regenerative.line

[Arraial Dajuda - Historical City **Bahia BA**]


[Blue macaws **Amazon MA**]
we want
to inspire you to do
something **new.**

Bionnovation Biomedical is a **Brazilian** company that offers advanced solutions for dental element replacement and bone reconstruction. Currently, the product line consists of biomaterials capable of providing highly satisfactory clinical and aesthetic results.

Biomaterials are ancillary products in bone regeneration processes that provide excellent clinical solutions with high success rates and minimal patient discomfort.

Our regenerative line is made up of alternative filler materials for bone grafting procedures, absorbable membranes, non-absorbable barriers, bone screws, titanium meshes and tent screws.

products

[Rio de Janeiro **RJ**]

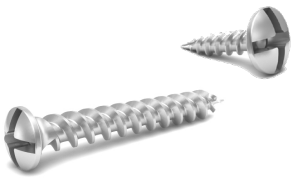
bonefill

bonefill**block**

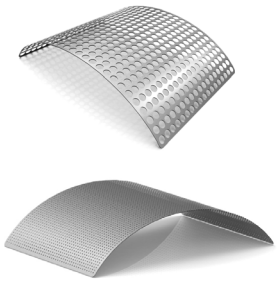
beta**tcp**

hydroxyapatite

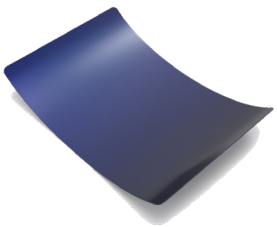
tent**screwdm**



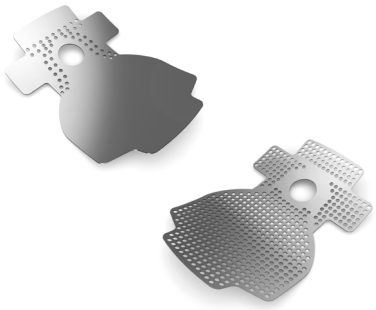
bone**screw**



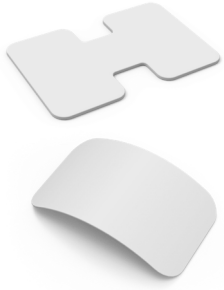
surgitime**titanium**



surgitime**seal**



surgitime**titanium** 3d

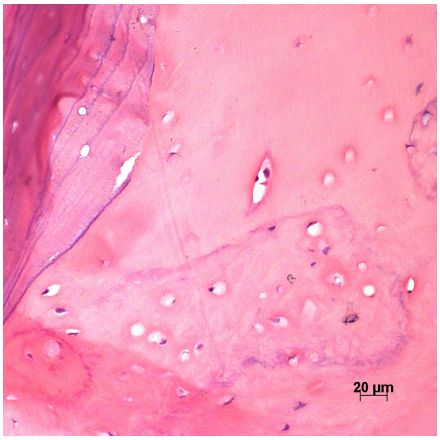


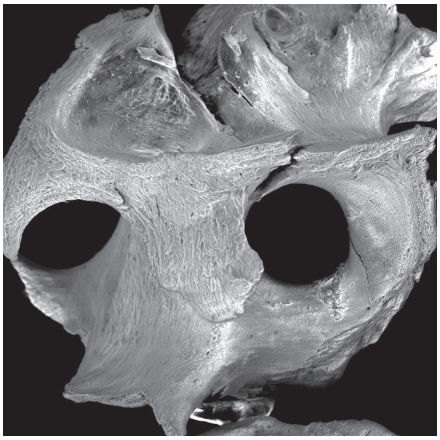
surgitime**ptfe**

surgitime**collagen**

instrumentals


[Curitiba PR]


20 µm



bonefill

The highly purified osteoconductive mineral structure is produced from natural bone through a multiphase process, complying with the safety regulations established by the control agencies. The fresh bone is crushed, receiving a sequence of baths that solubilize the organic structures such as, for example, remaining cells, fibers and proteins, with only the mineral portion remaining this way in order to avoid the induction of possible immunogenic processes in the body. The products made of mineralized bovine bone have an expected incorporation of 6 to 9 months.

Due to the natural origin, Bonefill is comparable to the mineral and morphological structure of the mineralized human bone, it is biocompatible, does not present cytotoxicity, acute systemic toxicity, carcinogenicity and it is not a sensitizing product [ISO 10993-1].

The mineralized inorganic bone matrix of the Bonefill has a porous macro and micro structure similar to the human cortical and spongy bones. In granulate form, Bonefill Dense, Porous & Mix act as osteoconductive mechanism promoting bone growth and regeneration. With time, the Bonefill is partially remodeled through the action of osteoclasts and osteoblasts, being a viable alternative to autologous bone in defects suitable for its use and indication.

Mode of Action
The first healing stage promotes the migration of bone forming cells that suffer differentiation through contact with apatite, the mineral portion of the bone. The process occurs between six and eight months resulting in a high density bone formed around the Bonefill particles.

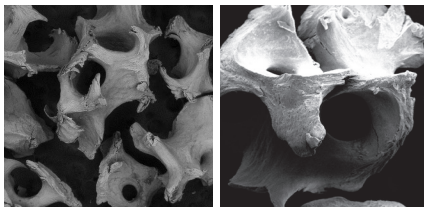
Indications
Bonefill is recommended for filling bone defects and for volumetric increase in the following situations: increase/reconstructions of alveolar crests, filling of post-extraction cavities, filling of cavities produced by post-surgery treatment interventions of cysts, granulomas and other lytic, oral and maxillofacial and dental pathologies, preparation of implant and filling sites of bone dehiscence, besides bone grafts in maxillary sinuses and in the periodontal area it can be used in filling bone defects and to support the membrane during guided bone regeneration.

