LifeAire Systems Aire~PPE™ Decontamination Unit

Rapid and complete disinfection for N95 masks

LifeAire Systems' Aire~PPE™ Decontamination Unit was designed to disinfect N95 masks based on existing and proven technology. The validated technology was mathematically and genomically designed such that it delivers a 155.7-log viral kill, both on the surface and within the mask layers, specific to the genomic sequence of the COVID-19 virus. As a reference, sterility is defined by a 6-log reduction and all logs above 6 are not measurable.

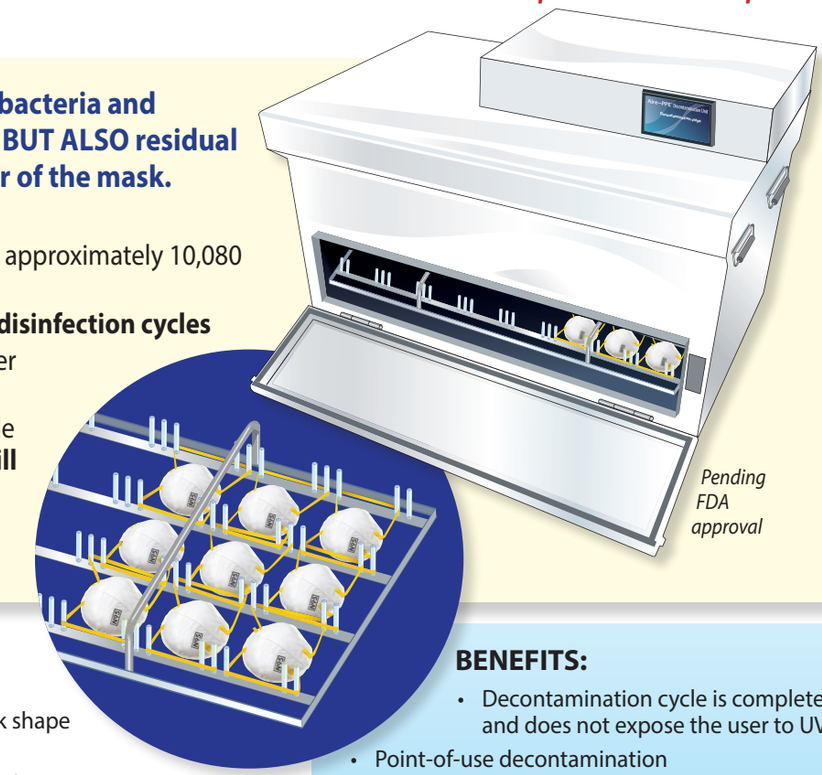
The unit is portable and can be placed in critical areas that require PPE disinfection:

- triage areas
- emergency department
- operating rooms
- medical and surgical intensive care units for adults and pediatrics
- medical and surgical wards
- radiology
- long term care facilities
- physician offices
- dental offices
- first responders
- any other user of N95 masks

The unit's proven kill enables healthcare workers to confidently recycle and reuse their N95 masks.

Designed NOT ONLY for the kill of bacteria and viruses on the surface of the mask BUT ALSO residual viable biologicals within each layer of the mask.

- **Holds (21) N95 masks at a time**
- **2.5 minute decontamination cycle,** approximately 10,080 masks/day
- N95 masks can withstand **up to 100 disinfection cycles**
- **Masks ready for immediate use** after decontamination
- Dosing, intensity, reflectivity and cycle time designed for **comprehensive kill on the surface of and within the layers** of the N95 mask
- Unit pays for itself in less than 1 day



Pending FDA approval

DETAILS:

- Portable - weighs approximately 110 lbs without rack, 18 lbs per tray
- No temperature rise during operation
- Buzzer alert at end of 2.5 minute cycle
- 120 to 240 V / 50 and 60 Hz
- Safety interlock that turns lamps off if door is opened
- Unit comes with 2 trays to increase workflow
- Graphic display to guide user through decontamination steps
- Easy to use, automated processing and continuous control of UVC dose
- Patent pending

DESIGNED TO DECONTAMINATE N95 MASKS:

- Specifically designed to account for mask shape and porous material
- Tray designed to hold masks on glass pins to ensure disinfection of both masks and straps
  - Ensures proper positioning
  - Compatible with different mask types and geometries
  - Provides proper tension on the mask surface
- Employs proven and tested kill technology used in full LifeAire System
- Delivers more than the lethal dose required to kill COVID-19
- Designed with input from leading physicists, and emergency medicine and infection control experts

BENEFITS:

- Decontamination cycle is completely safe and does not expose the user to UVC
- Point-of-use decontamination
- Chemical-free process (no risk related to hazardous material transport, storage and manipulation)
- Leaves no harmful chemical residues on decontaminated masks
- Generates no residue or waste
- Limited operating costs (electrical consumption and annual lamp replacement)
- Quick and simple installation without additional installation costs

TECHNOLOGY TESTED AGAINST:

- SARS-CoV-2 (COVID-19)
- Porcine Coronavirus (PEVD)
- Avian Coronavirus (IVB)
- Bacillus subtilis
- Geobacillus stearothermophilus

