

Laboratory Study



PROBIOTIC INFECTION CONTROL



Probiotic Wound Care Spray Achieves
LOG 10 Reduction of Staph Aureus

Key Findings:

- ✓ LUCAA+ Probiotic Pet Wound Care Spray reduced the multi-drug resistant bacteria of the species *Staphylococcus aureus* (MRSA) from 100,000 to 100 colony forming units (CFU) within 22 hours.
- ✓ Highly effective results with zero contribution to antimicrobial resistance.

LUCAA+ Wound Care Spray Reduces MRSA by 99% *WITH PROBIOTICS AND WITHOUT ANTIBIOTICS*

Study

The Luxembourg Institute of Science and Technology (LIST) carried out an independent laboratory study to measure the effectiveness of LUCAA+ Pet Wound Care Spray.

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

Equal amounts of LUCAA+ Pet Wound Care 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) & a Reference Strain of Staphylococcus Aureus

Bottles containing contaminated ingredients only (with no probiotics) were treated by filtration to remove contaminating bacteria. A pathogenic bacterium of Methicillin Resistant *Staphylococcus Aureus* – MRSA – (100,000 colony forming units per petri dish) was placed on a synthetic skin on top of petri dishes containing a nutrient-free Agar gel medium, and sprayed with:

(a) 1 x spray and (b) 3 x sprays of LUCAA+ Pet Wound Care Spray. The petri dishes were incubated for 22 hours at 37°C to stimulate real life temperature conditions of animal skin.

Results

TEST ONE:

There was no difference in *Bacillus* growth between (a) and (b).

TEST TWO:

LUCAA+ ingredients alone (no probiotics): no inhibition of pathogenic bacteria *Staphylococcus aureus* (MRSA).

LUCAA+ ingredients + probiotic solution: Achieved a 99% reduction of the pathogenic bacteria *Staphylococcus aureus* MRSA (with one spray and with 3 sprays) within 22 hours.

Conclusion

LIST states that: "The commercial product LUCAA+ produces a very significant drop in *Staphylococcus aureus* (>3 log unit CFU.ml⁻¹). The observation of the weak effect of the ingredients alone of LUCAA+ also indicates that the inhibitory effect of LUCAA+ is not due to the additional ingredients but to probiotic agents."

Follow Up

LUCAA+ Wound Care Spray provides a highly effective alternative to antibiotics for wound healing in animals. LUCAA+ Equine and ANNA+ Farming Wound Sprays achieve similar results. Read more at www.ingenious-probiotics.com.