Microdacyn® Surgical Irrigation Solution

pH Neutral Super-Oxidized Solution with Hypochlorous Acid For Irrigation & Wound Care

Non-Cytotoxic Topical Antisepsis

Don't Choose Between Saline or Antisepsis

Non-Antibitoic + Broad-Spectrum + Rapid Onset

Microdacyn®
is Clinically Proven
to Improve Surgical Outcomes
& Heal Wounds Faster[1,3,6]

- Surgical Irrigation
- Intra-Op Lavage

- Graft/Donor Site Management

- Surgical Site Prevention
- Ultrasonic Debridement
- Post Surgical Wound Care
- Suitable for Bone, Cartilage & Peritoneum ✓
- Negative Pressure Ready (NPWTi)

Microdacyn is a class IIb Medical Device for use in the debridement, irrigation and moistening of acute and chronic wounds, ulcers, cuts, abrasions, and burns. The solution is indicated to maintain the moisture thus establishing an optimum microenvironment for wound healing. Secondary antimicrobial effect achieved by the sodium chloride, sodium hypochlorite and hypochlorous acid is not due to pharmacological, immunological or metabolic means, but by physical process Microdacyn® Wound Care can be broadly applied within a comprehensive wound treatment. Do not use if sensitive to hypochlorous acid or sodium hypochlorite. Always read the instructions for use, detailed instructions can be found at www.microdacyn.com.au ARTG: 322476, 322475

References: 1. Kapur et al 2011 2. Swanson et al (IWII 2016) 3. Mohd et al 2010 4. Barrera et al 2006 5. Khan et al 2009 6. Garg et al 2013 7. Kubota et al 2013 8. Mekkawy et al 2014 9. Rani et al 2014 10. Gibbs et al 2007 11. Sauer et al 2009 12. Singal et al 2016 13 Johani et al 2018 14: EB Odom et al 2019 15: A Kramer et al 2018 16: Landa-Solis et al 2005 All available on request.

TeArai BioFarma

Non-Cytotoxic Infection Control

Super-oxidized solutions (SOS) utilize hypochlorous acid (<0.005%), a naturally occurring reactive oxygen species produced by the human body's immune system in response to invading pathogens.

Hypochlorous acid is produced endogenously during wound healing and infection control through a mechanism known as a oxidative burst by white blood cells.

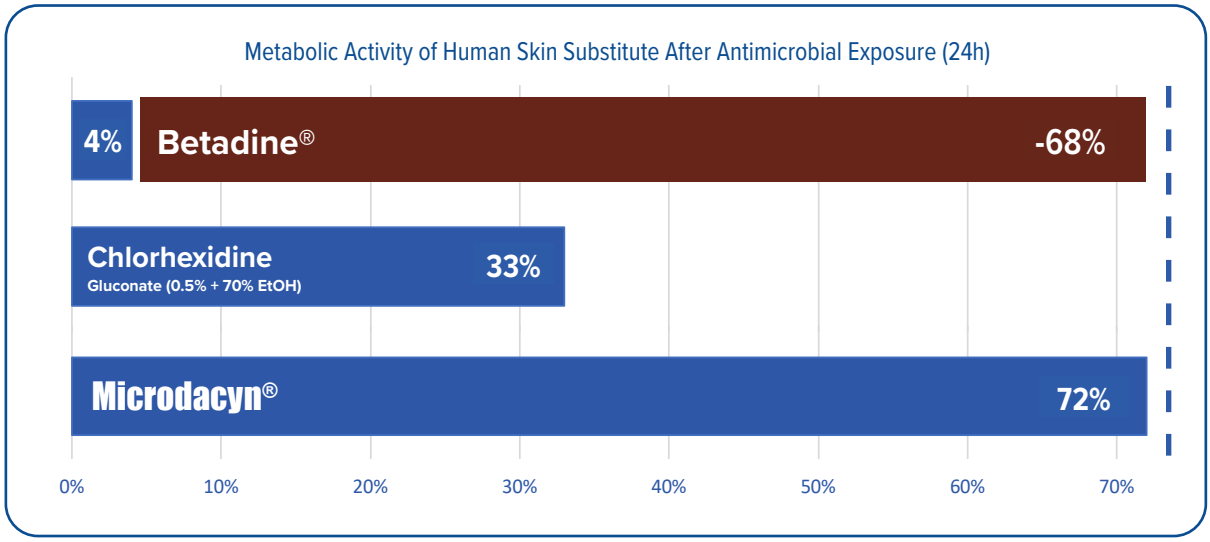
Microdacyn® harnesses this same powerful oxidizing molecule stabilized at neutral pH to improve biocompatibility. In contrast to other antiseptic agents, hypochlorous acid is non-cytotoxic at clinically effective concentrations making it ideal for physically reducing the microbial load during wound cleansing without adversely impacting cellular activities involved in healing whilst establishing a moist wound healing environment[9]

