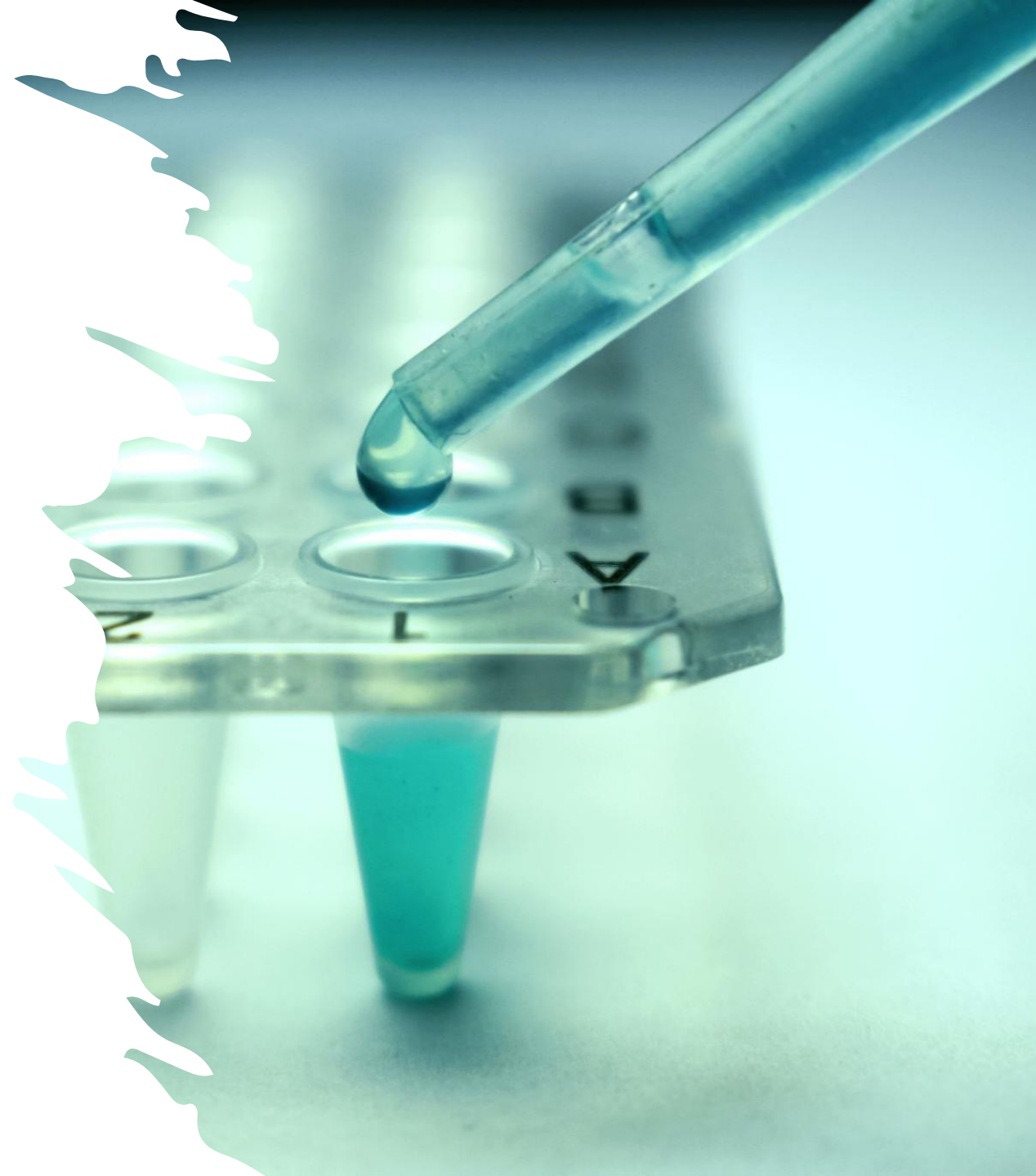


**A Comprehensive
Competitive Analysis
of Matriderm in the
Medical Device
Industry
By : Abhijeet
Prajapati**



Introduction

Dermal substitutes are essentially artificial skin used to replace damaged or missing dermis, the middle layer of your skin. They provide a scaffold or support structure for your body's own cells to grow into and regenerate new, healthy tissue. There are several different types of dermal substitutes, each with their own advantages and disadvantages. Here are a few of the most common:

