

Microdacyn60® Wound Care at a Glance

Advantages of Microdacyn60® Wound Care in comparison to chemical substances

Microdacyn60® Wound Care contains the preservatives Sodium Hypochlorite and Hypochlorous Acid which ensure the product's sterility. These compounds are naturally produced as defensive agents by mammalian neutrophils/mo-nocytes as part of the immune system.

- ✔ Prevents multiplication of bacteria, viruses, spores, fungi
- ✔ Facilitates mechanical removal of micro-organisms
- ✔ Can remain in the wound and does not need to be rinsed out
- ✔ Can also be used in exposed joints, cartilage, ligaments, and tendons
- ✔ Does not develop bacterial resistance
- ✔ For intraoperative irrigation and cleansing wounds
- ✔ Can be used indefinitely
- ✔ Separate dosage system for NPWT
- ✔ Microdacyn60® Wound Care is not cytotoxic

Great Efficacy

The primary mode of action of Microdacyn60 involves the mechanical removal of cellular debris, senescent cells, necrotic tissue, and foreign material from the skin and wound surface using a moistened dressing (e.g.gauze) along with irrigation. Removal of these materials through these actions is known to decrease infection rates and improve wound healing. The secondary mode of action is a function of the properties of hypochlorous acid (HOCl) and its salt, hypochlorite (OCl-) (1). These ancillary substances which are present in Microdacyn60 in very low, non toxic amounts, assist in the reduction of microorganisms.

Maximum tolerance

The essential component of Microdacyn60® Wound Care is hypochlorous acid (HOCl). It is an important constituent of our innate immune system and is formed and released by the macrophages during phagocytosis as a substance produced naturally in the body. This results in significant advantages over other wound-irrigation solutions and anti-septic solutions: because of the process that is also used in phagocytosis, the reaction of Microdacyn60® Wound Care is directed exclusively against single-celled microorganisms and not against more highly organized cell structures (such as human tissue).

Microdacyn60® Wound Care has no known side effects on human cells

Microdacyn60® Wound Care is not cytotoxic

Microdacyn60® Wound Care does NOT trigger any early aging processes

Low irritation threshold

Microdacyn60® Wound Care is tolerated extremely well and has achieved an irrigation threshold of 1.022 in the HET-CAM assay.

DRUG	IT	REACTION
Microdacyn60® Wound Care	1.022	No hemorrhage or coagulation
Polyhexanide 0.04 % in Ringer's solution	1.32	
Octenililn	11.8	Hemorrhage, lysis and coagulation

Study by Prof. Dr. A. Kramer, 10/2013

Irritation threshold (IT) = maximum reaction (hemorrhage or lysis or coagulation) is assessed after 5 min (0 = no reaction, 1 = mild reaction, 2 = moderate reaction, 3 = severe reaction), and the maximum scores for three CAMs are totaled. **Substances with an IT of 2 or less are considered not or hardly irritating.**



Microdacyn60® Wound Care is ideal for used in exposed joints, tendons, bones, and ligaments. In addition, it is possible to use Microdacyn60® Wound Care for installation in NPWT and in peritoneal and joint irrigation.



A. Irrigate wound with Microdacyn60® Wound Care and let it take effect for 15 min.

B. Clean wound with a compress soaked in Microdacyn60® Wound Care.

C. Apply wound bandage as usual.

Practical info

- Microdacyn60® Wound Care is a ready-to-use, pH-neutral wound-irrigation solution
- pH value 7.0
- Shelf life of 24 months at room temperature if not opened
- Use within 60 days after opening
- Can be warmed before use with no problem (to 40°C)

Modes of administration

PRODUCT	PRN (PHARM. REF. NO.)	AMOUNT	UNITS PER PACK	SHELF LIFE	OUTER CARTON	ITEM NO.
Microdacyn60® Wound Care	10339538	250 ml spray b.	12	24 month	x	OC004
	10339515	500 ml	24		x	OC008
	10339490	5000 ml	4	24 month	-	OC009
	10339544	990 ml NPWT	6		-	OC005

Studies

Visit our home page www.sonomapharm.com and let the over 40 publications and studies as well as more than 20 different test reports on efficacy, tolerance, and stability do the talking (to be available from December 2014).