Recent consensus has concluded that rather than inhibit wound healing, Microdacyn® improves wound healing and is indicated for use without restriction in all areas of the anatomy due to it's low cytotoxicity proving highly versatile in clinical practice.,[15]

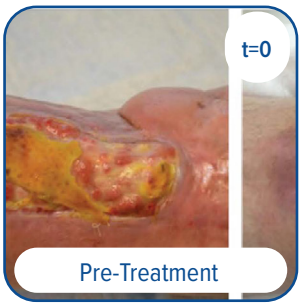
>99.99% Microdacyn® is Proven >99.99% effective against:
Bacteria (incl MRSA), Fungi, Viruses, Spores & Uniquely Penetrates Biofilm[2,16]

Tissue & Graft Viability

Microdacyn® is less cytotoxic to Autologous & Allogeneic human skin substitutes (HSS) in comparison to; Betadine ®, Flamzine® Chlorhexidine[10]



The use of Microdacyn® to prep and mange skin grafts significantly improves tissue viability favouring successful graft-take[10]



81 y/o chronic lower wound leg contaminated with MRSA.

Treatment consisted of placing the hypochlorous acid soltuion soaked-gauze on the wound bed or graft for 15 minutes daily 1 week before surgical closure and 1 week after.[14]

Irrigation | Peritonitis | SSI

During intra-operative peritoneal lavage (IOPL) and wash out for the treatment of peritonitis. Microdacyn® use reduces:

- Surgical Site Infection[6,7] (p<0.05)
- Overall Complications[4,5]
- Hospital Length of Stay[4,5,12]
- Wound Infection[4-6,12] (p<0.05)

- Post-Op Fever[5,6] (p<0.05)
- Purulent Discharge[5,12] (p<0.05)
- Rate of Burst Abdomen[5] (p<0.05)
- Time to Bowel Sounds[5,12] (p<0.05)
- Average Day of Drain Removall[2] (p<0.001)

Wash-Out With Microdacyn®

Overall reductions in post-operative morbidity, Irrespective of the cause of peritonitis[5]

Cardiothoracic Surgical Sites Infections

The use of Microdacyn® irrigation in patients undergoing coronary artery bypass surgery (CABG) significantly reduced sternotomy wound infection.[3]

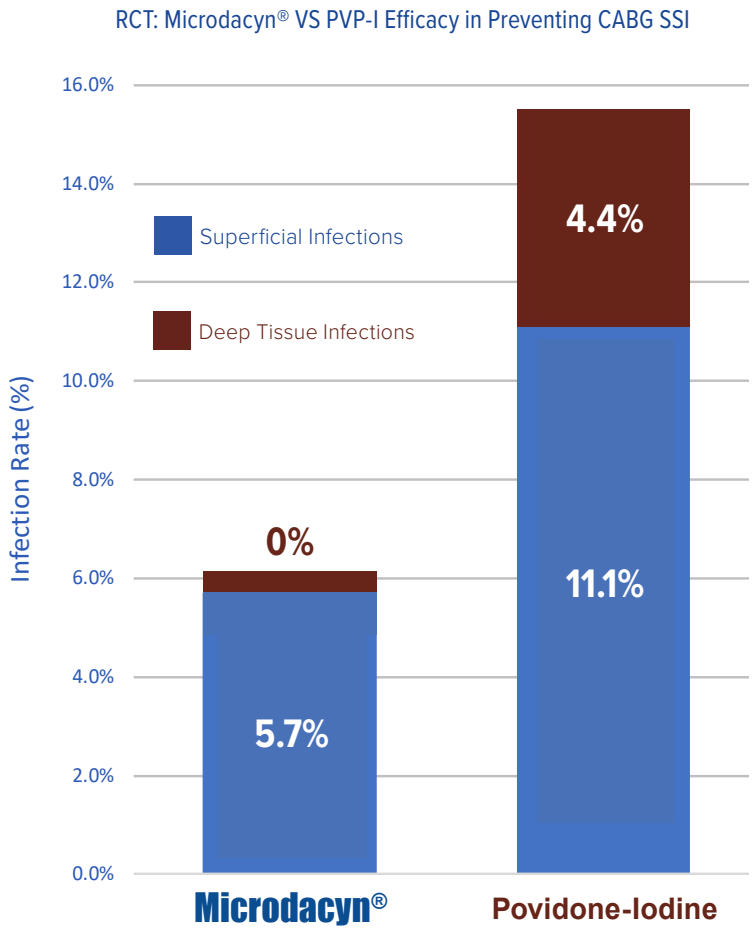
All patients received prophylactic IV amoxicillin and clavulanate at induction. Either Microdacyn of Povidon-Iodine (10%) was used to soak the wounds at the sites where the sternal wires were removed post surgery.

