

FISIOGRAFT

GEL - POWDER - SPONGE

A **synthetic biomaterial** used in dental and maxillofacial surgery to **fill bone cavities**, whether natural or pathological, based on hydroxyapatite and polyglycolic-polylactic acid (PLGA).

PLGA poly(lactic acid) and poly(glycolic acid)
Completely resorbable in 4-6 months



Ghimas
D E N T A L

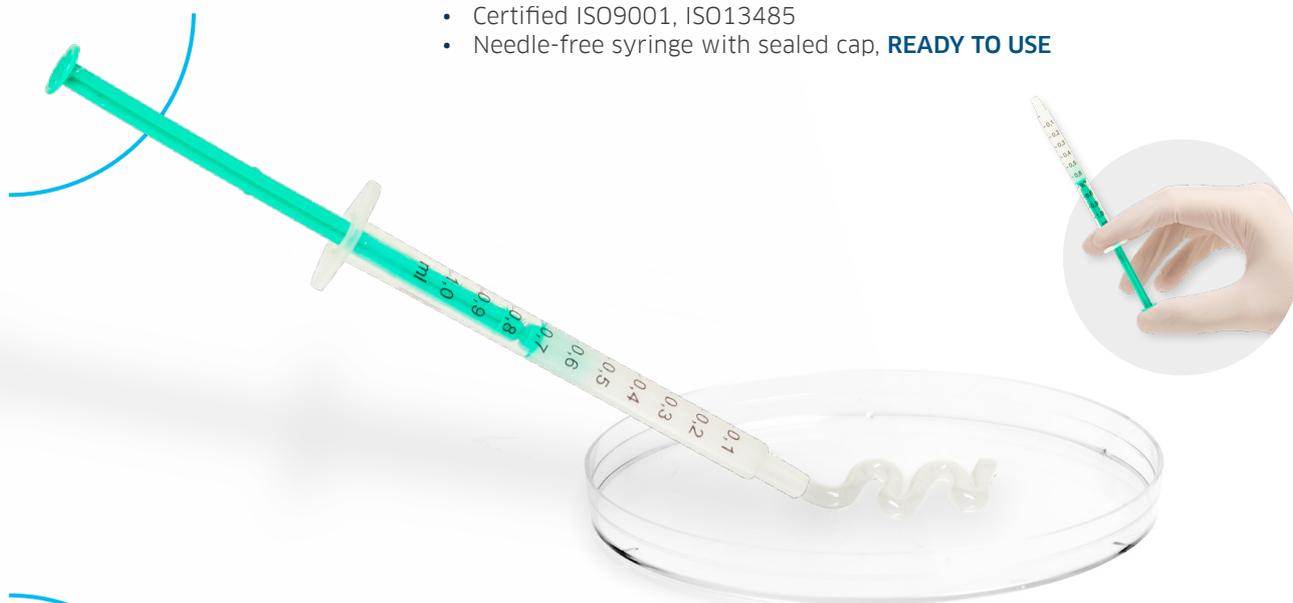
FISIOGRAFT GEL



Completely resorbable in **4-6 MONTHS**

Physical form:
gel scaffold

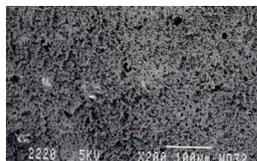
- Composition: PLGA 20% (100 mg) + PEG 80% (400 mg)
- Package: 1 syringe 500 mg (Product code: PFOF0036)
- Package: 5 syringes 500 mg (Product code: PFOF0035)
- Medical Device CLASS III CE0426
- Certified ISO9001, ISO13485
- Needle-free syringe with sealed cap, **READY TO USE**



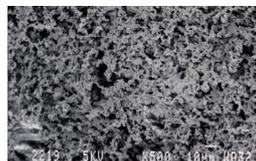
PLGA Gel

PLGA Gel

Trabecular porous structure accessible to the corpuscular part of the blood and GFs.