- **Fast integration through new bone formation;**
- **Long term stability of the three-dimensional graft**
- **No foreign body or inflammatory reaction;**
- **Rough and hydrophilic surface;**
- **Excellent cell adhesion and blood absorption;**
- **Interconnected pores [**rapid vascularization**];**
- **Safe, biocompatible;**

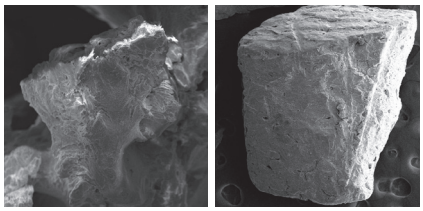
topography
key factor for clinical success!

Topography: Porous, Dense & Mix

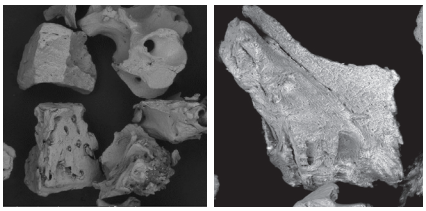
The surface helps the absorption of proteins in the Bonefill Porous particles, enabling the efficient adhesion of the osteoblasts. This biological interaction enables a reliable bone formation.



Bonefill Porous Particulate



Bonefill Dense Particulate



Bonefill Mix Particulate

Summary of advantages

- Preservation of the natural bone structure with improved mechanical properties
- Interconnected pores;
- The production process ensures the exclusion of organic components;
- There are no immunological reactions;
- **Highly hydrophilic surface;**

IFU

bonefill

hydrophilism
key factor for clinical success!

The rapid and complete hydration with blood or saline solution is an important feature of the handling, new bone formation and clinical success. Its strong capillary action allows the rapid and efficient penetration of particles with fluids in the material, nutrients and blood through its three-dimensional network of the trabecular bone, resulting in excellent handling, application and predictability in daily clinical use.

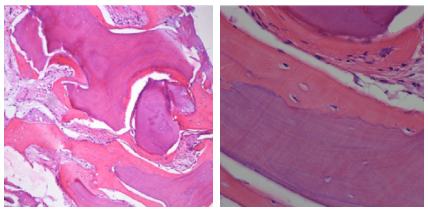
safe

All the bone substitutes of bovine origin are produced with bones from cattle tracked by the SISBOV system. According to the geographical risk classification issued by the International Zoosanitary Code and by the Scientific Steering Committee of the European Community (SSCEC August 2005), Brazil is free from Bovine Spongiform Encephalopathy (BSE). However, according to ordinance 516/97, even with Brazil declaring to be free from Bovine Spongiform Encephalopathy, and the processing to which the products are subjected are known to be efficient in the inactivation of the causing agent of BSE and the animals used for the production of the Bonefill line are registered in the Brazilian bovine and bubaline identification and certification system – SISBOV, all products of bovine origin, even if remote, have the risk of BSE transmission.

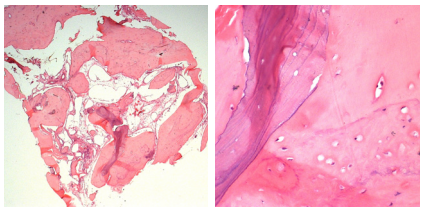
purified

Bonefill is subjected to a multiphase purification system that removes the organic material content from the bone. This process results in a Bonefill chemically and structurally similar to mineralized human bone (natural nanocrystalline apatite). Furthermore, it proved that Bonefill is biocompatible.

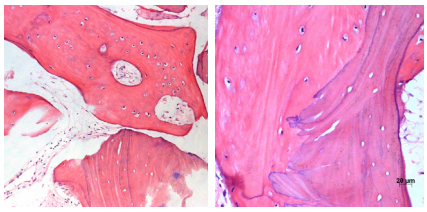
histology
key factor for clinical success!



Bonefill Porous Particulate [**maxillary sinus**]



Bonefill Block



Bonefill Porous Particulate [**maxillary sinus**]

[Amazon **River BA**]

Particulate

Bonefill **Dense** [0,10-0,60 mm] Small	0,50 g **I** 0,50 cc	**16001**
Bonefill **Dense** [0,60-1,50 mm] Medium	0,50 g **I** 0,50 cc	**16024**
Bonefill **Dense** [1,50-2,50 mm] Large	0,50 g **I** 1,00 cc	**16026**
Bonefill **Dense** [0,10-0,60 mm] Small	2,50 g **I** 2,60 cc	**16043**
Bonefill **Dense** [0,60-1,50 mm] Medium	2,50 g **I** 2,60 cc	**16042**
Bonefill **Dense** [1,50-2,50 mm] Large	2,50 g **I** 5,00 cc	**16041**
Bonefill **Porous** [0,10-0,60 mm] Small	1,00 g **I** 1,50 cc	**16891**
Bonefill **Porous** [0,60-1,50 mm] Medium	1,00 g **I** 2,10 cc	**16892**
Bonefill **Porous** [1,50-2,50 mm] Large	1,00 g **I** 3,00 cc	**16893**
Bonefill **Porous** [0,10-0,60 mm] Small	2,50 g **I** 3,75 cc	**16897**
Bonefill **Porous** [0,60-1,50 mm] Medium	2,50 g **I** 5,25 cc	**16914**
Bonefill **Porous** [1,50-2,50 mm] Large	2,50 g **I** 7,25 cc	**16931**
Bonefill **Porous** [0,10-0,60 mm] Small	5,00 g **I** 7,50 cc	**16902**
Bonefill **Porous** [0,60-1,50 mm] Medium	5,00 g **I** 10,5 cc	**16919**
Bonefill **Porous** [1,50-2,50 mm] Large	5,00 g **I** 14,5 cc	**16936**
Bonefill **Mix** [0,10- 1,50 mm] Small/Medium	0,50 g **I** 0,885 cc	**16955**
Bonefill **Mix** [0,60-1,50 mm] Medium/Medium	0,50 g **I** 0,885 cc	**16964**
Bonefill **Mix** [0,10- 1,50 mm] Small/Medium	1,00 g **I** 0,885 cc	**16956**
Bonefill **Mix** [0,60-1,50 mm] Medium/Medium	1,00 g **I** 0,885 cc	**16957**

