

# Reducing the risk of wound infection

Microlyte® is a synthetic antimicrobial matrix containing ionic and metallic silver at low, non-toxic levels, providing a 99.99% reduction of a broad range of microbes on the matrix.<sup>1,2†</sup> It is designed to support wound healing<sup>3</sup> by conforming to wound-bed micro-crevices, maintaining a moist healing environment, and sustaining consistent reduction of microbial burden.<sup>1,2†</sup>

- Conforms with transparency to the microtextures of the wound bed.<sup>4</sup>
- Sustained antimicrobial activity of ionic silver on the matrix.<sup>1,2†</sup>
- Can be used at onset of wound treatment or in surgery, including in conjunction with other wound management technologies and solutions.



## Microlyte®

Synthetic Antimicrobial Matrix

#### REFERENCES:

1. Microlyte Shelf Life and Stability, Data on file, Imbed Biosciences.
2. Measurement of Antimicrobial Activity of Microlyte Ag. Data on file, Imbed Biosciences.
3. Agarwal A, et al. Surfaces modified with nanometer-thick silver-impregnated polymeric films that kill bacteria but support growth of mammalian cells. *Biomaterials*. 2010;31(4):680-90.
4. Product Handleability Evaluation Report, Data on file, Imbed Biosciences.

PRO-1042-US-EN-v3

# Microlyte®

Synthetic Antimicrobial Matrix

| Size cm <sup>2</sup> | SKU        | Wound Coverage     |
|----------------------|------------|--------------------|
| 16mm disc            | I-ML16DISC | 2cm <sup>2</sup>   |
| 2x2                  | I-ML0202   | 4cm <sup>2</sup>   |
| 3x3                  | I-ML0303   | 9cm <sup>2</sup>   |
| 4x4                  | I-ML0404   | 16cm <sup>2</sup>  |
| 5x5                  | I-ML0505   | 25cm <sup>2</sup>  |
| 6x8                  | I-ML0608   | 48cm <sup>2</sup>  |
| 10x10                | I-ML1010   | 100cm <sup>2</sup> |

## Our Other Products

Apis®

Microlyte® PainGuard™

Membrane Wrap™

Tri-Membrane Wrap™

Membrane Wrap - Lite™

Membrane Wrap - Hydro™

# Reducing infection risk and pain with one solution

Microlyte® PainGuard™ is a synthetic antimicrobial matrix containing ionic and metallic silver at low, non-toxic levels, providing a 99.99% reduction of a broad range of microbes on the matrix.<sup>1,2†</sup> The matrix also releases a uniform, unit-dose of lidocaine HCl, providing simultaneous pain relief.<sup>2</sup>

- Conforms with transparency to the microtextures of the wound bed.<sup>3</sup>
- Synthetic, thin, porous matrix is made of resorbable polymers and designed to mimic human ECM.<sup>4,5</sup>
- Designed to assist in pain relief: >80% release of lidocaine HCl within first 30 minutes.<sup>6</sup>



**Microlyte®**  
Synthetic Antimicrobial Matrix

**PainGuard™**  
with Lidocaine

#### REFERENCES:

1. Microlyte Shelf Life and Stability. Data on file, Imbed Biosciences.
2. Measurement of Antimicrobial Activity of Microlyte Ag. Data on file, Imbed Biosciences.
3. Agarwal A, et al. Surfaces modified with nanometer-thick silver-impregnated polymeric films that kill bacteria but support growth of mammalian cells. *Biomaterials*. 2010;31(4):680-90.

4. Product Handleability Evaluation Report, Data on file, Imbed Biosciences.
5. Systemic Toxicity, Local Tissue Response, and Wound Healing Study of Microlyte Ag, Following Repeated Treatment to Full-Thickness Wounds in Rats – 28 Days. Data on file, Imbed Biosciences.
6. U.S. Food and Drug Administration. 510(k) Summary K211943: Microlyte Ag/Lidocaine. FDA.gov. Published July 2021.

