



ADVANCED
WOUND CARE

PURACOL[®]

Collagen Wound Dressings



Promote natural healing in stalled wounds

What can you do when wound healing stalls?

You know it when you see it. A wound you've been treating for over 30 days won't close. Healing has stalled. And now it's considered a chronic wound.

According to the National Institutes of Health, more than six million cases of chronic wounds cost \$20 billion each year in the United States.¹

Venous ulcers, pressure injuries, diabetic ulcers, and surgical incisions are wounds that may be likely to stall.

How can you optimize the healing process?

Break the non-healing cycle with 100% native collagen

Our Puracol wound dressings (Puracol Plus, Puracol Plus Ag+ and Puracol Ultra Powder) promote natural healing with type I 100% native collagen. Our exclusive, gentle manufacturing technology preserves the collagen's natural structure, resulting in dressings that provide more collagen to a wound for a longer period of time.



How 100% native collagen works

One key factor of chronic wounds is an elevated level of matrix metalloproteinases (MMPs). At elevated levels, MMPs not only break down necrotic tissue, but also viable collagen produced during the wound healing process. This can lead to stalled wounds. Native collagen wound dressings can be used to manage chronic wounds. The addition of collagen to the wound bed may reduce excess MMP activity to promote the wound healing cycle.²

Laboratory Findings

Puracol Plus 100% native collagen is likely to last longer

A three-dimensional 100% native collagen structure, known as the MicroScaffold, forms the basis of Puracol Plus.³ This native triple-helix is preserved during processing, making the collagen less likely to immediately convert to a gel or be absorbed by the secondary dressing.

Competitive products commonly consist of denatured collagen in which the native triple helix structure is damaged through chemical processing. This affects the dressings' structural integrity in any fluid substance.^{4,5,6}

Sensitive analytical tests^{4,5,7} (figs. 1A and 1B) and microscopic techniques⁸ (figs. 2A and 2B) show that Puracol retains its triple helix structure better than denatured collagen products.

Puracol Plus



Puracol Plus native MicroScaffold dressings tend to disintegrate in a more controlled fashion in a fluid environment – a major advantage.^{4,5,6}

Collagen/ORC Dressing



Chemical processing of denatured collagen affects the dressing's structural integrity in any fluid substance.^{3,4,5}

Sensitive analytical tests

Figure 1A

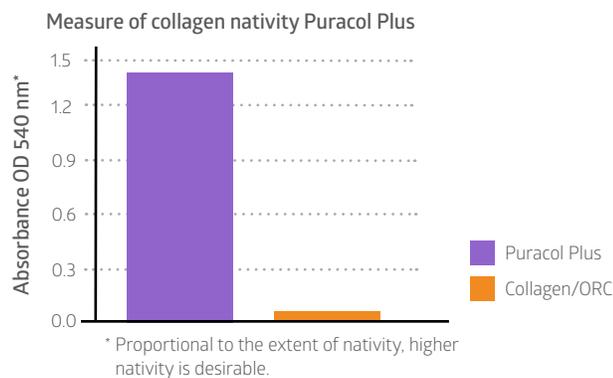
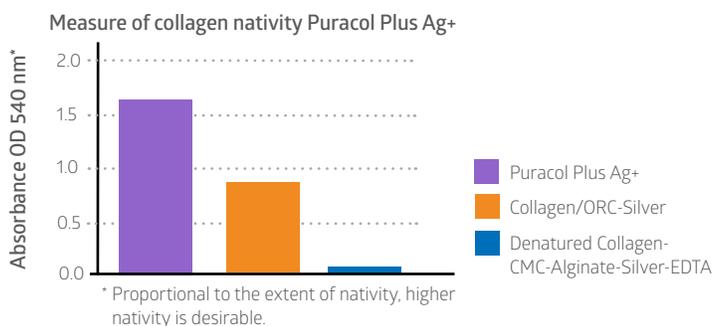
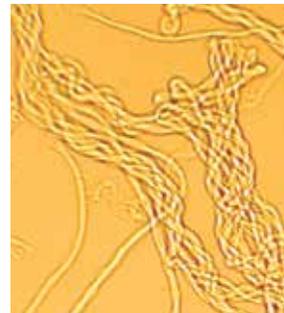


Figure 1B



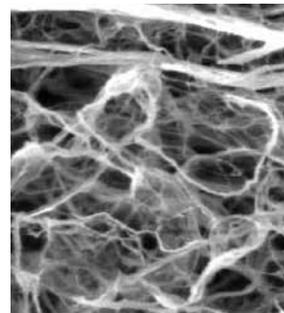
Microscopic techniques

Figure 2A



2A. Puracol Plus Native MicroScaffold wound dressing as seen through an optical microscope. The intact superstructure (above) provides strong evidence that the nativity of the collagen triple helix is preserved.