- **Acellular dermal matrix (ADM):** This type of substitute is made from collagen, a protein that provides structure and support to your skin. The collagen can be derived from animals (such as cows or pigs) or humans. ADMs are typically used to treat large or deep wounds that would not heal on their own. Examples of ADMs include AlloDerm, Integra, and Matrigel.
- **Bioengineered skin substitutes:** These substitutes are made from living cells, such as fibroblasts (cells that make collagen) or keratinocytes (cells that make up the outer layer of your skin). Bioengineered skin substitutes can be used to create new skin tissue, or to improve the quality of existing scar tissue.
- **Skin allografts:** These are grafts of skin taken from a human donor. They are typically used to treat large burns or other injuries that involve a loss of a significant amount of skin.



BIOLOGICAL SKIN SUBSTITUTES MARKET

GLOBAL STATISTICS

Market Size (2022)

\$287 MN

CAGR (2023-2032)

8.4%

Market Size (2032)

\$640 MN

>59%

Acute Wounds Segment
Market Share (2022)

>\$328 MN

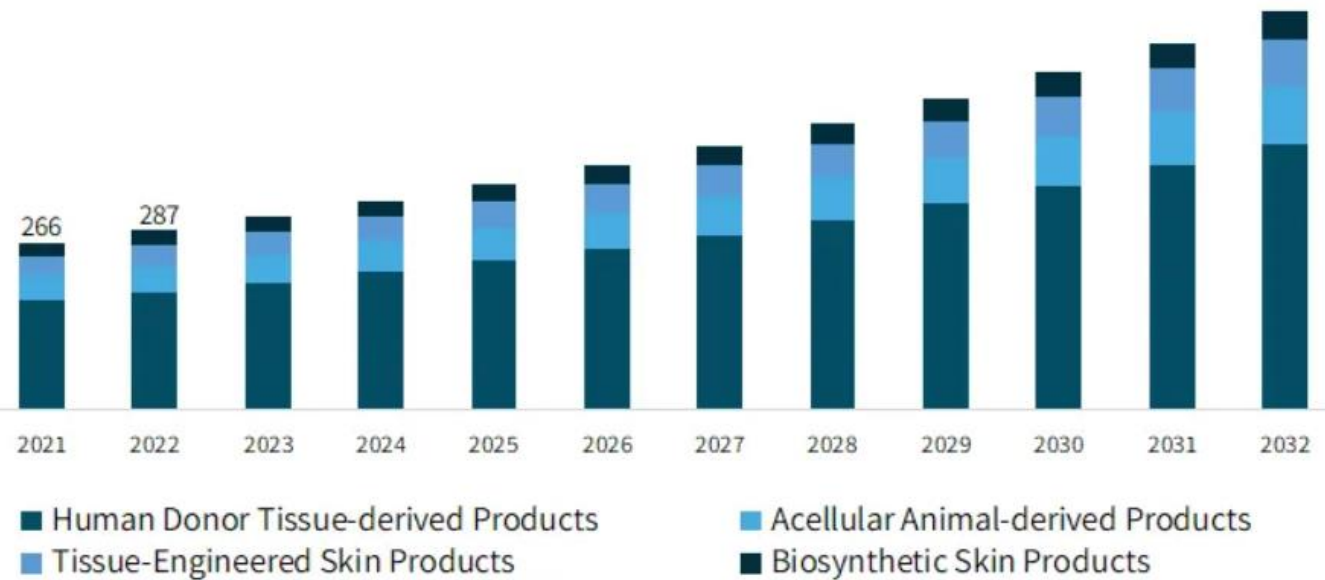
Regenerative Medicine
Market
Market Size (2032)



Skin Substitute Market Size

Skin Substitute Market Growth

Biological Skin Substitutes Market Size, By Type, 2021 - 2032 (USD Million)



Source: www.gminsights.com



Aim:

To comprehensively analyse Matriderm's competitive landscape within the medical device industry, identifying factors that will catalyse their success.

