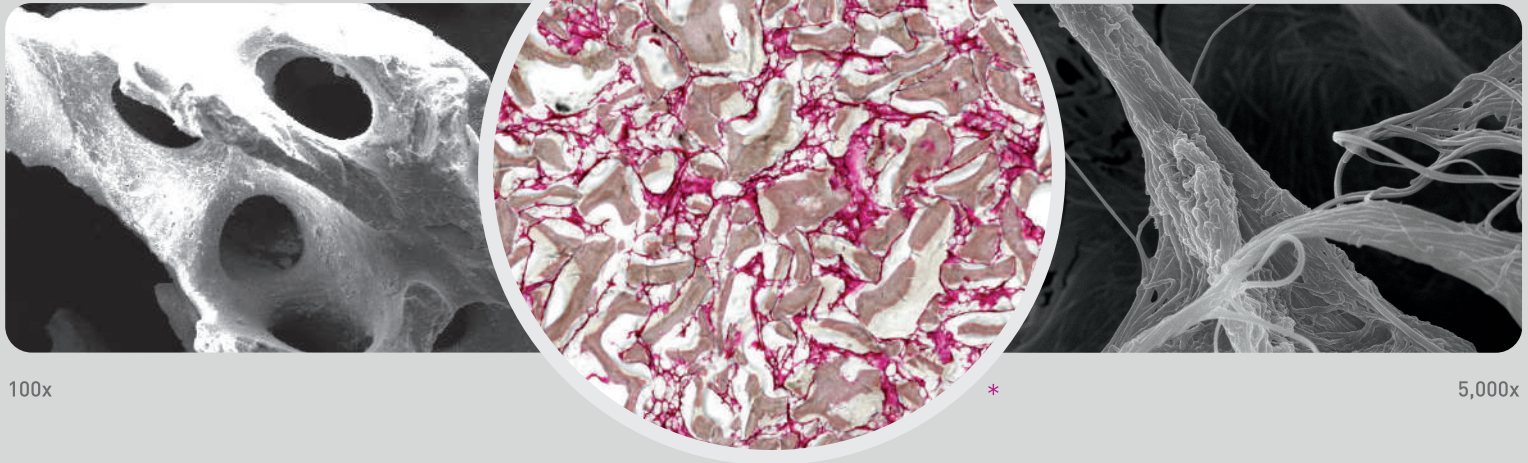
### Versatile indications

Ideal for post-extraction socket preservation, bone defect reconstruction, and implant site preparation.

A reliable and practical solution for predictable outcomes and effective bone regeneration

Specifications			
			
Description	Item NO.	Size / Volume ~	
THE Graft™ Collagen Block Type 	TCB-01	7x7x7mm	0.34cc
	TCB-02	8x9x10mm	0.72cc
	TCB-03	10x11x12mm	1.32cc
	TCB-05	5x5x5mm	0.125cc
	TCB-06	5x5x10mm	0.250cc





100x

5,000x



 THE Graft  
Collagen



## Characteristics of THE Graft™ Collagen

### 1 Easily Moldable

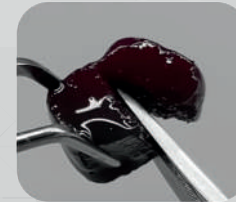
THE Graft™ Collagen is composed of THE Graft™ bone granules and type I collagen.

The collagen component enhances a better handling property compared with granules alone, enabling the material to be cut, shaped, making it a possible to adapt with more ease to various shapes for certain defect types.



### 2 Optimal osteoconductivity

While retaining better handling properties, THE Graft™ Collagen is able to form sufficient osseous tissue for implant placement and maintain natural volume and great adhesion property which lead to minimum chair time.



### 3 Predictable clinical results

With great hydrophilicity, THE Graft™ Collagen stabilizes the clot and aids in revascularization of the grafting material in the defect area to increase cell migration efficiency to the mineral substrate. As a result, fast bone formation can be expected, as well as a predictable clinical result.



**It is advantageous for shape and space maintenance**

## An Immune-Safe, Resorbable Collagen Membrane



# THE Cover™

THE Cover™ is a resorbable collagen membrane consisting of porcine-originated Type I Collagen.

