



Our **holistic** approach is to **protect** all people from the **Air** they breathe and what they **Touch - Validated**



Proguardeum Inc. is committed to helping our customers globally solve their toughest challenges with eco-friendly sustainable solutions to disinfect surfaces, mitigate air pathogens, and validate our solutions. Our passion is to deliver cleaner, safer, and healthier indoor environments critical to healthcare, schools, hotels, commercial enterprises, and food processing plants. Through our custom engineered systems, we effectively reduce the use of toxic chemicals and the carbon footprint.



# Beyond CLEAN™







In any indoor space be it offices, schools, airplanes, hospitals, hotels, and manufacturing — these environments can be assessed via **Sanitation Performance Indicators, or SPIs**. Derived from the business term Key Performance Indicators, SPIs are metrics that provide insight into how protocols are performing throughout all areas of the building. By assessing the SPIs your built environments, we can best support you to integrate new mandated protocols to optimize the building’s healthy hygiene long term. We call this **“beyondomics”** the beyond totality in environmental hygiene to protect human health, well-being through science and innovation.

Environmental cleaning practices plays a key role in preventing the spread of contagious pathogens. However, many current cleaning and disinfecting products negatively impact human health and the environment. The **Beyond Clean™ Program** is designed to assess, quantify, and offer optimal strategies with with **Proguardium Optimum™** solution to optimize building hygiene. Custom touchless ULV technology delivery systems are key to mitigate the risks of contagions in high traffic areas. As an additional protection, we have complimentary innovative technologies to maximize clean air in confined areas and validate the effectiveness of the protocols.

*Effective resourcing, both in terms of equipment and personnel, are essential as well as planning of cleaning activities to ensure that sources of contamination are accessed and removed.*

Peter Littleton, Vice-Chair and Training Services Director of the Society of Food Hygiene and Technology (SOFHT)

**Six pillars of the Beyond Clean™ are focused on the health, safety, and the productivity of its occupants.**

 <p><b>ASSESSMENT</b></p> <p>Our multi-disciplinary team will work with your Infection Prevention and Control team to identify the hygiene protocol requirements.</p>	 <p><b>BLUEPRINT</b></p> <p>Hygiene practises are analyzed to develop SPI's to optimize your operations in accordance with state and government requirements.</p>	 <p><b>TRAINING</b></p> <p>We collaborate to implement new protocols. We also offer complete training -site testing to validate the effectiveness of the new initiatives.</p>	 <p><b>DELIVERY</b></p> <p>Our engineers provide the metrics to delivery in the most efficient and economical solutions to maximize the value of custom applications.</p>	 <p><b>VALIDATION</b></p> <p>To add peace of mind, independent testing provides a full or self service model for all of your testing to ensure SPI's are met.</p>	 <p><b>OPTIMIZATION</b></p> <p>We are continuously innovating to best serve your operations and ensure that we optimize the SPI's deliverables for the future.</p>
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# Eco-friendly Cleaning & Disinfecting Applications

Accidental poisonings in the US have risen dramatically during the Covid-19 lockdown. They are up 20% in the first three months of 2020 compared with last year, according to the CDC. There were 45,550 calls related to exposure to disinfectant and cleaning agents, almost two-thirds of the incidents involving bleach and most of the others disinfectants and hand sanitisers.

**Proguardeum™ Optimum** is a EPA/FDA approved fast acting biocide that is up to 300 times more effective than bleach. It is highly effective to help reduce cross-contamination risks and alleviate the spread of pathogens both on the surface and in the air. The active ingredient is medical grade Hypochlorous (HOCL), a naturally occurring agent produced by our white blood cells to fight bacteria and inflammation after an infection or trauma.

Diverse product applications include; **touchless disinfection through dry misting, surface spraying, hand sanitizers, disposable wipes, sanitizing laundry practises, and the cleaning of raw food.**

Our goal is to provide the most sustainable cost-effective solution that contributes to protect the environment, and most importantly, improve people's ability return to indoor environments and be able to interact together.



