WOUND BIOLOGIXS

PRODUCT PORTFOLIO

Integrated wound-care solutions

01 **Membrane Wrap™**
Dual-Layer Amniotic Membrane

02 **Membrane Wrap - Hydro™**
Hydrated Dual-Layer Amniotic Membrane

03 **Tri-Membrane Wrap™**
Triple Layer Amniotic Allograft Membrane

04 **Microlyte® SAM™**
Antimicrobial Technology

05 **Microlyte® PainGuard™**
Synthetic Antimicrobial Matrix with Lidocaine

06 **APIS®**
A Bioengineered Wound Product

WOUND BIOLOGIXS

THE PORTFOLIO

Six products • three solution groups

AMNIOTIC MEMBRANE SOLUTIONS

Membrane Wrap™
Dual-Layer Amniotic Membrane

Membrane Wrap - Hydro™
Hydrated Dual-Layer Amniotic Membrane

Tri-Membrane Wrap™
Triple Layer Amniotic Allograft Membrane

SYNTHETIC ANTIMICROBIAL TECHNOLOGY

Microlyte® SAM™
Antimicrobial Technology

Microlyte® PainGuard™
Synthetic Antimicrobial Matrix with Lidocaine

BIOENGINEERED WOUND PRODUCT

APIS®
A Bioengineered Wound Product

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™

Amniotic Membrane Allograft

*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-v3

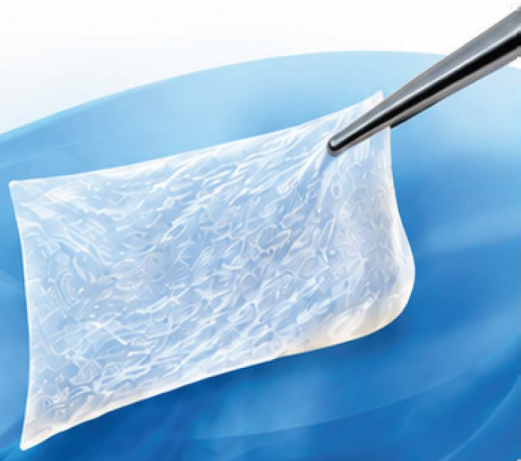
WOUND BIOLOGIXS | BIOLAB HOLDINGS

Membrane Wrap™

Dual-Layer Amniotic Membrane

AVAILABLE SIZES

Size	SKU	Wound Coverage
1 x 1	MW0101	1 cm²
2 x 2	MW0202	4 cm²
2 x 3	MW0203	6 cm²
4 x 4	MW0404	16 cm²
4 x 6	MW0406	24 cm²
4 x 8	MW0408	32 cm²
6 x 8	MW0608	48 cm²
10 x 10	MW1010	100 cm²



NATURAL POTENTIAL.
REAL PROGRESS.

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.

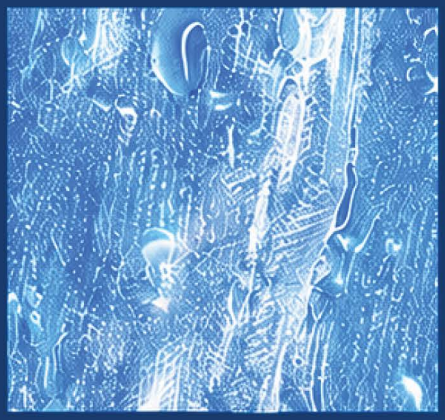
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WOUND BIOLOGIXS

Advanced hydration for complex 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.

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



Membrane Wrap - Hydro™

Amniotic Membrane Allograft

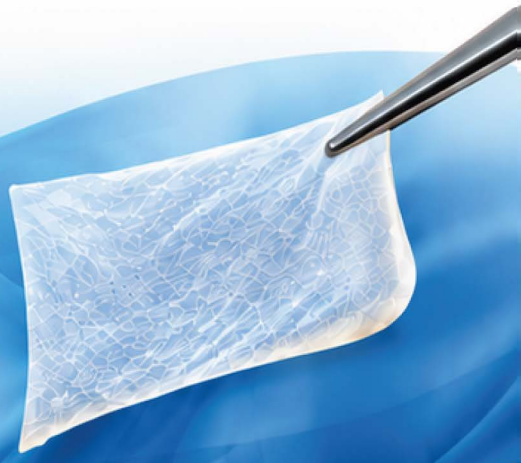
WOUND BIOLOGIXS | BIOLAB HOLDINGS

Membrane Wrap - Hydro™

Dual-Layer Amniotic Membrane

AVAILABLE SIZES

Size	SKU	Wound Coverage
1 x 1	HM0101	1 cm^2
2 x 2	HM0202	4 cm^2
2 x 3	HM0203	6 cm^2
4 x 4	HM0404	16 cm^2
4 x 6	HM0406	24 cm^2
4 x 8	HM0408	32 cm^2
6 x 8	HM0608	48 cm^2
10 x 10	HM1010	100 cm^2



NATURAL POTENTIAL.
REAL PROGRESS.