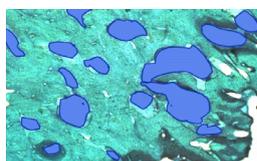


SEM PLGA magnification: 200X

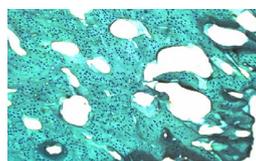


SEM PLGA magnification: 500X

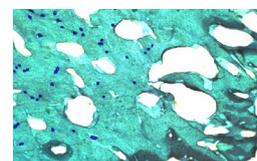
After six months, the histological examination of a core taken from a post-extraction site implanted with Fisiograft shows that: *'The material is fully resorbed and replaced by well-mineralised trabecular bone tissue containing bone marrow and has all the features of a normal alveolar bone.'*



Newly formed bone with medullary spaces



Newly formed bone with osteocytes



Newly formed bone with blood vessels

FISIOGRAFT POWDER



Completely resorbable in **4-6 MONTHS**

Physical
form: powder

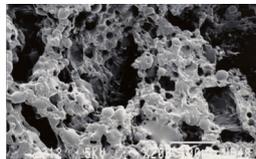
- Composition: PLGA 29% (145 mg) + DEXTRAN 71% (355 mg)
- Package: 1 bottle, 500 g - 2 ml - 2 cc ca. (Product code: PFOF0026)
- Package: 5 bottle, 500 g - 2 ml - 2 cc ca. (Product code: PFOF0025)
- Medical Device CLASS III CE0426
- Certified ISO9001, ISO13485



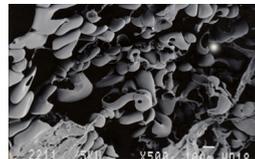
PLGA
lyophilised
powder

PLGA lyophilised powder

- Creates a larger number of access channels within it
- Is more easily traversed by blood
- Instant formation of a stable clot both inside and outside the material

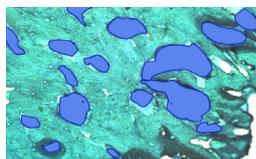


Fisiograft Powder Magnification: 200X

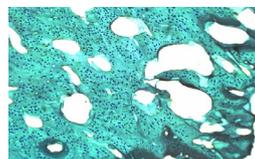


Fisiograft Powder Magnification: 500X

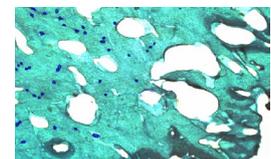
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Newly formed bone with medullary spaces



Newly formed bone with osteocytes



Newly formed bone with blood vessels

FISIOGRAFT SPONGE

Completely resorbable in **4-6 MONTHS**



Physical
form: block

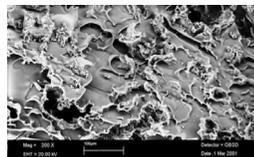
- Composition: PLGA 29% (156 mg) + PEG 71% (64 mg)
- Ampoule
- Package: 1 bottle 0.86 ml cc ca. (Code PFOF0016)
- Medical Device CLASS III CE0426
- Certified ISO9001, ISO13485



PLGA
lyophilised
sponge

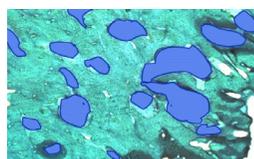
PLGA lyophilised sponge

- Creates a larger number of access channels within it
- Is more easily traversed by blood
- Instant formation of a stable clot both inside and outside the material

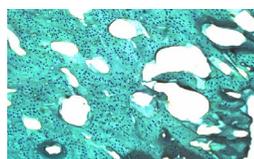


SEM Fisiograft Sponge magnification

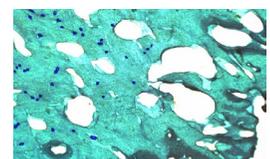
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Newly formed bone with medullary spaces



Newly formed bone with osteocytes



Newly formed bone with blood vessels

FISIOGRAFT
is the most
resorbable and
osteoconductive
biomaterial

“Biomateriali utilizzati in rigenerazione ossea: risultati istologici”

(Biomaterials used in bone regeneration: histological results)

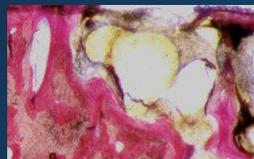
FISIOGRAFT was found to be the most resorbable and osteoconductive biomaterial 6-8 months after grafting.

