



The Need to Return to Normalcy – SAFELY in Era of COVID and Beyond

As we begin to accelerate the return to **learning, working, playing, praying and being entertained in person**, we need to do it safely, protecting people against the transference of viruses and other indoor air quality risks.

It's Confirmed, The Greatest Risk is from AIR WE SHARE INDOORS

As knowledge has increased into how COVID-19 and other diseases are transferred, the CDC, WHO and many others now acknowledge that:

- SARS-CoV-2 is predominantly transferred when infected individuals share indoor space with non-infected people. These individuals aspirate a wide size range of virus particles, from droplet nuclei down to very small, aerosolized virus expelled into "the air we all shared indoors." This small molecule aerosolized virus is known to travel farther and remain airborne much longer than previously measured, creating the greatest probability of COVID-19 transference indoors.
- The number of COVID-19 virus variants and mutations are increasing, such as the B.1.1.7 (UK), B.1.35 (South Africa), P.1 (Brazil), and Indian variants. More will almost assuredly follow.
- Recent attempts to open our economy appear to be resulting in the loosening of protection protocols, the return to indoor spaces at full capacity.

A SAFER Return to Learning, Working, Playing, being Entertained and Praying

CIMR® (Continuous Infectious Microbial Reduction) is a breakthrough **Active Pathogen Scavenging Technology Solution** to dramatically reduce or eliminate the risk of catching COVID-19 indoors as we return to sharing indoor spaces. While respecting the CDC recommendations (masks, social distancing etc.), **CIMR® solves for the most significant remaining risk** – the SARS-CoV-2 small, aerosolized molecules in the air we share. After extensive testing, this active photocatalytic technology is recommended by the Independent Shared Air Strategy Research Board (ISASRB) as part of their multi layered approach to protecting shared air in critical. The ISASRB is a non-profit group of renowned, retired military officers, academic, and experts in biohazard mitigation who have come together to advocate the best available science and technology today to fight the War On COVID.

CIMR® Active Pathogen Scavenging Technology - A Proven Safe and Effective Solution a Wide Range of airborne and surface threats.

CIMR® Technology has been proven to be a safe, effective, and affordable solution. CIMR® is an "active" technology that continuously fills indoor air with a safe, self-regulating, electrically charged (+ & -) .02 ppm hydrogen peroxide (H₂O₂) plasma gas. The electrically charged CIMR® plasma gas actively attaches to viruses and other pathogens to inactivate and kill in order to effectively protect building occupants near infected individuals.

- CIMR® Active Pathogen Scavenging Technology is a layered solution.
 - CIMR® actively targets viruses and pathogens anywhere air can reach.
 - Upon connecting, CIMR® quickly penetrates the outer protein envelop to destroy the pathogen.



- CIMR® continues to PREVENT disease transference by maintaining a protected shared air environment that is inhospitable to any newly introduced pathogens.
- Through a variety of military, university, and private laboratory tests, CIMR® has been verified to inactivate and kill live SARS-CoV-2 **on surfaces and in air** (aerosolized).
- CIMR® will purify the air continuously, many times faster than other solutions, including “passive technologies” such as HEPA filters, UV lights and other technologies that require pathogens to periodically pass through a static device to be inactivated.
- After an extensive 12-month review of other potential solutions, the United States Air Force has installed CIMR® in more than 150 Air Force facilities to actively sanitize indoor air in conjunction with continuing CDC protocols to create a multilayered solution.
- A number of recent case studies document where known COVID-19 positive individuals have entered buildings protected by CIMR®, there has not been a single known transference to people sharing air with COVID 19 positive individuals for extended periods of time.
- Over the past 15 years, Hi-Tech has expanded solutions beyond the military with deployments in other critical infrastructure including schools, hospitals, health care, long term care, offices, transportation, churches, residences, and a wide range of other facilities.

CIMR® is self-regulating and safe – at 1/50th the OSHA and EPA recommended concentration for extended human occupancy.

CIMR® PRODUCES NO OZONE. The Ozone created by other technologies can be harmful to humans and animals. It also can degrade fabrics, elastics, and plastics over time.

CIMR® is low cost to operate, does not require any inputs as it converts atmospheric air and water into a self-regulating H₂O₂, and does not rely on expensive filters nor require constant maintenance.