bonefill**block**

Advantages & Features

- Excellent alternative to autogenous and allogenous bone;
- Porous structure allows tissue penetration;
- Slow absorption that provides increased tissue stability;
- Easy to handle, can be cut into desired size;
- Storage at room temperature;
- Safe and Sterile
- **Allows Bolting;**

Bonefill **Block** [5 x 10 x 10 mm]	**16495**
Bonefill **Block** [5 x 20 x 20 mm]	**16498**

beta**tcp**

Description
Pure phase Beta tricalcium phosphate (ß-TCP) (Ca3(PO4)2) is a resorbable synthetic particulate ceramic made from Calcium Hydroxide (Ca(OH)2), Phosphoric Acid (H3PO4), with the proportion of Ca3(PO4)2 being 91.67% according to the X-Ray Diffraction test. It is used as matrix for bone tissue neoformation because, in terms of composition, it is identical to the bone matrix and allows the restoration of this tissue through the osteoconduction process.

Mode of Action
The first healing stage promotes the migration of vessels through porosities, followed by the migration of bone forming cells that suffer differentiation through contact with the mineral portion of the bone.

Indications
Beta TCP is a biomaterial used in bone graft procedures, and it is a synthetic bioceramic, elective for regenerative techniques in Periodontics, Implant Dentistry, Orthopedics or medical and dental surgery procedures that require bone neoformation. It can be used in the reconstruction of traumatic or degenerative bone wall defects, sinus floor elevation, periodontal or alveolar bone filling and osteotomies, as well as the site preservation and preparation. In medical procedures, it is used in orthopedics and traumatology cases such as correction of musculoskeletal tumors, spinal chord and cervical spine injuries.

The Bionnovation bone graft substitutes meets the requirements of the normative bases specified **ISO 13779-1** Implants for surgery – hydroxyapatite – part 1: Ceramic hydroxy-apatite e **ASTM F-1088** Standard Specification for Beta-Tricalcium Phosphate for Surgical Implantation.

Origin: **100% synthetic**
Phase Purity **≥ 95%**
Porosity: **Over 80%**
Gradually and completely resorbable

Beta tricalcium phosphate	0,10 a 0,50 mm	0,50 g **I** 1,9 cc	**16057**

hydroxyapatite

Description

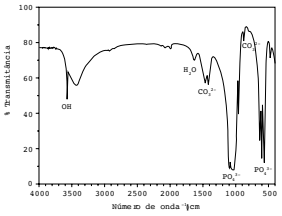
Hydroxyapatite, Ca10(PO4)6(OH)2 is a hydrated calcium phosphate, major component (about 95%) of the mineral phase of human bones and teeth. Used by the body to make up the skeleton due to its capacity to act as a calcium and phosphorus reserve. Due to its chemical similarity with the chemical phase of bone tissues, it is one of the most biocompatible materials known, promoting bone growth in regions where it is found (osteoconductive), establishing chemical bonds between it and the bone tissue (bioactive), allowing the proliferation of fibroblasts, osteoblasts and other bone cells, which are not different from the bone surface indicating a high surface chemical similarity.

The surface of the hydroxyapatite allows the integration of bipolar alloys, causing water molecules, proteins and collagen to be absorbed on the surface, thereby inducing tissue regeneration. The application of Hydroxyapatite enables the restoration of bone tissue through the osteoconduction process.
Hydroxyapatite is a synthetic material composed of macro and nano pores with low substitution rate. It is used for bone tissue regeneration and can be used in combination with autogenous bone, PRP and PRF.

The Bionnovation Hydroxyapatite has up to 80% of interconnected porosity to support the formation of vascularized bone. Its low substitution rate helps provide the long-term stability of the graft and maintain volume when necessary for a longer period of time. The Bionnovation Hydroxyapatite is a synthetic alternative but with chemical and structural features similar to the Xenogenous bone substitutes.

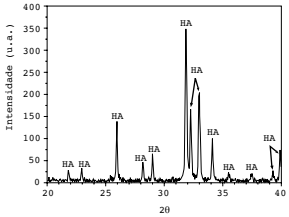
Indications

The hydroxyapatite-based biomaterials have been widely used in bone replacement. Hydroxyapatite is a bone graft material indicated with success in orthopedic, cranio-maxillofacial and dental surgeries. It is recommended for the repair of cranial base defects, spinal fusion and orthopedic applications, besides bone graft around dental implants and metal hip prostheses.



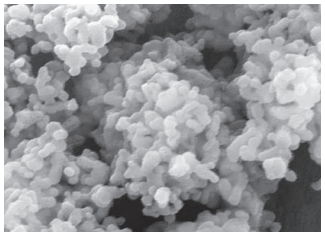
Infrared spectroscopy

Absorption infrared spectrum (Figure 2) are present as bands that characterize the HA phase; at 491cm-1, 563cm-1, 603cm-1, 1043cm-1 and 1088cm-1 there are peaks referring to the PO4 3- cluster, 636cm-1 and 3574cm-1 referring to the OH- cluster. The band at 871cm-1 represents molecular vibrations of the CO32- group, which indicates the presence of this group in the phase, therefore being carbonated hydroxyapatite due to the ion substitution of the carbonate in the HA.



