Bioteck bone substitutes are obtained from equine bone tissue treated with Zymo-Teck®. This exclusive proprietary process is based on the utilization of lytic enzymes operating at controlled temperatures. This enables the complete elimination of the antigen components of the tissue, without the mineral phase undergoing any changes. The unaltered bone mineral component is recognized as endogenous by the osteoclasts, thereby allowing for the total remodeling of the graft, which is completely replaced, in physiological time, by new patient vital bone tissue. The best possible condition for osseointegrated implants.

Zymo-Teck®: the secret of quality grafts

Bioteck manufactures and distributes its bone substitutes and membranes for Maxillofacial and Oral Surgery in more than 50 Countries:

- **BIO-GEN®** - natural osteoconductive bone substitutes featuring denatured bone collagen.
- **BIOCOLLAGEN®** - natural collagen membranes, also available as gels, for guided bone regeneration.
- **HEART®** - natural equine pericardium membranes for guided bone regeneration.
- **OSTEOPLANT®** - natural osteoconductive bone substitutes featuring preserved, native bone collagen.

**BIO-GEN®, BIOCOLLAGEN®, HEART®, OSTEOPLANT® and PRECISE®** are all Bioteck S.p.A. trademarks. For more information:

Bioteck® is an Italian company producing bone substitutes and protective membranes that are successfully used in orthopedics, neurosurgery, oral and maxillofacial surgery. Founded in 1995, the company continues to grow steadily and now operates in more than 50 countries around the world. A firm commitment to scientific research forms the basis for the innovative solutions offered by Bioteck® products. The company collaborates on numerous national and international research projects, which have driven the basic research and helped in setting important chapters in bone biology.

The in-depth knowledge acquired by Bioteck® through its research ensures the adequate quality of its products, which are subjected to strict environmental and quality controls, thereby guaranteeing a product meeting the highest quality and safety standards. Bioteck® applies a policy of total transparency, opening up the doors of its Production and R&D Center for the monitoring of its innovative manufacturing process and the intense scientific research carried out by its staff.

For more information:

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**Quality and safety guarantee**

**Enzymatic process**

**beta ray sterilization**

**safety and quality**

**total biocompatibility**

**complete remodeling**
Bioteck bone substitutes are obtained from equine bone tissue treated with Zymo-Teck®. This exclusive proprietary process is based on the utilization of lytic enzymes operating at controlled temperatures. This enables the complete elimination of the antigen components of the tissue, without the mineral phase undergoing any changes. The unmodified bone mineral component is recognized as endogenous by the osteoclasts, thereby allowing for the total remodeling of the graft, which is completely replaced, in physiological time, by new patient vital bone tissue.

The best possible condition for osseointegrated implants.
Granules
Bio-Gen granules are a total osteoclastic remodeling bone substitute, which can be used for all types of bone defects.

Clinical uses:
- recommended for small size, four walls bone defects (cancellous)
- recommended for larger size bone defects (cortical)

Remodeling time:
- 6 - 12 months (cortical)

Collagen Membranes
Bio-Gen Mix Gel is a mixture consisting of Bio-Gen Mix cortical-cancellous granules and water-based gel. It is extremely practical and easy-to-handle. It can be applied directly in the graft site. Useful for all defect types.

Clinical uses:
- to protect small grafted sites
- to stabilize granular grafts

Protection time:
- 4 - 6 weeks

Collagen Gel
Bio-Gen Mix Gel is a resorbable collagen gel, made of collagen from natural Achilles’ tendon and water-based gel. It may be used in place of traditional collagen membranes to protect small cortical defects. It works as a haemostatic and is extremely easy-to-handle.

Clinical uses:
- to protect small peri-implant cortical defects (less than 3 threads exposed)
- to protect small peri-implant grafted sites

Protection time:
- 4 - 6 weeks

Heart Pericardium Membranes
The Heart membranes are a substitute for natural pericardium. They still feature the native tridimensional structure of pericardium. Therefore, they are long lasting and resistant to infection. Because of the thin protection tissue, Heart membranes are the ideal choice for the majority of surgeries.

