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Because one option is not enough.

## botiss mucoderm® 3D-SOFT TISSUE GRAFT



# mucoderm® 3D-soft tissue graft

mucoderm® provides a true alternative in certain indications to the patient's own connective tissue. This stable 3-dimensional collagen soft tissue replacement, made of porcine dermis, supports fast revascularization and soft tissue integration, including color and texture.

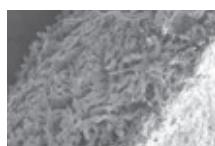
*Based on my clinical experience and research, the mucoderm® matrix provides an effective and patient-friendly alternative to palatal donor tissue for root coverage procedures and correction of soft tissue deficiencies.*



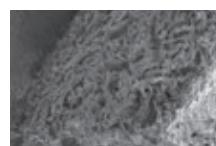
**DDS, MSc, PhD Adrian Kasaj, specialist in periodontology, Associate Professor, Department of Operative Dentistry and Periodontology at University of Mainz/Germany**

## FEATURES AND BENEFITS

3-dimensional matrix	Supports fast vascularization and integration <sup>1,2</sup> .
High tensile strength	Due to the structural stability, mucoderm® can be <ul style="list-style-type: none"><li>• sutured, pinned or screwed</li><li>• easily cut to the required size and shape</li><li>• easily applied by the tunnel technique without risk of tearing the matrix apart.</li></ul>
Structure similar to human tissue	mucoderm® is a viable alternative to the patient's own tissue in certain indications: <ul style="list-style-type: none"><li>• Remodels completely into patient's own tissue within 6-9 months.</li><li>• Reduces the patients' discomfort and donor site morbidity.</li></ul>



Magnification 200 μm



Magnification 500 μm

## PROPERTIES

Attribute	Description
Origin	Porcine dermis
Composition	Native collagen type I and III
Thickness	1.2-1.7 mm
Healing/integration time	6-9 months
Storage temperature	Room temperature (< 24 °C)
Shelf life	5 years



Courtesy of Dr. Algirdas Puišys, Vilnius/Lithuania

## APPLICATION AND HANDLING

### Rehydration

Rehydration of the mucoderm® matrix in sterile saline solution or blood for 5-20 minutes prior to application is required. The rehydration time depends on the applied technique and the desired flexibility of the matrix; the longer the rehydration time the higher the flexibility of the mucoderm® graft<sup>3</sup>.

### Trimming

After rehydration, the shape and size of the mucoderm® matrix can easily be adapted to the defect by trimming it to the desired size with a scalpel or a pair of scissors.



If the mucoderm® matrix is only rehydrated for a short time and therefore is not so flexible, cutting or rounding the edges can prevent perforation of the gingival tissue during flap closure. For coverage of

multi-recession defects, mucoderm® may be elongated by cutting the matrix on alternating sides (mesh-graft-technique) and pulling both ends to extend it.

### Exposure

The indication determines whether the mucoderm® matrix must be covered or may be left exposed. Exposure of the mucoderm® matrix should always be avoided in treatment of recession defects. It has to be ensured, that the repositioned flap fully covers the matrix. Complete coverage of the matrix

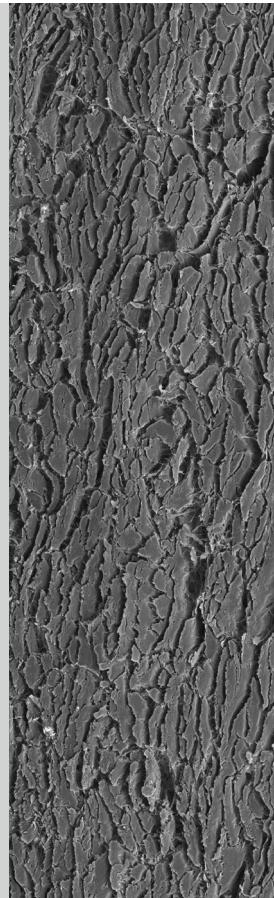
ensures ingrowth of blood vessels and cells from the overlying flap and therefore a rapid incorporation of the graft. Early exposure may lead to fast resorption and contamination of the mucoderm® matrix and soft tissue graft failure. Open healing is only possible if only minor parts of the matrix are exposed and revascularization can occur from the surrounding margins of the flap. Open healing may also be possible, if mucoderm® is closely fixed to the underlying periosteum, e.g. if you want to increase the width of attached gingiva but not the tissue thickness.

### Fixation

When preparing a split flap, mucoderm® should be sutured to the intact periosteum to ensure close contact between the matrix and the periosteal wound bed. Single button or cross sutures may be used; the use of resorbable sutures is recommended.

### Postoperative care

After surgery, mechanical trauma of the treated site must be avoided. Patients should be instructed not to brush their teeth on the affected side for 4 weeks following surgery. Plaque prevention may be achieved by mouth rinsing with 0.2% chlorhexidine solution. After surgery, the patient should be recalled weekly for plaque control and evaluation of the healing process.



### Recommended for

mucoderm® is recommended for implantology, periodontology, oral and craniomaxillofacial (CMF) surgery:

- Recession coverage
- Broadening of attached gingiva
- Soft tissue augmentation/thickening

### Available in the following sizes

Art.-No.	Product	Size
BO-701520	botiss mucoderm®	15 x 20 mm
BO-702030	botiss mucoderm®	20 x 30 mm
BO-703040	botiss mucoderm®	30 x 40 mm



For further informations please contact  
your local representative

## REFERENCES

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2. Rothamel D., Benner M., Fienitz T., Happe A., Kreppel M., Nickenig HJ. and Zöller JE. Biodegradation pattern and tissue integration of native and cross-linked porcine collagen soft tissue augmentation matrices – an experimental study in the rat. *Head and Face* 2014, 10:10.
3. Kasaj A., Levin L., Stratul SI., Götz H., Schlee M., Rüters CB., Konerding MA., Ackermann M., Willershausen B., Pabst AM. The influence of various rehydration protocols on biomechanical properties of different acellular tissue matrices. *Clin Oral Ivest*. 2015.

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