0% deep tissue infections in the Microdacyn® group resulting a 9.9% absoulte reduction in infection[3]

Microdacyn®
Prevents SSI More Effectively Than 10% Povidone-Iodine[3]

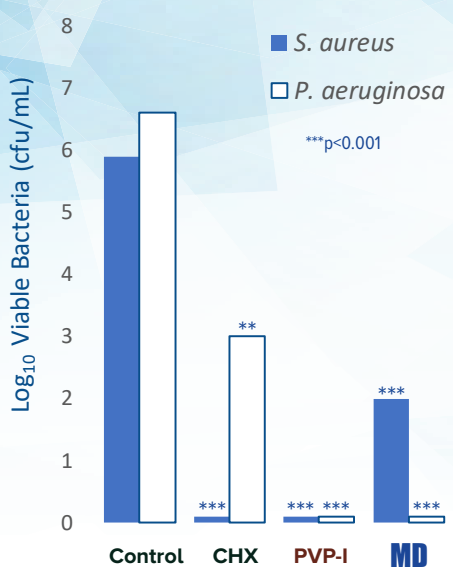
n=178 P<0.05

Post-Op Soak With Microdacyn®



Microbial Biofilm

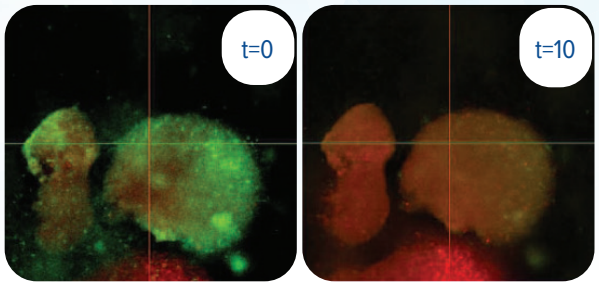
15 minute exposure to 3 day old mature biofilms



Microdacyn® can rapidly penetrate biofilms killing microbes from within.[2]
In vitro evidence suggests Microdacyn® reduces both gram negative and gram postive biofilm with efficacy comparable to that of clincail standards chlorhexadine + cetrimide (0.015%+0.15%) and povidone-iodine (1% equiv.)[13]

Visualising Antibiofilm Activity Under A Microscope

When Fluorescence microscopy is used to observe the LIVE/DEAD change of microbes within a mature, 6 day, *Pseudomonas aeruginosa* biofilm before and after 10 minutes of repeated exposure to a super oxidized hypochlorous acid solution it is clear to see total penetration has occurred throughout the matrix majorly reducing the microbial colony within.[11]



Living Microbes

Dead Microbes

Super-oxidised solutions "rapidly penetrate biofilms killing microbes from within"[21]

Product Description	Internal Code	
Microdacyn® Wound Care Solution 120ml	MDWC120HOSP	Box 24
Microdacyn® Wound Care Solution 250ml	MDWC250HOSP	Box 12
Microdacyn® Surgical Irrigation Solution 990ml	MDSIWT990HOSP	Box 6
Microdacyn® Hydrogel 60g	MDHG60HOSP	Box 24
Epicyn® Silicone Gel 45g	EPCYN45	Box 24

Product Information

1800 83 2724 | www.microdacyn.com.au | enquiries@tearaibiofarma.com

Microdacyn® is compatible with:

- **All** wound dressings
- Leaving soaked gauze in the wound
- Pulse lavage / wound irrigation
- Under occlusion
- NPWTi & ultrasonic debridement
- Postive pressure irrigation systems

Product Information

- Ready-to-use, pH neutral solution
- 24 month unopened shelf life
- Discard within 60 days of opening
- Does not promote bacterial resistance[2]
- Strictly not for injection
- Always read the instructions for use

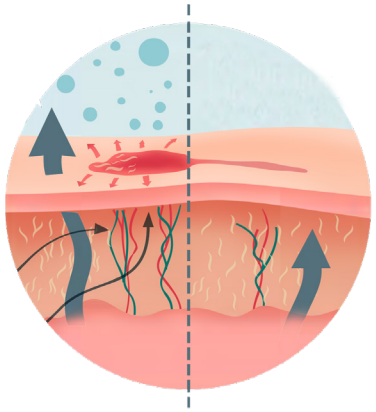
Microdacyn® can be used on:

- Skin
- Mucosa
- Ligament, joints, bones & tendons
- Cartilage & peritoneal cavity
- Sensitive areas such as the face
- Children

Epicyn®

Topical Silicone Impregnated with Microdacyn®

Post Op | Burns | Trauma | Cosmetic



Epicyn® contains guideline recommended, medical grade silicone gel in combination with super-oxidised hypochlorous acid that has clincally demonstrated anti-inflammatory, antipruritic and antimicrobial results to further improve healing and scar characteristics.[a,b]

ww.epicyn.com.au

Silicone gel for cosmeisis,
Hypochlorous acid for healing.

References: a- Bucko et al 2015 b- Gold et al 2017