

# Disinfecting for Methicillin-Resistant *Staphylococcus pseudintermedius* in the Clinic

---

**William Oldenhoff, DVM, DACVD**

*Madison Veterinary Specialists*

*Monona, Wisconsin*

## **In the literature**

Soohee J, Daniels JB, Brault SA, Rosychuk RAW, Schissler JR. Efficacy of three disinfectant formulations and a hydrogen peroxide/silver fogging system on surfaces experimentally inoculated with methicillin-resistant *Staphylococcus pseudintermedius*. *Vet Dermatol*. 2020;31(5):350-e91.

---

## **FROM THE PAGE ...**

Thorough environmental disinfection is critical in veterinary clinics to limit nosocomial infections. Methicillin-resistant *Staphylococcus pseudintermedius* (MRSP) is of particular importance for veterinary patients, as it is one of the most commonly isolated resistant pathogens in dogs and cats,<sup>1</sup> and hospitalization and frequent visits to the clinic have been identified as risk factors for infection.<sup>2,3</sup> There are currently no commercial disinfectant sprays or foggers effective against MRSP.

This study investigated the activity of 4 products on MRSP: a hydrogen peroxide and silver fogging system, a quaternary ammonium product, an accelerated hydrogen peroxide product, and a hydrogen peroxide and silver product. Surfaces were inoculated with MRSP then cleaned per manufacturer recommendations with the tested products.

To test the fogging system, 8 inoculated samples were placed in various locations in a clinic examination room. The fog was deployed and the room sealed for the recommended duration. Researchers found that the quaternary ammonium and accelerated hydrogen peroxide products provided mean reduction in MRSP cfu counts of 99.97% and 99.98%, respectively. A mean reduction of 97.81% was noted with the hydrogen peroxide and silver product and 52.14% with the fogging system.

## ... TO YOUR PATIENTS

Key pearls to put into practice:

- 1 The sprays used in this study demonstrated superior activity as compared with the fogging system. However, using a disinfectant after every patient (versus which product is used) is the most important component of cleaning. The quaternary ammonium and accelerated hydrogen peroxide products demonstrated superior efficacy in MRSP disinfection. The hydrogen peroxide and silver product also provided significant reduction and may be acceptable in a clinical setting. Ultimately, cleaning is the most critical part of preventing nosocomial infections.
- 2 The hydrogen peroxide and silver fogging system cannot be recommended as a sole means of disinfection but may have a role as an adjunct to disinfection, particularly in areas in the clinic where the risk for infection is higher (eg, surgery suite).
- 3 The environment is just one source of nosocomial infections. Other sources include hands and shared grooming equipment, and thorough and frequent cleaning is critical to preventing the spread of microbes.

## References

1. Beck KM, Waisglass SE, Dick HLN, Weese JS. Prevalence of methicillin-resistant *Staphylococcus pseudintermedius* (MRSP) from skin and carriage sites of dogs after treatment of their methicillin-resistant or methicillin-sensitive staphylococcal pyoderma. *Vet Dermatol.* 2012;23(4):368-375.
2. Lehner G, Linek M, Bond R, et al. Case-control risk factor study of methicillin-resistant *Staphylococcus pseudintermedius* (MRSP) infection in dogs and cats in Germany. *Vet Microbiol.* 2014;168(1):154-160.
3. Nienhoff U, Kadlec K, Chaberny IF, et al. Methicillin-resistant *Staphylococcus pseudintermedius* among dogs admitted to a small animal hospital. *Vet Microbiol.* 2011;150(1-2):191-197.



# Wound Care

Proper wound care is critical so that the wound does not become chronic and fail to heal. Our new and innovative products will help prevent that!



MicroLyte VET® is a thin polymeric film that absorbs moisture in the wound bed and contours intimately with the wound surface to promote healing and fight infection.

- Exerts sustained antimicrobial activity of silver (Ag) for at least 72 hours
- Kills > 99.99% CFU
- Fully resorbable
- Not harmful
- Attacks Biofilm
- FDA Approved for human wound management



The Results Speak for Themselves  
Canine Fracture and Wound Infection  
5 weeks non-healing



Day 0



Just Day 03

Product Code

J1535

J1535A

Size

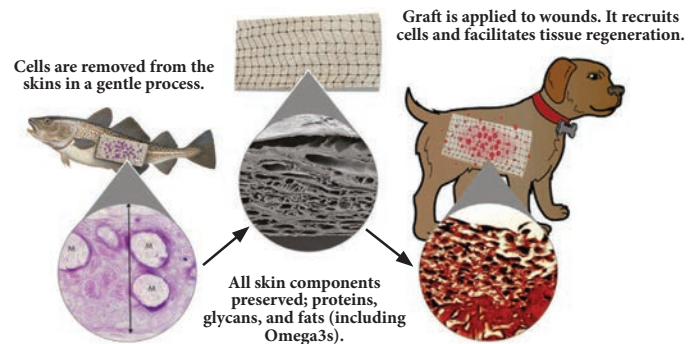
2" x 2" (51mm x 51mm)

4" x 4" (102mm x 102mm)

Sold in  
boxes of 5

## Cod Fish Skin Graft

Sustainably sourced from the Arctic supporting the body's own ability to heal.



- Long shelf life (5 years)
- Store at room temp
- In sterile chevron pouch

- Can be applied without sedation
- Non immunogenic
- A cellular matrix

Product Code

J1540

J1540A

J1540B

Size

3cm x 7cm (1.2" x 2.8")

7cm x 7cm (2.8" x 2.8")

7cm x 10cm (2.8" x 4")

Sold  
individually