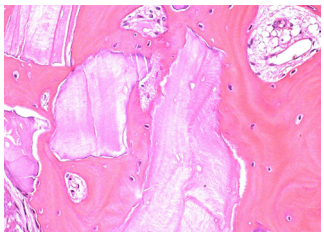
X-Ray diffraction

Shows the DRX spectrum for hydroxyapatite powder. It was observed that all the peaks are associated to the HA phase, without the formation of other compounds based on the Ca-P system.



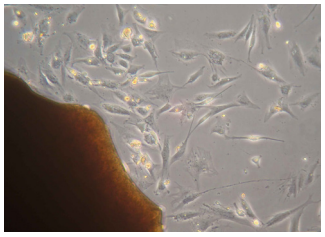
SEM Hydroxyapatite powder

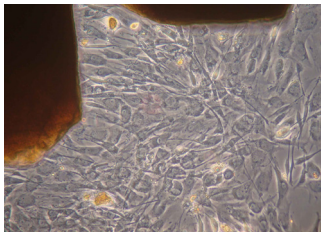
The microstructure of the powder obtained by this process was examined by scanning electron microscopy. We observed that the powder is composed of small particles, forming various agglomerates.



Histological Evidence

Histological image of the neoformed bone, where the large bone tissue growth can be observed.





Fibroblast culture

After seeding for 48 hours passage some fibroblasts adhered and stretched [**Figure 1**]
After seeding for 7 days all fibroblasts adhered and stretched [**Figure 2**]

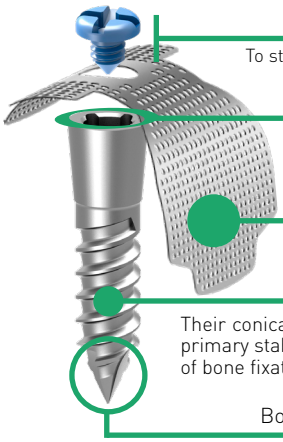
Origin: **100% synthetic**
Phase Purity **≥ 95%**
Porosity: **80% Overall porosity**
Interconnecting pore system ensures fast revascularization;
Resorption: **Long-Term Volume Stability**;
Biocompatible;
Radiopaque: Allows the monitorization of osteointegration;
Easy to handle

Hydroxyapatite	0,05 - 0,10 mm	0,50 g **I** 1,3 cc	**16028**
Hydroxyapatite	0,35 - 0,40 mm	0,50 g **I** 1,3 cc	**16029**
Hydroxyapatite	0,50 - 0,60 mm	0,50 g **I** 1,4 cc	**16030**
Hydroxyapatite	0,70 - 0,80 mm	0,50 g **I** 1,5 cc	**16031**
Hydroxyapatite	0,90 - 1,00 mm	0,50 g **I** 1,7 cc	**16032**
Hydroxyapatite	1,41 mm	0,50 g **I** 1,7 cc	**16033**

tentscrew

NEW

Tent Screws DM are designed with a self-drilling tip, polished neck, and broader head to maintain space under resorbable and non-resorbable membranes in horizontal and vertical bone regeneration procedures



Healing [Cover Screw**]**

To stabilize and submerge Tent Screw and Membrane

Head diameter **ø 2,5 mm**

Surgitime3d

Thread designed

Their conical thread has been designed to ensure controlled primary stability and that ensures screw stability at just 3mm of bone fixation.

Body diameter **ø 2,0 mm [** Apical Portion**]**

Connection **Square [1,3 mm]**

Philips Connection

Tent Screw dm	6 mm	**7444**
Tent Screw dm	9 mm	**7445**
Tent Screw dm	12 mm	**7446**
Tent Screw dm	15 mm	**7447**

Lacth-Type Driver **Square** **13032** | **13129** **Philips** Connection for Manual Drive [Ratched]

- Aggressive tip and thread design engages bone and allows for precise placement without the use of any drill - even **EXCEPT** in cortical bone.
- 2.5 mm diameter head provides broad surface area to help prevent membrane perforation or tearing.
- **Tent Screw** produced in titanium alloy [F136 6Al 4V];

surgitime3d

Biocompatibility
Titanium material has an excellent biological stability, and it is beneficial to bone formation. Produced in titanium pure Gr 1 [ASTM F-67]. It is sterilized by Gamma Radiation [25kGy].

Flexibility
Due to its reduced thickness 0.08 mm, can be easily shaped into the desired shape.

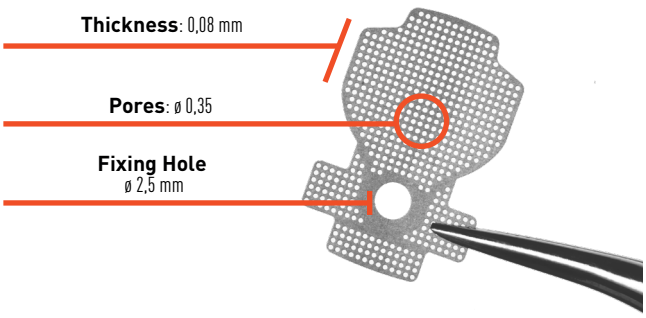
Strong
It has a superior strength than absorbable membrane and excellent retention of space. High durability

Stability
Use the Implants healing caps [] or tent cover screw [] to fix the membrane in place.

