BloodSTOP® iX ADVANCED HEMOSTAT WITH WOUNDHEAL®

REVOLUTIONARY TOTAL WOUND CARE SOLUTIONS

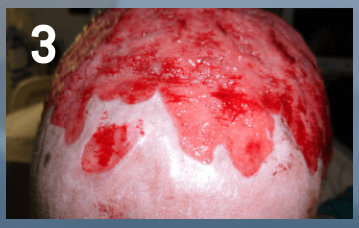
Acute & Chronic Wound Care

4x Faster Wound Healing

BloodSTOP iX treated chronic wounds from skinless genetic disorder

Before

Apply BloodSTOP iX



Tissue growth

Before

Healed

100% natural plant-based eCMC

Power to control bleeding
Power to heal

BloodSTOP® iX ADVANCED HEMOSTAT WITH WOUNDHEAL®

REVOLUTIONARY TOTAL WOUND CARE SOLUTIONS

BloodSTOP® iX Advanced Hemostat with WoundHEAL® is a clinically proven, research-based hemostatic dressing and wound healing matrix that provides rapid hemorrhage control, reducing blood loss. It is an all-natural, plant-based, biocompatible, water soluble, etherified carboxymethyl cellulose (eCMC) matrix that utilizes patented technology to achieve superior hemostasis and fast healing.

Existing wound care products have limitations such as slow hemostasis, causing significant pain, leading to delayed healing, increasing the risk of infections, necessitating multiple procedures, and resulting in discoloration, scarring, and complications related to the wound.

All of these challenges can be effectively addressed with BloodSTOP iX.

100% NATURAL PLANT-BASED

- No animal-derived, foreign human or added chemical materials
- pH neutral, nonexothermic (no heat generated), no irritation upon application and removal

RAPID HEMOSTASIS UNDER A MINUTE[1] (SMALL TO LARGE WOUND)

- Matrix turns into a translucent gel upon contact with blood and exudates, sticks, seals & protects wound without any blood oozing[1]
- No rebleeding and adhesion upon removal of secondary dressing coverage[2,3,4]

4× FASTER WOUND HEALING

- Facilitates proliferation of new skin growth within 7 days in full-thickness burns
- Prevents contamination, reducing risk of infection and inflamation[5,6]

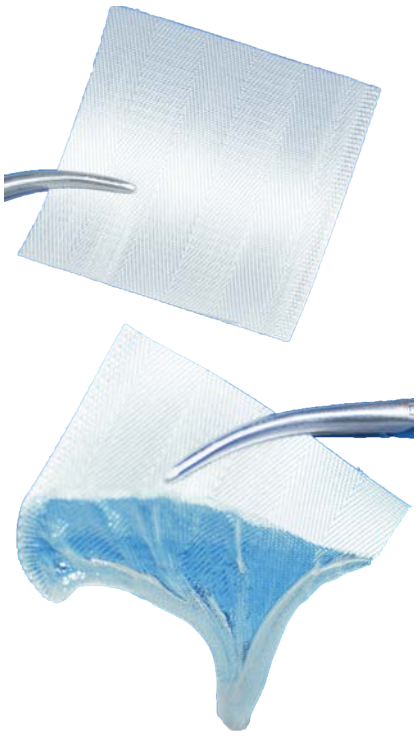
100% ABSORBABLE AND BIODEGRADABLE[2,3]

- Leaves no residue
- Used on patients with blood thinner medications (CE)[2,3]

REMOVES NECROTIC TISSUE

- Water solubility allows easy removal, leaves no residue behind
- Softens, loosens, and removes slough and necrotic debris from the wound bed

CAN BE USED WITH NEGATIVE PRESSURE WOUND THERAPY (NPWT)



Turns into a translucent gel upon contact with blood and exudates, seals the wound and promotes fast healing

BloodSTOP iX addresses the issue of long healing time in wounds such as diabetic foot ulcers, which is one of the reasons for higher risk of amputations. The median time to healing for diabetic foot ulcers without surgery is usually 84 days[7], compared to only 21 days for skin to regenerate after application of BloodSTOP iX (Figure 3, histology report).

