# Biodegradable membrane pin from polylactide.

**LeadFIX®**

INNOVATION. The clinical use of resorbable membranes for guided bone regeneration constitutes a new approach in dental surgery. LeadFIX is a bioresorbable augmentation system used to fix membranes in position.

STABILITY. Total membrane stability is an important pre-requisite for successful, guided bone regeneration. Application of the LeadFIX-augmentation system prevents any relative movement between the membrane and surrounding bone or membrane and mucoperiostal flaps. It ensures an intact seal and smooth transition to the periosteum. The membrane becomes securely fixed in position over several months.

MATERIAL. The membrane pin comprises osteosynthetic implant material and has proved to be an effective suture material. Biological degradation occurs through hydrolysis to lactic acid, which is subsequently metabolised to $CO_2$ and $H_2O$.

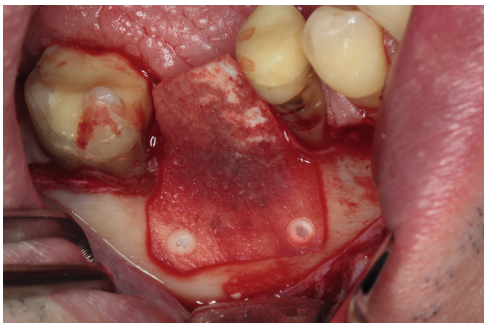

***Figure 1:*** LeadFix Pin in use during dental surgery.

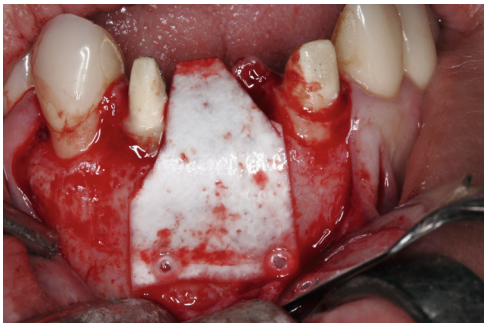

***Figure 2:*** Fixation of a membrane with degradable pins.

## SAFETY

The bioresorbable LeadFIX – augmentation system is the answer to successful therapy

- No micro-movement of the membrane
- Simple, straightforward procedure
- No need for a second explantation procedure and therefore no damage to newly formed structures
- Accidental swallowing of a membrane pin won't cause any serious health risk
- Safe resorption of polylactide confirmed in clinical studies and histological examinations

## APPLICATION AND HANDLING TECHNIQUE

LeadFIX pins should only be used with the LeadFIX instruments developed specifically for this purpose.

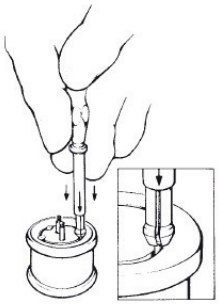

***Figure 3:*** Surgical technique. Pick up the membrane pins using the straight applicator.

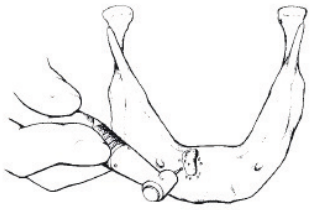

***Figure 4:*** Perforation of the buccal corticalis.

***Figure 5:*** Use the probe with soft membranes.

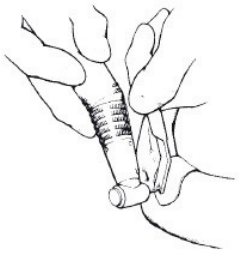

***Figure 6:*** Use the drilling and positioning guide on hard membranes.

***Figure 7:*** Inserting the LeadFIX-membrane pins.

## OPERATING MODE

Reduction in Pin strength and degradation:

After 6 - 7 months the mechanical strength of the LeadFIX pin decreases. A process then begins, whereby resorption sets in and the volume of the pin is reduced. Pin degradation by hydrolysis leads to lactic acid formation. Lactic acid is metabolized to $CO_2$ and $H_2O$ in the citrate cycle. The material is fully resorbed after 60 weeks.

The design of the pin ensures rapid, straightforward application and the long-term secure positioning of the pin throughout its lifespan. With a shaft diameter of < 1 mm, the membrane pin is an ideal material for secure fixing in surrounding bone.

The retention ridges on the shaft allow the membrane pin to sit firmly in the implantation site. Thanks to the smooth, lens-shaped head, the pin van be inserted simply using specially developed LeadFIX-instruments.

## Information for ordering:

| | | |
|---|---|---|
| LeadFIX | 2 Pins, Ø 2,5 mm /Length 3,5 mm | PL 0121 |
| LeadFIX | Cassette (without content) | PL 0113 |
| LeadFIX | Dispenser | PL 0119 |
| LeadFIX | Driller 0,8 mm | PL 0114 |
| LeadFIX | Driller 0,9 mm | PL 0115 |
| LeadFIX | Drill Template | PL 0116 |
| LeadFIX | Sonde, angular | PL 0117 |
| LeadFIX | Sonde, straight | PL 0131 |
| LeadFIX | Mallet | PL 0120 |
| LeadFIX | Applicator, Kopf Straight | PL 0126 |
| LeadFIX | Applicator, Head angular | PL 0127 |
| LeadFIX | Applicator Handle | PL 0128 |

**Order Hotline:** T: +49 3677 64 07 10 | F: +49 3677 64 07 13 | info@biovision.de
**Ordering:** www.biovision.de/en/order

BIOVISION specialises in the development and manufacturing of biomaterials. In particular in the processing of resorbable polymer products by means of injection moulding and the production of resorbable ceramic products. These technologies are used inter alia in our products for dental surgery/implantology and for orthopedics. The following products are also included in our portfolio:

### Orthopedics:

BetaBASE bioresorbable bone replacement

BioBASE bioresorbable bone replacement

PolyPIN bioresorbable bone pin

### Wound Care:

EpiGARD synthetic skin replacement

### Dental Surgery:

BetaBASE MP bioresorbable bone replacement

BioBASE AP bioresorbable bone replacement

LeadFIX bioresorbable membrane pin

PRODUCTION

BIOVISION GmbH
Am Vogelherd 52
98693 Ilmenau
Germany

www.biovision.de

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