- ✓ THE Cover™ is a resorbable membrane originated from a pure Type I Collagen, and it's highly biocompatible and cell-friendly since chemical crosslinking agent was not used.
- ✓ There are two types of THE Cover™; THE Cover™ Flex (0.3mm) offering easy handling experiences and THE Cover™ Stiff (0.5mm) more favorable for space maintenance.



THE Cover™ Flex  
0.3mm



THE Cover™ Stiff  
0.5mm



## Benefits

- Easy-to-handle
- Hydrophilic
- Space maintenance
- Good flexibility and extension



30 x 40 mm

25 x 30mm

15 x 20mm

## Specifications

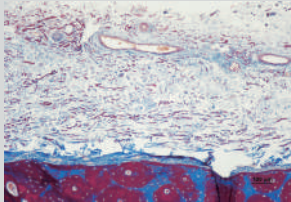
### THE Cover™

Description	Item NO.	Unit Size
THE Cover™ Flex (0,3mm)	BP3-1520	15mm x 20mm
	BP3-2530	25mm x 30mm
	BP3-3040	30mm x 40mm
THE Cover™ Stiff (0,5mm)	BP5-1520	15mm x 20mm
	BP5-2530	25mm x 30mm
	BP5-3040	30mm x 40mm

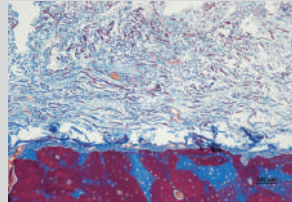
## THE Cover™ Biocompatibility and Safety

THE Cover™ is a resorbable collagen membrane consisting of porcine originated Type I Collagen. It is safe and has high biocompatibility as manufactured by an inherent physical crosslinking method (Self-Assembly Technology) of Purgo without using any chemical crosslinking agents.

### In-vivo beagle experiment (Masson Trichrome)\* [11]

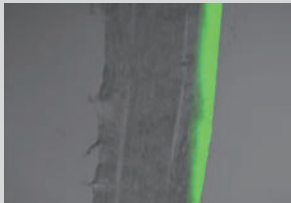


THE Cover™ (Flex)

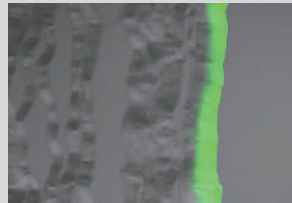


THE Cover™ (Stiff)

### Infiltration Test



THE Cover™ (Flex)



THE Cover™ (Stiff)

## THE Cover™ Hydrophilicity and Morphology maintenance

THE Cover™ is hydrophilic and has excellent adhesion as it maintains its shape even after being left at room temperature for more than 30 minutes after hydration.

### Dehydration Test (After 30min)

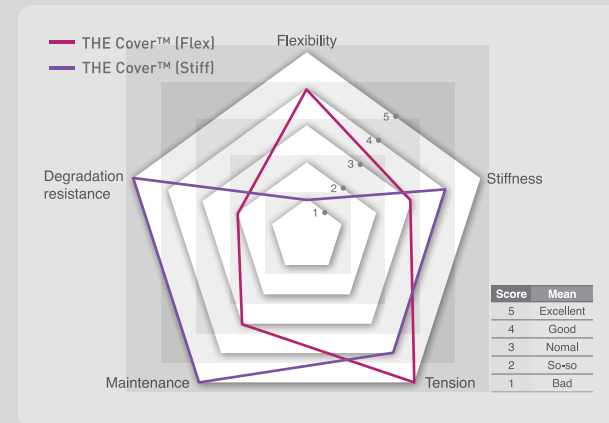


THE Cover™ (Flex)



THE Cover™ (Stiff)

### Radial Graphs



\* [11] In-vitro test : Cross-sections of confocal images showing infiltration of bovine serum albumin (BSA-488) after 48h



## THE Cover™ Flex or THE Cover™ Stiff

THE Cover™ Flex can cover an irregular surface with high flexibility.