† As demonstrated in vitro

PRO-1041-US-EN-v3

**Microlyte®**

Synthetic Antimicrobial Matrix

**PainGuard™**  
**with Lidocaine**

| Size cm <sup>2</sup> | SKU        | Wound Coverage     | Total lidocaine quantity per piece (mg) |
|----------------------|------------|--------------------|-----------------------------------------|
| 3x3                  | I-MLPG0303 | 9cm <sup>2</sup>   | 3.6 mg                                  |
| 5x5                  | I-MLPG0505 | 25cm <sup>2</sup>  | 10 mg                                   |
| 10x10                | I-MLPG1010 | 100cm <sup>2</sup> | 40 mg                                   |

## Our Other Products

Apis®

Microlyte®

Membrane Wrap™

Tri-Membrane Wrap™

Membrane Wrap - Lite™

Membrane Wrap - Hydro™

# Provide a dual-layer protective covering for wounds

Membrane Wrap™ is a dual-layer amnion human tissue allograft derived from the amniotic membrane that serves as a barrier and provides protective covering for the wound. It is minimally manipulated, preserving the properties exhibited in its natural state\*, remaining compliant with FDA Regulations.

- Readily Available
- Easy Application
- 5-Year Shelf Life
- FDA Compliant



## Membrane Wrap™ Dual-Layer Amniotic Membrane

\*All BioLab Holdings Membrane Wrap™ allograft tissue products have been tested for potentially infectious diseases and terminally sterilized to ensure the safety of each membrane.

PRO-1026-US-EN-v4

# Membrane Wrap™

## Dual-Layer Amniotic Membrane

| Size cm <sup>2</sup> | SKU    | Wound Coverage     |
|----------------------|--------|--------------------|
| 1x1                  | MW0101 | 1cm <sup>2</sup>   |
| 2x2                  | MW0202 | 4cm <sup>2</sup>   |
| 2x3                  | MW0203 | 6cm <sup>2</sup>   |
| 4x4                  | MW0404 | 16cm <sup>2</sup>  |
| 4x6                  | MW0406 | 24cm <sup>2</sup>  |
| 4x8                  | MW0408 | 32cm <sup>2</sup>  |
| 6x8                  | MW0608 | 48cm <sup>2</sup>  |
| 10x10                | MW1010 | 100cm <sup>2</sup> |

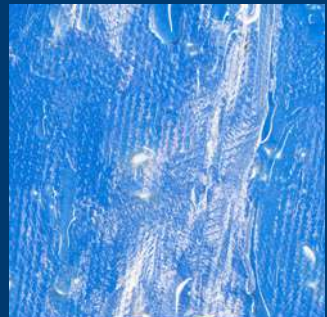
### Our Other Products

Apis®  
Microlyte®  
Microlyte® PainGuard™  
Membrane Wrap - Lite™  
Membrane Wrap - Hydro™  
Tri-Membrane Wrap™

# Provide a hydrated protective covering for wounds

Membrane Wrap - Hydro™ is a hydrated, dual-layer amnion human tissue allograft derived from the amniotic membrane that serves as a barrier and provides protective covering for the wound. It is minimally manipulated, preserving the properties exhibited in its natural state\*, remaining compliant with FDA Regulations.

- Readily Available
- Easy Application
- 5-Year Shelf Life
- FDA Compliant



## Membrane Wrap - Hydro™

Hydrated Dual-Layer Amniotic Membrane

\*All BioLab Holdings-Membrane Wrap - Hydro™ allograft tissue products have been tested for potentially infectious diseases and terminally sterilized to ensure the safety of each membrane.  
PRO-1026-US-EN-v4

# Membrane Wrap - Hydro™

Hydrated Dual-Layer Amniotic Membrane

| Size cm <sup>2</sup> | SKU    | Wound Coverage     |
|----------------------|--------|--------------------|
| 1x1                  | HM0101 | 1cm <sup>2</sup>   |
| 2x2                  | HM0202 | 4cm <sup>2</sup>   |
| 2x3                  | HM0203 | 6cm <sup>2</sup>   |
| 4x4                  | HM0404 | 16cm <sup>2</sup>  |
| 4x6                  | HM0406 | 24cm <sup>2</sup>  |
| 4x8                  | HM0408 | 32cm <sup>2</sup>  |
| 6x8                  | HM0608 | 48cm <sup>2</sup>  |
| 10x10                | HM1010 | 100cm <sup>2</sup> |

## Our Other Products

Apis®

Microlyte®

Microlyte® PainGuard™

Membrane Wrap™

Tri-Membrane Wrap™

Membrane Wrap - Lite™



# Provide a protective covering for wounds

Membrane Wrap - Lite™ is a single-layer amnion human tissue allograft derived from the amniotic membrane that serves as a barrier and provides protective covering for the wound. It is minimally manipulated, preserving the properties exhibited in its natural state\*, remaining compliant with FDA Regulations.