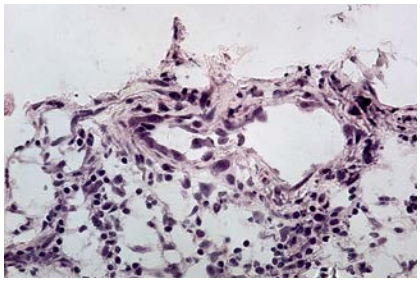


Figure 1. After debridement

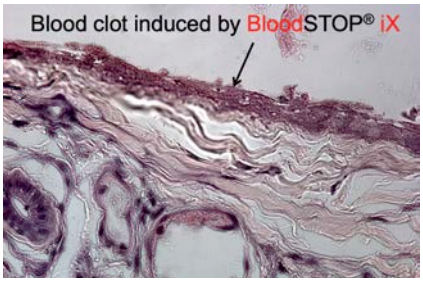


Figure 2. Hemostasis with BloodSTOP iX

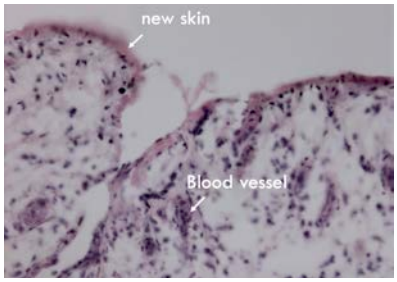


Figure 3. Healing with BloodSTOP iX

Modulation of Growth Factors in Promotion of Angiogenesis and Tissue Regeneration in Burn Injury Model[8]

BloodSTOP iX

- **Modulates endogenous tissue cytokines**
- **Binds to cellular receptors on cell membranes and thereby activating Wnt/Frizzled cellular signaling**

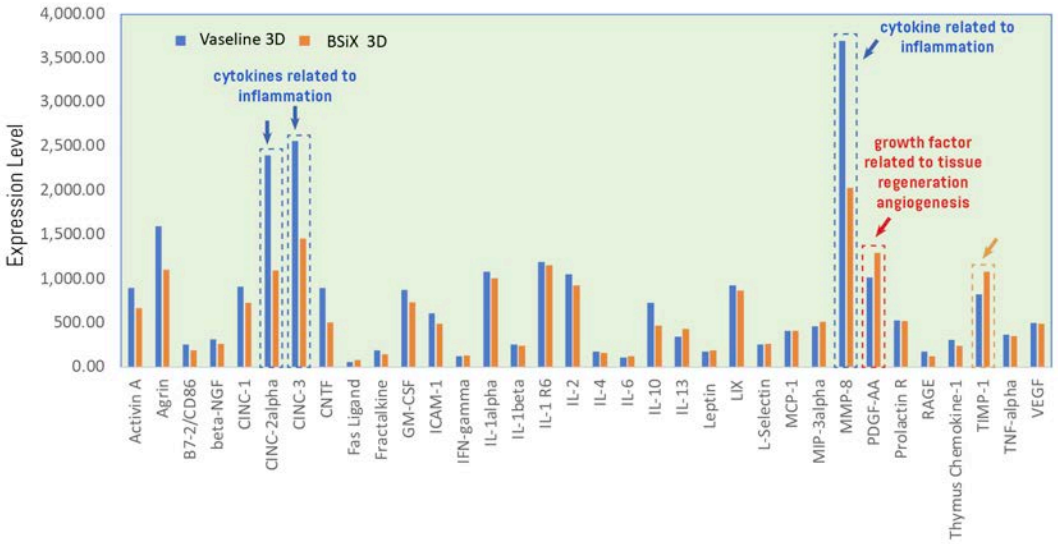
Angiogenesis and Tissue Regeneration ↑

Growth factor PDGF ↑
Growth factor VEGF ↑

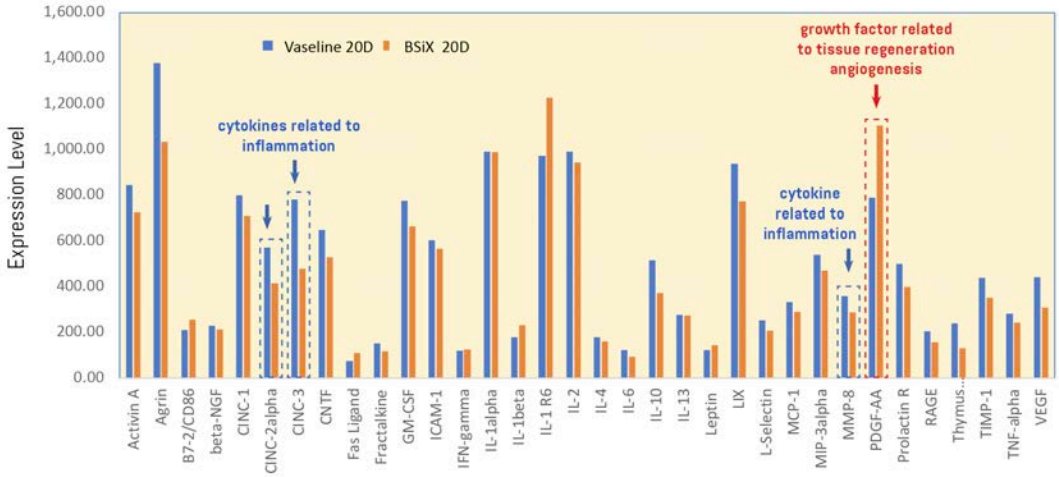
Inflammatory Response ↓

Inflammatory mediator MMP-8 ↓
Inflammatory mediator CINC-1 ↓
Inflammatory mediator CINC-3 ↓