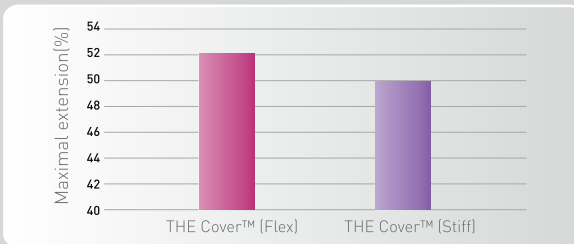
It has practically useful extension and offers convenient handling.

THE Cover™ Stiff is favorable for space maintenance with its high stiffness and ability to maintain space.

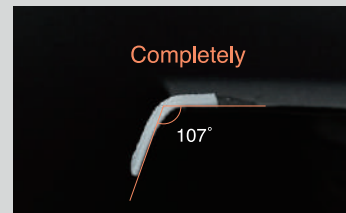
It is strongly resistant to biodegradation and suitable for indication that requires a longer time for bone maturation.



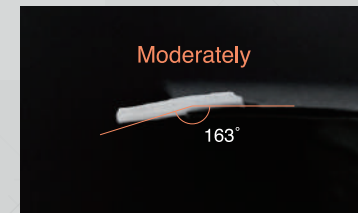
### Extension



### Flexibility

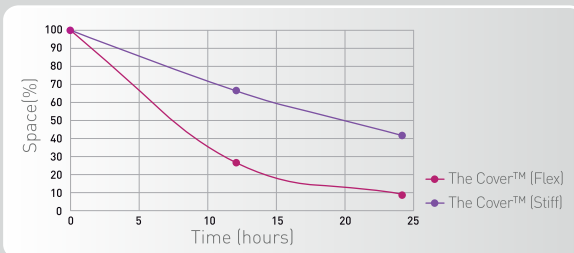


THE Cover™ (Flex)

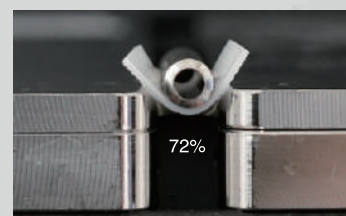


THE Cover™ (Stiff)

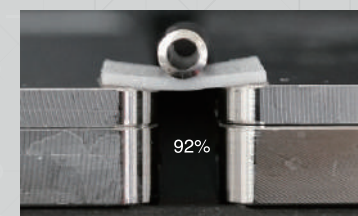
### Collagenase degradation



### Maintenance



THE Cover™ (Flex)



THE Cover™ (Stiff)

## Resorbable Collagen Membrane with High Tension Resistance

# THE Cover™ Xtend

THE Cover™ Xtend membrane is designed to combine high mechanical strength with optimal flexibility, providing a reliable solution for guided bone regeneration, ridge preservation, and augmentation procedures.



**Protect**



**Restore**



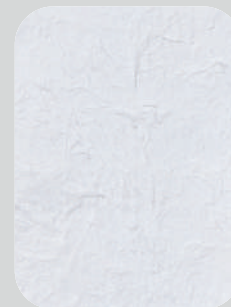
**Preserve**





## Benefits

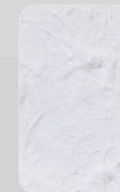
- Easy handling properties
- Tear-resistant membrane under tension
- Barrier effect durability



TCX-3040



TCX-2525



TCX-1525

## Specifications

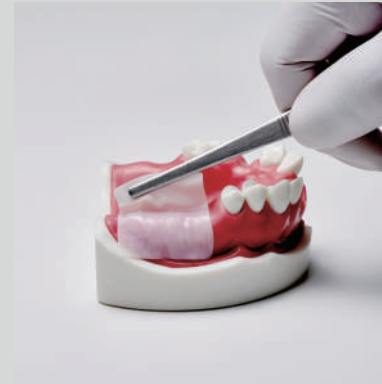
### THE Cover™ Xtend

Description	Item NO.	Size
THE Cover™ Xtend	TCX-1525	15mm x 25mm
	TCX-2525	25mm x 25mm
	TCX-3040	30mm x 40mm

## Key Features

### High Mechanical Strength and Tear Resistance\* [12]

- The robust tensile properties of THE Cover™ Xtend prevent tearing or breaking during handling, ensuring a smooth and controlled placement.
- The combination of mechanical strength and pliability ensures the membrane can be positioned accurately without risk of tearing, even in delicate procedures.