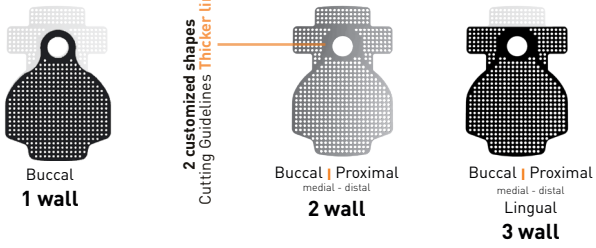
Porosity
The pores with **ø 0,35 mm** prevent shifting or migration of bone grafting material while allowing for blood supply diffusion.

		Thickness	Pores	
Surgitime Titanium 3DF	12 x 18 mm	0,08 mm	0,15 mm	**161256**
Surgitime Titanium 3Dl	12 x 18 mm	0,08 mm	0,15 mm	**161261**

Original Format



Built to promote bone formation
Customized for all degrees of bone defect is categorized as 3 different shapes:



surgitimeptfe

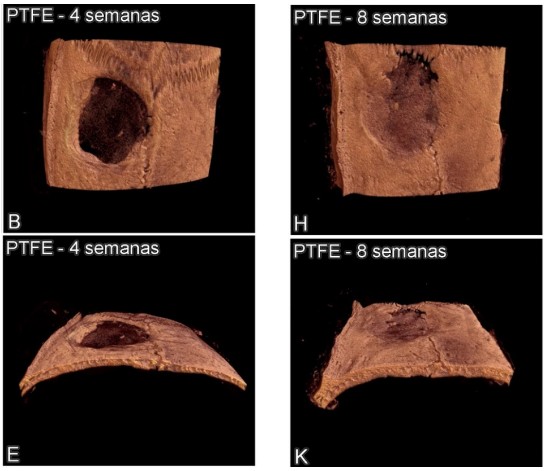
Description

Surgitime PTFE is a nonabsorbable membrane composed of Polytetrafluoroethylene, with thickness of 0.10 or 0.25 mm. Surgitime PTFE is 100% biocompatible, synthetic and not of animal origin. It is indicated for in orthopedic, neural, maxillofacial procedures and other medical or dental surgery procedures.
The polytetrafluoroethylene (PTFE) membranes or mechanical barriers for RTG (Guided Tissue Regeneration) has the aim of preventing the migration of epithelial and connective tissue cells, which would cause the inhibition of bone growth, promoting suitable space for the formation of a natural fibrin framework, the bone tissue precursor.
The membrane avoids the tissue competition between the connective tissue and the bone, and has the purpose of isolating the bone grafts promoting tissue regeneration.l.

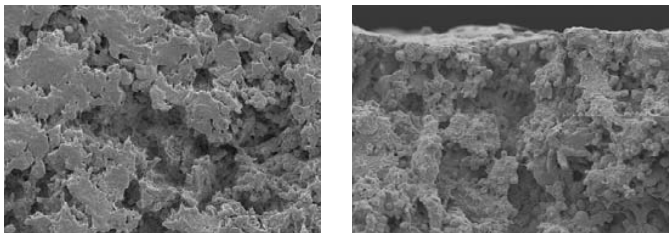
Surgitime non Resorbable is supplied as a STERILE product [**Ethylene Oxide - ETO**]. Providing the package integrity is kept.

Micro CT **Morphometry Analysis**

Three-dimensional images of the defects created in thecalvaria of mouse: Implanted PTFE membrane Scale ba: 2 mm.



Lopes, Helena Bacha,
Efeito da Membrana de Poli(Vinilideno-Trifluoretileno)/Titanato de Bário sobre a Formação Óssea em Defeitos Criados em Calvárias de Ratos. Ribeirão Preto, 2014



SEM

Typical microscopic images of POREX Microporous PTFE. Structure differences are apparent as absent are the nodes and fribules and visible is a network of well-controlled particles all bonded to their neighbors. This structure provides a very robust 3 dimensional membrane that experiences very little change with temperature or pressure, and requires no supporting layers.

- **High resistance [** weight/resistance ratio **];**
- **Chemically inert;**
- **High chemical resistance in aggressive**
- **Low inflammability;**
- **Low coefficient of friction;**
- **Low dielectric constant;**
- **Good weathering properties;**

However, these membrane do require second surgery to removal after healing process.

Surgitime PTFE 30 x 20 mm **I** Thickness 0,10 mm	**16021**
Surgitime PTFE 30 x 20 mm **I** Thickness 0,25 mm	**16044**
Surgitime PTFE H 30 x 20 mm **I** Thickness 0,25 mm	**16528**

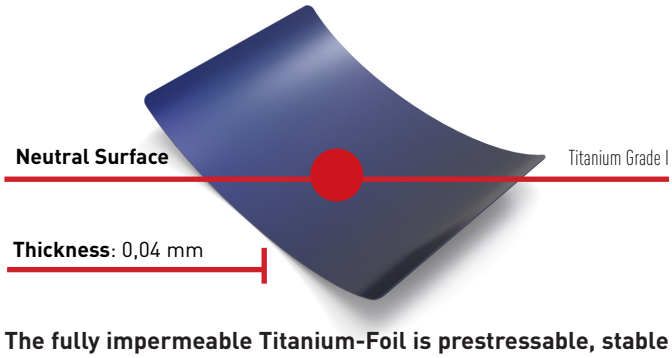
surgitime**seal**

Surgitime Titanium Seal [Titanium-Foil **]** is ideal for threedimensional bone regeneration (GBR, Guided Bone Regeneration). If necessary, it can be attached with pins or screws.

Safety

Titanium is a safe material with an excellent history in all the surgical procedures.