Cytokine array BloodSTOP iX vs Vaseline Gauze (3 Days)



Cytokine array BloodSTOP iX vs Vaseline Gauze (20 Days)



Healing of Chronic Venous Ulcer

A 69 y/o male patient with a history of venous ulcer that failed multiple treatments. For 7 years, the patient had untreatable chronic right lower limb venous stasis that progressed into leg ulceration. Four years ago, the skin ulceration aggravated, and local exudation occurred.

Comorbidities: 20-year history of hypertension, self-administered antihypertensive drug treatment; history of cerebral infarction for more than 10 years, slurred speech

1. Intraoperative debridement photo - Debridement and VSD Coverage (Vacuum sealing drainage: negative pressure with micro hole dressing)

2. Covered with BloodSTOP iX

3a. Seven days after initial application
3b. Continue application of BloodSTOP iX

4. On the 13th day after initial application of BloodSTOP iX, wound surface was epithelialized and covered

Healing of Fragile Skin of Cancer Patient Under Chemo

Before

After

References
[1] Ethox International, Rush, NY, Hemostasis Assessment of BloodSTOP, BloodSTOP iX, GLP-2006-0332, 2006.
[2] Ferretti L, Qiu X, Villalta J, Lin G. Efficacy of BloodSTOP iX, Surgicel, and Gelfoam in Rat Models of Active Bleeding From Partial Nephrectomy and Aortic Needle Injury. *Urology.* 2012;80(5):1161.e1-1161.e6. doi:10.1016/j.urology.2012.06.048
[3] BloodSTOP iX has European Union CE Class III absorbable implant and Class IIb topical wound certification, and for use with anticoagulant medications (blood thinners). BloodSTOP iX currently has US FDA 510(k) clearance for topical wound hemostasis.
[4] Li H, Wang L, Alwaal A et al. Comparison of Topical Hemostatic Agents in a Swine Model of Extremity Arterial Hemorrhage: BloodSTOP iX Battle Matrix vs. QuikClot Combat Gauze. *Int J Mol Sci.* 2016;17(4):545. doi:10.3390/ijms17040545
[5] Peng D, B. Reed-Maldonado A, Banie L, Wang G, Lin G, F Lue T. Carboxymethylcellulose Activates Dermal Cells and Adipose-Derived Stem Cells Through Wnt/β-catenin Pathway. *J Surg Res (Houst).* 2021;04(01). doi:10.26502/jsr.10020117
[6] Ju S, Wang K, Qiao L et al. Application of BloodSTOP iX Wound Heal Nanocellulose Matrix for Burn Wound Care. *J Surg Res (Houst).* 2021;04(01). doi:10.26502/jsr.10020105
[7] Jeffcoate WJ, Vileikyte L, Boyko EJ, Armstrong DG, Boulton AJM. Current Challenges and Opportunities in the Prevention and Management of Diabetic Foot Ulcers. *Diabetes Care.* 2018;41(4):645-652. doi:10.2337/dc17-1836
[8] Poulakidas S, Lin G, F. Lue T. BloodSTOP iX: A hemostatic agent that assists in tissue regeneration. Abstract presented at: The 45th Annual John A. Boswick, M.D. Burn and Wound Healing Symposium; Jan 22, 2023; Maui, HI.

Product Name	Item #	Size	Quantity
BloodSTOP® Hemostatic Matrix	BS-10	2″ × 2″ (5 × 5cm)	20 pc/box
	BS-11	2″ × 4″ (5 × 10cm)	20 pc/box
	BS-12	4″ × 4″ (10 × 10cm)	10 pc/box
BloodSTOP® iX Advanced Hemostat with WoundHEAL® (Purified eCMC)	BS-iX-14	2″ × 2″ (5 × 5cm)	12 pc/box
	BS-iX-15	2″ × 4″ (5 × 10cm)	12 pc/box
	BS-iX-17	4″ × 8″ (10 × 20cm)	12 pc/box
	BS-iX-20	2″ × 14″ (5 × 35cm)	12 pc/box
	BM-iX-24	3″ × 24″ (7.5 × 60cm)	1 pc

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REVOLUTIONARY WOUND CARE

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