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LifeAire Systems	SIZE TYPE	SIZE MICRON	LOG KILL*	% DISINFECTION
Mycobacterium tuberculosis	*bacteria*	0.637	223.5	**100.0000%**
Candida auris	*virus*	0.113	211.6	**100.0000%**
Coronavirus (SARS)	*virus*	0.113	178.5	**100.0000%**
Coronavirus (COVID-19)	*virus*	0.113	155.7	**100.0000%**
Proteus mirabilis	*bacteria*	0.494	136.8	**100.0000%**
Mycoplasma pneumoniae	*bacteria*	0.177	132.1	**100.0000%**
Salmonella	*bacteria*	0.800	104.6	**100.0000%**
Aeromonas	*bacteria*	2.098	96.1	**100.0000%**
Ricksettsia prowazekii	*bacteria*	0.600	83.3	**100.0000%**
Staphilococcus epidermis	*bacteria*	0.866	76.7	**100.0000%**
E. Coli	*bacteria*	0.500	73.9	**100.0000%**
Yersinia enterocolitica	*bacteria*	0.707	72.7	**100.0000%**
Coxiella burnetii	*bacteria*	0.283	72.7	**100.0000%**
Lactobacillus reuteri	*bacteria*		72.7	**100.0000%**
Vaccinia virus	*virus*	0.307	72.4	**100.0000%**
smallpox			72.3	**100.0000%**
Newcastle disease	*virus*	0.212	68.2	**100.0000%**
Acinetobacter baumanii	*bacteria*	1.225	60.6	**100.0000%**
influenza A virus	*virus*	0.098	56.3	**100.0000%**
MRSA	*bacteria*	0.866	53.5	**100.0000%**
Coxsachievirus	*virus*	0.027	52.5	**100.0000%**
Avian Influenza virus	*virus*	0.098	50.2	**100.0000%**
Measle virus	*virus*	0.329	49.8	**100.0000%**
Pseudomonas aeruginosa	*bacteria*	0.494	49.6	**100.0000%**
Serratia marcescens	*bacteria*	0.632	45.0	**100.0000%**
Bacillus subtilis			43.6	**100.0000%**
Parvovirus H-1	*virus*	0.022	43.6	**100.0000%**
Proteus vulgaris/mirabilis	*bacteria*	0.291	36.3	**100.0000%**
Corynebacterium diphteriae	*bacteria*	0.698	33.2	**100.0000%**
Ustilago zeae	*fungi sp*	5.916	31.1	**100.0000%**
Streptococcus pyogenes	*bacteria*	0.894	29.2	**100.0000%**
Haemophilus influenza	*bacteria*	0.285	28.4	**100.0000%**
Yeast	*VegY*	0.000	27.2	**100.0000%**
Klebsiella pneumoniae	*bacteria*	0.671	25.9	**100.0000%**
Neisseria catarrhalis/meningitidis	*bacteria*	0.177	24.8	**100.0000%**
Clostridium tetani	*fungi sp*	5.000	22.2	**100.0000%**
VRE	*virus*	0.065	19.8	**100.0000%**

LifeAire Systems	SIZE TYPE	SIZE MICRON	LOG KILL*	% DISINFECTION
Burkholderia cenocepacia	*bacteria*	0.707	18.7	**100.0000%**
Adenovirus	*virus*	0.079	18.5	**100.0000%**
C.diff sp.	*bacteria*	0.060	18.2	**100.0000%**
Enterobacter cloacae	*bacteria*	1.414	17.0	**100.0000%**
Reovirus	*virus*	0.075	15.9	**100.0000%**
Norwalk virus	*virus*	0.029	14.4	**100.0000%**
Echovirus	*virus*	0.024	10.4	**100.0000%**
Bacillus Anthacis (Anthrax)	*bacteria*	1.118	7.9	**100.0000%**
Cryptococcus neoformans	*fungi sp*	4.899	7.9	**100.0000%**
Blastomyces dermatidis	*VegY*	11.000	7.8	**100.0000%**
Histoplasma capsulatum	*Veg fungi*	2.550	7.8	**100.0000%**
Mucor spores	*fungi*	7.070	7.8	**100.0000%**
Bacillus subtilis spores	*bacteria*	1.120	7.3	**100.0000%**
Listeria monocytogenes	*bacteria*	0.707	7.0	**100.0000%**
Francisella Tularensis	*virus*	0.200	7.0	**100.0000%**
Fusarium oxysporum	*fungi sp*	11.225	6.7	**100.0000%**
Botrytis cinerea	*fungi sp*	11.180	4.4	**99.9956%**
Rhizopus nigricans	*fungi sp*	6.928	4.1	**99.9916%**
Nocardia asteroides	*bacteria*	1.118	3.9	**99.9872%**
Penicillium digitatum	*fungi sp*	3.262	3.4	**99.9601%**
Bacillus Cereus spores	*Fungi sp*	1.118	2.7	**99.7861%**
Algae blue-green	*algae*	5.000	2.4	**99.6230%**
Streptocuccus Pneumoniae	*bacteria*	1.225	2.3	**99.5312%**
Penicillium chrysogenum	*fungi sp*	3.262	2.1	**99.1179%**
Trichophyton rubrum	*fungi sp*	4.899	1.9	**98.8665%**
Candida albicans	*VegY*	4.899	1.9	**98.8160%**
Mucor mucedo	*fungi sp*	7.071	1.9	**98.7082%**
Cladosporium herbarum	*fungi sp*	8.062	1.8	**98.2279%**
Scopulariopsis brevicaulis	*fungi sp*	5.916	1.6	**97.6473%**
Bacillus Anthacis spores	*bacteria*	1.118	1.5	**96.5918%**
Aspergillus fumigatus spores	*fungi sp*	2.640	0.5	**67.4600%**
Aspergillus niger spores	*fungi*	3.354	0.3	**53.3734%**
Cladosporium wemecki	*fungi sp*	8.062	0.2	**42.6444%**

**All logs above 6 are considered sterile and not measurable*

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