Figure 2B



2B. Puracol Plus Native MicroScaffold wound dressing as seen through an electron microscope. The open porous structure increases the internal surface area.

Puracol Plus Ag+ inhibits bacterial growth

Normal wound healing progresses through three distinct phases in an orderly way. Bacteria that enters the wound, however, can cause disruption, delay healing and potentially result in serious health consequences.^{9,10,11}

Puracol Plus Ag+ contains silver chloride, a known antibacterial agent.^{12,13} The silver ions disrupt metabolic processes in bacteria and inhibit their growth within the dressing. (See table.) A review of scientific literature shows that it is difficult for bacteria to develop resistance to silver.¹⁴

Table: Reduction in Bacteria Levels with Puracol Plus Ag+

Test Organism	Log Reduction with Puracol Plus Ag+
Staphylococcus (MRSA)	5.20
Enterobacter Cloacae	5.08
Pseudomonas Aeruginosa	5.18
Enterococcus Faecalis (VRE)	5.11
Escherichia Coli	5.20
Staphylococcus Epidermis (Coagulase-Negative)	5.08

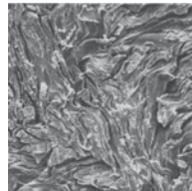
*In vitro test data on file.

Log reduction in bacteria levels (in vitro) was observed in testing of large populations of selected microorganisms, including MRSA, that came into contact with the Puracol Plus Ag+. (Method: AATCC-100)

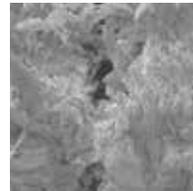
Puracol Ultra Powder conforms to irregularly shaped wound sites

Easily apply 100% native collagen in powder form. Puracol Ultra Powder allows for more intimate contact with tunneling and irregularly shaped wounds by increasing the surface area in contact with the wound bed. This powdered version of Puracol forms the same gel-like barrier to protect the wound bed and delicate, newly regenerated granulation tissue, while also helping provide a moist wound healing environment.

A view from under the microscope.



Human dermis

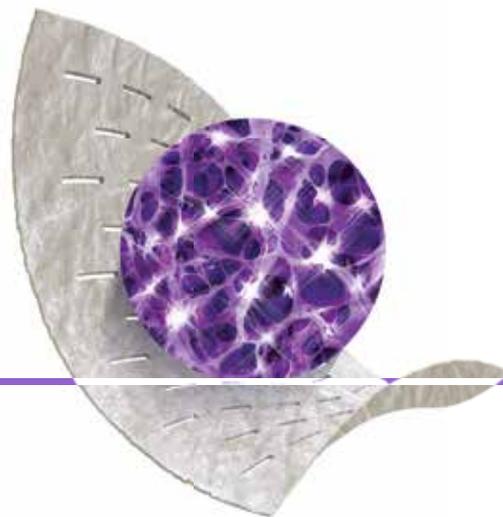


Puracol Ultra Powder

The appearance of Puracol Ultra Powder (right) closely resembles the appearance of human dermis (left) when viewed under a scanning electron microscope. Both consist of natural collagen.

Puracol Ultra ECM features the most sophisticated scaffold yet

This robust biological matrix, derived from porcine peritoneal membrane, consists primarily of type I collagen with additional extracellular matrix (ECM) proteins. It is decellularized, gamma-radiated and freeze-dried to yield a shelf stable product that provides an environment for wound management.