	newly formed bone	medullary spaces	residue material
BIOCORAL	42%	40%	18%
BOVINE BONE	39%	34%	27%
BIOGLASS	40%	43%	17%
DFDBA	29%	37%	34%
FISIOGRAFT	43%	56%	1%
HYDROXYAPATITE	41%	30%	31%
AUTOLOGOUS BONE	42%	40%	18%
PEP-GEN P-15	40%	37%	23%
CALCIUM SULPHATE	48%	39%	13%

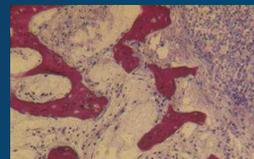
Piattelli A. Implantologia-Orale (Oral implant dentistry). 2003; 4: 77-80

Complete bone neogenesis

These histological results confirm that FISIOGRAFT is an **“ideal space maintainer”**. Its centripetal and progressive erosion, up to its total degradation, in fact, allows bone tissue to be regenerated without interfering with the physiological repair processes.



Autologous bone



FISIOGRAFT



Bovine bone

The newly formed bone can be checked with an X-ray

Fisiograft is **NOT RADIOPAQUE** and enables bone neoformation to be checked with an X-ray.



Applications



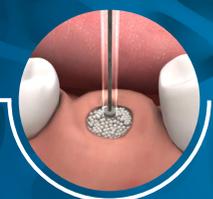
Maxillary sinus elevation
FISIOGRAFT GEL
FISIOGRAFT POWDER + GEL
FISIOGRAFT SPONGE



Maintaining volume
FISIOGRAFT SPONGE
FISIOGRAFT POWDER
FISIOGRAFT POWDER + GEL



Split crest
FISIOGRAFT POWDER
FISIOGRAFT POWDER + GEL
FISIOGRAFT SPONGE



Post-extraction
FISIOGRAFT SPONGE
FISIOGRAFT POWDER + GEL

The **ADVANTAGES** of **FISIOGRAFT**

GEL

- ✓ Fully reabsorbed within **4 - 6 MONTHS**
- ✓ Fully replaced by **NEWLY FORMED MINERALISED CELLULAR BONE**
- ✓ **NO ODDS RATIO:** BSE - HIV - HBV - SARS
- ✓ **NON-RADIOPAQUE**
- ✓ **HIGH BIOCOMPATIBILITY**
- ✓ **EASILY ADHERES** to irregular cavity walls

POWDER

- ✓ Fully reabsorbed within **4 - 6 MONTHS**
The molecular weight allows for rapid biological degradation
- ✓ **FULLY REPLACED** by newly formed mineralised cellular bone
- ✓ **NO ODDS RATIO:** BSE - HIV - HBV - SARS
- ✓ **NON-RADIOPAQUE**
- ✓ **HIGH BIOCOMPATIBILITY**
- ✓ It **FULLY OCCUPIES** irregular cavities

SPONGE

- ✓ Fully reabsorbed within **4 - 6 MONTHS**
Its molecular weight allows for rapid biological degradation
- ✓ **FULLY REPLACED** by newly formed mineralised cellular bone
- ✓ **NO ODDS RATIO:** BSE - HIV - HBV - SARS
- ✓ **NON-RADIOPAQUE**
- ✓ **HIGH BIOCOMPATIBILITY**
- ✓ When hydrated with **FISIOGRAFT GEL**, saline solution or blood,
the sponge can be put in the receiving site without compacting it
- ✓ If inserted into post-extraction alveoli, Fisiograft Sponge **REDUCES ALVEOLAR RIDGE RESORPTION**

FISIOGRAFT: MORE THAN 100 PUBLICATIONS

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- 3 - Stem cells, growth factors and scaffolds in craniofacial regenerative medicine. Viktor Tollemar et al. Genes & Diseases Volume 3, Issue 1, March 2016, Pages 56-71.
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- 11 - Ridge preservation following tooth extraction using a polylactide and polyglycolide sponge as space filler: a clinical and histological study in man. Serino G, Biancu S, Iezzi G, Piattelli A. Clin Oral Impl. Res. 2003; 14: 651-58.
- 12 - Use of PLA-PGA as a bone filler: clinical experience and histologic study of a case. Stancari F, Zanni B, Bernardi F, Calandriello M, Salvatorelli G. Quintessenz (Germany) 2000; 51