### Flexible & Pliable

- Despite its strength, THE Cover™ Xtend maintains flexibility, allowing easy adaptation to surgical sites and complex defect shape type.

## Applications

- Suitable for ridge preservation, socket augmentation, guided bone regeneration, and other dental and surgical procedures where reliable membrane handling is crucial.

## Benefits

### Biocompatible\*<sup>[13]</sup>

- THE Cover™ Xtend is composed of a network of purified porcine collagen fibers intermingled with purified porcine elastin fibers.
- THE Cover™ Xtend is produced through controlled and standardized manufacturing processes to ensure consistency and quality.
- Highly purified, THE Cover™ Xtend minimizing the risk of immunogenic response.

### Barrier effect\*<sup>[14]</sup>

- With slow resorption over 20 weeks, THE Cover™ Xtend membrane acts as a reliable barrier against soft tissue ingrowth, while its fibrous network provides mechanical stability and keeps bone graft material securely in place.



[13] Differences in degradation behavior of two non-cross-linked collagen barrier membranes: an in vitro and in vivo study, Ahmet Bozkurt, Christian Apel, Bernd Sellhaus, Sabien van Neerven, Bastian Wessing, Ralf-Dieter Hilgers, Norbert Pallua

[14] Tissue dynamics and regenerative outcome in two resorbable non-cross-linked collagen membranes for guided bone regeneration: A preclinical molecular and histological study in vivo  
Omar Omar, Anna Dahlin, Angelines Gasser, Christer Dahlin

Resorbable Collagen Membrane for GBR procedures



# THE Cover™ Pericardium



THE Cover™ Pericardium is a resorbable membrane made from porcine pericardium, consisting of Type I collagen, and is used in GBR procedures. For successful and effective bone regeneration, THE Cover™ Pericardium offers various advantages, resulting in satisfactory outcomes throughout implant procedures.



Easy to use



Protect



Biocompatibility





## Benefits

- Easy to use
- Superior Flexibility ensuring a good fit and secure defect site adhesion
- Space Maintenance



TG-1

TG-2

TG-3

## Specifications

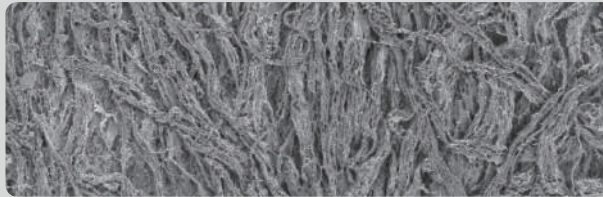
### THE Cover™ Pericardium

Description	Item NO.	Size
THE Cover™ Pericardium	TG-1	15mm x 20mm
	TG-2	20mm x 30mm
	TG-3	30mm x 40mm

## THE Cover™ Pericardium Main Features & Benefits

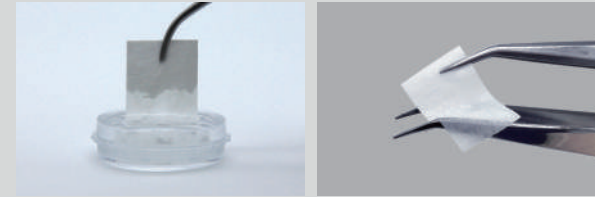
### Easy to Use

- THE Cover™ Pericardium is easy to use because it does not stick to instruments or itself, and either side can be applied without distinction.
- These features make THE Cover™ Pericardium an excellent choice for users looking to reduce chairside time and enhance procedural efficiency.



### Good Surface Adaptation\*<sup>[15]</sup>

- THE Cover™ Pericardium features excellent hydrophilicity, enabling rapid hydration by blood from the defect site during the procedure.
- Its superior flexibility ensures a good fit and secure adhesion to the defect site.



### Outstanding Biocompatibility\*<sup>[15]</sup>

- THE Cover™ Pericardium has been recognized for its safety with CE certifications and has been a trusted choice in dental practices.
- As a non cross-linked product, it demonstrates superior tissue integration and low **post-operative** complication rate compared to cross-linked products.