Impermeable!
it performs well even when
exposed!



The fully impermeable Titanium-Foil is prestressable, stable and acts as a space maker, e.g. for alveolar ridge augmentation. Surgitime Titanium SEAL neutral bioelectrically thanks to electrochemical passivation and thus contribute to an uneventful growth of new bone.

Advantages: Manipulation

Surgitime Titanium Seal is very flexible and can be used to cover periodontal or alveolar defects and generally does not require fixation, but if necessary, the Bionnovation graft and fixation screw accessory can be used.

Surgical Procedure

The Titanium Seal is indicated for alveolar sealing procedures, protecting the surgical wound against the invagination of the soft tissues, which promotes resorption of the alveolar process. Therefore, there is a statistically proven decrease of absorption reduction. It should be used through the modeling of the mesh with the careful covering of the operated zone completely with a margin that varies from 2 to 4 mm. It should not be reprocessed and attention must be paid to the sterilization period and correct instrumentations. Regarding the restrictions, the professional is responsible for choosing the implementation site, that is, he must carefully consider its use in the esthetic environment. Due to its color, it may cause some discomfort from the social point of view. Due to its malleability, it can be cut to adapt to the surgical sites and for being **bio-electrically neutral** thanks to the electrochemical passivation, it contributes to new bone growth without intercurrences.

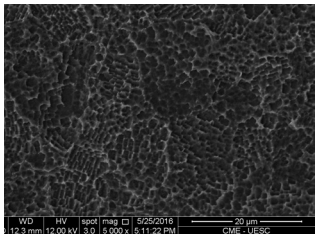
How long can the membrane stay in place?

It is recommended that the membrane stay in place for **21 days [** This provides sufficient time for the initiation of osteoconduction **]** and **14 days** if used to seal a fresh extraction socket.

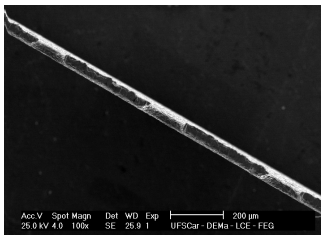
Characteristics

- Increased tissue isolation;
- Auto- fastener (not require fixing screws);
- Total occlusivity;
- Easy removal;
- Used in post-extraction defects, and isolation or occlusion of sinus buco communications;
- Extremely low biofilm retention;

When removal is desired, the membrane can be easily removed by grasping with forceps. Anesthesia may be provided to enhance patient comfort, but is usually not necessary.



SEM



Thickness

Surgitime Titanium Seal 34 x 25 mm **I** Thickness 0,04 mm **16890** **biocompatible, stable** & **inert**


[Lacerda Elevator **BA**]

surgitime**titanium**

Description
Surgitime Titanium (Titanium Mesh) is a nonabsorbable titanium screen made with pure Titanium (ASTM F-67) and has different sizes, thicknesses and hole diameters in order to meet the different clinical needs.
It is supplied sterile, as long as it is kept under ideal storage and preservation conditions and the integrity of the pack is not compromised. It is sterilized by Gamma Radiation (25kGy).

Purpose
Surgitime Titanium aids in bone neoformation, acting as a barrier that prevents the migration of epithelial cells and connective tissue, avoiding the competition with the bone graft.

Benefits
The titanium mesh provides excellent biocompatibility, occlusive property, its permeability enables the transmission of nutrients, easy use because it is very malleable and can be cut to adapt to surgical sites, has the capacity of keeping the regenerative space whole and enables vascularization of the graft on both sides (periosteum and endosteum). It was designed to ensure the three-dimensional reconstruction of alveolar bone defects and to facilitate bone replacement through suitable fixation of the replacement material.

Consideration
Immobilization of the graft / membrane complex is a major factor for the success of bone reconstruction. It also depends on the correct selection of grafting biomaterials and the use of regenerative membranes. Care with the size and location of the flap, careful removal without damaging the periosteum and primary closure without tension, are fundamental for a good postoperative.

Surgitime Titanium should be shaped according to the anatomy of the bone and should not be bent at sharp angles, scratched or deformed. Once used and molded, it should not be molded again as it may result in product function failure.

The necessary stay for starting the osteoconduction is at least 21 days.

Advantages
- Easy to use in surgical sites [Flexible];
- No trauma on soft tissues;
- Suitable containment of the bone graft;
- Improves the space for bone regeneration;
- Ultra fine [0.04 mm and 0.08 mm];
- Biocompatible;
- Titanium pure Gr 1;

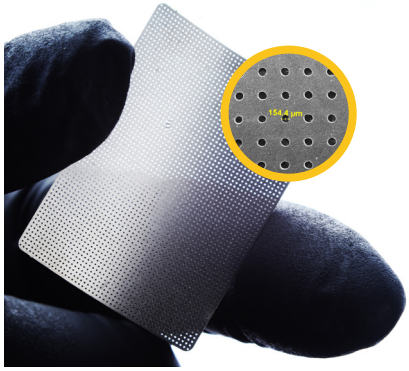
Data on material's
Physico-chemical properties
Titanium pure Gr 1 [ASTM F-67]

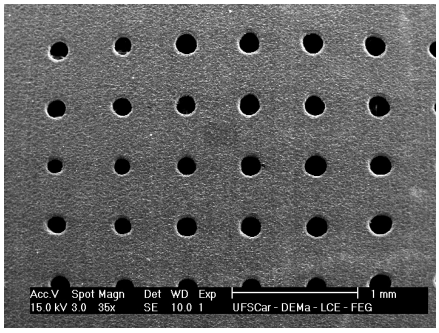
Elements	Titanium Plat ASTM F-67 Grade 1 Cód. 91902 Lote: P209737	Specifications Standard ASTM F 67-06 Grade 1	Tolerance below the minimum or above the ceiling Standart ASTM F-67 % (m/m)
	% (m/m)	% (m/m)	% (m/m)
Fe	0,04	**0,20 máx.**	**0,10**
C	0,030	**0,08 máx.**	**0,02**
O	0,115	**0,18 máx.**	**0,02**
N	0,015	**0,03 máx.**	**0,03**
H	0,0044	**0,015 máx.**	**0,015**

