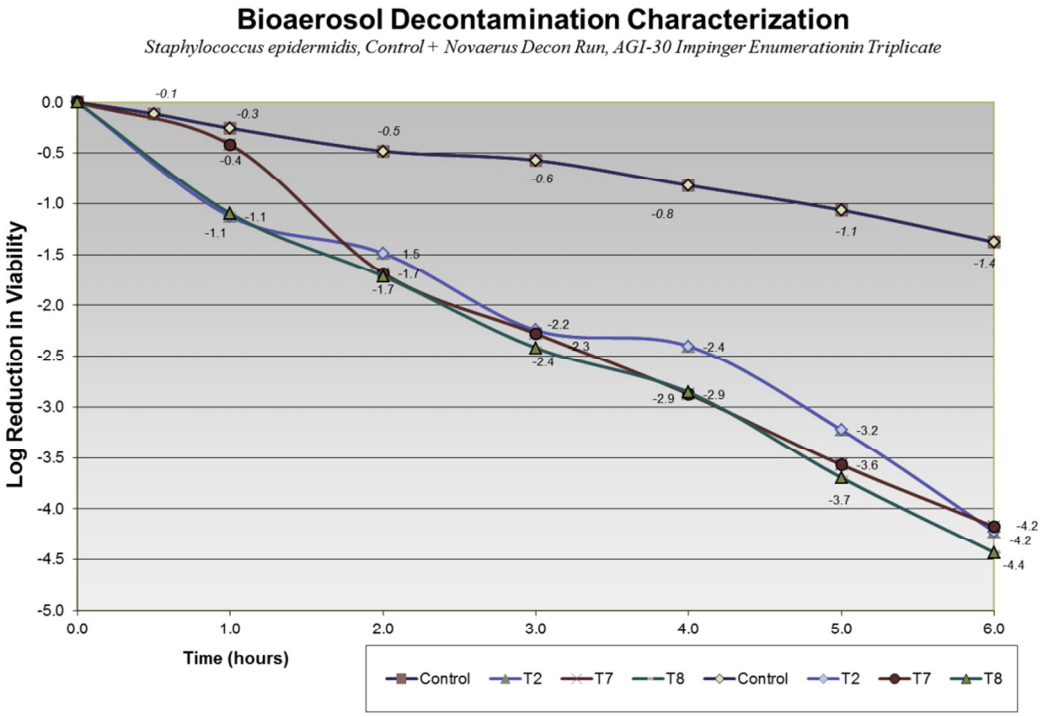


Figure 7: *S. Epidermidis Control and NV900 trial LOG Reduction in Viable Concentration.*

It was demonstrated that stability for *S. epidermidis* during the control runs was excellent even at extremely high concentrations. Chamber viable aerosol concentrations were greater than 1 x 10^4 cfu/liter or 2.8 x 10^5 cfu/ft^3 for all trials.

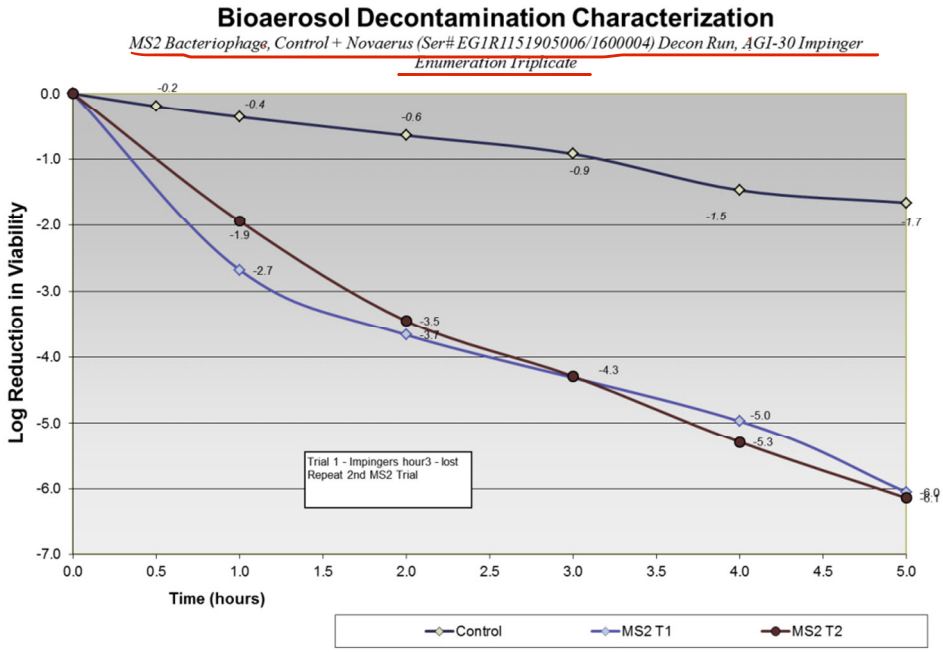
The viable concentration within the aerosol chamber decreased over a period of 6 hours and showed a loss in viable aerosol of approximately 1.4 logs for the control run. In contrast, the NV900 trials showed a viable bioaerosol reduction of 4.2, 4.2 and 4.4 logs for each trial in 6 hour.