### Application

- THE Cover™ Pericardium is suitable for Guided Bone Regeneration (GBR) and other implant surgeries. (eg. Transmucosal GBR, Sinus elevation, Dehiscence in fixture)



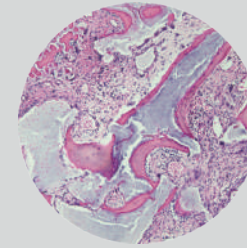
## Barrier Function

- THE Cover™ Pericardium functions as a barrier, maintaining space effectively with its ideal resorption period.
- It is biodegradable and is fully absorbed about 3 months after implantation.

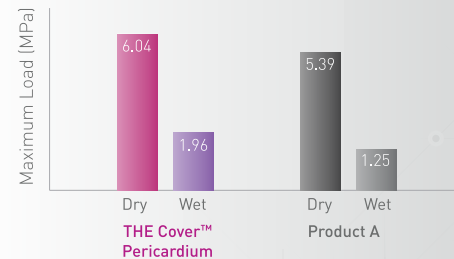


## Tensile Strength

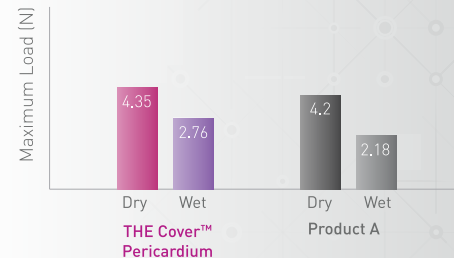
- THE Cover™ Pericardium has excellent tensile strength therefore as compared to other products, it has stronger tear resistance during surgery.
- Due to its superior tensile strength and suture pullout strength, THE Cover™ Pericardium can be securely sutured or fixed with anchorage devices such as bone tacks, enabling the use of various techniques, including the Sausage Technique.



### Tensile Strength Test



### Suture Pullout Strength Test



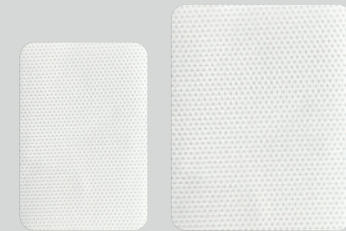
Make smart decision with smart alternative !



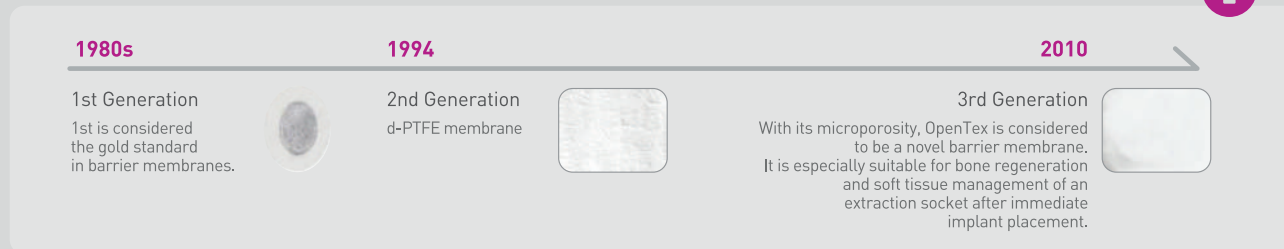
# OpenTex<sup>®</sup>

OpenTex<sup>®</sup> Non-Resorbable PTFE Membrane is a pure medical-grade polytetrafluoroethylene (PTFE) sheet with inert biological features and predictable barrier effect.

Non-resorbable membrane is sustainable for surgical procedure with no primary closure. OpenTex<sup>®</sup> Membrane is ideal for space-making feature providing enough space for host cells to adhere to grafting materials. OpenTex<sup>®</sup> is supplied sterile for single use only and available in various sizes. [7]



## The Evolution of PTFE Membrane



## Non-Resorbable PTFE membrane



### Indications

#### GBR (Guided Bone Regeneration)

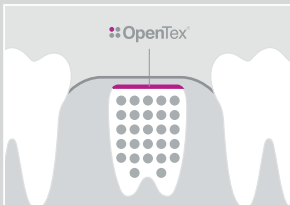
- Simultaneous use of GBR membrane and implants.
- Augmentation around implant placed in immediate extraction sites or delayed extraction sockets.

