DermaMatrix Acellular Dermis. Comparative testing.

Natural, like native tissue
Minimally processed
Strong and flexible
**Unique process**

DermaMatrix has unique processing that does not impact human skin properties.

DermaMatrix
- High concentration sodium chloride
- Non-ionic detergent
- Peracetic acid

Other matrices
- Acetone
- Gamma irradiation
- E-beam sterilization

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**Enzyme degradation and crosslinking: DermaMatrix is most similar to unprocessed human tissue.**

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![Graph showing peptide released per unit mass (mg/ml/g) for different matrices: Unprocessed, DermaMatrix, AlloDerm, Strattice firm, Strattice pliable, AlloMax. The graph indicates that DermaMatrix is most similar to unprocessed human tissue.](image-url)
Matrix that is closest to natural human tissue

DermaMatrix retains the architectural elements of human unprocessed skin, allowing natural healing.²,³

Minimal processing of DermaMatrix maintains the natural characteristics of collagen.⁴

Collagen proteins separated by molecular weight through sodium dodecyl sulfate polyacrylamide gel electrophoresis (SDS-PAGE). Smaller, degraded proteins migrate lower in the gel, whereas larger, crosslinked proteins remain higher in the gel. Collagen in DermaMatrix is similar to unprocessed human skin.
**Innovative: Strong and Flexible**

DermaMatrix has the greatest tensile strength of all leading matrices.\(^5\)

DermaMatrix stands out with natural memory to resist excessive stretching.\(^5\)

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**Tensile strength**

\(\text{MPa}\)

*\(\text{P} < 0.05\)*

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**Modulus of elasticity**

\(\text{MPa}\)

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Images and charts based on preclinical data, unless otherwise stated.
**Integration with native tissue**

DermaMatrix has natural components and architecture that support cellular infiltration and revascularization.

Hyaluronan is present in all living organisms and provides matrix structure, osmotic balance and assists with cell migration and differentiation. Vitronectin, an adhesive glycoprotein, binds to collagen and promotes cell attachment, proliferation and differentiation. Both hyaluronan and vitronectin are found in DermaMatrix.²

Immunohistochemical staining using Alcian Blue/PAS shows the presence of hyaluronan in DermaMatrix as indicated by indigo staining.

Immunohistochemical staining shows vitronectin in DermaMatrix as indicated by brown staining. Histology courtesy of Premier Laboratory, LLC.

DermaMatrix shows healthy revascularization after 8 weeks, without adhesions to internal organs.⁶

Immunohistochemical staining shows the presence of vitronectin in DermaMatrix as indicated by brown staining. Histology courtesy of Premier Laboratory, LLC.

Clinical evidence of DermaMatrix integration.

DermaMatrix is visibly (40X magnification) populated with fibroblasts, indicating integration of the dermal matrix into soft tissues. Numerous red blood cells are also apparent in blood vessels within DermaMatrix, demonstrating neovascularization.

Image courtesy of Dr. John Y.S. Kim.

Three months after placement in patient.

Rabbit abdominal wall
DermaMatrix outperforms Strattice in preclinical study.6

Hernia tissue graft success

Preclinical studies indicate a 100% hernia graft success rate for DermaMatrix. However, 50% of Strattice grafts resorbed or thinned, resulting in hernia defect or recurrence.6

Proven performance
DermaMatrix shows 3X greater tissue ingrowth than Strattice in preclinical study.6

* Preclinical studies performed in a rabbit model and not necessarily indicative of clinical results.
DermaMatrix is available through the Musculoskeletal Transplant Foundation (MTF).

- MTF adheres to quality and safety standards developed by leading physicians, transplant surgeons, and specialists in the fields of science and medicine
- Donor screening criteria are among the most stringent of any tissue bank
- MTF meets and exceeds the standards and regulations of the American Association of Tissue Banks (AATB) and the Food and Drug Administration (FDA)

References

Other Clinical and Preclinical References


Synthes has partnered exclusively with the Musculoskeletal Transplant Foundation (MTF) for over 10 years to provide high quality tissue for patients. Although there are national standards for tissue banks, they only set a baseline for the industry. Beyond that, regulations leave a lot to interpretation, so standards vary significantly from tissue bank to tissue bank. MTF offers safe allografts processed from among the most carefully selected donors.

**Directed by Surgeons**
MTF utilizes a Medical Board of Trustees comprised of more than forty surgeons from world-renowned academic institutions. MTF’s board sets standards, which are among some of the most stringent in the industry.

**Selecting the Ideal Donor**
MTF’s extensive network of participating organ procurement organizations ensures that MTF has access to a broad selection of qualified donors. MTF holds itself to stringent standards for donor selection and processing criteria. MTF defers more donors than they accept.

**Preserving and Protecting Tissue Integrity**
MTF’s approach ensures a high level of safety, without compromising biological and mechanical integrity. MTF has developed and validated several tissue cleaning technologies to provide safe and high quality allograft. Since MTF’s inception, MTF has maintained an exemplary safety record distributing almost 5.1 million allografts from over 91,000 donors.
### DermaMatrix

<table>
<thead>
<tr>
<th>Tissue Code</th>
<th>Description</th>
<th>Thickness</th>
<th>Tissue Code</th>
<th>Description</th>
<th>Thickness</th>
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**Tissue Code** refers to the unique identifier for each product size and thickness combination.

**Description** specifies the size of the product.

**Thickness** indicates the range of thickness for each product.

**Breast Kits** refer to products designed for breast applications, available in both Ultra Thin and Ultra Thick categories.