

## SISTEMA DE PURIFICACION DE AIRE COMERCIAL - CAPS MINI TECNOLOGÍA FOTOHIDROIONIZANTE (PHI)



CAPS-MINI-16 / 25

### REDUCE

Humo  
Limo, hongo, olores y bacterias

### ELIMINA

Grasas - Restaurantes  
Mercurio - Clínicas dentales y laboratorios

### VENTAJAS

Economía  
Bajo mantenimiento (anual)  
10.000 horas de vida útil del PHI luz  
Compacto  
Versatilidad en opciones de montaje

Ideal para restaurantes, tiendas PET, clínicas médicas y odontológicas, salones de belleza, gimnasios, entre otros.

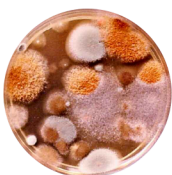
### EL PROBLEMA

La contaminación del aire interior es actualmente reconocida como el problema más serio de salud ambiental. Las edificaciones herméticamente selladas pueden tener mayor eficiencia energética pero acumulan contaminantes y microbios causando olores orgánicos, hongos y enfermedades.

### LA SOLUCIÓN

CAPS-Mini probó reducir drásticamente olores generados internamente, hongos y bacterias por encima del 90%, junto con una significativa reducción del humo. Reducción del mismo nivel en grasas en suspensión y gases de mercurio (+ 90%).

ANTES



DESPUÉS

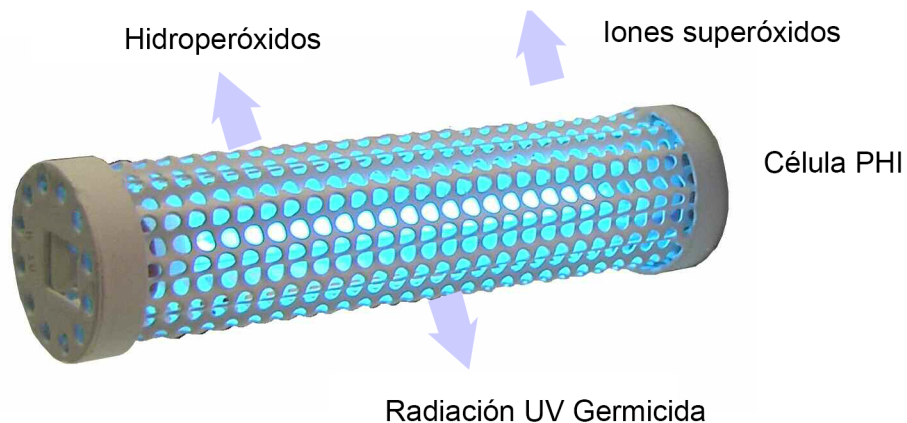


Las pruebas avanzadas de laboratorio muestran la reducción de más del 90% de humo, bacterias y moho.

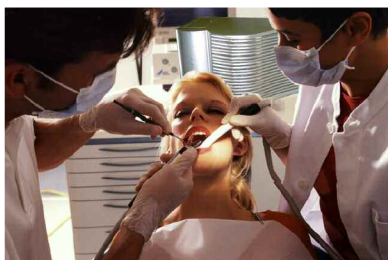
MODELO	CAPS-MINI 16	CAPS-MINI 25
DIMENSIONES (cm)	16 x16 x 45	16 x16 x 45
PESO (kg)	11	11
CAUDAL DE AIRE (m <sup>3</sup> / h)	25	25
ALIMENTACIÓN ELÉCTRICA	110V   10w	220V   10w
ÁREA DE COBERTURA (m <sup>2</sup> )	150	150
ESPECIFICACIÓN DE LA CÉLULA	PHIC-5A/PHIC-9A	PHIC-5APHIC-9A

## LA TECNOLOGÍA

CAPS-MINI utiliza la célula fotohidroionizante QR + de RGF. En esta célula la radiación generada por una lámpara UV incide sobre una superficie metálica en forma y revestimiento aduados para actuar como catalizador en la formación de iones súperoxidantes, tales como el peróxido de hidrógeno.