CIMR® is effective in sanitizing indoor shared air well beyond the risk of COVID transference, reducing respiratory issues, caused by VOC's, flu, fungus, mold, and a wide range of other “sick building” health issues. CIMR® has been proven to reduce Hospital Acquired Infections (HAIs), protect food production workers, and a wide range of other areas.

Hi-Tech Systems does more than sell devices – our team specializes in the application of CIMR® Active Pathogen Scavenging technology and has developed proprietary processes that maximize effectiveness, and to lower the cost.

CIMR® has been in use and proven safe and effective for more than 12 years in a wide range of applications including (but not limited to) Universities and schools, a wide range of Military critical infrastructure, hospitals and long term care facilities, theaters, museums, churches and community centers, food processing facilities, homes and offices.



CIMR® is Proven to inactivate and eliminate up to 99.96% of SARS-CoV-2 Virus in the Air and on Surfaces

In multiple studies conducted at top University, Military and commercial laboratories, CIMR® Technology has been **repeatedly proven to inactivate and eliminate 96.7% to 99.96% of SARS-CoV-2** (the virus causing COVID-19) on both surfaces and in the air (aerosolized).

MRIGlobal Laboratory Test (Effectives against Live Aerosolized SARS-CoV-2 virus) April 2021

MRIGlobal is an independent not for profit research institute out of Kansas City (and other locations). MRIGlobal is a worldleader in technology and science testing and has a vast history of working with government agencies, commercial businesses, and academic institutions

In our most demanding testing to date, and the most rigorous testing we believe has been done on any technology against live virus, CIMR® has again excelled at eliminating live SARS-CoV-2 in the air. MRI ran 6 total control and test runs (3 each) over 3 intervals each run.

During the first interval, to replicate CIMR real world application, scientists established CIMR® in a bio chamber for 10 mins – then live SARS-CoV-2 virus was continuously nebulized (injected in aerosol form) at a high concentration while continuing to generate CIMR®, as well as continuously extracting samples for testing. During this first interval, Virus concentration was estimated to be the equivalent of over 240 deeply COVID-19 infected individuals in a densely populated space. CIMR® eliminated 91% of the virus in real time while the virus was continuously being introduced.

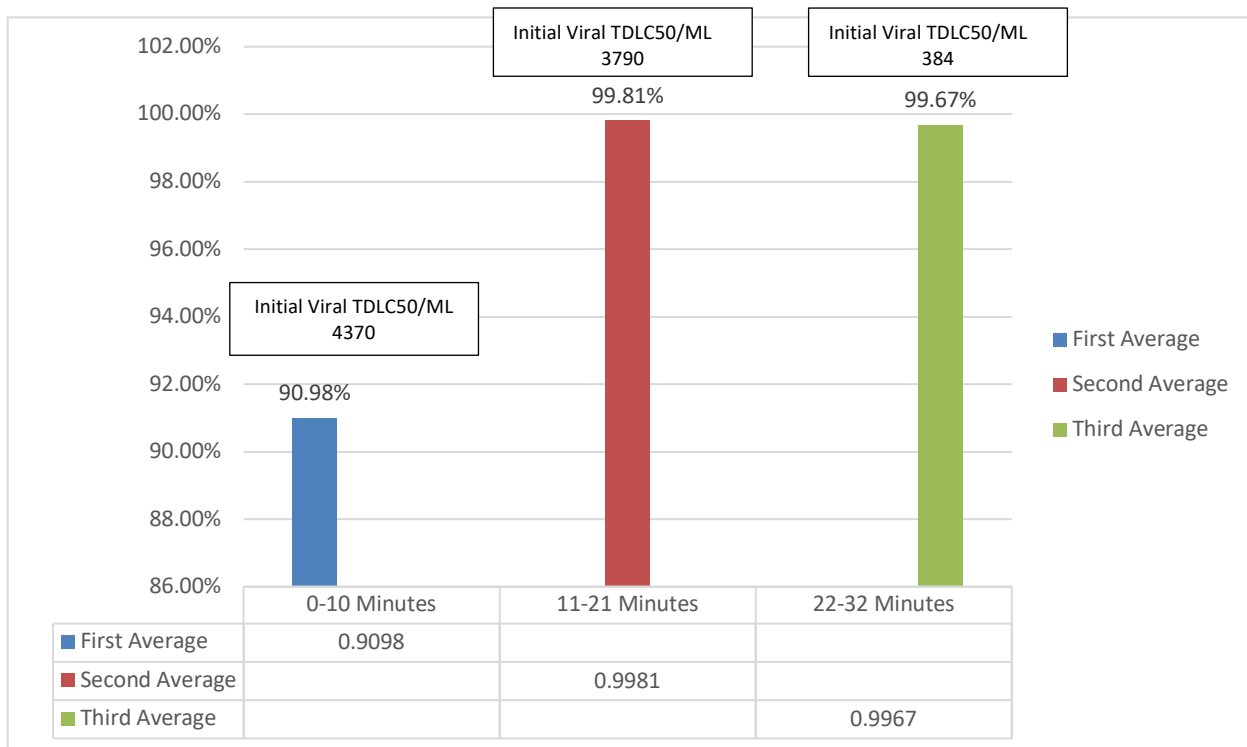
During the next 10 min interval, within an average of 5 mins of stopping the continuous injection of virus and continuing to run CIMR®, CIMR® inactivated and eliminated and average of 99.81% (~3 Log) virus relative to control (the most conservative way to measure results).

