**FEATURE**

100% Modified Collagen

**BENEFITS**

Provided with a portion of very quickly soluble short chain polypeptides creating an excellent environment for the proliferation of cellular growth.

- **100% Modified Collagen**
  - Stimulen™ powder is 100% modified collagens. Stimulen™ is prepared from collagen with greater than 90% collagen content of Type I. Type I collagen is the most abundant type in the human body.

- **Pain Reduction**
  - Stimulen™ becomes a gelatinous mass as it comes in contact with exudate, which provides a protective growth medium.

- **Wound Filler**
  - SADMERC has assigned Stimulen™ to the HCPC code A6010 Collagen-Based Wound Filler, dry form per gram of collagen.

- **No Special Handling Required**
  - Can be stored at room temperature

- **Carefully Controlled Manufacturing**
  - Each component of Stimulen™ is manufactured under specified, carefully controlled procedures assuring consistent high quality products.

- **Convenient Sterile Packaging**
  - One (1) gram packets for single use, 20 gram bottle for continued use.

- **Cost Effective**
  - Lower cost - per dressing change: Case studies have shown improved outcomes at less cost compared to previous protocols and products on these same wounds.

**PRODUCT INFORMATION**

A hydrolyzed natural collagen powder, Stimulen™ interacts with the wound site as it forms a gel and creates a moist wound healing environment. Collagen is a biological platform for all new cell growth and supplies nutritive protein directly to the wound site. It has been reported that collagen promotes and accelerates cellular regeneration by replicating the natural fibro-connective template and provides mechanical protection against physical and bacterial insult.

**PRODUCT APPLICATION**

Stimulen™ is a sterile product and should be handled as such.

1. Initial application – Debridement of the wound may be needed. Cleanse the wound site with appropriate cleanser.
2. Dry skin surrounding wound site, leaving the wound bed slightly moist. Sprinkle Stimulen™ powder on the wound site. A depth of approximately 1/8” is recommended. Make sure entire wound bed is covered with Stimulen™ powder. Use a non-adherent secondary dressing and secure with tape or appropriate wrap. We recommend Elasto-Gel™, a bacteriostatic, absorbent glycerine-based gel sheet.
3. Maintain a moist, not wet, wound environment.
4. Change the secondary dressing and add Stimulen™ powder daily or as needed. There is no need to remove prior Stimulen™ powder applications.

**ORDERING INFORMATION**

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Description</th>
<th>Quantity</th>
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<tbody>
<tr>
<td>ST9501</td>
<td>1 gram packets</td>
<td>10 packets per box, 10 boxes per case</td>
</tr>
<tr>
<td>ST9515</td>
<td>10 gram bottles</td>
<td>12 bottles per case</td>
</tr>
<tr>
<td>ST9520</td>
<td>20 gram bottles</td>
<td>12 bottles per case</td>
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MOST COMMON WOUND ETIOLOGIES:
Arterial, Venous, Diabetic/Neuropathic, Pressure Ulcers, Surgical and Mixed Disease

KEYS TO GREAT ASSESSMENTS
★ Measure wounds weekly and when there is any significant change
★ Assess the periwound skin
★ Identify necrotic tissue
★ Recognize epibole, tracks, tunnels and undermining
★ Quantify the amount and characteristic of drainage
★ Determine wound location
★ Identify colors in the wound
★ Consider the possibility of foreign bodies
★ Identify any barriers to healing
★ Assess circulation
★ Identify the type and severity of edema
★ Determine the etiology
★ Review the patient’s nutritional status
★ Identify comorbidities
★ Review medical and surgical history; family and social history
★ Assess mobility
★ Clarify patient and/or family goals

Stimulen® Gel and Stimulen® Powder are specific additions to wound care for most wound etiologies. Stimulen® Powder is ideal for wounds with moderate to heavier exudate. It will absorb that moisture and convert to a gel. Stimulen® Gel will lend some moisture to drier wounds. Both products offer the same unique properties for healing those difficult to heal wounds.

PRODUCT APPLICATION

1. Initial application – Debridement of the wound may be needed. Cleanse the wound site with appropriate cleanser.
2. Dry skin surrounding wound site, leaving the wound bed slightly moist. Apply Stimulen® Powder or Gel to the depth of approximately 1/8”. Make sure entire wound bed is covered with Stimulen®. Add a non-adherent secondary dressing and/or appropriate dressings to address certain etiologies. Secure with tape or conforming wrap.
3. Maintain a moist, not wet, wound environment.
4. For clean wounds, change the secondary dressing and apply Stimulen® daily or as needed. There is no need to remove prior Stimulen® applications. For dirty or infected wounds, clean and replace dressings daily or as needed.

NEW TRANSLATIONAL RESEARCH IN WOUND CARE

The Ohio State University Comprehensive Wound Center, led by Dr. Chandan Sen’s research team, studied the use of Modified Collagen Gel (MCG) on both murine and porcine models. The MCG studied is marketed as Stimulen®. This series of research studies significantly contributes to Evidence-based Medicine with direct relevance to clinical practice. Key findings include the following:

- Wounds dressed with a MCG dressing had greater infiltration of inflammatory cells in the early inflammatory phase followed by a timely and efficient resolution of the inflammation.
- The unique properties of MCG are responsible for macrophage efferocytosis that helps switch macrophages from pro-inflammatory (M1) to anti-inflammatory (M2) phenotypes leading to the resolution of wound inflammation. The macrophage is responsible for removing dead/dying cells. During the process of efferocytosis, macrophages actually change from pro-inflammatory to anti-inflammatory cells.

Although the above findings are significant contributions to the science of wound healing, the MOST challenging wounds to heal are those without adequate circulation. The most recently published study, which was featured on the cover of the Wound Healing Society journal, validates accelerated healing in avascular wounds. MCG was applied to ischemic wounds. The following findings reflecting a 21 day healing cascade are as follows:

- At 7 days post-wounding, macrophage recruitment was significantly higher in the MCG treated wounds.
- In vitro, MCG up-regulated expression of Mrc-1 a M2 macrophage marker. Anti-inflammatory cytokines, IL-10 and β-FGF were induced. This demonstrates the change in cell phenotype from inflammatory to reparative.
- At 21 days post-wounding, MCG treated wounds showed an abundance of proliferating endothelial cells that formed mature vascular structures and increased blood flow to the wounds.
- Wounds treated with MCG showed significantly higher fibroblast counts at the critical wound edge tissue. A higher abundance of mature collagen with increased collagen type I:III deposition indicated beneficial scar minimization effects.
- These findings demonstrate that MCG helps mount a more robust inflammatory response which resolves in a timely manner. This is followed by an enhanced proliferative phase, angiogenesis and favorable scar response.

For more information about this ground-breaking research, contact Southwest Technologies, Inc. at www.elastogel.com.

ALL wounds need protein to heal. Collagen provides both the necessary proteins and the structural matrix to support optimal wound healing. Stimulen® Gel and Stimulen® Powder are unique collagen products. These proprietary modified collagen products combine both short and long chain collagen polypeptides in addition to delivering collagen. These polypeptides modify host wound cell behavior to support healing.

Acute wounds will normally heal in a timely, predictable pattern. More serious wounds and chronic wounds fail to heal without the proper wound care interventions. As the above research demonstrates, MCG promotes optimal healing of even the MOST challenging wounds. MCG is ONLY available as Stimulen® Gel and Stimulen® Powder from Southwest Technologies, Inc.