Clinical uses:
- protection of medium to large bone grafts

Protection time:
- 3 - 4 months

Cortical Membranes
Osteoplant Mix Cartilage is a flexible cortical bone sheet that works as a long lasting (>6 months) resorbable membrane.

Clinical uses:
- to protect grafted sites where regeneration time is to be slow (horizontal and vertical augmentation)
- to maintain bone profiles (vestibular ridge reconstruction)

Protection time:
- 6 months (protection)
- 8 - 12 months (total remodeling)

Cancellous or Cortical Flex Sheets
Osteoplant Mix flexible sheets are easy-to-handle, cortical or cancellous bone sheet substitutes. Other than fixations, they adapt perfectly to the bone cavity and maintain bone profiles. They are easy to use in conjunction with other bone substitutes. They need fixation with screws or similar devices.

Clinical uses:
- vertical ridge augmentation with conventional implant placement (cortical sheet)
- horizontal ridge augmentation (cancellous sheet)

Cancellous Blocks
Osteoplant Mix cancellous block is made of real blocks. They feature the same mechanical resistance to compression and elastic deformation of natural bone. They can be shaped with rotating instruments, or drilled, without breaking. They have to be fixed in place with screws or similar devices.

Clinical uses:
- horizontal or vertical/horizontal ridge augmentation (cortical sheet)
- intraosseous grafting

Remodeling time:
- 8 - 12 months (cortical)

Collagen Membranes
Bio-Gen Mix Gel is a resorbable paste made of cancellous Bio-Gen granules and collagen from Achilles tendon. It is easily mouldable, haemostatic and sticks well to bone wall.

Clinical uses:
- recommended for small size, four walls bone defects
- excellent for post-extractive sockets

Remodeling time:
- 4 - 6 months

Collagen Membranes
Bio-Gen Mix Gel is a resorbable paste made of Achilles tendon collagen for guarded bone regeneration. Its protection time is 6-12 weeks. This is indicated in the treatment of cortical bone defects.

Clinical uses:
- to protect small grafted sites

Protection time:
- 4 - 6 weeks

Collagen Gel
Bio-Gen Mix Gel is a resorbable collagen gel, made of collagen from natural Achilles’ tendon and water-based gel. It may be used in place of traditional collagen membranes to protect small cortical defects. It works as a haemostatic and is extremely easy-to-handle.

Clinical uses:
- to protect small peri-implant grafted sites

Protection time:
- 4 - 6 weeks

Collagen Gel
Bio-Gen Mix Gel is a resorbable collagen gel, made of collagen from natural Achilles’ tendon and water-based gel. It may be used in place of traditional collagen membranes to protect small cortical defects. It works as a haemostatic and is extremely easy-to-handle.

Clinical uses:
- to protect small peri-implant grafted sites

Protection time:
- 4 - 6 weeks

Cancellous or Cortical Flex Sheets
Osteoplant Mix flexible sheets are easy-to-handle, cortical or cancellous bone sheet substitutes. Other than fixations, they adapt perfectly to the bone cavity and maintain bone profiles. They are easy to use in conjunction with other bone substitutes. They need fixation with screws or similar devices.

Clinical uses:
- vertical ridge augmentation with conventional implant placement (cortical sheet)
- horizontal ridge augmentation (cancellous sheet)

Cancellous Blocks
Osteoplant Mix cancellous block is made of real blocks. They feature the same mechanical resistance to compression and elastic deformation of natural bone. They can be shaped with rotating instruments, or drilled, without breaking. They have to be fixed in place with screws or similar devices.

Clinical uses:
- horizontal or vertical/horizontal ridge augmentation (cortical sheet)
- intraosseous grafting

Remodeling time:
- 8 - 12 months (cortical)

Cancellous or Cortical Flex Sheets
Osteoplant Mix flexible sheets are easy-to-handle, cortical or cancellous bone sheet substitutes. Other than fixations, they adapt perfectly to the bone cavity and maintain bone profiles. They are easy to use in conjunction with other bone substitutes. They need fixation with screws or similar devices.

