



Microdacyn® Wound Care Microdacyn® Hydrogel

Super-oxidised solutions for better wound healing at every stage



Antimicrobial | Biofilm | Healing | How to Use | Clinical Evidence

Microdacyn is a class IIb Medical Device for use in the debridement and moistening of acute and chronic wounds, ulcers, cuts, abrasions and burns including those located in any human cavity such as the oral, nasal or ear. Sodium hypochlorite and hypochlorous acid are ancillary substances may have a local antimicrobial effect. Through reducing the microbial load and assisting in creating a moist environment, it enables the body to perform its own healing process. Microdacyn® Wound Care can be broadly applied within a comprehensive wound treatment. Do not use if sensitive to hypochlorous acid or sodium hypochlorite.



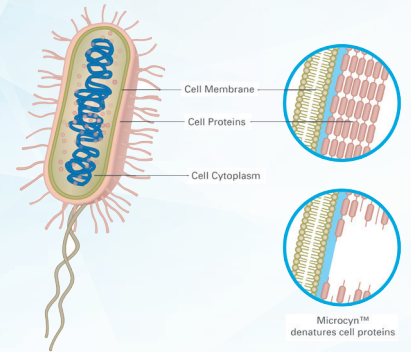
Antimicrobial | Biofilm

Super-oxidized solutions and hydrogels utilize highly reactive, physiological concentrations of hypochlorous acid (HOCl)

Hypochlorous acid is naturally present in the body & is produced as a natural response to microbial invasion. The cells of our immune system create hypochlorous acid through a mechanism known as respiratory burst.

The low concentrations of highly reactive hypochlorous acid in Microdacyn are highly effective against microbes but uniquely, non-cytotoxic to human cells.

This physical kill mechanism is specific to single cell organisms, broadly encompassing: Bateria (+MRSA & VRE), Fungi, Viruses, Spores & Biofilms



“Use antiseptics at the lowest effective concentration to minimize harm to skin and tissue cells involved in wound healing”

International Wound Infection Institutes (IWII) Clinical Practice Guidelins 2016

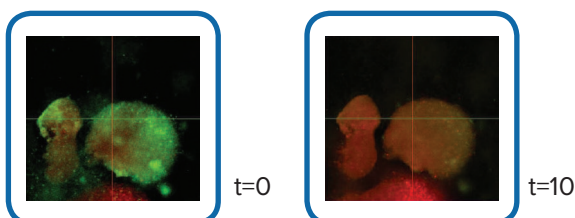
Antimicrobial Activity of Wound & Skin Cleansers at Nontoxic Concentrations¹

Active Component	Concentration	Toxicity Index	Comments
Povidone-Iodine	10%	10,000	“Potent wound cleansers with a high toxicity index (eg Betadine) will likely have deleterious effects to living tissue” ¹
Chlorhexidine	4%	10,000	
Hydrogen Peroxide	3%	1,000	Specifically, not recommended by international guidelines (IWII 2016)
PHMB (polyhexamethylene biguanide)	0.1%	100	Same chemical classification as Chlorhexidine (biguanide)
Super-oxidized hypochlorous acid (HOCl)	0.004%	10	HOCl is produced naturally by the bodies immune system ¹
Sterile Saline, Non-active	0.9%	0	Not antimicrobial

The significant difference in germicidal potency is due to HOCl being an uncharged species that can penetrate microbial cell walls, whereas charged ionic species cannot¹

Biofilm

Super-oxidised solutions have been clinically researched demonstrating physical degradation and disaggregation to the matrix of biofilms as well as to: “rapidly penetrate biofilms killing microbes from within”²¹



An example of this rapid penetration is shown here:

Fluorescence microscopy of a mature, 6 day, *Pseudomonas aeruginosa* biofilm before and after 10 minutes of repeated exposure. It is clear to see uniform penetration and eradication of living microbes

Green | Living Microbes Red | Dead Microbes



The low concentration Hypochlorous acid found in Microdacyn® is the only antimicrobial component with clinical research demonstrating additional wound healing effects.

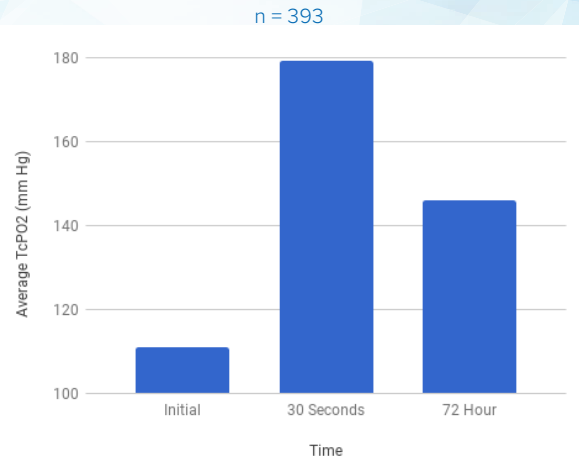
The use of Microdacyn has been demonstrated to:

- Reduce Inflammation, Itch & Irritation²⁰
- Increase available oxygen (TcPO2 - mmHg)^{3,5}

Here we observe the average tissue oxygenation effects when applying Microdacyn® to 393 non-insulin dependent diabetic (NIDDM) patients velous leg ulcers.