Usage information

Rinse the wound with Microdacyn60® Wound Care and let it take effect briefly; the process can be repeated up to three times daily or whenever the bandage is changed.

Alternatively, the wound can also be cleaned with compresses soaked in Microdacyn60® Wound Care.

Adhering bandages can be loosened easily and without trauma using Microdacyn60® Wound Care. To support mechanical wound cleansing, the working time of Microdacyn60® Wound Care can be extended to 15 minutes.

Ingredients

Water, sodium chloride, hypochlorous acid, sodium hypochlorite

Microdacyn60® Wound Care is an environmentally friendly product, which can be disposed of quite normally without any particular requirements.

Microdacyn60® Wound Care

Antimicrobial Wound-Irrigation Solution –
The Greatest Efficacy.
Maximum Tolerance.

For Treatment of Chronic and Acute Wounds
as well as First- and Second-Degree Burns



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The Greatest Efficacy – Clinically Proven

Microdacyn60® Wound Care also eliminates the unpleasant odors that often occur in wounds with particular – and all that in just a few seconds.

The Microdacyn60® Wound Care effect has also been proven under clinical conditions: in a controlled prospective study*, 90% of patients had a distinct increase in granulation and improvement in the surrounding skin.

*Martínez-De Jesús FR, Ramos-De la Medina A, Remes-Troche JM, Armstrong DG, Wu SC, Lázaro Martínez JL, Beneit-Montesinos JV. Efficacy and safety of neutral pH superoxidised solution in severe diabetic foot infections. Int Wound J 2007;doi:10.1111/j.1742-481X.2007.00363.x.

Microdacyn60® Wound Care inhibits the growth of gram-positive and gram-negative bacteria (including MRSA), viruses, fungi, and spores.

CATEGORIE	MICROORGANISM	STANDARD / METHOD	TYPE	Expos. Time [Minutes]	Reduction of Microbial Load
Bactericide	Pseudomonas aeruginosa	AOAC Use Dilution Method	Carrier	10	> 4.7 log
		BS EN 13727:1999	Suspension	15	> 5.4 log
	Staphylococcus aureus	AOAC Use Dilution Method	Carrier	10	> 4.7 log
		BS EN 13727:1999	Suspension	15	> 5.1 log
	Salmonella choleraesuis	AOAC Use Dilution Method	Carrier	10	> 5.7 log
Bactericide (resistant strains)	Enterococcus hirae	BS EN 13727:1999	Suspension	15	> 5.0 log
	Escherichia coli	AOAC Use Dilution Method	Carrier	1	> 5.0 log
Bactericide (resistant strains)	Methicillin-resistant staphylococcus aureus (MRSA)	AOAC Use Dilution Method	Carrier	10	> 5.9 log
	Vancomycin-resistant enterococcus (VRE)	AOAC Use Dilution Method	Carrier	10	> 6.1 log
Tuberculocide	Mycobacterium bovis	Tuberculocidal effect in suspension	Suspension	5	> 6.4 log
Virucide	Human immunodeficiency virus, type 1 (HIV-1)	As per US EPA guidelines	Carrier	10	> 3.7 log
Fungicide	Trichophyton mentagrophytes	Fungicidal Use Dilution Method	Carrier	10	> 6.3 log
Sporicide	Bacillus atrophaeus	BS EN 14347:2002	Suspension	15	> 6.5 log

In vitro study also available under: Journal of Hospital Infection (2005), 1–9; Dr. Landa-Solis



Test the efficacy yourself:

Use Microdacyn60® Wound Care for wounds with a particularly strong odor, such as Pseudomonas infections. The odor will be reduced significantly in just a short time.

Maximum Tolerance – Proven Safety

More than five million patients have already been treated worldwide with Microdacyn60® Wound Care. In Europe, the USA, Mexico, China, India, and Malaysia, more than 32 clinical papers have been conducted – all this without any indication of irritation, sensitization, toxicity, or eye irritation.

