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BIOGUARD® Barrier Dressings have a cationic biocide — polyDADMAC — bound to the dressing substrate which acts as a physical barrier of protection against a broad spectrum of opportunistic pathogens including MRSA.

BIOGUARD®'s active component polyDADMAC, has a high charge density and molecular weight — up to 100x larger than PHMB. Due to its size, bacteria do not develop resistance.

Don’t just guard. **BIOGUARD®**

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**BIOGUARD®**’s active component is bound to the dressing substrate.

**BIOGUARD®**’s active component polyDADMAC, has a high charge density and molecular weight — up to 100x larger than PHMB.

Due to its size, bacteria do not develop resistance.

**Fast acting and long lasting protection**

A non-leaching, non-resistant, non-toxic barrier dressing.

**Non-toxic antimicrobial activity**

Non-toxic antimicrobial activity means bacteria do not develop resistance to the biocide. Safe to use over the long term.

**Does not induce bacterial resistance**

**A physical barrier against MRSA**

A physical barrier against MRSA. Does not allow bacteria to pass through the dressing.

**A non-leaching, non-toxic barrier dressing**

A non-leaching, non-resistant, non-toxic barrier dressing.

**It’s Non-leaching:**

**It’s Non-toxic:**

**It’s Non-resistant:**

**Don’t just guard.**

**BIOGUARD®**

**BIOGUARD®** Barrier Dressings have a cationic biocide — polyDADMAC — bound to the dressing substrate which acts as a physical barrier of protection against a broad spectrum of opportunistic pathogens including MRSA.

**It’s Non-leaching:**

**BIOGUARD®**’s active component is bound to the dressing substrate.

**It does not leach, causing a zone of inhibition on the dressing, which can lead to resistance or toxicity issues to healthy cells.**

**It’s Non-toxic:**

**BIOGUARD®**’s active component polyDADMAC, has a high charge density and molecular weight — up to 100x larger than PHMB.

Due to its size, bacteria do not develop resistance.

**It’s Non-resistant:**

**BIOGUARD®**’s active component polyDADMAC, has a high charge density and molecular weight — up to 100x larger than PHMB.

Due to its size, bacteria do not develop resistance.

**New confidence in **BIOGUARD®** Barrier Dressings for your patient care and protection against opportunistic pathogens and wound infection.**

**STAND GUARD** against opportunistic pathogens cost-effectively with **BIOGUARD®** Barrier Dressings.

- Non-toxic antimicrobial activity
- Fast acting and long lasting protection
- A physical barrier against MRSA
- Does not induce bacterial resistance

**WOUND INFECTION, BY THE NUMBERS:**

Hospital Acquired Infections (HAIs) include MRSA and MSSA at the healthcare system.

2 million patients per year are affected by HAIs. Almost 100,000 result in death.

33.7% of the total cost of HAIs is attributed to Surgical Site Infections (SSIs)

2 out of 3: Surgical treatments of skin and debridement of wound infections are the top procedure associated with the treatment of MRSA infections

The average incremental cost of a SSI = $25,500 with an average LOS of 11.2 days

The average incremental cost of a MRSA infection = $42,300 with an average LOS of 23 days

8 Pseudomonas per 40 Fair is released with each gauze dressing change increasing potential of cross contamination
When managing your patients’ wounds, the last thing you want to worry about is opportunistic pathogens causing infection and delaying wound healing. BIOGUARD® Barrier Dressings offer you broad-spectrum barrier protection against opportunistic pathogens when managing your patients’ surgical incisions and wounds.

Through a patented manufacturing process, PolyDADMAC, an advanced cationic biocide, is bound to the dressing substrate, providing a physical barrier of protection against opportunistic pathogens including MRSA.

The Importance of Non-Leaching for Healthy Healing

Leaching – For wounds that are either infected or clinically colonized, bacterial control and having an active leach into the wound environment is paramount. The main goal of wound healing is to prepare and protect the wound environment for healthy healing.

Non-Leaching – For wounds that are on-track for healthy healing, dressings should not leak into healthy cells and should not reach into the wound. Dressings with an antimicrobial active bound to the dressing substrate, such as BIOGUARD®, should be considered. (See Fig.3)

Samples of gauze dressings were inoculated with 2 mL of PBS containing 1 x 10⁴ cfu/mL of E. coli and incubated for 15 hours at 37°C on tryptic soy agar (Difco) containing 0.01% TTC. Red color indicates areas of bacterial growth. (See Fig.1)

Cationic Biocides

Cationic biocides are commonly used to kill pathogens. PolyDADMAC shares the same compound class of biocides used in other gauze-based dressings such as PHMB (polyhexadimethylen biguanide), but with two key differences:

- PolyDADMAC is 10x larger than PHMB.
- The larger the molecule the lower the chance of the pathogen developing resistance to the biocide.¹

What about size?

Most causes of antimicrobial resistance occur when the active component enters into the cell of the pathogen. With a high molecular weight — up to 10x larger than PHMB — PolyDADMAC simply won’t fit through the holes of the damaged cell walls to induce resistance.²

In this standard antimicrobial resistance assay (See Fig.3), constant exposure to PolyDADMAC for a prolonged period of time — showed no resistance to the biocide treated substrate. Throughout this 10-round adaptation testing trial, bacterial cells were repeatedly exposed to PolyDADMAC with no resistance.

Method of Action

Cationic biocides act through a physical mechanism of action. They attract bacterial cells and bind rapidly to the cellular envelope and physically disintegrate the cell wall, disrupting the membrane to fragment, leading to cell breakdown. (See Fig.3).

Additionally, the higher the charge density, the more likely the biocide effects will maintain their effectiveness in high levels of exudate or other bodily fluids.³

<table>
<thead>
<tr>
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CONCLUSIONS

These clinical results suggest that BIOGUARD® gauze barriers may prevent rapid bacterial growth in gauze dressings saturating wound cavities. The reduction in biocides could lead to a decrease in the contamination of open wounds, as compared to standard dressings. Additional benefits of using BIOGUARD® gauze barriers include reduced wound odor, frequency of dressing changes, and the spread of biocides from biocidal dressings between patients and clinical personnel.