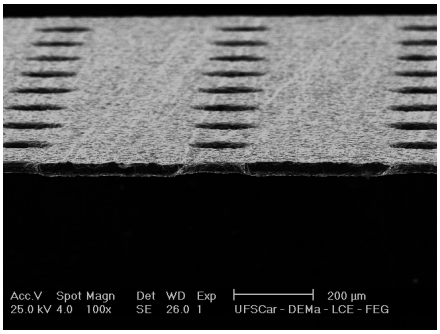
Note: The result is according to globally recognized standards: ASTM F67-06 Grade 1

		Thickness	Hole	
Surgitime Titanium	34 x 25 mm	0,04 mm	0,15 mm	**16565**
Surgitime Titanium	34 x 25 mm	0,04 mm	0,85 mm	**16472**
Surgitime Titanium	34 x 25 mm	0,08 mm	0,85 mm	**16698**
	Bone Screw **1,2 x 3,0** mm			**7097**

"World's **thinnest** titanium mesh and **smallest** and **pores** as well!"







surgitime**collagen**

Surgitime Collagen [pericardium] is an acellular matrix of bovine pericardium, implantable and resorbable, designed to be used as a barrier in regenerative bone procedures in implantology, periodontics and maxillofacial facial surgery.

Obtained through mechanisms of acellularization from bovine pericardium, the final product translates into a highly pure natural collagen membrane that acts as a regenerative biological barrier when implanted on the bone graft and below the gingival tissues, in guided bone regeneration procedures.

The process of Surgitime Collagen is standardized and controlled, which submits the tissue to a multi-step sequence of reagents that acellularizes it, yet preserving the characteristics of type I collagen with a high degree of purity, biocompatibility, free of heavy metals and from any biological contamination. It is acellular, non-cytotoxic, non-immunogenic and non-pyrogenic.

Resistant

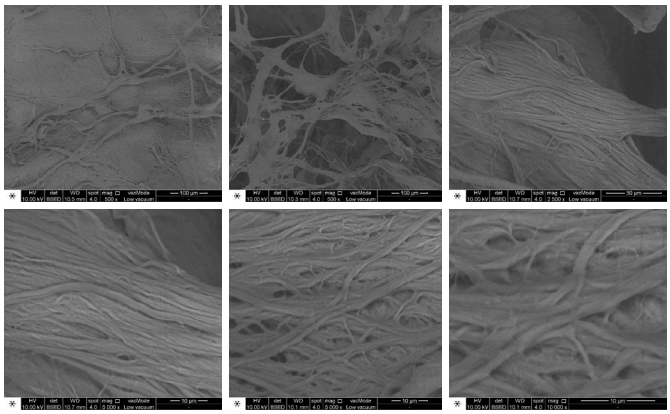
It is resistant to tearing, easy to handle and apply. It has porosities that allow cell settlement and neovascularization, essential conditions for the natural processes of remodeling and reconstruction of bone and connective tissue.

- **Safe for the patient** – Manufactured from highly purified collagen type I derived from bovine pericardium;
- **You can suture or tack the membranein place without tearing** – Unique fiber orientation provides high tensile strengths;
- **Prevents epithelial downgrowth** – Cell occlusive;
- **Stiff enough for easy placement, yet easily drapes over ridge** – Optimizedflexibility. Placed either dry or hydrated;

Indications

- Maxillofacial Reconstructions
- Alveolar ridge Reconstructions for prosthetic rehabilitation
- Alveolar ridge enlargement prior or simultaneous to implantation
- Raising or volumetric preservation in immediate implant procedures
- Filling of bone defects after root recession
- Removal of cysts and retained teeth
- Guided Regeneration in periodontal defects
- Access closure in bone graft surgery in maxillary sinuses

The Surgitime Collagen [pericardium**] has an average resorption time between 60 and 90 days, sufficient for the structural formation of the new grafted bone. Being resorbable, at the end of the total cicatricial period,**



Surgitime Collagen [*pericardium*]	15 x 20 mm	**161272**
Surgitime Collagen [*pericardium*]	20 x 30 mm	**161273**

bonegraftkit

Single
Small and compact, the Bionnovation Graft Kit consists of a practical kit that contains all the necessary instruments (drills, drivers and screws) for fixation procedures of the bone block and membranes (barriers). It is produced with precise tolerances to ensure the easy pick-up of screws, stable transfer to the surgical site and rapid engagement in the maxilla or mandible. All components of the kit are organized and stored together to simplify the procedures.

Differential
The Bionnovation Graft Kit has **EXCLUSIVE** Digital and Contra-Angle Installation Drivers providing an additional ease in the handling of screws during surgical procedures.