- Readily Available
- Easy Application
- 5-Year Shelf Life
- FDA Compliant



## Membrane Wrap - Lite™

Single Layer Amniotic Membrane

\*All BioLab Holdings Membrane Wrap - Lite™ allograft tissue products have been tested for potentially infectious diseases and terminally sterilized to ensure the safety of each membrane.

PRO-1027-US-EN-v3

# Membrane Wrap - Lite™

Single Layer Amniotic Membrane

| Size cm <sup>2</sup> | SKU    | Wound Coverage    |
|----------------------|--------|-------------------|
| 6x8                  | ML0608 | 48cm <sup>2</sup> |

## Our Other Products

Apis®

Microlyte®

Microlyte® PainGuard™

Membrane Wrap™

Membrane Wrap - Hydro™

Tri-Membrane Wrap™

# Cold plasma therapy in wound treatment

## mobile. simple. effective.

The **plasma care®** is a handy, mobile medical device for the treatment of either acute, as well as infected and chronic wounds.

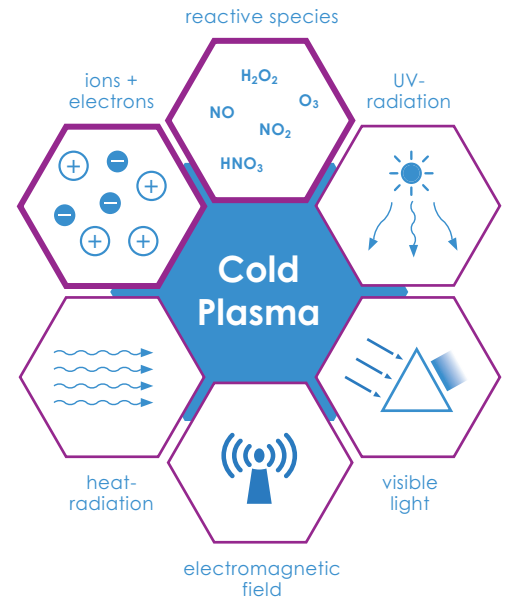
**It uses cold atmospheric plasma for the inactivation of microorganisms – including multi-resistant pathogens – and activation of wound healing.**

The cold plasma therapy with the **plasma care®** device is the result of 12 years of research by the Max Planck Institute. Numerous clinical case studies have proven its effectiveness over the past 4 years. Please ask for our documented case studies.

### Cold plasma works with reactive species

Plasma is the fourth state of matter generated by adding energy to a gas.

For wound treatment, cold plasma (< 40 C°) is generated from the ambient air working essentially with reactive oxygen and nitrogen species, such as O<sub>3</sub>, H<sub>2</sub>O<sub>2</sub>, and NO<sub>2</sub>, as therapeutic components.



## The 2-fold effect of cold plasma

The active components (reactive species) generated by cold atmospheric plasma can interact with cells in different ways. The effects are endogenous physical or chemical processes.

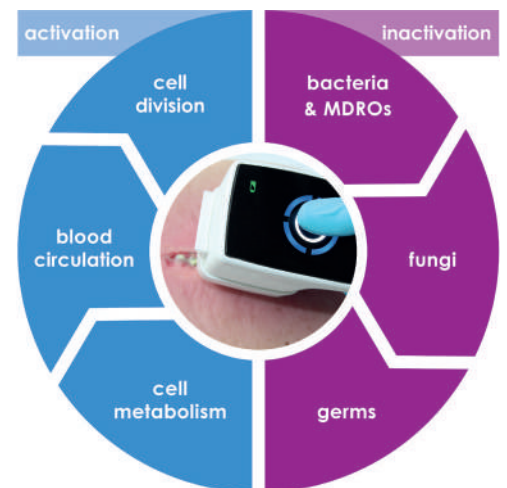
### 1. Stimulation of wound healing

The reactive species interact with healthy human cells. Intracellular processes that promote wound healing are stimulated. The release of cytokines triggers growth of cells and stimulation of angiogenesis improves blood flow to wound and its environment.

