



Biomist Power Sanitizing Systems

Areas of Use

- Ambulance, cruiser and vehicle interiors
- Personal protective gear, masks and harnesses
- Jump bags and portable equipment
- Radios and communication devices
- Electronics, keyboards, touch pads and monitors
- Patient care devices such as blood pressure cuffs, stethoscopes and ECG's
- Gurneys, stretchers and wheelchairs
- Communal areas in the fire house (kitchens, cafeterias, bathrooms and living areas)
- Inmate holding cells

Benefits

- Biomist Systems eliminate the flammability of atomized, concentrated alcohol
- Heated CO₂ system will run 24/7/365, provides continual spray over long periods of time
- Cylinders and valves are protected by stainless steel enclosures
- Accessories and options allow for uninterrupted decontamination
- Biomist reduces chemical consumption and waste
- Saves time and labor - no wiping or rinsing, no cross-contamination with dirty rags
- Biomist Formula D2 is non-corrosive and safe for sensitive equipment
- Biomist Formula D2 is bactericidal, virucidal, fungicidal and tuberculocidal
- Biomist Formula D2 complies with OSHA's Bloodborne Pathogen Standard
- Spray penetrates small cracks, crevices and areas beyond physical reach

Simply point, spray and walk away!

To learn more call Biomist.

BIOMIST, INC.

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To:
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Anti-microbial Effect of Product Biomist.

Lab. Report 51-63055

The product was examined for its anti-microbial activity in order to confirm its disinfectant properties on different surfaces in a Magen David Adom ambulance that were inoculated with a bacterial suspension of the following microorganisms (to a final concentration of aprox. 10^4 org/ml each):

Escherichia coli ATCC 8739

Staphylococcus aureus MRSA 33591

Candida albicans ATCC 10231

Pseudomonas aeruginosa ATCC 9027

The microorganisms were grown on Tryptic Soy Agar Slants and suspended in phosphate buffer (pH 7.2) to a final concentration of ca 10^4 org/ml.

The bacterial suspension was dispersed on 4 different surfaces.

- 1) Patient bed- head pillow
- 2) armchair-paramedic
- 3) Medicine drawer
- 4) Driver steer wheel

The chosen surfaces were examined a) for their initial microbial load, b) after the contamination with the bacterial suspension and c) after the disinfection process.

Each surface was sampled by **Replicate Organism Direct Agar Contact plates (RODAC)** - to see the amount of all viable microorganisms remaining on each surface and by cotton swabs wetted with sterile buffer (aprox 50-100 sq-cm sampled/swab).

The plates were incubated at $32\pm 0.5^\circ\text{C}$ for 48 hours and examined for growth. The number of colonies was counted and the number of colony forming units (CFU) per RODAC or per swab was reported.

The percent of reduction was calculated and the results are presented in the following table (1).

Table 1: Antimicrobial Effect

	<u>initial count</u>		<u>after contamination</u>		<u>after disinfection</u>		<u>% reduction</u>
	<u>SWAB</u>	<u>RODAC</u>	<u>SWAB</u>	<u>RODAC</u>	<u>SWAB</u>	<u>RODAC</u>	
Patient bed- head pillow	<u>150</u>	<u>84</u>	<u>53000</u>	<u>To numerous to count</u>	<u>46</u>	<u>19</u>	<u>99.91%</u>
armchair - paramedic	<u>450</u>	<u>190</u>	<u>78000</u>	<u>To numerous to count</u>	<u>20</u>	<u>12</u>	<u>99.97%</u>
Medicine drawer	<u>80</u>	<u>25</u>	<u>33000</u>	<u>To numerous to count</u>	<u>140</u>	<u>19</u>	<u>99.57%</u>
Driver steer wheel	<u>890</u>		<u>180000</u>		<u>3500</u>		<u>98.06%</u>

Conclusions

This preliminary study shows the presence of a relatively high microbial background as it appears after the initial sampling, particularly in the driver wheel and the paramedic armchair. It is recommended to repeat the experiment with a longer exposure time of the disinfectant. It may be useful to disinfect the driver's wheel by thorough physical means not only by spreading the product on the surface of the wheel.

All protocols recommend cleaning surfaces before disinfection. This preliminary experiment shows that even without cleaning, the product was effective in reducing by more than 98% (driver's wheel) and at least 99.5% the different surfaces sampled. **Biomist** was shown to be effective in disinfecting most surfaces in the ambulance where a medium to high disinfection level is required.



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