#### GTR (Guided Tissue Regeneration)

- Filling of bone defects after root resection, removal of cysts, and removal of retained teeth.



Primary Closure



Non-Primary Closure



### Specifications

**OpenTex**

Item NO.	Size	Packaged	Shape Image
OpenTex_T01	24 mm x 30 mm	1 EA	
OpenTex_T02	17 mm x 25 mm	1 EA	

## OpenTex® Main Features



### Non-Resorbable

- 100% medical grade PTFE membrane.
- Biologically inert and chemically non-reactive.
- Healing procedure is not interfered with membrane absorption.



### Microporous

- Promote the gingival tissue attachment.
- Enhances ease in the interstitial fluid circulation.
- Resist the bacteria infection and fibroblast cells migration.



### Minimally Invasive

- Rapid recovery of soft tissue.
- Primary Closure is not necessary.
- Virtually impervious to bacteria.
- Minimum flap reflection or dissection. Safe from bacteria infection, even in the event of the exposure.



### Withstands Exposure

- Protect the tissue regeneration site.
- Regenerated underlying tissue can be evaluated.
- Provide a proper environment for the growth of blood vessel and osteogenic cells.

## OpenTex® Benefits



Soft Tissue Obtaining



Aesthetic Implant Restoration



Natural Saliva Passage



Minimally Invasive

## OpenTex® Strengths

### 1 Stability :

Non-resorbable PTFE Membrane offers enough healing time to bone regenerative process.

### 2 Biologically inert :

PTFE is soft tissue friendly so it is ideal material as a barrier for bone regenerative process.

### 3 Withstands to exposure :

PTFE Membrane withstands to exposure since it is impervious to bacteria due to their barrier function.

## Characteristics of OpenTex® [8]

### Impervious to Bacteria

Most of Oral Bacteria is larger than 1µm. OpenTex® is micro-porous material that has the pore size small enough to prevent bacterial infiltration.

Biocompatible, OpenTex® facilitates cell adhesion on the surfaces.  
Test performed shows that the surface of OpenTex® is not toxic causing cells to adhere well on the surface.



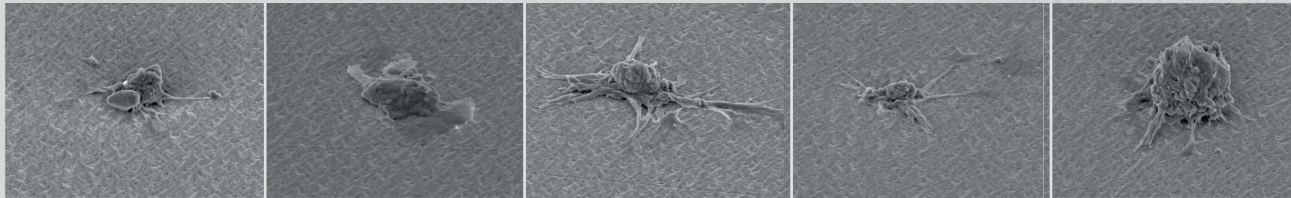
General Oral Bacteria

> 1 µm

The matter is **PORE SIZE**

### 24 Hours for five cells adhesion cases on OpenTex® surface

(SEM : Scanning Electron Microscope)



**Make smart decision with smart alternative !**



**OpenTex<sup>®</sup> -TR**

Membrane is composed of 100% polytetrafluoroethylene (PTFE) sheet and grade 1 titanium frame, which are biologically inert and tissue compatible.

OpenTex<sup>®</sup>-TR Non Resorbable PTFE Membrane with titanium frame is designed to have a suitable surface structure and porosity to prevent integration and passage of bacteria within the interstices of the material, while maintaining space for host cells adhesion to the device.

OpenTex<sup>®</sup>-TR provides a favorable environment for neovascularization and healing of defects, through repopulating the bone derived cells and protecting the bony defects from migration of the gingival tissue derived cells.