*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.

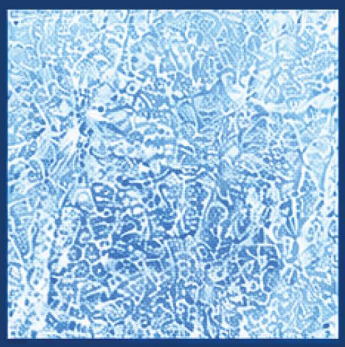
PRO-1026-US-EN-v3

WOUND BIOLOGIXS

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-1043-US-EN-v2

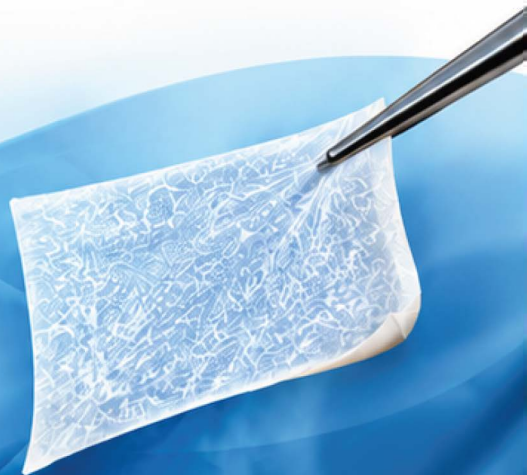
WOUND BIOLOGIXS | BIOLAB HOLDINGS

Tri-Membrane Wrap™

Triple-Layer Amniotic Membrane

AVAILABLE SIZES

Size	SKU	Wound Coverage
1 x 1	TM0101	1 cm²
2 x 2	TM0202	4 cm²
2 x 3	TM0203	6 cm²
4 x 4	TM0404	16 cm²
4 x 6	TM0406	24 cm²
4 x 8	TM0408	32 cm²
6 x 8	TM0608	48 cm²
10 x 10	TM1010	100 cm²



NATURAL POTENTIAL.
REAL PROGRESS.

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-1043-US-EN-v2

WOUND BIOLOGIXS

Protect Wounds with SAM™

SAM™ Antimicrobial Technology is advancing the science of skin regeneration as the ONE and ONLY matrix on the market that is fully synthetic, antimicrobial, and biocompatible.

Indicated for the treatment of chronic, acute, burn and surgical wounds

SAM™ - the revolutionary platform technology behind Microlyte® - designed to support wound healing by immediately conforming to the micro-crevices of the wound bed, and allowing for cellular growth while sustaining a consistent reduction in microbial burden.





Microlyte®

NEXT GENERATION ANTIMICROBIAL MATRIX

- ANTIMICROBIAL PROTECTION
- BIOCOMPATIBLE MATRIX
- SUPPORTS WOUND HEALING
- FULLY SYNTHETIC TECHNOLOGY

POWERED BY Imbed BIOSCIENCES

WOUND BIOLOGIXS

SAM™ CORE TECHNOLOGY — IN ACTION

1. Fully synthetic ultra-thin, porous matrix made of bioresorbable polymers and designed to mimic human ECM1-3
2. Conforms to the micro-textures of the wound bed1,2 with full transparency
3. Rapidly transforms into a biocompatible, cytophilic, nonpyrogenic soft matrix upon contact with wound fluid, to create a moist wound-healing environment1-3 — called the SAM™ Scaffolding Effect
4. Antimicrobial, containing ionic and metallic silver at a low, non-toxic level, providing 99.99% reduction in microbial burden†4
5. Microlyte® SAM™ can be used at onset of wound treatment or in surgery, including in conjunction with other wound management technologies and solutions

PROVEN OUTCOMES

In two peer-reviewed, published studies, Microlyte® SAM™ enabled closure of previously stalled chronic wounds and reduced surgical site infections (SSIs), respectively.

0% **SSI rate** vs. historical 13% expected SSI rate in this population

91% of wounds **healed completely or improved significantly** within 12 weeks

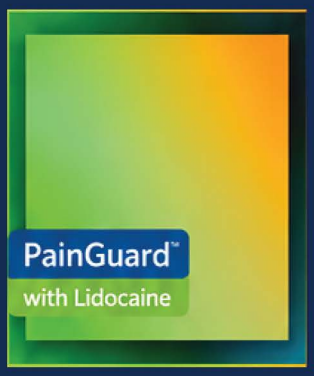
100% **heal rate** of per-protocol population in an average of 21 days*

73% **average wound area reduction** within 12 weeks

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.[1],[2]† The matrix also releases a uniform, unit-dose of lidocaine HCl, providing simultaneous pain relief.[2]

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



Microlyte® PainGuard™ with Lidocaine
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 silverimpregnated 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.