Objectives:

- To Analyse attributes the Product (Matriderm)
 - To analyse industry trends and emerging technologies in dermal substitutes.
 - To assess Matriderm's current strengths, weaknesses, opportunities, and threats (SWOT analysis) within the competitive environment.
 - To identify and evaluate strategic options available to Matriderm for achieving a sustainable competitive advantage.
 - To develop actionable recommendations for Matriderm to capitalize on their strengths, mitigate weaknesses, exploit opportunities, and neutralize threats in the market.
- 

METHODOLOGY

METHODOLOGY

- The methodology for this competitive analysis of Matriderm involves a systematic approach to gather, analyze, and interpret data which include **Correlation research and Comparative Study**.
- Tools include: **Interviews, group discussion, Observation, case studies**.
- A comprehensive review of existing literature, including academic journals, industry reports, and market analysis publications

Sources:

- Peer-reviewed journals
- Industry reports
- Market analysis publications
- Data Collection: Targeted 50 Doctors to collect **Primary data**. Data was collected from multiple sources to ensure a robust and comprehensive analysis.
- Random sampling, is used to accomplish this. This approach minimizes selection bias by giving each doctor in the hospital population an equal chance of being chosen for the study.

Primary Data:

- Interviews with key stakeholders such as healthcare professionals, researchers, and industry experts.
- Surveys distributed to users of dermal substitutes, including plastic surgeons, dermatologists, and burn specialists.

Secondary Data:

- Market research reports from leading market research firms.
- Online databases such as PubMed, ScienceDirect, and Google Scholar.