**KILLS  
COLD & FLU  
RSV  
VIRUSES**



**CONTROLS  
MILDREW MOLD  
& ATHLETES  
FOOT**



**DESTROYS  
LISTERIA  
SALMONELLA  
& E. COLI**



**BREATHE  
EASY  
NO HARSH  
FUMES**

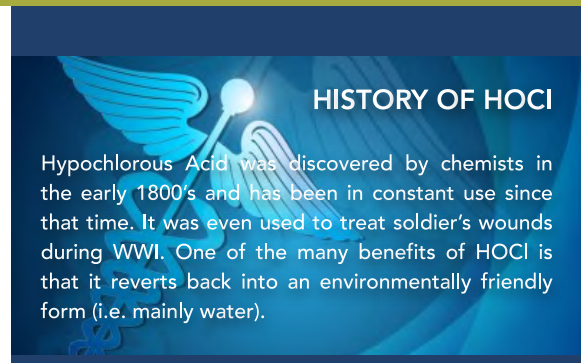


**NO RINSE  
REQUIRED EVEN  
ON FOOD  
CONTACT SURFACES**

EPA Code of Federal Regulations: Title 40 - Protection of Environment, CAS REG No. 7790-92-3 USDA

Under FSIS Directive 7120.1 - Approved as a food additive FDA Approval under 21 CFR Part 178

Proguardeum Optimum™ EPA Registration No. 98201-1-96376



## HISTORY OF HOCL

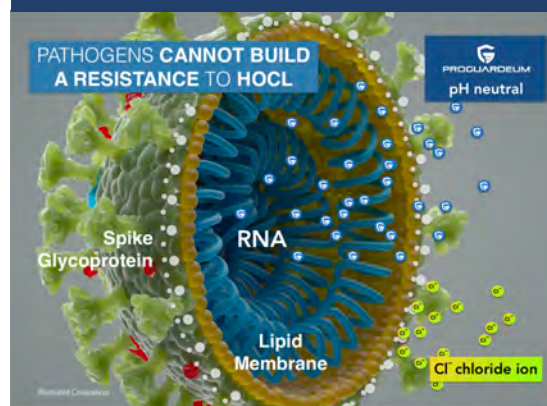
Hypochlorous Acid was discovered by chemists in the early 1800's and has been in constant use since that time. It was even used to treat soldier's wounds during WWI. One of the many benefits of HOCL is that it reverts back into an environmentally friendly form (i.e. mainly water).

## BIOCIDAL EFFICACY\*

Polio virus 8	99.999999%
Hepatitis A 8.	99.999999%
Listeria monocytogenes	99.99999%
Pseudomonas aeruginosa	99.9999%
Escherichia coli	99.9999%
Legionella pneumoniae	99.9999%
Salmonella spp	99.9999%
Staphylococcus aureus MRSA	99.9999%
M. tuberculosis (H7Rv) 6	99.9999%

\*Based on ProguardeumODS Application

pH neutral **HOCL can** easily rupture the negatively charged cell lipid membrane viruses to destroy the replication abilities of the RNA. Whereas the negatively charged **chloride ions (CL-)** cannot penetrate cell walls as effectively.



# The Ultimate in Mobile Air Disinfection



The Mobile Air Disinfection System uses a patented three stage technology process to efficiently capture airborne pathogens in large volumes of fast-moving air, holding germs long enough for total UV-C eradication that will render environments sterile.



HEPA FILTRATION



PATENTED UV-C  
AIR DISINFECTION



CONTINUOUS  
AIR SCRUBBING

The units are currently used in hospitals including:

- NYU Medical Center
- University of Rochester Medical Center
- The Federal VA Hospital System
- Baptist Health South Florida

Standing 37" tall and weighing only 62 lbs., the unit plugs into any 110-120 outlet, using as little power as an average residential ceiling fan!

"Plug and Play" - no technical training required.



## EPA Guideline Laboratory Tested

(August 2019)

- Bio-Aerosol Test Chambers
- Aerosolized Pathogen Species
- ISOP 17025 accredited within EPA & FDA
- Test Chamber Room 800ft<sup>3</sup> / 22.7m<sup>3</sup>
- Contact time 30-60 mins

*"We have deployed these units in the Emergency Department and Trauma Bay to address outside effluents, airborne flu viruses and other pathogens, this effort was met with great praise from both our clinicians and patient population due to increased air quality."*

- Mark Schwartz, Director, Medical Center Facilities, University of Rochester Medical Center, NY



### 99.9995% VIRUS

- Coronavirus
- Hepatitis A, B, C, D, E
- Human Immunodeficiency (HIV)
- Influenza
- Norovirus
- Rubeola (includes Measles)
- Varicella (Chicken Pox)



### 99.99% BACTERIA

- Methicillin Resistant Staphylococcus aureus (MRSA)
- Pertussis (Whooping Cough)
- Pseudomonas aeruginosa
- Streptococcus Group A & B
- Streptococcus pneumoniae
- Vancomycin Resistant Enterococcus faecalis (VRE)



### 99.97% FUNGI

- Aspergillosis (niger and fumigatus)
- Candida auris



In minutes, the MADS 400 uses a patented UV-C technology, processing large amounts of fast-moving air (400 CFM) to kill pathogens, reduce particulates, and remove odor and VOCs in a standard 10 x10 x 8 / 3x3x2.5m (800ft<sup>3</sup> / 22.65m<sup>3</sup>) room.