Clinical uses:
- vertical ridge augmentation with conventional implant placement (cortical sheet)
- horizontal ridge augmentation (cancellous sheet)

Cancellous Blocks
Osteoplant Mix cancellous block is made of real blocks. They feature the same mechanical resistance to compression and elastic deformation of natural bone. They can be shaped with rotating instruments, or drilled, without breaking. They have to be fixed in place with screws or similar devices.

Clinical uses:
- horizontal or vertical/horizontal ridge augmentation (cortical sheet)
- intraosseous grafting

Remodeling time:
- 8 - 12 months (cortical)

Cancellous Blocks
Osteoplant Mix cancellous block is made of real blocks. They feature the same mechanical resistance to compression and elastic deformation of natural bone. They can be shaped with rotating instruments, or drilled, without breaking. They have to be fixed in place with screws or similar devices.

Clinical uses:
- horizontal or vertical/horizontal ridge augmentation (cortical sheet)
- intraosseous grafting

Remodeling time:
- 8 - 12 months (cortical)
### Granales
**Bio-Gen granales** are a total osteoconductive remodelling bone substitute, which can be used for all types of bone defects.

**Clinical uses:**
- recommended for small size, four walls bone defects (cortical)
- recommended for larger size bone defects (cortical)

**Remodelling time:**
- 4 - 6 months (cortical)
- 6 - 12 months (cortical)

**Clinical uses:**
- Bioteck Activagen and Angiostad are osteopromotive bone grafts containing extracellular matrix, thus enhancing the bone healing process.

<table>
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<tr>
<th>Bone substitute</th>
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<th>Protection time</th>
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### Gel Granules
**Bio-Gen Mix Gel** is a mixture consisting of Bio-Gen Mix cortical-cancellous granules and water-based gel. It is extremely practical and easy-to-handle. It can be applied directly in the graft site. Useful for all defect types.

**Clinical uses:**
- excellent for maxillae sinuses lift (Sawbones)
- excellent for very large periodontal defects

**Remodelling time:**
- 4 - 6 months (cortical)
- 6 - 12 months (cortical)

### Demineralized Bone Matrix (DBM)
**BiotecK** Activagen and Angiostad are osteopromotive bone grafts containing Demineralized Bone Matrix (DBM). Demineralization process completely removes type I collagen and organic extracellular matrix, thus enhancing the bone healing process.

**Clinical uses:**
- combination with Bio-Gen bone substitutes in order to improve the biological conditions favoring bone regeneration

### Collagen Membranes
**Bio-Gen** is a membrane made of Achilles tendon collagen for guided bone regeneration. Its protection time is 4-6 weeks, therefore it is indicated to maintain bone profiles (vestibular ridge construction).

**Clinical uses:**
- to protect small grafted sites
- to stabilize granular grafts

**Protection time:**
- 4 - 6 weeks

### Collagen Gel
**Bio-Gen** is a resorbable collagen gel, made of collagen from natural Achilles tendon and water-based gel. It may be used in place of traditional collagen membranes to protect new peridental defects. It works as a hemostatic and is extremely easy-to-handle.

**Clinical uses:**
- to protect small peri-implant grafted sites

**Protection time:**
- 4 - 6 weeks

### Heart Pericardium Membranes
The Heart membranes are made of natural pericardium. They still feature the native tridimensional structure of pericardium. Therefore, they are long lasting and resistant to infection. Because of their thick protection time, Heart membranes are the ideal choice for the majority of surgeries.

**Clinical uses:**
- protection of medium to large bone grafts

**Protection time:**
- 3 - 4 months

### Cancellous Blocks
Bio-Gen cancellous blocks are tough. They feature the same mechanical resistance to compression and elastic deformation of natural bone. They can be shaped with rotating instruments, or drilled, without breaking. They have to be fixed in place with screws or similar devices.

**Clinical uses:**
- to maintain bone profiles (vestibular ridge construction)

**Protection time:**
- 6 - 8 months

**Bio-Gen cancellous block**
- 1 pc 10 x 10 x 10 mm

**Bio-Gen cancellous wedge**
- 1 pc 25 x 10 x 5 mm (final 2 mm)
Granules

Bio-Gen granules are a total osteoconductive remodelling bone substitute, which can be used for all types of bone defects.