Competitive Analysis Framework

- The framework includes SWOT Analysis





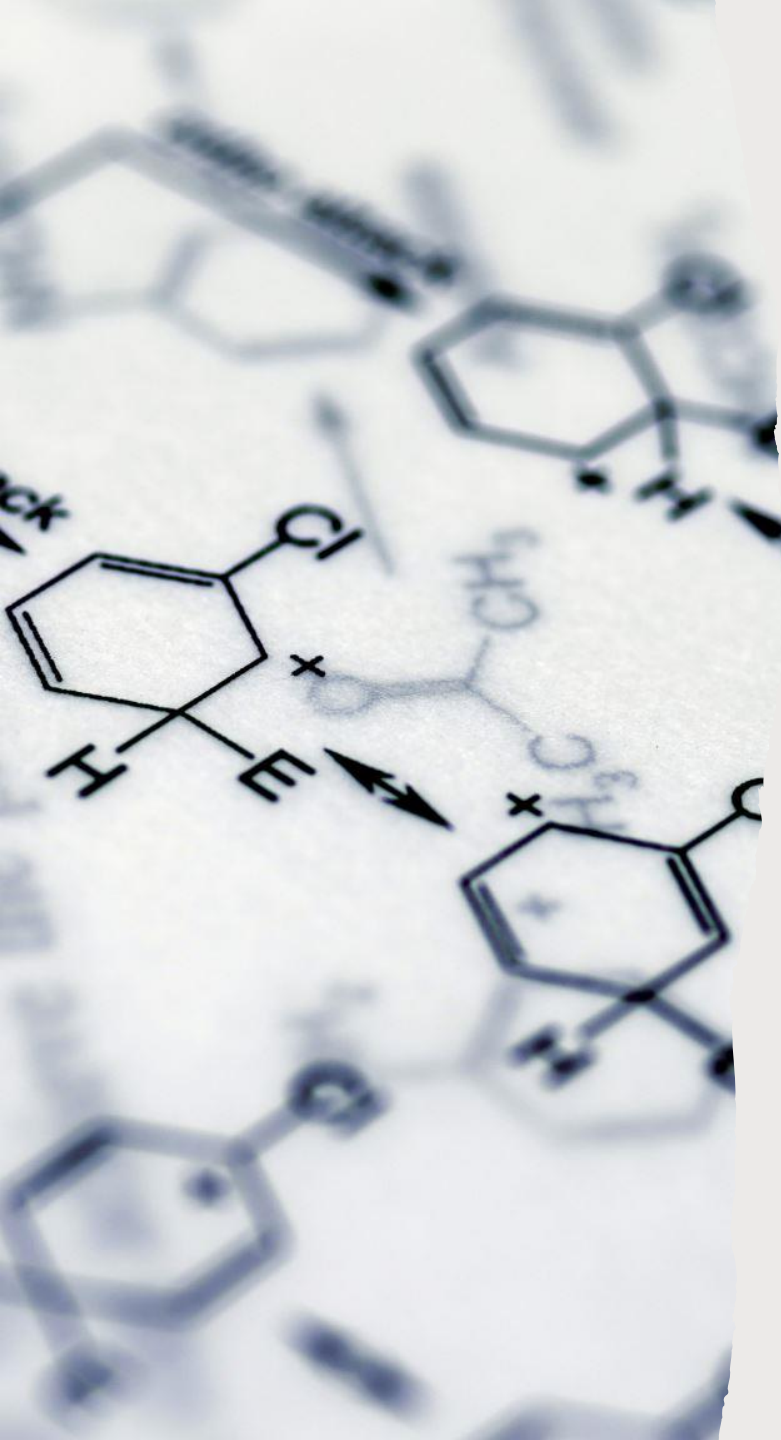
Research Questions

Product

- How does Matriderm's material composition (bovine collagen and elastin) compare to competitor products in terms of wound healing efficacy?
- Does Matriderm's three-dimensional structure offer advantages in cell migration and tissue formation compared to competitor products' structures?
- What variety of sizes does Matriderm offer, and how does this size range compare to competitor offerings, impacting treatment flexibility?

Clinical Performance:

- Are there published clinical trials comparing the effectiveness of Matriderm in wound healing with competitor products?
- If so, what are the key findings regarding wound closure rates, healing times, and patient outcomes?
- Are there studies investigating potential side effects or complications associated with Matriderm compared to competitor products?