The MADS 400 is hospital proven with nationally recognized facilities such as NYU Medical Center, University of Rochester, Federal VA Hospitals, NY Health+ Hospital, and Baptist Health Systems using the device in their intensive care units, operating rooms, patient rooms, compounding pharmacies, air infection isolation rooms (AIIR), morgues, food-service, waiting areas, and more.

## BENEFITS

- EPA guideline tested and certified whole room air disinfection in minutes
- Mitigate HAIs with patented UV-C pathogen killing **99.9995%** efficacy rating
- Verified elimination of virus, bacteria, mold, particulates, odor and VOCs
- Powerful and quiet 24/7 UV-C air scrubbing - 100% safe for patients and staff

## SPECIFICATIONS

### Electrical Ratings

- Rated at 110 Volts
- Rated at 1.6 Amps
- Grounded outlet required

### Decibel Level

- 62-64 decibels

### Certifications

- MET US/C UL 507

### Construction

- High-grade steel
- Antimicrobial powder coating
- Aluminum wheelbase

### Air Circulation

- 360-degree vortex air flow over a large surface area
- Will not affect room air exchanges or room air flow
- Will not affect positive/negative pressure
- Air intake matches air exhaust
- 400 CFM

### Disinfection Process

- HEPA (0.3 um) pre-filter
- UV-C 253.7nm 36W non-ozone
- Treated carbon substrate final filter granulated non-moisture

### Cleaning

- Wipe down entire machine with antibiotic cleaner



## FEATURES

- High-volume 400 CFM fan operation performs complete air change within 2-10 minutes in a typical room size of 10'x10'x 8' (800 cubic feet)
- Powerful and quiet brushless high-speed motor disinfects 400 cubic feet per minute of air volume (42 decibels at average operating speeds)
- High-capacity HEPA® pre-filter cartridge captures particulates down to 0.3 microns
- Large-volume UV-C induction chamber for full process of pathogen-laden air, killing germs less than 0.3 microns in size
- 360-degree total air intake system creates a quiet, undetectable whole-room air induction vortex
- Patented carbon substrate for complete odor and VOC removal
- Creates zero airflow disturbance, no temperature or humidity variations, and no negative or positive air pressure interference
- Premium hospital wheel casters for effortless mobility on all surfaces with toe touch locking wheels
- 110-120 voltage standard outlet with the same power requirements as a typical residential ceiling fan
- Zero ozone production
- Lightweight with aluminum balanced security base for superb stability and safety
- On-Board Digital screen reporting
- HEPA® Filter/Air Flow integrity metering
- UV-C Light integrity/intensity metering
- Carbon Final Filtration metering
- Pathogen and Particulate Air Volume process metering
- Filter replacements available with simple and economical annual self service

**DIMENSIONS** 62 lbs / 22" w x 37" h  
23 kg / 59 cm w x 94 cm h

Model #	Description
PRO-MADS400	Proguardium™ Mobile Air Disinfection System
CAPACITY	12,000 cubic feet

FOR MORE INFORMATION

1.888.813.9008

info@utilitiesmarketinggroup.com



POWERED BY  
**PROGUARDEUM™**

# Hand Held ULV Dry Misting Units

## MADE FOR THE PROFESSIONALS - MADE TO LAST

### PRO-ULV 383 DRY MISTER



PRO-ULV-383

German engineered patented lithium Ion 24V Battery (UN-38.3 certified)

High output motor sheers particles through dual vortex head

No drip nozzle to achieve 0.66, 1.2, 1.85 G/HR

Engine stops before decreasing power which would result in reduce consistent particle sizes with indicator light showing battery level

One hour use time on full charge

### PRO-ULV 426 DRY MISTER



PRO-ULV-426

German engineered AC induction motor with speed up to 38,000 RPM and airspeed of 426ft per sec

Vortex air shear double turbine nozzle A Double Turbine Atomizer with consistent 15 microns dispersion

20 inch highly flexible and durable hose (6ft extension available)

1.25 Gallon UV resistant resevoir tank

### PRO-MINI 60 DRY MISTER



PRO-MDM-60

1 Quart high grade stainless steel for corrosion-resistance and professional appearance

Heavy duty pressure gauge, allows for accurate monitoring and control of the spray operation

Pressure release valve for safety and convenience

High efficiency pump design makes pumping to 60 psi easy with ergonomic handle

# OPTI-CLEAN CUBE



DESIGNED & MANUFACTURED BY



Proguardeum Inc. in partnership with Xtreme Cubes Corp., announces an important break-through in moving forward from the impact of the global pandemic. The **Xtreme Opti-Clean Cube (XOCC)**, is a custom-engineered relocatable (or permanent), modular walk-thru structure designed to combat the spread of COVID-19 while entering and exiting building environments.