Since the adequate space maintenance is critical to this procedure, the membrane is sufficiently stiff to prevent spontaneous collapse, but also flexible enough to easily conform to tissue contours and reduce perforations of overlying soft tissue. [9]



## PTFE Titanium reinforced membrane

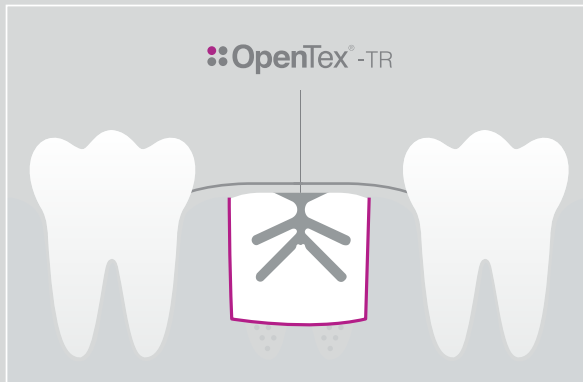


### Indications

- Extraction socket reconstruction
- Bone regeneration
- Where primary closure isn't possible








## Primary Closure



### Specifications

#### OpenTex® -TR

Item NO.	Size	Shape Image
OpenTex-TR_01	17 mm x 25 mm	
OpenTex-TR_02	24 mm x 30 mm	
OpenTex-TR_03	17 mm x 25 mm	
OpenTex-TR_05	12 mm x 24 mm	
OpenTex-TR_06	14 mm x 24 mm	
OpenTex-TR_07	30 mm x 40 mm	

## OpenTex®-TR Main Features



Non-Resorbable



Minimally Invasive



Optimal rigidity for space maintenance



17 x 25 mm

OpenTex-TR\_P01



24 x 30 mm

OpenTex-TR\_P02



17 x 25 mm

OpenTex-TR\_P03



12 x 24 mm

OpenTex-TR\_P05



14 x 24 mm

OpenTex-TR\_P06



30 x 40 mm

OpenTex-TR\_P07

## OpenTex®-TR Benefits

**1 Optimal rigidity and strength for space making**  
OpenTex®-TR is optimal product which is able to be trimmed easily and it is solid enough for space making since it is reinforced with titanium frame.

**2 Diverse embedded titanium frame**  
OpenTex®-TR is designed in various shapes to meet surgeon's demand.

**3 Excellent tissue interaction**  
Its micro porous structure helps the tissue interaction.

**4 Easy of use**  
OpenTex®-TR can be trimmed easily and also removed easily.

## Characteristics of OpenTex®-TR



- ✔ Membrane can be molded and shaped for tenting and space maintenance.
- ✔ The rigidity of the membrane is enhanced to be used for space maintenance.
- ✔ Provides additional stability in large, non-space-making osseous defects.
- ✔ Provide with little memory of Titanium frame, which enables easy placement of the membrane.
- ✔ Ability to withstand exposure.

## Minimal memory, No tangle, and Superior handling



**Biotex**<sup>®</sup>

Biotex<sup>®</sup> Non-Resorbable PTFE Suture is comprised of a single-arm, non-resorbable monofilament suture with a stainless-steel surgical needle connected to the suture. The suture is uncoated, undyed and sterile for single use only, composed of 100% PTFE.

- ✔ SOFT HANDLING
- ✔ BIOLOGICALLY INERT
- ✔ NO TANGLE
- ✔ EASY KNOTTING





## Indications

- Bone grafting procedures
- Periodontal surgery
- Guided tissue regeneration
- Ridge augmentation
- Implant surgery
- Soft tissue grafts

## Specifications



Item NO.	USP Size	Length (cm)	Needle Length (mm)	Circle	Point Type
BT301955	3-0	55	19	3/8	▽
BT301655	3-0	55	16	3/8	▽
BT401655	4-0	55	16	3/8	▽
BT401955	4-0	55	19	3/8	▽
BT501655	5-0	55	16	3/8	▽
BT401355	4-0	55	13	3/8	▽
BT501355	5-0	55	13	3/8	▽
BTP4013	4-0	45	13	1/2	⊙

## Biotex® Main Features & Benefits [10]

### Suture

#### 1 High pliability (PTFE)

- Tying and bending more at ease with less unintended loosening.