### 2. Bactericidal effect

In prokaryotic cells these processes result in a destruction of their cellular macromolecules, including DNA, thus inactivating the bacteria, fungi or germs.

**Antibiotic resistance or allergies become insignificant.**



### When to use plasma care®?

- All types of **chronic wounds** – the sooner the better.
- **Acute wounds** – to promote wound healing
- **Surgical wounds** – to prevent wound healing disorders
- Entry ports, such as CVC, IV-lines, drainages, urinary catheters (suprapubic)

**Due to its physical effect, cold plasma therapy can in general be applied to all types of wounds, i.e. it is effective independent from the cause of the wound development.**



SAFE -  
NO TISSUE DAMAGE  
KNOWN



SUITABLE FOR PATIENTS  
WITH PACEMAKER



MOBILE USE  
AND EASY TO USE

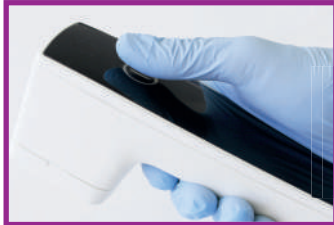


ACTIVATION OF  
WOUND HEALING

## Treatment and device

### Easy to use:

- **Sterile spacer** (single-use, disposable)
- **Quick treatment** (1 – 3 min. per wound area)
- **Treatment area per spacer up to 73 cm²**
- **Safe:** Consistent application of constant plasma cocktail due to defined spacer volume.
- **Device stops automatically:** no overdose or misuse



1. Switch on the device via touch button



2. Attach spacer to the device



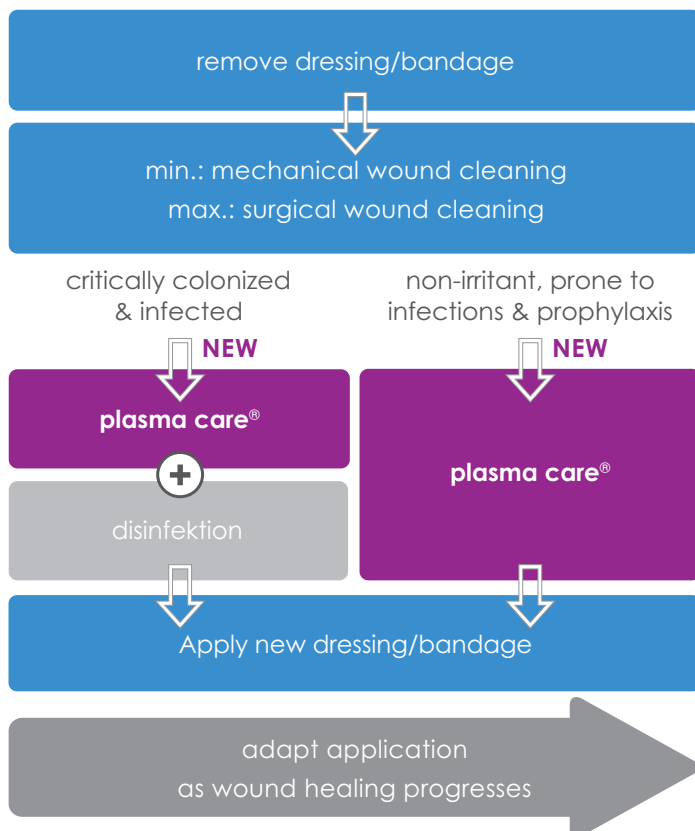
3. Place spacer-equipped device on the wound



4. Start treatment by pushing touch button

## The wound treatment process

The **plasma care®** can be easily integrated into your standard wound treatment process.