XOCC is designed to safely deliver a complete 360° coverage of ultra-light volume (ULV) "dry mist" application of **Optimum™ Pro Surface Defense**, an EPA-FDA approved stable pH neutral formulation of hypochlorous solution (HOCL). HOCL is made naturally in white blood cells to fight against infection, reduce inflammation, and enhance the healing process. Through our proprietary technologies Optimum™ Pro Surface Defense is produced at its highest purity without any contaminants, offering superior efficacy to inactivate known pathogens and long-standing stability for storage. The natural formulation contains no additives, buffers, or preservatives, and is non-toxic, non-hazardous to people and surfaces.



- Safe for all areas of skin, clothing, and accessories
- 100% natural, Eco-friendly, Non-toxic, Non-hazardous; 99.8% purified super optimized water
- Simply walk through, no stopping necessary
- Designed with weatherproof steel modular relocatable or permanent structure
- Customization available for motion sensors for intermittent traffic and/or thermal sensors
- Customization for brand advertising available
- SARS-CoV-2 Validated Environmental Testing available







## VALIDATED NOVEL CORONAVIRUS-19 ENVIRONMENTAL TESTING

The sudden and unprecedented demand to validate indoor environments for viral pathogens is paramount. This is to instill 'peace of mind' to staff, consumers, and visitors when businesses become fully reopened. In alignment with the updated CDC and OSHA safety standards, **Proguardeum** in partnership with **IWC Environmental Solutions**, now offers the most accurate CDC approved testing method for SARS-CoV-2. The **RT-qPCR rapid response testing** can efficiently test any high touch surfaces, air, and fluids in your building. IWC Environmental Solutions offers full or onsite service options for cost-effective testing to strengthen the effectiveness of sanitation protocols.

### What is a RT-qPCR Validation Test?

The state-of-the-art 'Reverse Transcription Quantitative Polymerase Chain Reaction' technology is used to detect the SARS-CoV-2 virus. Our test removes all impurities from samples to capture the highest-quality RNA for the best results.

### What are the Testing Options?

We offer both Full and On-site Service program options. Each program can be tailored to the customer's specific needs.

- Full services includes overnight results sent to an accredited certified lab
- With On-site, the IWC team conducts the test with an average 1-hr turn around time



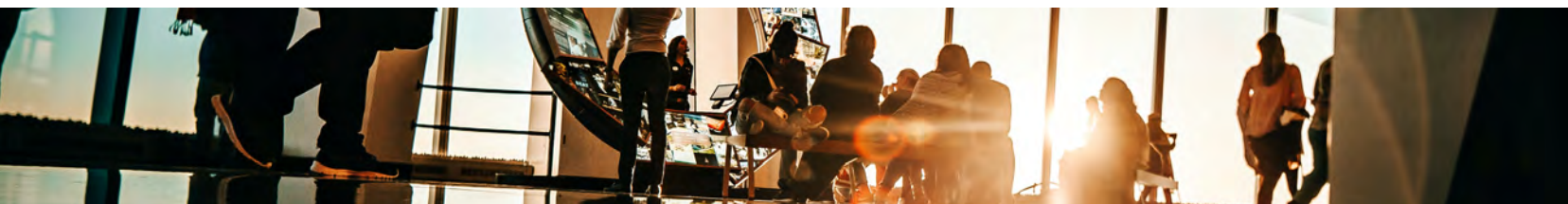
### Results you can trust

IWC Environmental Solutions has built accuracy and reliability at every step, including:

- A simplified yet robust extraction process that enables a low limit of detection, allowing for the effective removal of interferences from a range of sample types
- Positive and negative controls are in place, ensuring each test has run properly
- Results available on the "Smart Test App" to provide maximum efficiency and direction for your sanitization efforts
- Easy to read reports provide verification, validation, and allows for the greatest level of success for mitigating SARS-CoV-2 within the environment



FOR MORE INFORMATION  
[info@proguardeum.com](mailto:info@proguardeum.com)



# Delivering Solutions through **Science.**

Our **holistic** approach is to **protect** the lives of all people,  
in all buildings, everywhere, every day.

FOR MORE INFORMATION

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