- Elimina las bacterias
- Elimina los hongos
- Reduce los olores
- Reduce los compuestos orgánicos volátiles



SOPORTE VERTICAL OPCIONAL  
OP-002T



**FILTROS SUPLEMENTARIOS**  
FILTRO DE GRASA FL-012T  
FILTRO DE MERCURIO FL-013T  
FILTRO DE COVs FL-014T

**DISTRIBUIDOR**  
**DANNENGE INTERNATIONAL LLC**  
3439 NW 55th Street  
FORT LAUDERDALE, FL 33309 - EUA  
[www.dannenge.com](http://www.dannenge.com)

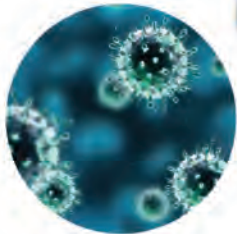


## ADVANCED OXIDATION TEST RESULTS 2000-2019

RGF<sup>®</sup> first developed its advanced oxidation technology over 20 years ago. Over four million RGF<sup>®</sup> cells are in use around the world. RGF<sup>®</sup> has licensed its technology to many Fortune 500 companies for use in the medical, food, military, residential, commercial, marine, hospitality and government. RGF<sup>®</sup> cells in various products have been tested and/or approved or registered by:

- ETL, TUV, EU, CSA
- Chinese Government
- U.S. Government
- U.S. Military
- Japanese Government (TV commercials)
- European Union
- Electric Power Research Institute
- Canadian Government
- USDA & FSI

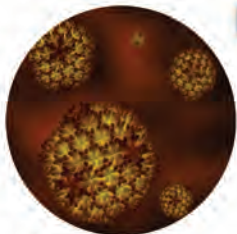
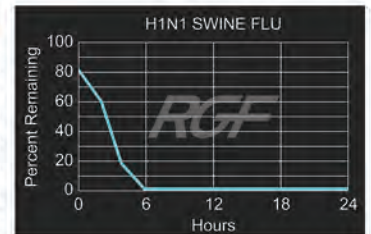
In addition, RGF<sup>®</sup> cells have been specified in the Norovirus & MRSA protection plan of America's largest restaurant chains, hotel chains, theme parks, cruise lines, public schools and hospitals. The following is a summary of some of the testing and studies performed by third party independent labs and universities. RGF<sup>®</sup> products are not medical devices and no medical claims are made.



### H1N1 (Swine Flu)

Kansas State University has completed preliminary testing on RGF's Photohydroionization<sup>®</sup> (PHI-Cell<sup>®</sup>) and Reflective Electromagnetic Energy (REME<sup>®</sup> Cell) technologies with 99+% inactivation of the H1N1 virus (referred to as "swine flu" early on) on a stainless steel surface. This virus was first detected in people in the United States, April 2009. It is now considered a regular human flu virus, continuing to circulate seasonally worldwide according to the CDC. Flu viruses are spread mainly from person to person through coughing or sneezing. Sometimes people may become infected by touching items such as a surface or object with flu viruses on it and then touching their mouth or nose.

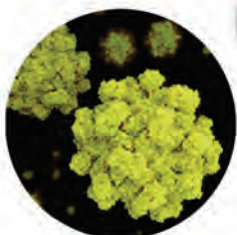
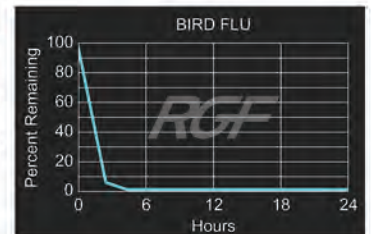
Tested by: Kansas State University Inactivation Rate 99+%



### Avian Influenza (Bird Flu)

Avian influenza is an infection caused by avian (bird) influenza (flu) viruses. These influenza viruses occur naturally among birds. Of the few avian influenza viruses that have crossed the species barrier to infect humans, H5N1 has had the largest number of detected cases of severe disease and death in humans.

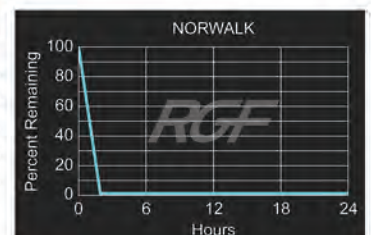
Source CDC Center for Disease Control and Prevention  
Tested by: Kansas State University Inactivation Rate 99+%



### Norwalk Virus

Noroviruses are a group of related, single-stranded RNA, non-enveloped viruses that cause acute gastroenteritis in humans. Noroviruses are highly contagious and as few as 10 viral particles may be sufficient to infect an individual. 50% of all food-borne outbreaks of gastroenteritis can be attributed to noroviruses. Chicago schools realized a 20% improvement in attendance after installing RGF's PHI Technology.