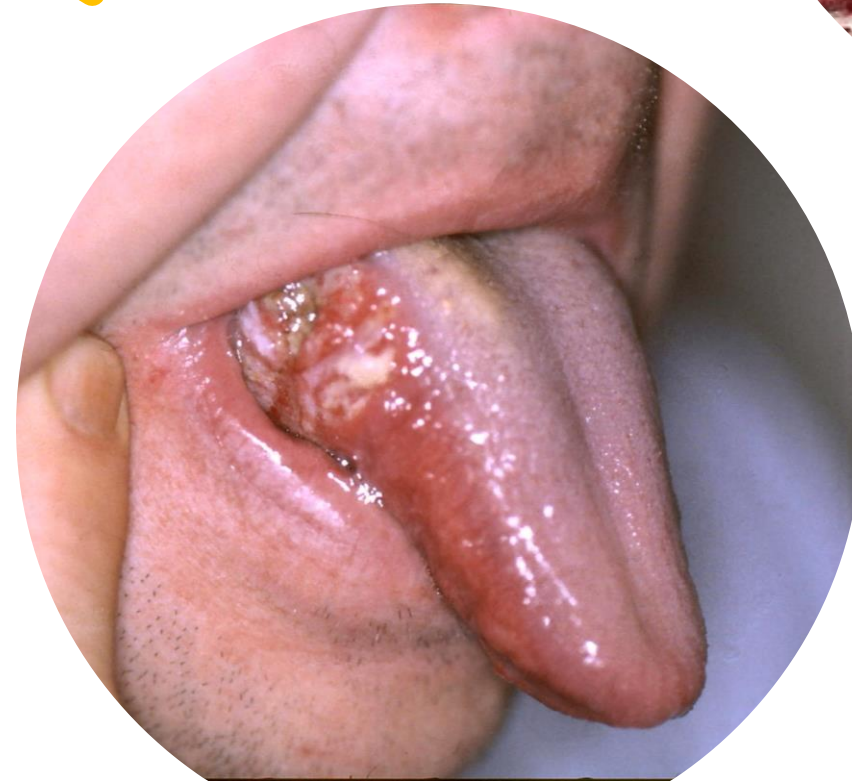
Product

1. Collagen and elastin helps to reduce scarring and improve flexibility and pliability.
2. Matriderm offer cell Migration, elongation and proliferation. Reduce tissue scarring , improve flexibility
3. Sizes for Matriderm are A8,A9,A6,A4- with thickness of 1,2 and 3mm, while other have only 2 size in market

Clinical Performance

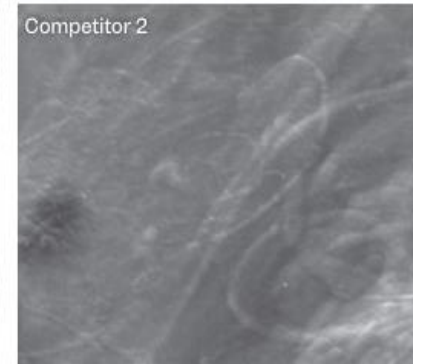
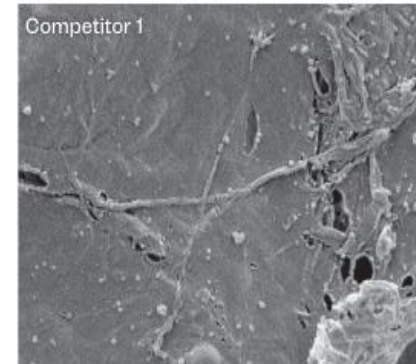
1. There are more than 200+ publication
2. Healing time is almost half compared with competitor and quality of wound improves around 25 % more than competitors. Moreover wound can be closed within a week after application.
3. No side effect of Matriderm is found yet

- Matriderm is a open porous dermal matrix with a unique combination of native collagen and elastin with no chemical cross linking.
- It serves as dermal substitute in full thickness wounds, condition like burns, trauma, chronic wound, cancer excision, adhesion barrier
- It reduce scarring, limits myofibroblast formation,improve re-vascularization and reduce time of healing.
- It enhance cell migration ,elongation and proliferation.



Product Differentiation

- It mimics the human dermis by 97 %
- Can be used in single step process
- Takes 3 to 6 weeks for resorbed
- Don't have to wait for long period for grafting
- It integrated in less than one week



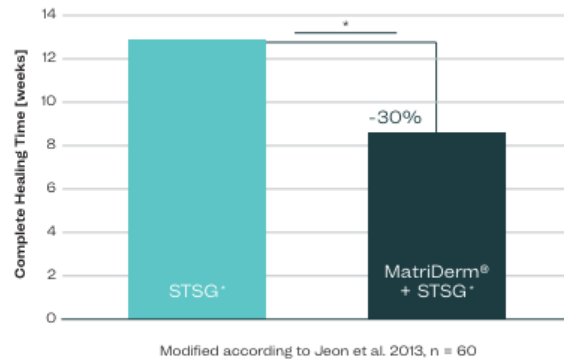
Trends and Technology

- Dermal Substitute market is growing with around 8% CAGR. There are different category of substitute available in market.
- Acellular dermal matrix (ADM)- Safest
- Bioengineered skin substitutes- Less effective
- Skin allografts - Chances of graft rejection
- Current trend- Scientist are trying to grow human cells on these dermal matrix Eg: (Advance Cell, Noida)