Microdacyn60® Wound Care		Wound-irrigation Solution Containing Polyhexanide
Identical to natural substance	< active substance >	Synthetic
Skin Mucosa Bone Cartilage Tendons Abdominal cavity Urinary bladder Long-term use	< tolerance >	Skin Mucosa - - - - - -
Wound irrigation Under occlusion	< applications >	Wound irrigation - -
Leaving soaked bandages or gauze in the wound Negative-pressure wound therapy		- -



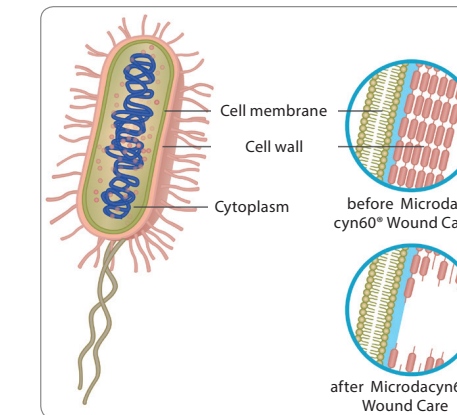
Exclusive: Microdacyn60® Wound Care for NPW therapy

Because of its maximum tolerance, Microdacyn60® Wound Care can also be used with all the usual positive and negative-pressure therapies, such as V.A.C. Instill®. For ease of use, Microdacyn60® Wound Care is offered in a special hanging bottle with a piercing cone.

Operating Principle of a Substance Produced Naturally in the Body

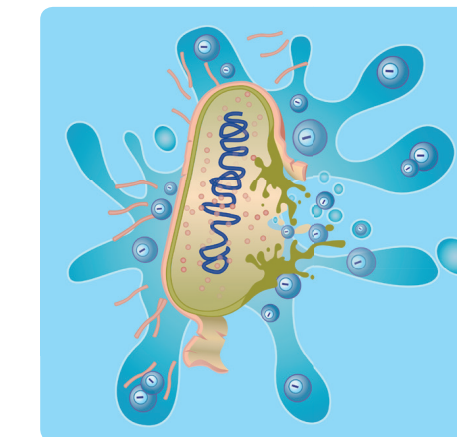
Microdacyn60® Wound Care replicates one of the body's own defense mechanisms against pathogens: Foreign substances are not eliminated chemically, but are destroyed by a purely natural, physical process. The decisive factor is the essential ingredient, hypochlorous acid (HOCl). It is an important component of the body's innate immune system.

1. Disruption of the cell wall



Microdacyn60® Wound Care surrounds single-celled microorganisms. The hypochlorous acid attacks the cell wall of the microorganisms and increases its permeability. Since our body's own cells have the necessary processes to prevent cell damage, they are not destroyed.

2. Osmolysis – bursting of the cells

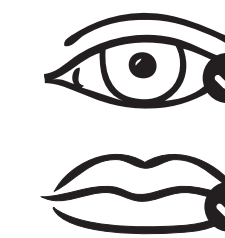


The hypotonic Microdacyn60® Wound Care solution ensures that water increasingly flows into the cells to equalize the osmotic gradient. The result is osmolysis: The increasing internal pressure causes the cells to burst. This purely physical effect ensures a highly effective reduction in pathogen load.

Mechanical effect of the sterile solution

The Microdacyn60® Wound Care wound-irrigation solution facilitates the mechanical removal of microorganisms and cell debris. Microorganisms are rinsed away with Microdacyn60® Wound Care; other soluble components are removed. Microdacyn60® Wound Care can also be left on the wound for softening.

Facilitates debridement, because previously damaged cells, as are found in large volumes in infected wounds, can be lysed more quickly under the influence of Microdacyn60® Wound Care.



Test the tolerance yourself:

Microdacyn60® Wound Care is tolerated so well that even swallowing or eye contact do not lead to any irritation and can be done without any reservations. Use Microdacyn60® Wound Care the next time peritoneal or joint irrigation is needed.