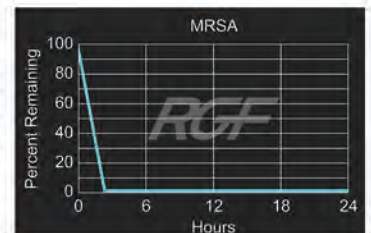
Source: CDC Centers for Disease Control and Prevention  
Tested by: Midwest Research Institute Inactivation Rate 99+%



### Methicillin Resistant Staphylococcus Aureus

Methicillin-resistant Staphylococcus aureus (MRSA) is a type of bacteria that is resistant to certain antibiotics. These antibiotics include methicillin and other more common antibiotics such as oxacillin, penicillin and amoxicillin. RGF<sup>®</sup> participated, along with a major hospital, in a two-year study evaluating PHI Technology, which resulted in a 33.4% reduction in infections.

Source: CDC Centers for Disease Control and Prevention  
Tested by: Kansas State University Inactivation Rate 99+%



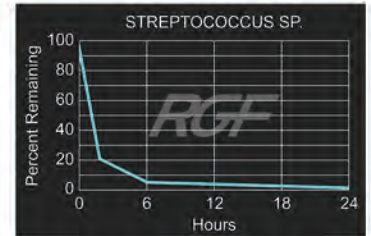




### Streptococcus Sp.

Group A Streptococcal (strep) infections are caused by group A Streptococcus, a bacterium responsible for a variety of health problems.

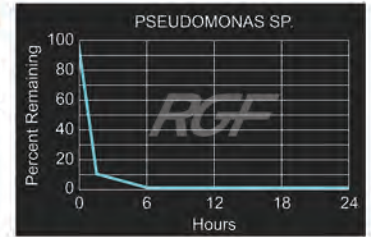
Source: U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES  
Tested by: Kansas State University Inactivation Rate 96+%



### Pseudomonas Sp.

The bacterial genus Pseudomonas includes plant pathogenic bacteria such as *P. syringae*, the opportunistic human pathogen *P. aeruginosa*, the ubiquitous soil bacterium *P. putida*, and some species that are known to cause spoilage of unpasteurized milk and other dairy products.

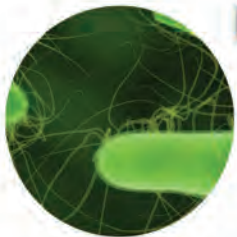
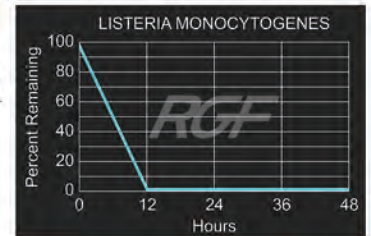
Tested by: Kansas State University Inactivation Rate 99+%



### Listeria

This is a Gram-positive bacterium, motile by means of flagella. Some studies suggest that 1-10% of humans may be intestinal carriers of *L. monocytogenes*.

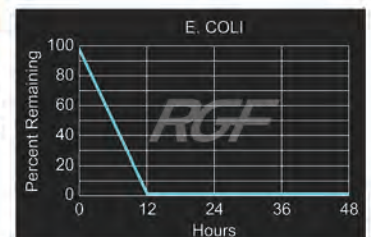
Source: U.S. Food and Drug Administration  
Tested by: Kansas State University  
Steris Labs  
KAG / Eco Labs Inactivation Rate 99+%



### Escherichia coli

*Escherichia coli*, usually abbreviated to *E. coli*, discovered by Theodor Escherich, a German pediatrician and bacteriologist, is one of the main species of bacteria that live in the lower intestines of mammals, known as gut flora.

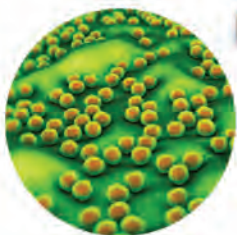
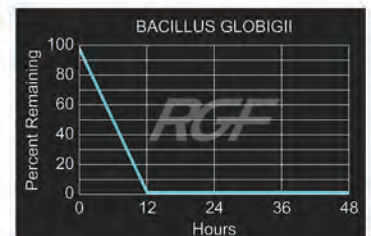
Tested by: Kansas State University Inactivation Rate 99+%



### Bacillus Globigii

*Bacillus globigii* lives in soils around the world and can readily be found in samplings of wind-borne dust particles. It is also known as *Bacillus subtilis*, its more modern name.