Given that viral load (the amount of virus someone inhales) and the duration of exposure to the virus determines both whether one gets COVID-19 and how sick they get, CIMR® would have prevented any serious transference disease. This result has been confirmed time and time again in CIMR protected facilities

These results were achieved solely through the effectiveness of CIMR Technology at completely safe level .02 PPM H₂O₂ (no overconcentration in the test chamber), without the creation or byproduct of Ozone creation, and without the use of any Ionization device.

The results are an unparalleled proof of CIMR® effectiveness and further validate the repeated testing results we have seen

Figure 1 – CIMR Percent Deactivation vs Control
[including initial TDLC50/ML Initial Values each interval]



First Interval – Continuous Heavy Nebulization of Virus - CIMR Active

The result relative to control indicates that CIMR is deactivating and eliminating 90.98% of active virus in real time during continuous virus introduction throughout the period

Second Interval – Nebulization stopped - CIMR Active

The result relative to control indicates that CIMR is deactivating and eliminating active at 99.81% after the virus injection has stopped

Third Interval – Nebulization stopped - CIMR Active

The result relative to control indicates that CIMR continues deactivating and eliminating virus at 96.67% even when virus levels are very low

UTMB - University of Texas Medical Branch (December 2020)

In Dec. 2020 testing at UTMB, CIMR® technology inactivated live airborne SARS-CoV-2 to undetectable levels in under 3 mins.

MRIGlobal Inc. – CIMR Technology testing on surfaces.

- CIMR® was **proven to inactivate or eliminate 96.7 to 99.3% of SARS-CoV-2** (embedded in a challenging biofilm) on surfaces within a short time frame of testing at this top private US bio laboratory.

Research indicates CIMR produces the equivalent of a high number (100-200) of air changes per hour

(ACH) by quickly dissipating contaminants and eliminating viral load from the air. Most offices and schools have approximately 4 -8 ACH. Many passive solutions such as filters(carbon and HEPA) and UV lights will only cycle the air much less frequently, increasing virus transmission risk to occupants.

CIMR is not just effective against Viruses

In addition to recent proven effectiveness against SARS-COV-2, CIMR® Technology has effectively killed previous forms virus that cause COVID, seasonal flu, mold, and a wide range of other pathogens, all through the same inactivation and elimination cell oxidation process. This indicates a very high probability CIMR® will kill future forms of virus and eliminate a wide range of indoor air risks and sick building syndrome.

A wide range CIMR® Solutions

Small versions of the hydrogen peroxide units simply plug into a wall and produce and disperse hydrogen peroxide gas to protect the occupants of enclosed spaces. Other larger variants of this unit, like the ones pictured above, are designed to install on the output side of the building’s HVAC system and disinfect all areas of a building, including the entire HVAC system.



CIMR Ductwork
(various sizes
for ~1500 –
8000 sq ft)



CIMR 500 Wall
Mount (500 sq ft)



CIMR 2000
Portable
(~2000 sq ft)



CIMR Cloud
Ceiling Mount
(~2000 sq ft)



CIMR 414
Portable - Large Spaces
Hospitals/Schools/Offices
(~16,000 sq ft)

More information is available at www.cimrtech.com www.cimrcommercial.com
infor@cimertech.com or can be requested from rwillms@hitechcimr.com
Additional Testing Results and Safety Validation available on request