## The device

|                       |                                                                                                                                            |
|-----------------------|--------------------------------------------------------------------------------------------------------------------------------------------|
| Weight                | 610 g                                                                                                                                      |
| Measures              | 16 cm x 5 cm                                                                                                                               |
| Battery charging time | 10 – 12 h                                                                                                                                  |
| Operating time        | max. 4 – 6 h, 240 – 360 applications                                                                                                       |
| Spacer                | one sterile spacer per patient/treatment                                                                                                   |
| Treatment duration    | 60 sec. per treatment area (4x4cm),<br>larger wounds: 6 intervals of 60 sec each are possible per spacer (= max. wound size up to 73 cm²). |
| Frequency of use      | 2 – 3 times/week                                                                                                                           |

# APIS<sup>®</sup>

by sweetbio<sup>®</sup>

A Bioengineered Wound Product

## Known ingredients, proven independently, powerful together.

Made with an intentional synthesis of trusted materials, APIS<sup>®</sup> is designed to cover and protect wounds, absorb exudate, and create a moist wound environment.



### Backed by evidence

Published in multiple peer-reviewed publications demonstrating 2x faster wound closure across both chronic and acute wounds <sup>1-4\*</sup>



### Uniquely engineered for use throughout the full healing cascade

Proven to support wound closure across the early stages of bacteria and inflammation to the late stages of proliferation and remodeling <sup>5-7\*</sup>