Total viable reduction of airborne *S. epidermidis* was 2.90 +/ 0.14 logs (Avg. +/- STdev) above the control run at 6 hour. Figure 7, shows the results of the control and triplicate Staphylococcus NV900 trial runs.

NV900 Viral Bioaerosol Results

Results from the control trials were graphed and plotted in a similar fashion to vegetative cell bioaerosol testing with the control runs plotted alongside the NV900 live challenge runs.

Testing results with MS2 bacteriophage (figure 8) showed that the NV900 showed viable reductions of 6.0 and 6.1 LOG for the duplicate trials. This was in contrast to the control run which showed a 1.7 LOG reduction after 6 hours. The adjusted viable reduction after subtracting the control run reduction showed that the NV900 reduced the viable MS2 aerosol by 4.44 +/- 0.06 logs (Avg. +/- STdev) in the 360 minutes timeframe.



El bacteriofago MS2 es un sustituto del SARS-COV, ya que es un virus RNA monocatenario, con Tres tipos de proteína en la cubierta

Figure 8: *Bacteriophage MS2 Control and NV900 trial LOG Reduction in Viable Concentration.*

Gráfico que muestra la reducción en escala LOG de la concentración viable en ensayos con Novaerus NV9000 del aerosol de Bacteriófago MS2 (2 repeticiones) frente al control (sin NV900)

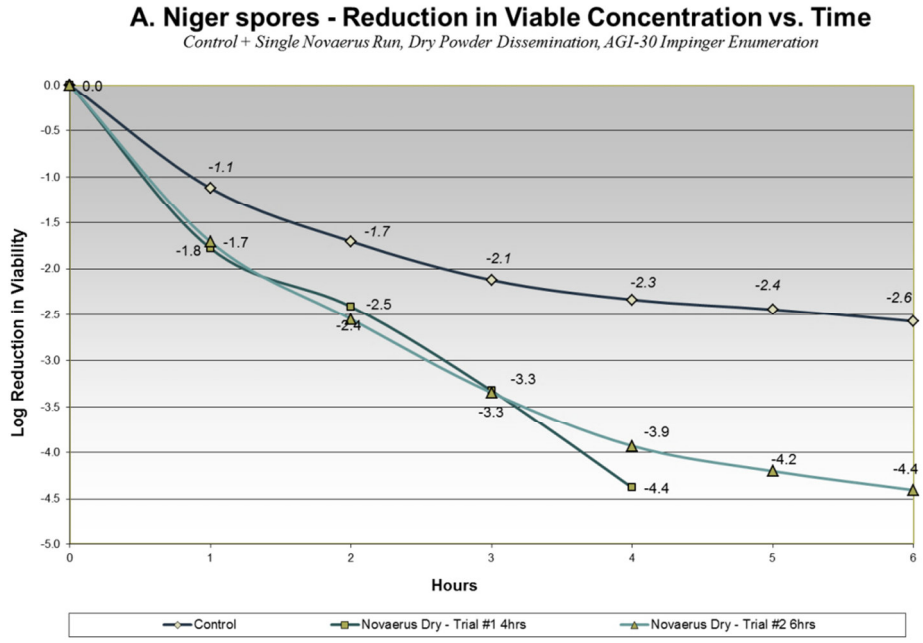


Figure 9: *Aspergillus niger spores Control and NV900 trial LOG Reduction in Viable Concentration.*

Gráfico que muestra la reducción de la concentración viable en escala LOG de Aspergillus Niger esporas comparando ensayos con Novaerus NV900 y sin el equipo.

