

renovar™

advanced skin and wound solution

REF#	Description	Packaging
60504	4 oz. Bottle	Flip-Top Bottles
60491	8.5 oz. Bottle	
60691	16.9 oz. Bottle	
60507	8 oz. Bottle	Trigger Spray Bottles
60690	16 oz. Bottle	
60799	250 ml Bottle	Instill/Spikeable Bottles
60798	500 ml Bottle	
60781	990 ml Bottle	



Safe Healing Starts Here



To Learn More or Request Samples

Contact HR HealthCare

hrhealthcare.com | 877.302.1110 | customercare@hrhealthcare.com

- <https://www.dovepress.com/opportunities-and-challenges>
- <https://www.healogics.com/2022-healing-cant-wait>
- www.thewca.com/2022/06/01/why-wound-care-matters
- <https://www.healogics.com/why-wound-care-is-important>

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Chronic Non-Healing Wounds Are Debilitating

Despite extensive efforts to develop therapeutic strategies for the effective treatment of chronic wounds, limited clinical success has been achieved, which negatively affects the quality of life for patients and induces exorbitant costs to the global healthcare systems.¹



1 in 4 people
with diabetes will experience
a diabetic foot ulcer²



Every 30 seconds
a diabetic patient suffers
an amputation³



Every 4 seconds
a patient develops a wound
in the US³



7 million people
suffer from chronic,
non-healing wounds⁴

With complex diseases and many risk factors on the rise in society, it is vital to have protocols and solutions in place that will assist in wound management.

Chronic Wound Risk Factors:

- Poor Diet
- Smoking
- Infection
- Aging
- Diabetes
- Weight
- Arthritis
- Kidney Disease
- Swelling
- Certain Medications
- High Blood Sugar
- Circulation Problems

Restore With Renovar™

Renovar is a fast-acting, non-cytotoxic, antimicrobial wound care solution that helps keep the wound bed clean and free of contaminants and debris, which is essential for wound healing without infection.

- **No Known Contraindications or Side Effects**

No report of any serious adverse effects.

- **Neutral pH Level**

pH level of 6.2 - 7.8 remains active and stable for the full 24-month shelf life.

- **Isotonic | Non-Sensitizing**

Keeps the tissue supple and does not break down healthy skin.

- **Non-Toxic, Power Solution**

No added antibiotics or harsh, stinging chemicals. Effective in cleansing, irrigating and moistening wounds to help ensure a sterile environment and speed up the healing process.



Safe Healing Starts with Renovar™

Renovar is safe to be used at the discretion of the treating clinician for cleansing the wound, relieving irritation and reducing the risk of infection.

Super-Oxidized-Solution: Performs better than povidone iodine and saline in promoting healing and can lead to a 33% faster healing rate.

Antimicrobial/Antibacterial: Effective against a broad spectrum of gram-negative and gram-positive bacteria, reducing the risk of infection.

Fast-Acting Formulation: Kills bacteria and yeast species while breaking down biofilm in an impressive 30 seconds, allowing healthy tissue to form.

Ease of Use: Non-irritating, ready-to-use solution for a wide variety of wound types that can be combined with other wound healing products and debridement methods.



Accelerated Healing with HOClean™ Technology

Utilizing Renovar Advanced Skin and Wound Care Solution, featuring HOClean Technology mimics the natural hypochlorous compound produced by the human body's natural inflammatory response to remove contaminants and debris during phagocytosis.

As neutrophils encounter contaminants within the wound bed, they encapsulate the cell membrane and generate HOCl.



Combining this process with our Super-Oxidized-Solution increases the flow of oxygen to the wound bed and, therefore **helps speed up the healing process.**

The HOCl binds to critical cell membrane components, affecting the cell's permeability. Once this happens, the cell membrane will rupture, causing the bacteria cells to disintegrate.



Proven and Versatile Solution

Renovar is a versatile solution useful in the treatment, debridement, exudate management, and healing promotion for the following wounds:

- Stage I-IV Pressure Ulcers
- Stasis Ulcers
- Partial and Full Thickness Wounds
- Diabetic Foot Ulcers
- Post Surgical Wounds
- 1st and 2nd Degree Burn
- Grafted and Donor Sites
- Abrasions and Minor Irritations of the Skin
- Ingrown Toenails
- Exit Sites (catheter sites)

Healing for Every Phase

Renovar is useful for the following wound healing phases as deemed appropriate by a clinician:

Hemostasis:

To clean the wound, provide hydration, and give better visualization for examination of the wound bed.

Inflammatory:

To cleanse, debride, remove biofilm, and irrigate the wound bed. During this phase, natural HOCl is released to fight infection during phagocytosis.

Proliferation:

For cleaning, debriding, removing biofilm, and irrigating the wound bed. Here, granulation begins, and the wound starts to close.

Maturation:

Used prophylactically in conjunction with other compatible products to provide moisture and aid in the final healing process.