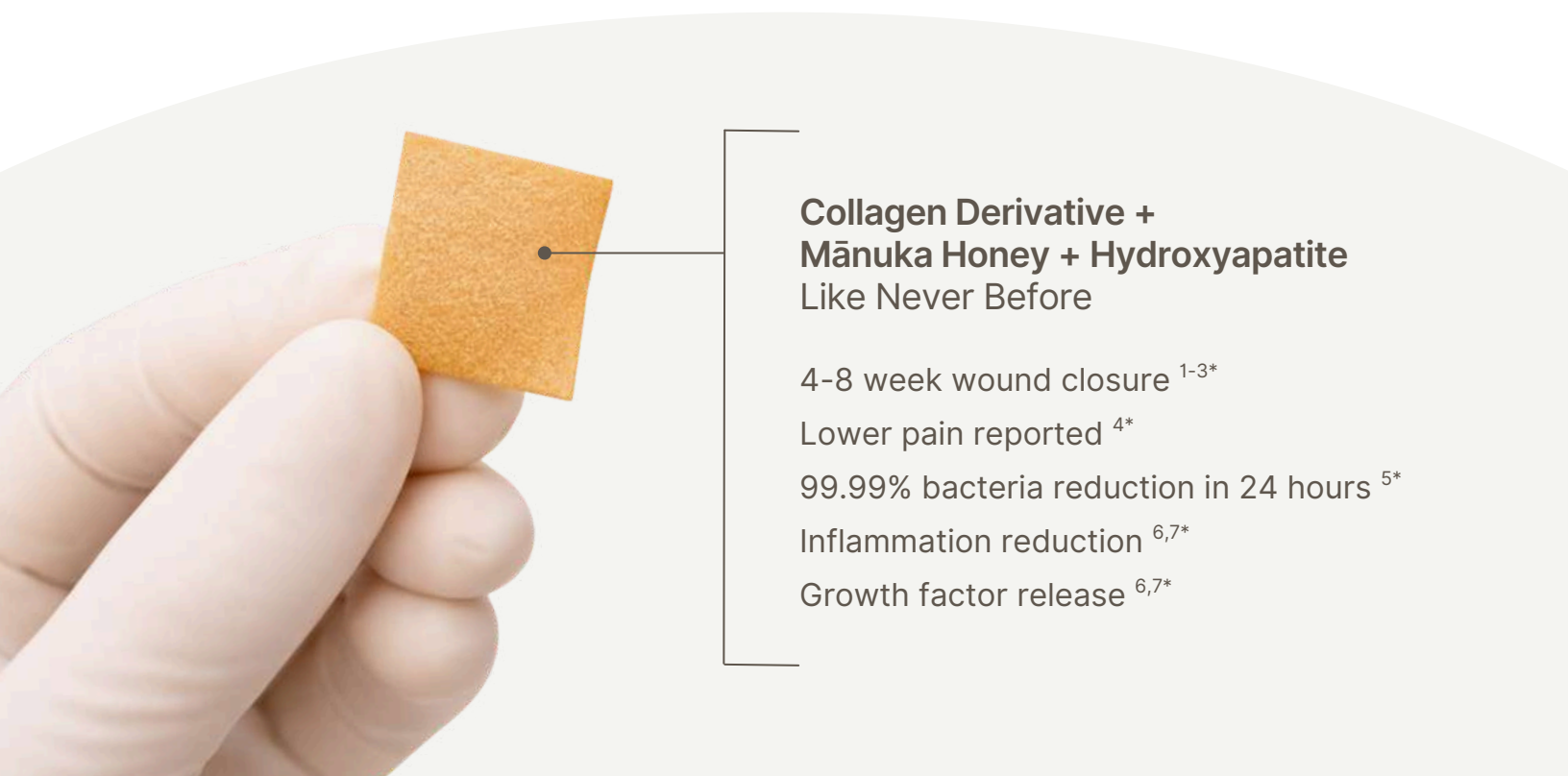
### Next level convenience

Supplied in an all-in-one sheet, APIS<sup>®</sup> is ready to apply in minutes, can be trimmed or folded, and naturally conforms to the wound bed for easy application



### Reimbursement-ready and operationally simple

Clear billing pathway and positioned for stability in the evolving reimbursement landscape. Established HCPCS code, A2010, APIS<sup>®</sup>



### Collagen Derivative + Mānuka Honey + Hydroxyapatite Like Never Before

4-8 week wound closure <sup>1-3\*</sup>

Lower pain reported <sup>4\*</sup>

99.99% bacteria reduction in 24 hours <sup>5\*</sup>

Inflammation reduction <sup>6,7\*</sup>

Growth factor release <sup>6,7\*</sup>

## OUR MX® TECHNOLOGY FUELS APIS®

### Designed to address the demands of the healing process

We meticulously deconstructed natural elements to reimagine and rebuild a new biomaterial, MX®, with a unique chemical fingerprint that transcends the sum of its parts.

#### Collagen Derivative<sup>8</sup>

A natural, porcine-derived extracellular matrix protein beneficial for cell migration, adhesion and proliferation

#### Mānuka Honey<sup>9</sup>

100% UMF-certified New Zealand Mānuka honey known for antibacterial and anti-inflammatory effects

#### Hydroxyapatite<sup>10</sup>

A naturally occurring mineral known to bind proteins and promote healing via angiogenesis

### APIS® in Action: Diabetic Foot Ulcer (Heel)

Diabetic foot ulcer on the heel of the right foot of a 60-year-old male with a history of diabetes mellitus, hypertension, peripheral vascular disease, peripheral neuropathy, and obesity. For 12 months, the wound was treated with various wound care products without resolution of closure.

Near complete closure at week 4 with complete closure at week 5. The patient had 5 visits over 5 weeks with a total of 4 APIS® applications.

#### WOUND CLOSURE PROGRESSION



DAY 0



WEEK 1



WEEK 2



WEEK 4

“Traditionally, my wounds have taken 14-18 weeks to close. After 5 weeks of APIS®, my wound closed. I can easily take a shower again.”