Corelation Between Matriderm and STSG

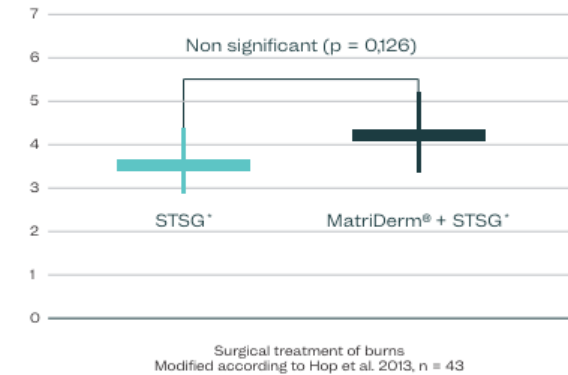
Fast

Shorter healing period with Matriderm®



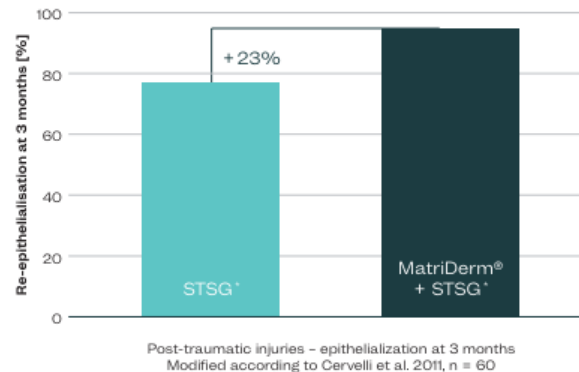
Cost effective

Total surgical treatment costs don't differ significantly from STSG*