70-80% of patients will fully heal in 8 weeks if wound care is received²

Established Reliability

Renovar™ Advanced Skin and Wound Care Solution demonstrates in-vitro activity against a broad spectrum of gram-negative and gram-positive bacteria while breaking down biofilm **in just 30 seconds**, allowing healthy tissue to form and reducing the risk of infection.

Microorganisms Kill Chart			
Name of Organism	Log Reduction (30 sec.)	Time to Kill	Percent Reduction
<i>Acinetobacter baumannii</i>	6.3692	30 seconds	99.9999%
<i>Bacteroides fragilis</i>	7.6435	30 seconds	99.9999%
<i>Candida albicans</i>	6.3345	30 seconds	99.9999%
<i>Enterobacter aerogenes</i>	6.0881	30 seconds	99.9999%
<i>Enterococcus faecalis</i> -VRE	6.3646	30 seconds	99.9999%
<i>Enterococcus faecium</i> -VRE MDR	6.5119	30 seconds	99.9999%
<i>Escherichia coli</i>	5.699	30 seconds	99.9999%
<i>Haemophilus influenzae</i>	5.1775	30 seconds	99.9999%
<i>Klebsiella oxytoca</i> -MDR	6.0492	30 seconds	99.9999%
<i>Klebsiella pneumoniae</i>	6.143	30 seconds	99.9999%
<i>Micrococcus luteus</i>	5.842	30 seconds	99.9999%
<i>Proteus mirabilis</i>	6.2028	30 seconds	99.9999%
<i>Pseudomonas aeruginosa</i>	5.8096	30 seconds	99.9999%
<i>Serratia marcescens</i>	5.9978	30 seconds	99.9999%
<i>Staphylococcus aureus</i> -MRSA	6.3454	30 seconds	99.9999%
<i>Staphylococcus aureus</i>	6.2266	30 seconds	99.9999%
<i>Staphylococcus epidermidis</i>	6.0233	30 seconds	99.9999%
<i>Staphylococcus haemolyticus</i>	5.9112	30 seconds	99.9999%
<i>Staphylococcus hominis</i>	5.4456	30 seconds	99.9999%
<i>Staphylococcus saprophyticus</i>	5.959	30 seconds	99.9999%
<i>Streptococcus pyogenes</i>	6.716	30 seconds	99.9999%

Renovar is **fast-acting in killing bacteria** within the wound bed. It is persistent and continues to work over time, prohibiting the growth of bacteria.

Preservative Testing - Successfully Meets USP Category 1 Criteria			
Organism	Results Day 7	Results Day 14	Results Day 27
P. aeruginosa ATCC 9027	> 1 log reduction from the initial calculated count	> 3.0 log reduction from the initial calculated count	No increase from the Day 14
E. coli ATCC 8739			
S. aureus ATCC 6538			
C. albicans ATC 10231	No increase from the initial calculated count	No increase from the initial calculated count	No increase from the initial calculated count
A. niger ATCC 16404			

Renovar **provides broad spectrum, antimicrobial activity** that is directly toxic to many bacteria and fungi and might also impart antiviral properties.

Performance Safety Compatibility Study	
Testing	Results
Bactericidal: (carrier test)	Pass - 1 in 60 samples or less contained surviving bacteria.
Bactericidal: (suspension test)	Pass - all three tested organisms showed a reduction of the bacterial load of more than 105 was achieved within 15 minutes.
Bactericidal: (MRSA)	Pass - all 20 samples showed no growth.
Bactericidal: Resistant strains (VRE)	Pass - all 20 samples showed no growth.
Tuberculocidal (Mycobacterium)	Pass - during the 20 day incubation time period, no growth was observed.
Virucidal	Pass - Renovar demonstrated complete inactivation of HIV-1 following a 10-minute exposure time.
Fungicidal	Pass - Renovar was fungicidal against Trichophyton mentagrophytes following a 10-minute exposure at 20 °C.
Sporicidal	Pass - Renovar was sporicidal against Bacillus atrophaeus spores. The reduction in spores was log 6.5 on average.
AOAC Available Chlorine in Disinfectants	Pass - Renovar with available chlorine levels of approximately 60 ppm demonstrated germicidal equivalence to a control sample with 200ppm available chlorine.

Renovar is **non-cytotoxic, non-sensitizing, and non-irritating**, and is therefore able to be used as often as needed with no risk of skin breakdown, irritation or peri-wound degradation.

Safety Biocompatibility Testing	
Animal Model	Results
Genotoxicity	No signs of toxicity.
Cytotoxicity	Does not generate cytotoxic effects.
Dermal Sensitization (Animal)	No skin sensitization or irritations.
Skin Irritation (Rabbit)	No skin irritation detected throughout the study.
Ocular Irritation (Rabbit)	No ocular irritation detected.
Acute Oral Toxicity (Rat)	No mortality or clinical/behavioral signs of toxicity were detected. Does not cause oral toxicity.
Acute Dermal Toxicity (Rabbit)	No signs of dermal irritation at any time. Does not generate dermal toxicity.
Acute Inhalation Toxicity (Rat)	No signs of any toxic effects when inhaled.