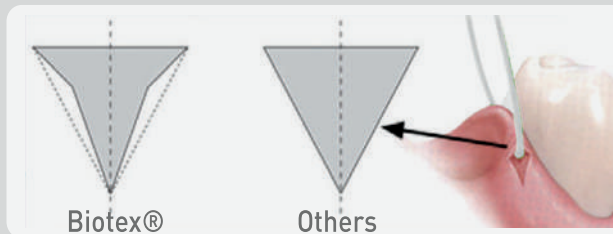
#### 2 No room for little plaque

- It dispels the possibility of any bacterial infection as well as the plaque formation and any other factors that prevent healing process.

### Needle

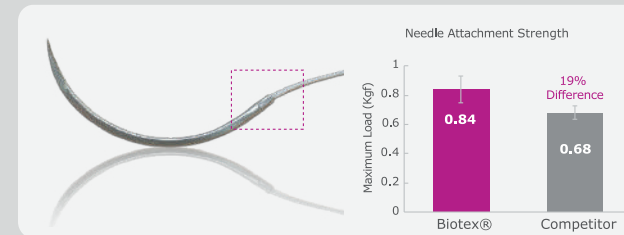
#### 1 Slim reverse cutting needle tip

- Precision slim cut triangular needle for small penetration area and smooth suturing.
- Minimize damage to surrounding soft tissue.



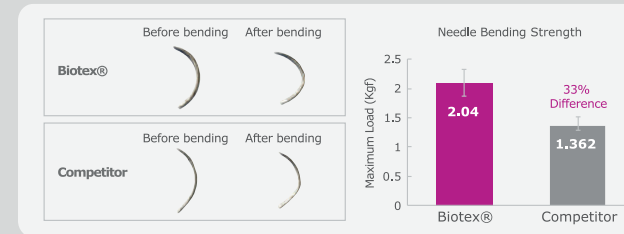
#### 2 Strong Attachment

- Advanced technology for strong needle attachment.
- Smooth and firm connection between needle and thread.
- Rapid healing process due to the reduced bleeding from needle insertion.



#### 3 Strong Needle

- 33% higher strengths are required to bend needle in same degree compared to other product.
- High rigidity of the needle resists to bent stress during suturing.



### Needle holding clip

Designed to hold the needle in place, also allows for secure and easy release of the suture needle from its package.



### Tab

Allows surgeon to easily grasp and remove the suture needle from its needle holder clip.

### Sturdy & Flexible Transparent Cover

Protect and give clear visibility of suture and needle. Soft and sturdy cover effectively protect the suture.

### 'Race Track' shape

Designed to prevent suture from entangling, and allows easy release of the suture.



## Benefits

- Soft and comfortable for patients
- Soft texture for patient comfort
- Reliable closure period
- Superior handling: provides flexibility in the positioning of a square knot. Easy to tie - Easy to remove
- Nonwicking: Elimination of bacterial wicking usually associated to monofilament
- Maintains tensile strength
- PFOA free

## Recommended

Classification	BONE GRAFT		MEMBRANE						SUTURE
	Xenograft	Xenograft with collagen	Resorbable collagen membrane				Non-resorbable PTFE		PTFE Suture
	THE Graft	THE Graft Collagen	THE Cover Flex	THE Cover Stiff	THE Cover Xtend	THE Cover Pericardium	OpenTex	OpenTex-TR	Biotex
Management of contained extraction socket	●	●	●		●	●			●
Management of non-contained extraction socket	●	●		●		●	●	●	●
Augmentation of minor bone defect	●	●	●		●	●			●
Augmentation of major bone defect	●			●		●	●	●	●
Sinus floor augmentation	●	●	●	●	●				●
Periodontal defects	●	●	●	●	●	●			●
Peri-implantitis	●	●	●	●	●	●			●
Immediate implant	●	●	●	●	●	●			●
Soft tissue volume		●							●

## Scientifically supported and clinically-proven products



**53+**

Countries Approval



**34+**

Countries Sales



**59+**

Papers Published



**30+**

Papers SCI Journal



**THE Graft™** 

 THE Graft  
 Collagen

**THE Cover™**

**THE Cover™**  **xtend**

**THE Cover™** Pericardium

 **OpenTex®**

 **OpenTex®** -TR

 **Biotex®**

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Biologics  
Solution  
**Purgo Biologics Inc.**

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Clinical Case Book #1



Clinical Case Book #2