Clinical Study

Evaluation of a **Bovine 100% Native Collagen** for the Treatment of Chronic Wounds¹⁵

Shishir V. Shah, DO, CWS and Debashish Chakravarthy, PhD

Summary

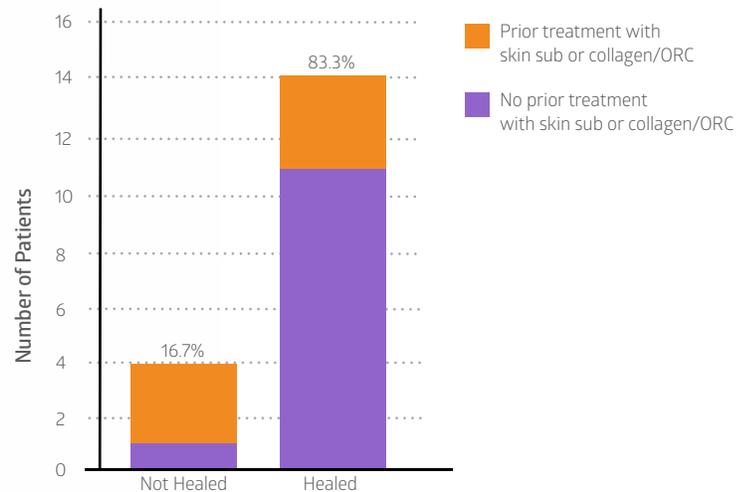
The usual measures of debridement, infection control and moisture balance may not be sufficient for wound closure in all patients. In these cases, wound dressings such as collagen may help promote wound healing. This case series describes the authors' experience with a bovine-derived, 100% native, type I collagen in patients with chronic and persistent wounds.

This case series included 20 patients with 21 chronic wounds ranging from 0.6 to 101.4 cm² that had been recalcitrant to prior treatment. The total duration of treatment with the bovine-derived 100% native collagen was up to 12 weeks. Complete wound healing was achieved for 15 of the patients in this series; wound healing times varied from 13 to 68 days.

Two patients achieved wound healing, using a combination of the bovine-derived 100% native collagen and other therapies, at 114 days and 107 days, respectively, after starting the wound healing process with solely the bovine-derived 100% native collagen treatment.

After managing the wounds with a bovine-derived, 100% native, type I collagen, **83% achieved wound closure within 90 days. (15 out of 18 patients)**

Wound Closure within 90 Days Using Bovine-Derived Native Collagen Dressing



Puracol

When Chronic Wounds Aren't Responding

Help aid in a foundation for a healthy wound bed.

Puracol® Plus

Promote natural healing with two sizes of Puracol Plus sheets as well as rope for filling deep and tunneling wounds.

Item No.	Description	HCPCS	Pkg.
MSC8622EP	2" x 2.25"	A6021	10/bx, 5 bx/cs
MSC8644EP	4.25" x 4.5"	A6022	10/bx, 5 bx/cs
MSC861X8EP	1" x 8"	A6021	10/bx, 5 bx/cs

Add Z at the end of the SKU to order by the box. Add H at the end of the SKU to order by the each.



Puracol® Plus Ag+

All the same forms and sizes as Puracol Plus. Ionic silver preserves the dressing from bacteria.

Item No.	Description	HCPCS	Pkg.
MSC8722EP	2" x 2.25"	A6021	10/bx, 5 bx/cs
MSC8744EP	4.25" x 4.5"	A6022	10/bx, 5 bx/cs
MSC871X8EP	1" x 8"	A6021	10/bx, 5 bx/cs

Add Z at the end of the SKU to order by the box. Add H at the end of the SKU to order by the each.



Puracol® Ultra ECM

Robust biological matrix containing native type 1 collagen and other important extracellular matrix proteins.

Item No.	Description	HCPCS	Pkg.
MSC8822EP	2" x 2"	Pending	10/bx
MSC8845EP	4" x 5"	Pending	10/bx
MSC8822F	2" x 2"	Pending	10/bx
MSC8845F	4" x 5"	Pending	10/bx

Add H at the end of the SKU to order by the each.



Puracol® Ultra Powder

All the same natural healing properties of Puracol. Powdered form allows for easy application to tunneling and irregularly shaped wounds.

Item No.	Description	HCPCS	Pkg.
MSC8801EP	1 gm Collagen Powder	A6010	10/bx, 10 bx/cs

Add Z at the end of the SKU to order by the box. Add H at the end of the SKU to order by the each.



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