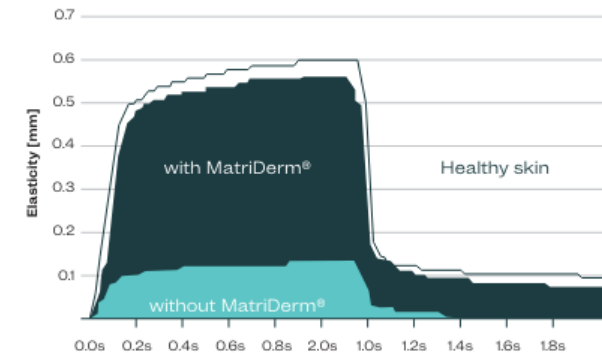
Effective

Improved efficacy with Matriderm®

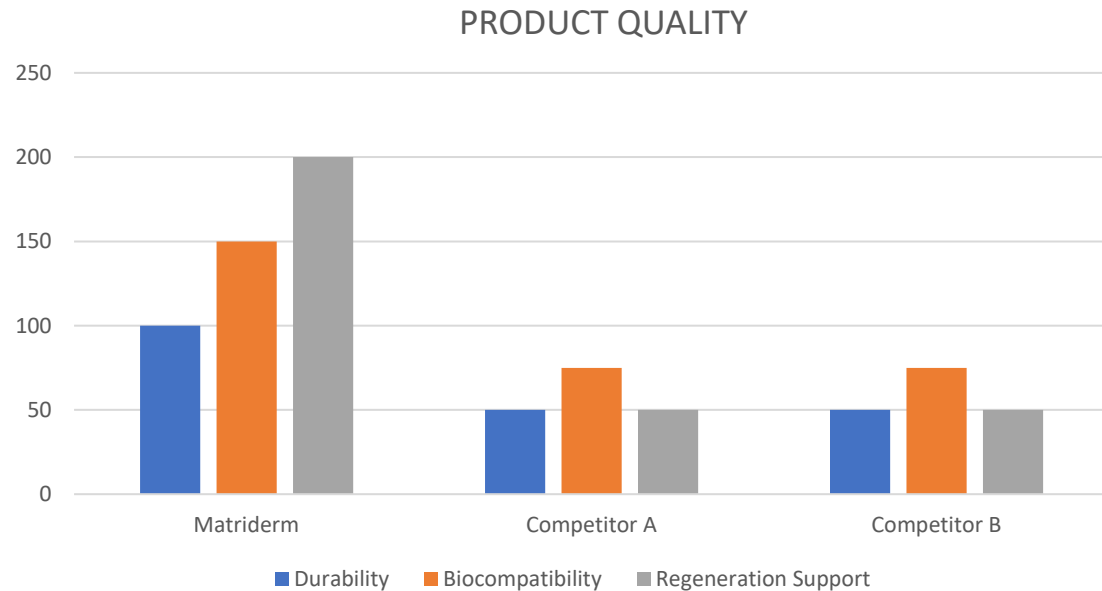


Skin elasticity

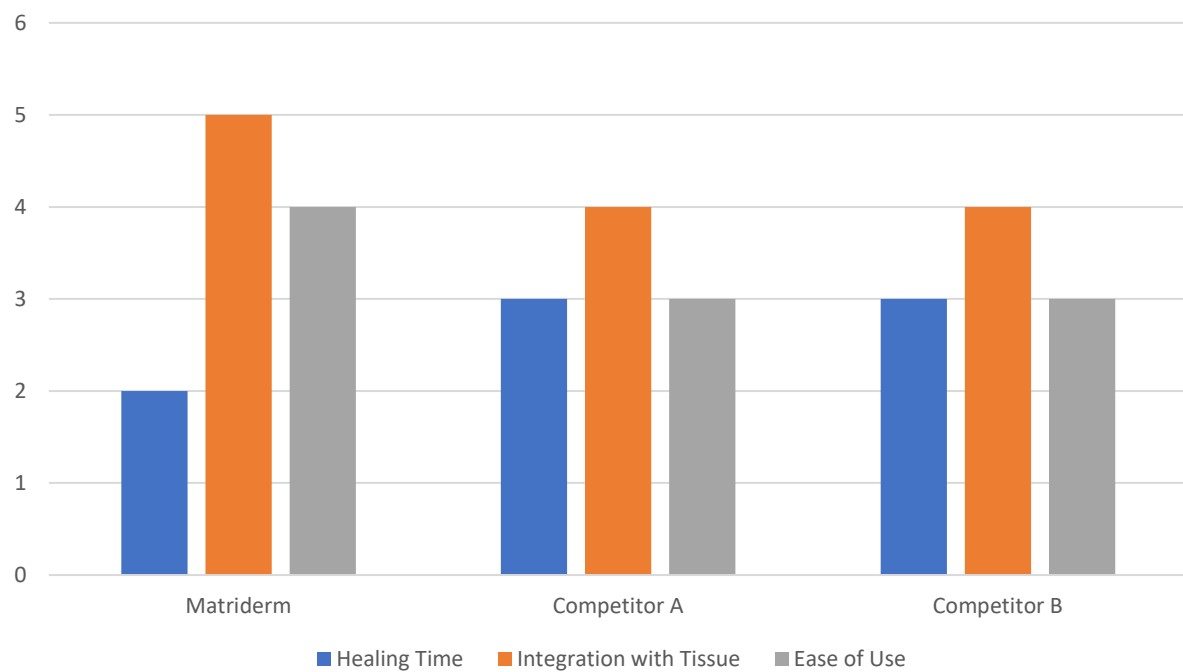
Improved skin elasticity (close to healthy skin) - determination via Cutometer® measurement