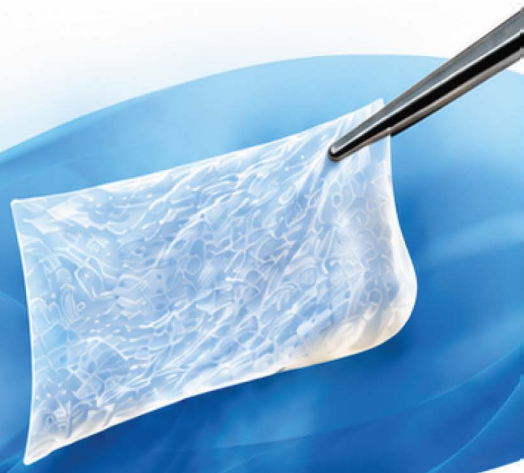
† As demonstrated in vitro PRO-1041-US-EN-v2

Microlyte® PainGuard™ with Lidocaine
Synthetic Antimicrobial Matrix

A2040

AVAILABLE SIZES

Size cm²	SKU	Wound Coverage	Total lidocaine quantit per piece (mg)
3 x 3	I-MLPG0303	9 cm²	3.6 mg
5 x 5	I-MLPG0505	25 cm²	10 mg
10 x 10	I-MLPG1010	100 cm²	40 mg



NATURAL POTENTIAL.
REAL PROGRESS.

POWERED BY
Imbed BIOSCIENCES

WOUND BIOLOGIXS

APIS® by sweetbio®

A Bioengineered Wound Product

Known ingredients, proven independently, powerful together.

Made with an intentional synthesis of trusted materials, APIS® 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[1–4]

Uniquely engineered for use throughout the full healing cascade

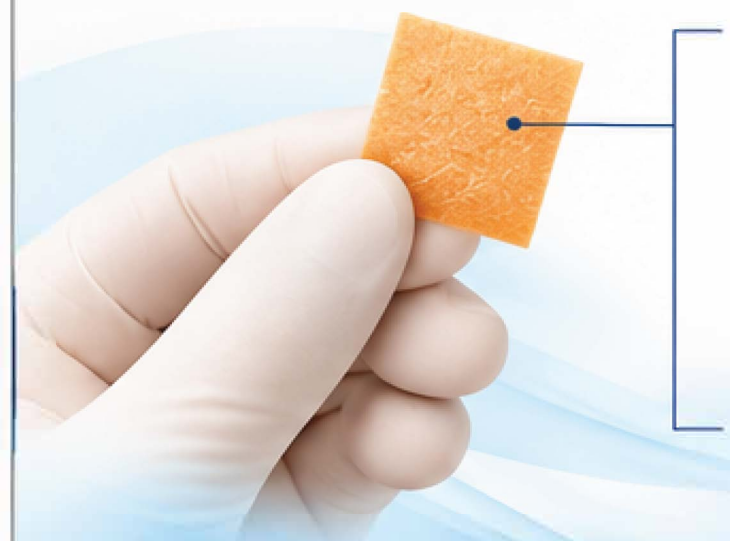
Proven to support wound closure across the early stages of bacteria and inflammation to the late stages of proliferation and remodeling[5–7]

Next level convenience

Supplied in an all-in-one sheet, APIS® 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®



Collagen Derivative + Manuka Honey + Hydroxyapatite Like Never Before

- 4-8 week wound closure [1-3]
- Lower pain reported [4*]
- 99.99% bacteria reduction in 24 hours [5*]
- Inflammation reduction [6,7*]
- Growth factor release [6,7*]



NATURAL POTENTIAL. REAL PROGRESS.

APIS® by sweetbio®

WOUND BIOLOGIXS

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[8]



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

Manuka Honey[9]



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

Hydroxyapatite[10]



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."

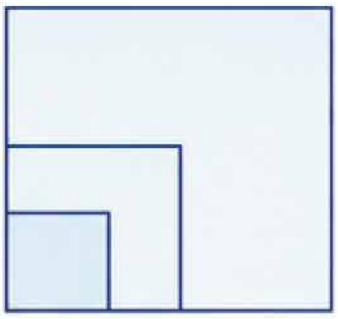
– PATIENT FROM THIS CASE

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



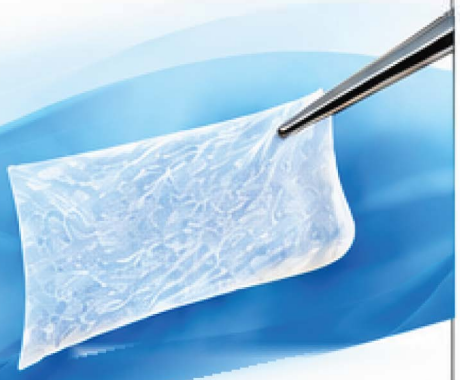
APIS-16x16-2
1.6 x 1.6cm
APIS-25x25-2
2.5 x 2.5cm
APIS-50x50-2
5.0 x 5.0cm
Coming soon in 6.0 x 8.0cm

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. Seil 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.

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