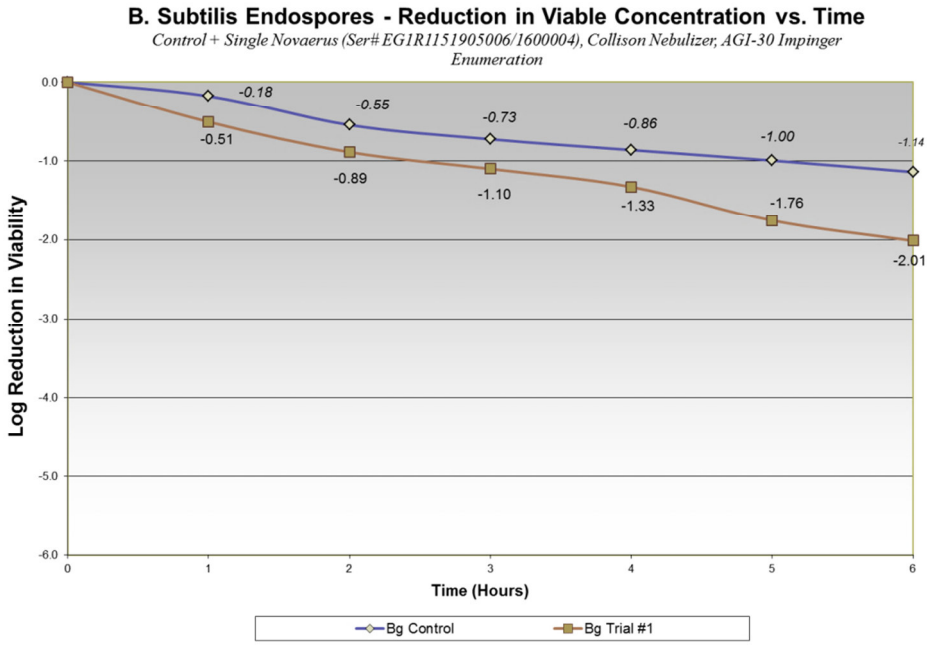


Figure 10: B. Subtilis *Control and NV900 Trial LOG Reduction in Viable Concentration.*

NV900 Aspergillus Spore Bioaerosol Results

A. niger stability was poor over the 6 hour control trial with a measured loss of a loss 2.6 LOG after 6 hours. This could possibly be due to a net surface charge on the bioaerosol due to the dry powder dissemination technique. However, stability was adequate to show 2.05 LOG net reduction during the 4 hour trial NV900 trial.

NV900 testing showed a net of 1.94 +/- 0.15 LOG (Avg. +/- STdev) reduction above the baseline control trial.

NV900 Endospore Bioaerosol Results

B. subtilis endospore stability was excellent over the 6 hour control run period. The control run showed that over a 6 hour period, approximately 1.14 LOG reduction in viable aerosol was observed. Chamber initial aerosol concentrations were high for all NV900 trials an averaged 1.27 x 10^6 cfu/l for the t=0 impinger samples.

Test results shown in figure 10 for *B. Subtilis* reflect the NV900 trials showed only a 2.01 LOG reduction in 6 hours, compared to the control which had a 1.14 LOG reduction in the same timeframe. NV900 testing showed a net of 0.87 LOG reduction above the baseline control trial for the single bioaerosol challenge.

Summary of Findings

Test results show that Novaerus NV900was extremely effective at reducing viability of bioaerosols in all conducted trials. Results from the control baseline viability tests show very stable viable aerosol persistence in the chamber with minimal losses in viability related to environmental conditions or chamber deposition.

NV900 System's efficacy of reduction of S. epidermidis viability, after correcting for control run losses, were 2.92 +/- 0.2 logs (average +/- standard deviation) in 6 hours. The reduction for viral bioaerosol concentrations within the chamber were 4.44 +/- 0.06 logs (Avg +/- STdev) in 5 hours for bacteriophage MS2. The A. niger fungal spores resulted in viable bioaerosol concentration reduction within the chamber of 2.05 +/- 0.15 logs (Avg +/- STdev) in 4 hours. The NV900 performance against aerosolized B. subtilis endospores was less than other aerosolized micro-organisms yet the NV900 still showed viable bioaerosol concentration reduction within the chamber of 0.87 logs (Avg +/- STdev) in 6 hours.

Figure 12 shows the average net LOG reduction in all bioaerosols trials after correction for control run viability losses. Table 3 shows the summary of results in tabulated form.