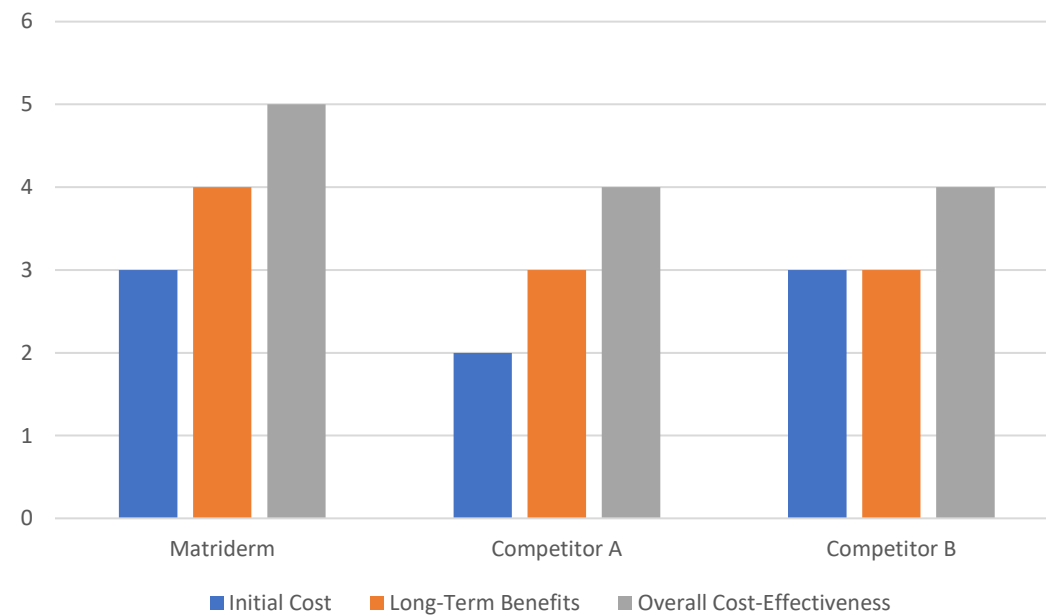
Comparative Study with Close Competitor



PRODUCT EFFICIENCY



PRICE-BENEFIT RATIO



SWOT

Strengths:

- **Proven Efficacy**: Matriderm has a strong track record of effective outcomes
- **Biocompatibility**: well-known for its biocompatibility, reducing the risk of rejection and complications.
- **Versatility**: It can be used in a variety of medical fields,
- **Ease of Use**: can be used in single step.
- **Strong Research Backing**: Numerous studies and clinical trials support the efficacy and safety of Matriderm.

Weaknesses:

- **Cost**: Matriderm may be more expensive compared to alternative treatments, which can limit its use in cost-sensitive markets.
- **Availability**: Limited distribution channels may affect its availability in certain regions.
- **Training Requirements**: Proper application requires specialized training, which might be a barrier for some practitioners.

Threats:

- **Competition**: The presence of other advanced wound care products and treatments poses a significant threat.
- **Regulatory Hurdles**: Navigating the complex and varying regulatory landscapes across different regions can be challenging and costly.
- **Economic Factors**: Economic downturns can affect healthcare spending, impacting the demand for premium medical products.

Opportunities:

- **Expanding Indications**: Research and development can lead to new indications for use, broadening the market.
- **Geographic Expansion**: Entering new markets, particularly in emerging economies, could significantly boost sales.
- **Technological Advancements**: Incorporating advanced materials or methods could enhance the product's performance and appeal.

Strategic Options

- **Product Innovation:** High potential for long-term advantage but requires significant R&D investment.
- **Market Expansion:** Offers potential for immediate growth but success hinges on effective entry strategies.
- **Cost Leadership:** Improves profitability but requires careful management to maintain quality.
- **Brand Differentiation:** Builds long-term brand loyalty but requires ongoing investment in data and marketing.

Actionable Recommendations



Capitalizing on Strengths:

Leverage Innovation: Invest in R&D to maintain technological leadership

Enhance Brand Marketing: Success stories, Samples, Elegant product brochures



Mitigating Weaknesses:

Cost Management: Implement lean manufacturing practices and negotiate better terms with suppliers to reduce production costs.

Expand Geographic Reach: Invest in market research and develop strategic entry plans for underpenetrated regions, focusing on partnerships with local distributors.

Regulatory Strategy: Strengthen the regulatory affairs team to streamline approval processes and maintain compliance across all operating regions.



Exploiting Opportunities:

Market Penetration: Launch tailored marketing and educational initiatives in emerging markets to build awareness and drive adoption of Matriderm.

Adopt New Technologies: Explore and integrate new biomaterials and regenerative medicine technologies into the product line to enhance performance and expand applications.

Form Strategic Alliances: Partner with hospitals, research institutions, and healthcare providers to drive clinical research and gain market insights.



Neutralizing Threats:

Competitive Analysis: Continuously monitor competitor activities and market trends to adapt strategies and maintain a competitive edge.

Economic Resilience: Develop flexible pricing strategies and explore cost-effective product variations to cater to budget-constrained markets.

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