– PATIENT FROM THIS CASE

#### CITATIONS

1. Rodriguez et al. Novel bioengineered collagen + Manuka honey + hydroxyapatite sheet for the treatment of lower extremity chronic wounds in an urban hospital wound care setting. 2023.
2. Rodriguez et al. Preliminary clinical evaluation of a novel bioengineered wound product: A focus on the management of lower extremity ulcers. 2020.
3. McMurray et al. Use of a Novel Biomaterial to Enhance Secondary Intention Healing. 2021.
4. Arnaud et al. Novel Biomaterial Containing Gelatin, Manuka Honey, and Hydroxyapatite Enhanced Secondary Intention Healing Versus Standard Secondary Intention Healing in Mohs Surgical Defects on the Head and Distal Lower Extremities-A Randomized Controlled Trial: Pilot Study. 2023.
5. Williams et al. A novel bioengineered wound product with in vitro capabilities to reduce bacteria. 2021.
6. Rodriguez et al. Microenvironment influence of a novel bioengineered wound product APIS®: An in vitro analysis of inflammatory marker and growth factor secretion. 2021.
7. Rodriguez et al. A Preliminary Direct Comparison of the Inflammatory Reduction and Growth Factor Production Capabilities of Three Commercially Available Wound Products: Collagen Sheet, Manuka Honey Sheet, and a Novel Bioengineered Collagen Derivative + Manuka Honey + Hydroxyapatite Sheet. 2022.
8. Dantas et al. 2011; Li et al. 2014; Pezeshki-Modaress et al. 2014; Pezeshki-Modaress et al. 2015
9. Sell et al. 2012; Afrin et al. 2018; Johnston et al. 2018; Minden-Birkenmaier et al. 2018
10. Okabayashi et al. 2009; Majeed et al. 2012; Kawai et al. 2011; Weilin et al. 2016; Tommila et al. 2008; Vilardell et al. 2016; Rodriguez et al. 2013 & 2016

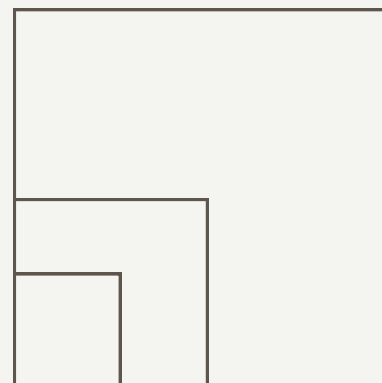
\* Based on clinical and *in vitro* data; claims have not been cleared by the FDA. Faster wound closure reported in slower healing and chronic wounds compared to standard of care.

## INDICATIONS

Under the supervision of a healthcare professional, APIS® is indicated for use in the management of wounds, including:

- Full and partial thickness wounds
- Pressure ulcers (stages I-IV)
- Venous stasis ulcers
- Diabetic ulcers
- Surface wounds
- Traumatic wounds (healing by secondary intention)
- Surgical wounds
- Abrasions
- Donor site wounds

## AVAILABLE SIZES



APIS-16x16-2  
1.6 x 1.6cm

APIS-25x25-2  
2.5 x 2.5cm

APIS-50x50-2  
5.0 x 5.0cm

Coming soon in 6.0 x 8.0cm

# APIS®

by **sweetbio®**

[recoverwithAPIS.com/clinicians](https://recoverwithAPIS.com/clinicians)  
[info@sweetbio.com](mailto:info@sweetbio.com)



MKT-032 Rev1 / 0226

# Provide a triple-layer protective covering for wounds

Tri-Membrane Wrap™ is a triple-layer amnion-chorion-amnion human tissue allograft derived from the amniotic membrane that serves as a barrier and provides protective covering for the wound. It is minimally manipulated, preserving the properties exhibited in its natural state\*, while remaining compliant with FDA Regulations.

- Readily Available
- Easy Application
- 5-Year Shelf Life
- FDA Compliant



## Tri-Membrane Wrap™

Triple-Layer Amniotic Membrane

\*All BioLab Holdings Tri-Membrane Wrap™ allograft tissue products have been tested for potentially infectious diseases and terminally sterilized to ensure the safety of each membrane.

PRO-1026-US-EN-v4

# Tri-Membrane Wrap™

Triple-Layer Amniotic Membrane

| Size cm <sup>2</sup> | SKU    | Wound Coverage     |
|----------------------|--------|--------------------|
| 1x1                  | TM0101 | 1cm <sup>2</sup>   |
| 2x2                  | TM0202 | 4cm <sup>2</sup>   |
| 2x3                  | TM0203 | 6cm <sup>2</sup>   |
| 4x4                  | TM0404 | 16cm <sup>2</sup>  |
| 4x6                  | TM0406 | 24cm <sup>2</sup>  |
| 4x8                  | TM0408 | 32cm <sup>2</sup>  |
| 6x8                  | TM0608 | 48cm <sup>2</sup>  |
| 10x10                | TM1010 | 100cm <sup>2</sup> |

## Our Other Products

Apis®

Microlyte®

Microlyte® PainGuard™

Membrane Wrap™

Membrane Wrap - Hydro™

Membrane Wrap - Lite™