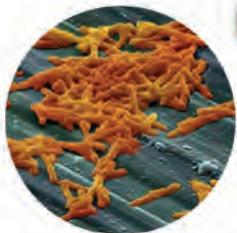
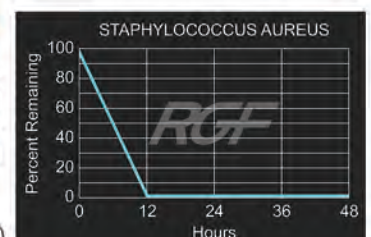
Source: CDC Center for Disease Control and Los Alamos National Laboratory  
Tested by: Kansas State University Inactivation Rate 99+%



### Staphylococcus Aureus

*Staphylococcus aureus*, often referred to simply as "staph," is a bacteria commonly found on the skin and in the nose of people. Person-to-person transmission is the usual form of spread and occurs through contact with secretions from infected skin lesions, nasal discharge or spread via the hands.

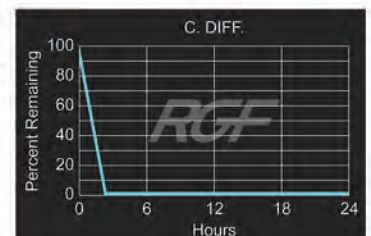
Source: CDC Center for Disease Control and FDA (Food and Drug Administration)  
Tested by: Kansas State University Inactivation Rate 99+%



### Clostridium difficile (C-Diff)

Many hospitals have been waiting for more information on C-Diff bacteria as it may be as big a problem or bigger than MRSA. Independent university studies tested RGF's REME® Technology with 99% kill rate.

Source: CDC Center for Disease Control and Prevention  
Tested by: Kansas State University Inactivation Rate 99+%



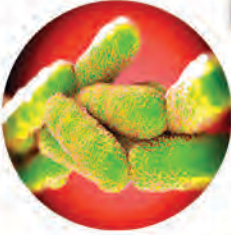
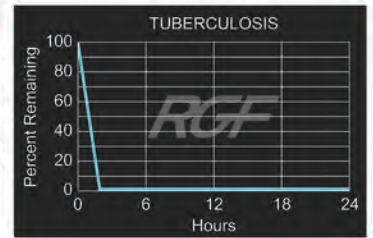




### Tuberculosis

Tuberculosis typically attacks the lungs, but can also affect other parts of the body. It is spread through the air when people with infection cough, sneeze, or otherwise transmit their saliva through the air. Most infections are asymptomatic and latent, but about one in ten latent infections eventually progresses to active disease which, if left untreated, kills more than 50% of those so infected.

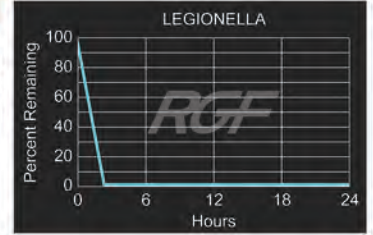
Source: Health and Industry  
Tested by: Kansas State University Inactivation Rate 99+%



### Legionella

Legionella is common in many environments, with at least 50 species and 70 serogroups identified. The chemical composition of these side chains determine the nature of the somatic or O antigen determinants, which are essential means of serologically classifying many Gram-negative bacteria.

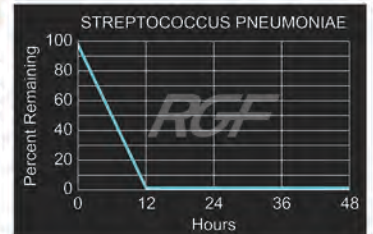
Source: CDC Centers for Disease Control  
Tested by: Kansas State University Inactivation Rate 99+%



### Streptococcus Pneumoniae

S.pneumoniae is an exclusively human pathogen and is spread from person-to-person by respiratory droplets, meaning that transmission generally occurs during coughing or sneezing to others within six feet of the carrier. Health experts estimate that more than ten million mild infections (throat and skin) like these occur every year.

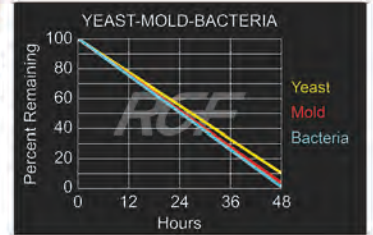
Source: CDC Centers for Disease Control  
Tested by: Kansas State University Inactivation Rate 99+%



### Mold/Yeast

The purpose of this test was to evaluate the effect the RGF® AOT unit has on mold/yeast bacteria (TPC). This test was performed utilizing a standard 2,000 sq. ft. home and 3,000 sq. ft. simulated home.

Tested by: California Microbiology Center  
Bacteria 99%    Mold 97-98%    Yeast 90+%

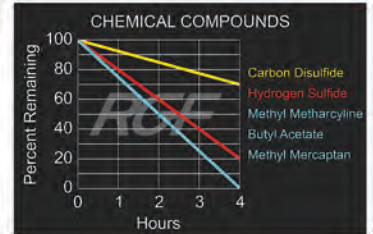


### Chemical Compounds

Gas Chromatograph/Mass Spectrometer test performed by Nelap Accredited Lab on airborne chemical compound reduction using RGF's AOT.

