Laboratory Study

PROBIOTIC INFECTION PREVENTION

INGENIOUS PROBIOTICS

Probiotic Bio-Cleaning Achieves LOG 10 Reduction of MRSA Compared with Traditional Cleaning

Significant Result Achieved

- ✓ DENAA+ Healthcare Probiotic Patient Bed Bio-Cleaning Spray reduced the multi-drug resistant, pathogenic bacteria of the species Staphylococcus aureus (MRSA) from 100,000 to 100 colony forming units within 22 hours.

Probiotic Cleaning Spray Reduces MRSA by 99%

WITH **NATURALLY SOURCED PROBIOTIC BATERIA &** ***WITHOUT*** **CHEMICAL CLEANING AGENTS**

Study

The Luxembourg Institute of Science and Technology (LIST) carried out an independent laboratory study to measure the effectiveness of DENAA+ Healthcare Probiotic Patient Bed Bio-Cleaning Spray.

TEST ONE: The Effect of a Spray on the Passage & Survival of Probiotic Bacteria

Equal amounts of DENAA+ Patient Bed Bio-Cleaning Spray were extracted from the bottles:

(a) Using the spray and (b) using an automatic pipette.

TEST TWO: The Competition Between Bacillus Constituting Biomass (Probiotic Bacteria) and a Reference Strain of Methicillin Resistant Staphylococcus Aureus (MRSA):

Bottles containing contaminated ingredients only (no probiotics) were treated by filtration to remove contaminating bacteria. A pathogenic bacterium of MRSA was placed on a nutrient-free medium, Agar gel (100,000 colony forming units per petri dish). The boxes were sprayed with:

(a) 1 x spray and (b) 3 x sprays of DENAA+ Patient Bed Bio-Cleaning Spray.
The Petri dishes were incubated for 22 hours at 37ºC.

Results

TEST ONE: There was no difference in Bacillus growth between (a) and (b).

TEST TWO:

DENAA+ ingredients alone: no inhibition of pathogenic bacteria MRSA.
DENAA+ ingredients + probiotic solution: Achieved a 99% reduction of the pathogenic bacteria MRSA (with one spray and 3 sprays) within 22 hours.

Conclusion

The use of the spray method of application does not have a negative impact on the biomass (the number of live organisms in a given area) of the probiotics. The product ingredients alone have no inhibitory effects. The DENAA+ ingredients + probiotic solution demonstrated a significant inhibition effect on MRSA. NB: 99% reduction is achieved when the room temperature is maintained above 20ºC.

Follow Up

Although the results took longer to achieve than traditional cleaning agents, which can work almost immediately, the results were longer lasting. Continued use creates an increasingly healthier microbial environment, without the risk of the bacteria building resistance and without polluting the environment. Read the full research study at www.ingenious-probiotics.com/knowledge.