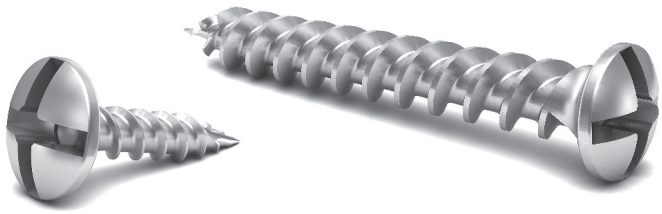
Bionnovation Fixation Set **13118**

Driver Handle	**13066**
Philips Connection for Manual Drive (Ratchet) Short	**13129**
Philips Connection for Manual Drive (Ratchet) Long	**13130**
Twist Drill - Ø 1,0 x 15 mm	**5051**
Twist Drill - Ø 1,2 x 15 mm	**5053**
Twist Drill - Ø 1,4 x 15 mm	**5055**
Twist Drill - Ø 1,6 x 15 mm	**5057**
Philips Connection for Contra Angle Short	**13132**
Philips Connection for Contra Angle Long	**13133**
Installation rod - 70 mm	**13127**
Screwdriver handle	**13085**

bonescrews

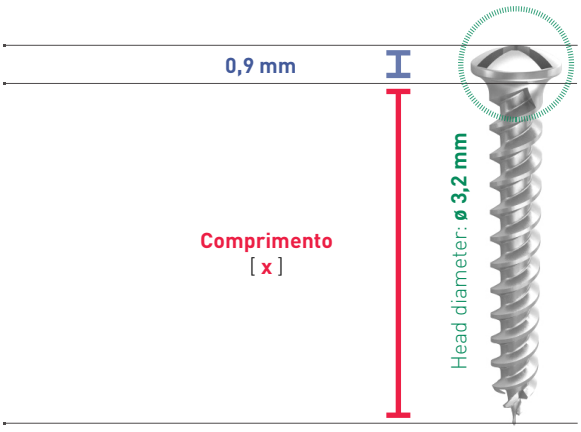
Bionnovation Graft Screws: Are used for the fixation and stabilization of bone grafts and nonabsorbable membranes (barriers) used in guided bone regeneration [GBR].

The bone graft screws are temporary and must only stay within the bone reparation period because its purpose is to keep the graft and membrane stable for consolidation and bone neoformation.



Drilling speed: **200 rpm**;
Placement speed: **30 rpm**;

[x]	ø 1,2	ø 1,4	ø 1,6	ø 1,8
4 mm	7098	7145	7191	7236
6 mm	7092	7090	7093	7238
8 mm	7101	7148	7194	7240
10 mm	7103	7150	7094	7242
12 mm	7105	7152	7095	7244
14 mm	7107	7091	7198	7246

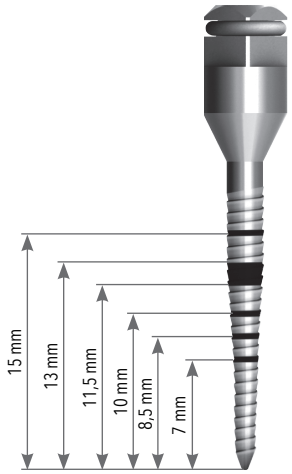


- Excellent screw retention;
- Reliability when carrying for installation in the surgical site;
- Produced in titanium alloy (F136 6Al 4V);
- Self-drilling;
- Self-perforation;
- Has a conical end and cylindrical, body;
- Head inert in cross form;

boneexpander

It is used for bone expansion and condensation, executing the preparation and instrumentationfor installation of dental implants. The expanders can also help in the crest division techniques.

Threaded Expanders increase the clinical success, improving stability and increasing bone density.



	Digital Driver Adaptor	**13066**
	Expansor self-tapping 1,7/2,4 mm	**13113**
	Expansor self-tapping 2,0/3,1 mm	**13114**
	Expansor self-tapping 2,5/3,4 mm	**13115**
	Expansor self-tapping 3,0/3,9 mm	**13116**

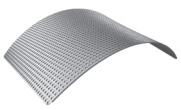
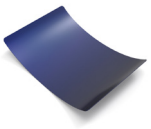
[Brazilian flag **]**

suggested**applications**

Bone Substitutes

	Xenograft				Synthetic	
						
	Bonefill *denso*	Bonefill *porous*	Bonefill *mix*	Bonefill *blood*	Hidroxiapatita	Beta *tcp*
Sinus Lift		■	■		■	
Infra-bone Defects	■	■	■		■	■
Sockets Fills **Post Extraction**		■	■		■	
Bone augmentation **Vertical**	■	■	■	■	■	
Bone augmentation **Horizontal**	■	■	■	■	■	
Bone augmentation **Concomitante com implante**	■	■	■		■	
Treatment **Exposed implant threads**	■	■	■		■	
Bone formation **Interproximal**	■	■	■		■	
Filling **Cystic cavity**	■	■	■		■	■
Re-entry time Estimated [**months**]	6 - 9	6 - 9	6 - 9	6 - 9	6 - 9	6 - 9
Main Integration Estimated [**months**]	6 - 9	6 - 9	6 - 9	6 - 9	6 - 9	6 - 9
Shelf-life [**years**]	5	5	5	5	3	3

Membranes I Meshes I Barriers

	PTFE	Titanium	Titanium	Titanium	Pericardium
					
	Surgitime *ptfe*	Surgitime 3d	Surgitime	Surgitime *Ti*	Surgitime *collagen* pericardium
Sinus Lift	■			■	■
Periodontal Infra-bone Defect	■				■
Bone augmentation **Horizontal**	■	■	■		■
Bone augmentation **Vertical**	■	■	■		■
Bone augmentation **Immediate implant placement**	■	■	■		■
Alveolar ridge preservation **Post-Extraction**				■	■
Treatment **Exposed implant threads**	■	■	■		■
Bone formation **Interproximal**	■				■

fábricabauru
Rua Laureano Garcia,1 - 275
17039-760 Distrito Industrial II
Bauru - SP
Tel. +55 14 4009 2400

exclusivedistributor

bionnovationimplantes

bionnovation_biomedical