- |                  |                     |                    |                |
|------------------|---------------------|--------------------|----------------|
| Hydrogen Sulfide | - Rotten eggs       | Butyl Acetate      | - Sweet banana |
| Methyl mercaptan | - Rotten cabbage    | Methyl Metharcylne | - Plastic      |
| Carbon Disulfide | - Vegetable sulfide |                    |                |

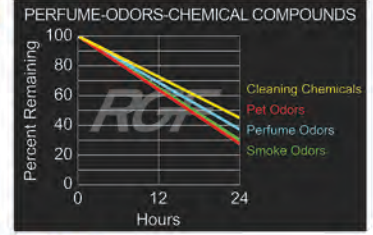
Methyl Metharcylne / Butyl Acetate / Methyl Mercaptan 100%  
Hydrogen Sulfide 80%    Carbon Disulfide 30%



### Odors

The purpose of this test was to evaluate to what effect the RGF's AOT unit has on cleaning chemicals, pet odors, smoke and perfume odors. This test was performed utilizing two 500 cubic foot test chambers and a ten-person odor panel. The qualitative assessments of the ten-person odor panel were then used as a means to determine the odor reduction.

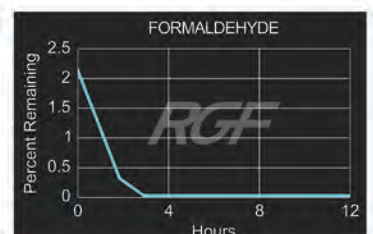
Tested by: C&W Engineering (Independent PE Firm)  
Pet Odors 72%    Smoke Odors 70%    Perfume Odors 63+%    Cleaning Chemicals 55+%



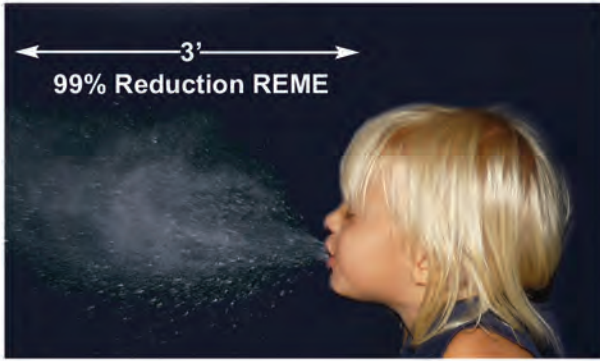
### Formaldehyde

The purpose of this test was to evaluate the effect the RGF® AOT unit has on formaldehyde.

Tested by: Kansas State University in a Class II Bio test chamber







A testing protocol concept was used which included a "Sneeze Simulation Machine" and "Sneeze" chamber. A sneeze can travel at up to 100 mph, so we had to consider lung capacity, sneeze pressure, and liquid volume to properly simulate a human sneeze. This was accomplished and the test proceeded with outstanding results. An average of 88% reduction of microbials was achieved with PHI in a double blind test, at three feet from the sneeze source. This is clearly not a medically supervised test or protocol. However, from a practical point, it was definitely providing some kill at the source and will provide some level of protection. When RGF® developed the next generation of Advanced Oxidation Technology, REME®, the same testing was performed and an average of 99% reduction of microbials was achieved in the same 3 foot distance.

Tested by: Kansas State University, inactivation 99%  
 Simulated Sneeze Lab Test at three feet in a 250 cu ft Bio Test Chamber. An independent PE double blind study.

All the above tests were performed on RGF® advanced oxidation products with advanced oxidation plasma of less than .02 ppm. They were conducted by independent accredited labs and university studies. They were funded and conducted by RGF's major clients to assure third party credibility. RGF® products are not medical devices and no medical claims are made.

\*Some products may not be available to be sold in the state of California.



## RGF® Environmental Group ISO 9001:2015 Certification

ISO 9001:2015 is an internationally recognized standard that specifies the requirements for an audited Quality Management System (QMS). RGF® developed their QMS to promote continuous improvement in every aspect of their business, including administrative functions, quality control, product development, engineering, production, marketing, sales, logistics and customer service.



RGF's VP/GM Walter Ellis, received ISO 9001:2015 Certification in record time, under budget and received an above and beyond congratulations from the audit team.



ISO 9001:2015 Certification Quality Management Kiosk allows employees to access all pertinent files and procedures.



DIVISIONS



ISO 9001:2015 CERTIFIED COMPANY

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