The TcPO2 levels are significantly increased to quickly improve tissue conditions within the wound and are sustained above baseline for up to 72 hours⁵

Effect of comorbidities on microcirculatory response of periwound tissue to Microdacyn® exposure.



These additional effects may further assist in Microdacyn® accelerating wound healing & being excellently tolerated

Clinical Evidence

Clinical conclusions of 10+ years of Microdacyn use internationally

- Improve wound healing^{5-9,11,13-15}
- Improve wound bed oxygen supply (TcPO2)^{3,5}
- Reduce the requirement for concomitant antibiotic use to manage infection¹⁰
- Reduce pain associated with wound cleansing¹⁷
- Reduced wound associated malodour¹¹
- Reduce post-surgical infection rate^{2,7,12,15}
- To be at least as effective as certain oral antibiotics for treatment of mild diabetic foot infections¹⁰
- Improve infection control^{2,4,7,14,16}
- Reduce wound healing time^{5-9,11,13-15}
- Improve wound bed granulation^{3,11,13}
- To be a wider spectrum antimicrobial compared to commonly used topical-antimicrobials^{12,17-18}
- Reduce patient length of stay^{8,16-17}
- To be non-cytotoxic^{1-2,11,14,19,21}

The combination of real world, randomised control trials and extensive in vitro testing have shown Microdacyn® to provide three fundamental outcomes crucial to modern wound care



Prevents Infection



Reduces Inflammation



Improves Healing

How to Use | Ordering

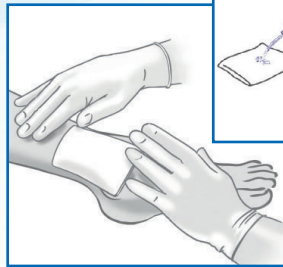
Microdacyn® should be applied liberally at every dressing change or if the wound can be regularly accessed, up to 3 times daily

1 Saturate



Irrigate the wound by spraying Microdacyn® Wound Care Solution directly onto/into the wound to the point of saturation

2 Soak



Generously saturate a section of gauze or bandage with Microdacyn® Wound Care Solution and apply directly to the still moist wound leaving it to soak for up to 10 minutes

3 Flush Clean



If the wound requires debridement or further cleaning apply Microdacyn® Wound Care Solution is an irrigant

Practice Tip

Another strip of gauze or similar that is doused in Microdacyn® Wound Care Solution is excellent for cleaning both in & around the wound

4

Cover & Dress

Leave Microdacyn® in the wound, do not rinse out

3b



Higher Risk Patients

In the case of the following, repeat step 2;

- Significant Debridement
- Chronic Wounds
- Non-Healing Wounds
- Suspected Biofilm

3c



Applying Hydrogel

Leave Microdacyn® Wound Care Solution in the wound and apply Microdacyn® Hydrogel 2-5mm thick as required
This may be left for up to 3 days
Microdacyn® Hydrogel is well suited to painful, inflamed or malodorous wounds

Microdacyn® Wound Care

Super-Oxidised Water, Sodium Chloride (0.022%), Hypochlorus Acid (0.004%), Sodium Hypochlorite (0.004%), Ancillary Substances including Oxygen & Ozone

Microdacyn® Hydrogel

Super-Oxidised Water, Sodium Chloride (0.066%), Hypochlorus Acid (0.004%), Sodium Hypochlorite (0.002%), Ancillary Substances including Oxygen & Ozone
Additionally Sodium Magnesium Fluorosilicate Gelling Agent (3.0%)

“Stop anointing wounds & start cleansing wounds”

International Wound Infection Institutes
Clinical Practice Guidelines

In the case of severe or multi-resistant infection, stubborn biofilm or lack of progress. Microdacyn® may be applied copiously to achieve desired results

Microdacyn® is compatible with:

- All Wound Dressings
- Leaving Soaked Gauze in the Wound
- Pulse Lavage / Wound Irrigation
- Under Occlusion
- NPWTi & Ultrasonic Debridement

Microdacyn® can be used on:

- Skin
- Mucosa
- Exposed Ligament, Joints, Bones & Tendons
- Sensitive Areas Such as Eyes
- Children

Product Information

- Ready-to-use, pH neutral solution
- 24 month unopened shelf life
- Discard Within 60 Days of Opening
- Does not promote bacterial resistance²¹
- Available from your local pharmacy

Product Description	Internal Code	PDE Code	
Microdacyn® Wound Care Solution 120ml	MDWC120	2483335	Box 24
Microdacyn® Wound Care Solution 250ml	MDWC250	2483343	Box 12
Microdacyn® Surgical Irrigation Solution 990ml	MDSIWT990	2483351	Box 6
Microdacyn® Hydrogel 60g	MDHG60	2483378	Box 24