Clinical uses: 
- recommended for small size, four walls bone defects (cancellous) 
- recommended for larger size bone defects (cortical)

Remodeling time: 
- 4 - 6 months (cancellous) 
- 8 - 12 months (cortical)

Putty

Bio-Gen Putty is a workable paste made of cancellous Bio-Gen granules and collagen from Achilles tendon. It is easily moldable, hemostatic and sticks well to bone walls.

Clinical uses: 
- recommended for small size, four walls bone defects 
- excellent for post-extractive sockets

Remodeling time: 
- 4 - 6 months (cancellous) 
- 8 - 12 months (cortical)

Collagen Granules

Biocollagen collagen granules are a recombinant human collagen substitute. They are formed of collagen from natural Achilles tendon and water-based gel. It is extremely practical and easy-to-handle.

Clinical uses: 
- Biocollagen Collagen Gel is a resorbable collagen gel, made of collagen from natural Achilles tendon and water-based gel. It is used in place of traditional collagen membranes to protect periodontal defects. It works as a hemostatic and is extremely easy-to-handle.

Remodeling time: 
- 4 - 6 weeks

Heart Pericardium Membranes

The Heart membranes are made of natural pericardium. They still feature the native tridimensional structure of pericardium. Therefore, they are very lasting and resistant to infection. Because of the time needed for protection, Heart membranes are the ideal choice for the majority of surgeries.

Clinical uses: 
- protection of medium to large bone grafts

Remodeling time: 
- 3 - 4 months

Cortical Membranes

Osteoplant Cortical Membrane is a flexible cortical bone sheet that works as a long lasting (> 6 months) resorbable membrane.

Clinical uses: 
- to protect grafted sites where regeneration is expected to be slow (horizontal and vertical augmentation) 
- to maintain bone profiles (vestibular ridge reconstruction)

Protection time: 
- 8 - 10 months (total remodeling)

Cortical Flex Sheets

Bio-Gen cancellous blocks are rigid blocks. They feature the same mechanical resistance to compression and elastic deformation of natural bone. They can be shaped with rotating instruments, or drilled, without breaking. They have to be fixed in place with screws or similar devices.

Clinical uses: 
- vertical ridge augmentation with concentric implant placement (cortical sheet) 
- horizontal ridge augmentation (cancellous sheet) 
- sinus lift, to protect the Schneider membrane (Tulasne technique)

Remodeling time: 
- 4 - 6 months (cancellous) 
- 6 - 12 months (cortical)

Cortical Membranes

Biocollagen is a membrane made of Achilles tendon collagen for guided bone regeneration. Its protection time is 4-6 weeks, therefore it is indicated to protect small grafted sites.

Clinical uses: 
- to protect small grafted sites 
- to stabilize granular grafts

Protection time: 
- 4 - 6 weeks

Remodeling time:

- 8 - 12 months (cortical)

Cancellous or Cortical Flex Sheets

Cancellous Blocks

Bio-Gen cancellous blocks are rigid blocks. They feature the same mechanical resistance to compression and elastic deformation of natural bone. They can be shaped with rotating instruments, or drilled, without breaking. They have to be fixed in place with screws or similar devices.

Clinical uses: 
- horizontal or vertical/horizontal ridge augmentation (cortical sheet) 
- protection of small grafted sites (less than 3 threads exposed)

Remodeling time: 
- 6 - 8 months

Remodeling time:

- 3 - 4 months (total remodeling)
Bioteck bone substitutes are obtained from equine bone tissue treated with Zymo-Teck®. This exclusive proprietary process is based on the utilization of lytic enzymes operating at controlled temperatures. This enables the complete elimination of the antigen components of the tissue, without the mineral phase undergoing any changes. The unused bone mineral component is recognized as endogenous by the osteoclasts, thereby allowing for the total remodeling of the graft, which is completely replaced, in physiological time, by new patient vital bone tissue.

The best possible condition for osseointegrated implants.