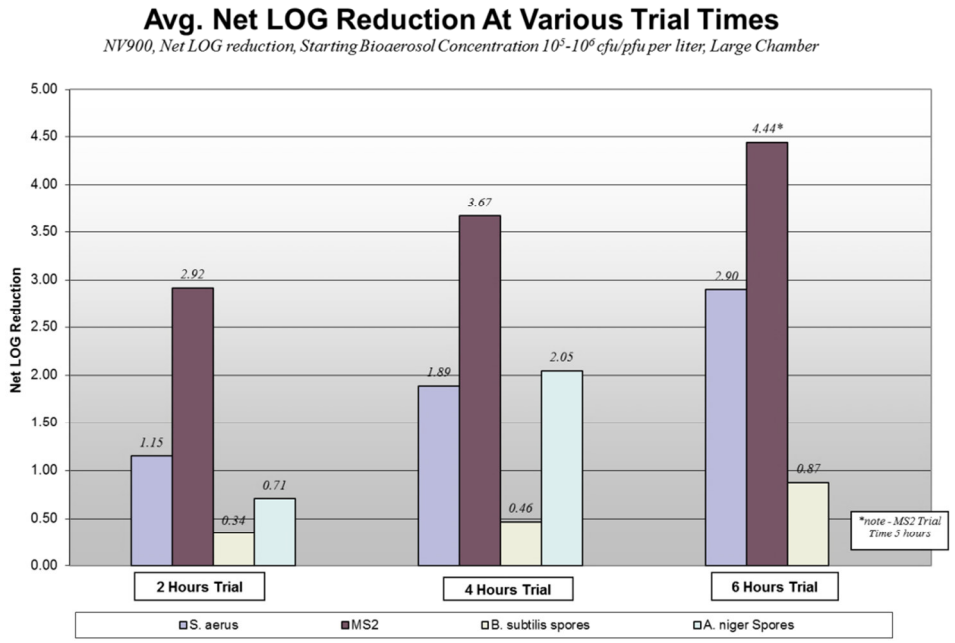


Figure 12: *Summary of Net LOG reduction of Viable Bioaerosol concentration for NV900.*

Resumen de la reducción promedio neta en escala LOG de la concentración de bioaerosoles viables (S. aerus, bacteriofago MS2, B. subtilis esporas y A. niger) con el uso de NOVAERUS NV900 en función del tiempo de uso empleado (2, 4 y 6 horas de ensayo)

Average NET LOG Reduction of BioAerosols by NV900

Bioaerosol Type	Species (gram, description)	Surrogate	Number of Trials	Trial Time					
				1hr	2hr	3hr	4hr	5hr	6hr
Bacterial	*Staphylococcus epidermidis (+, vegetative)*	*Staphylococcus aerus*	*3*	0.63 +/- 0.4	1.15 +/- 0.12	1.74 +/- 0.09	1.89 +/- 0.27	2.43 +/- 0.24	2.9 +/- 0.14
Virus	*MS2 bacteriophage (RNA E. coli phage)*	*Influenza*	*2*	1.95 +/- 0.52	2.92 +/- 0.15	3.37	3.67 +/- 0.23	4.44 +/- 0.06	-
Spores	*Bacillus subtilis endospore (Bacillus Spores)*	*Anthrax*	*1*	0.33	0.34	0.37	0.46	0.76	0.87
Spores	*Aspergillis niger (mold, spore forming)*	*Black Mold*	*2*	0.66	0.71	1.20	1.94 +/- 0.15	-	-

Average Percent Kill of BioAerosols by NV900

Bioaerosol Type	Species (gram, description)	Surrogate	Number of Trials	Trial Time					
				1hr	2hr	3hr	4hr	5hr	6hr
Bacterial	*Staphylococcus epidermidis (+, vegetative)*	*Staphylococcus aerus*	*3*	67.82% +/- 31.7%	92.68% +/- 2.21%	98.16% +/- 0.37%	98.51% +/- 1%	99.59% +/- 0.25%	99.87% +/- 0.04%
Virus	*MS2 bacteriophage (RNA E. coli phage)*	*Influenza*	*2*	98.44% +/- 1.52%	99.88% +/- 0.04%	99.96%	99.98% +/- 0.01%	100% +/- 0%	-
Spores	*Bacillus subtilis endospore (Bacillus Spores)*	*Anthrax*	*1*	53.44%	54.42%	57.59%	65.59%	82.73%	86.63%
Spores	*Aspergillis niger (mold, spore forming)*	*Black Mold*	*2*	77.96%	80.32%	93.75%	99.10%	-	-

Table 3: *Summary of Results.*