ParaDerm™ Dermal Matrix

ParaDerm™ is a minimally manipulated, patent pending, biocompatible graft that supports cellular attachment and infiltration.

Key Features

- Retention of crucial extracellular matrix proteins
- Reduction or elimination of nucleic acids
- Preservation of natural collagen matrix
- Preservation of native vascular channels
- Biocompatibility with multiple types of cells:
  - MSC’s (MIAMI cells)
  - Fibroblasts
  - Chondrocytes

ParaDerm™ is produced using a highly technical process that reduces native nucleic acids, cells, and other antigenic material while preserving the collagen matrix with vascular channels. The extracellular matrix promotes cellular infiltration, attachment, and proliferation.

The unique processing technique preserves the collagen and elastic tissue fibers while maintaining the open channels through which mesenchymal cells can migrate, proliferate, and form new blood vessels. This biologic process is crucial to the integration and remodeling of the allograft by host cells.

ParaDerm™ is a biocompatible collagen matrix that promotes cellular infiltration and proliferation.
NORMAL SKIN

The outer covering of the epidermis is composed mainly of keratinocytes arranged in stratum corneum, stratum granulosum, and stratum spinosum. The epidermis rests on the basement membrane, which is penetrated by epidermal appendages. The inner surface of the epidermis is not smooth, but composed of epidermal papillae. Below the basement membrane is the dermis, a layer of dense collagenous fibroconnective tissue intermixed with elastic fibers. The dermis is penetrated by blood and lymphatic vessels and nerve endings. In addition to epidermal appendages (sweat glands, hair follicles, sebaceous glands), the dermis contains mast cells, lymphocytes, and macrophages. Elastic fibers in the dermis are essential for maintaining the biomechanical properties of the skin.

PARADERM PREPARATION

The epidermis from the skin surface as well as that from the skin appendages has been removed. Cellular elements have also been removed from the dermis. The dermal matrix is composed of collagen strands. The basement membrane and blood vessel channels are preserved, which allows for rapid revascularization. Multiple studies demonstrate that angiogenesis is critical in wound healing.
**BIOCOMPATIBILITY**

Cellular infiltration and attachment are important for demonstrating biologic potential for connective tissue host cell ingrowth into allograft matrices.

Fibrosarcoma L929 cells are a mouse fibrosarcoma cell line used for testing the biocompatibility of allograft matrices. Biocompatibility of these cells with an allograft matrix is an ISO requirement.

ParaDerm preparations incubated in cell culture vessels with fibrosarcoma L929 cells showed these cells attaching to and infiltrating the ParaDerm Matrix at day 5.

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**SAFETY & QUALITY**

The University of Miami Tissue Bank was established in 1970 and has provided safe and effective musculoskeletal and skin allografts for transplantation without interruption or significant incident since its inception.

Extraordinary efforts are used to ensure aseptic procurement and processing to protect the biologic integrity of the graft.

Allograft tissue is treated in such a way as to assure biocompatibility with the host, as well as their biomechanical integrity.
INDICATION FOR USE

1. Integumentary Augmentation

To orient the graft with the basement membrane facing up, the notch must be in the upper left hand corner of the graft (see figure to the right).

ORDERING INFORMATION

Please contact Paragon 28™ Customer Service
Phone: 1-888-728-1888
Email: info@paragon28.com

<table>
<thead>
<tr>
<th>Product #</th>
<th>Description</th>
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<tbody>
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<td>PDMW-4X4</td>
<td>4cm x 4cm Dermal Matrix</td>
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<tr>
<td>PDMW-4X8</td>
<td>4cm x 8cm Dermal Matrix</td>
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REFERENCES


