



BIODECONTAMINATION SOLUTIONS

For Rapid, Effective and Flexible Pathogen Elimination

ECOLAB[®]

A Rapid Response to Eliminate Pathogens

HOW BIOQUELL'S RAPID RESPONSE ELIMINATES PATHOGENS

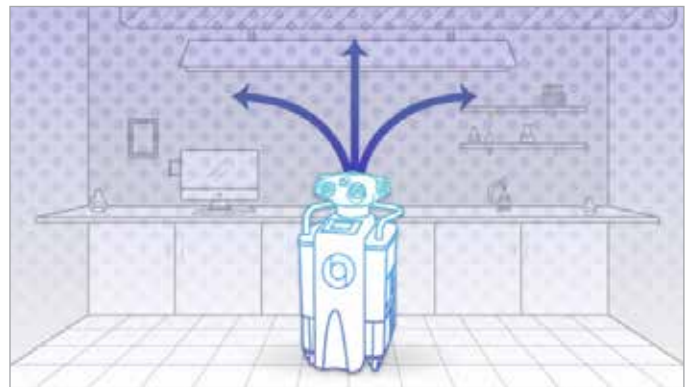
- ▲ Automated hydrogen peroxide vapor biodecontamination equipment is setup in contaminated area
- ▲ A single cycle is started, killing 99.9999% of pathogens on every exposed surface
- ▲ A broad spectrum of pathogens can be killed, including **coronaviruses**
- ▲ After recovering the Bioquell equipment, the room is immediately available for the next patient

Bioquell's Hydrogen Peroxide Vapour Process



STEP 1 PREPARATION

The Bioquell decontamination system warms up, getting ready to disperse the vapor. You do not need to reach or wait for temperature or humidity levels to begin.



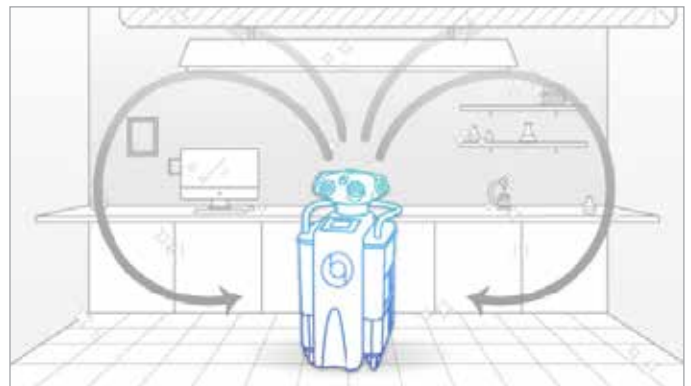
STEP 2 VAPORIZATION

The Bioquell decontamination system emits the vapor into the enclosed area and fills the space, pushing the vapor against every exposed surface, including surrounding complex shapes and crevices.



STEP 3 DWELL

With vaporization complete, the enclosed area is at a standstill, allowing the peroxide to dwell on every exposed surface and kill pathogens.



STEP 4 AERATION

Your HVAC system, high-powered Bioquell aeration units using catalytic conversion or a combination of both safely removes all of the hydrogen peroxide vapor from the enclosed area. When aerated with Bioquell units, the vapor is converted into water vapor and oxygen.

Case Study

COVID-19

ELIMINATING THE PATHOGEN FROM SURFACES IS EXTREMELY IMPORTANT

The **COVID-19 pandemic is fast evolving** and more than 175 countries across the globe continue to see more patients and community spread transmissions.

Initial review of the disease from the World Health Organization (WHO) indicates that COVID-19 has a higher transmission rate than influenza, and other coronaviruses like MERS-CoV.¹ Additionally, a recent NIH study indicates that the virus can survive for days on hard surfaces.²

Eliminating this deadly pathogen from surfaces in increasingly crowded hospital settings and patient care areas is extremely important. With the fast growing number of patients, hospitals must work quickly and effectively to clean surfaces and eliminate the pathogen to prevent the transmission of disease for patients and staff.

COVID-19 AT A SINGAPOREAN HOSPITAL

A private hospital in Singapore cared for one of the **first COVID-19 patients** in the country

The facility needed **a plan** to ensure the **ICU area** hosting the patient was **safe** for staff and future patients to occupy upon patient discharge

After just **two hours** from the start of a Bioquell cycle, the hospital was able to **reopen its ICU**

Bioquell's Rapid Biodecontamination Service (**RBDS**) was selected to perform enhanced disinfection on an as needed contract basis

Bioquell completed **10 separate deployments** in **less than 2 weeks** at this facility



**AFTER A TWO HOUR BIOQUELL
CYCLE, THE HOSPITAL WAS
ABLE TO REOPEN ITS ICU**

RBDS is available for **immediate response** in the United States, France, Germany, England, Ireland, Singapore and China. Response teams may be sent globally with advanced notice. Visit Bioquell today at [bioquell.com](https://www.bioquell.com)

Addressing Your Needs with **Our Solutions**

PROVEN EFFICACY

Bioquell has data from over 60 peer-reviewed publications related to its efficacy on a broad spectrum of organisms including bacteria, viruses, spores and more.

Related to the coronaviruses and dangerous diseases, Bioquell has data from a 2014 published study for the inactivation of structurally distinct viruses:

2014 Published Study for the Inactivation of Structurally Distinct Viruses³

Feline Calicivirus (FCV)

Human Adenovirus Type 1

Transmissible Gastroenteritis Coronavirus of Pigs (SARS-CoV Surrogate)

Avian Influenza Virus (AIV)

Swine Influenza Virus (SwIV)

Other Related Health Emergencies Involving Bioquell Response

2003 in Singapore to decontaminate SARS infected hospitals

2017 in Mecca as a proactive measure to control MERS-CoV infections during the Hajj

2014 in the US, France and England to decontaminate western hospitals treating Ebola patients

2020 in Singapore hospitals related to COVID-19



WHAT SETS THE BIOQUELL PROCESS APART?

REPEATABLE TRUSTED RESULTS

REACHES DIFFICULT TO CLEAN SPACES

ELIMINATES DOUBT AND RISK OF ADDITIONAL EXPOSURE

USE ANYWHERE IN A FACILITY AND ON SENSITIVE ELECTRONICS

CYCLE IS RESIDUE-FREE

AREA IS AVAILABLE FOR USE IMMEDIATELY AFTER A CYCLE

Deployable in Nearly **Any** Enclosed Space

BIOQUELL TECHNOLOGY IS SCALABLE AND ADAPTABLE TO YOUR NEEDS

Protect your patients, staff and community by using Bioquell Hydrogen Peroxide Vapor technology to create a fully decontaminated environment anywhere in your hospital.

Ideal for use in:

- ▲ **Patient Rooms**
- ▲ **Operating Rooms & Surgical Treatment Areas**
- ▲ **Critical and Intensive Care Units**
- ▲ **Larger Open Spaces** (such as hallways and waiting rooms)
- ▲ **Specialized Units** (such as Burn, BMT, and NICU)
- ▲ **Hospital Pharmacy and more**



HOW BIOQUELL TECHNOLOGY CAN BE USED

Bioquell's Rapid Biodecontamination Service (RBDS)

- ▲ All-inclusive decontamination service coordinated and performed by Bioquell engineers
- ▲ Available for emergency response
- ▲ Scalable to accommodate small or large spaces
- ▲ Verified and validated results with chemical and biological indicators



Bioquell Equipment

- ▲ Automated decontamination systems available for purchase with comprehensive training included
- ▲ Simple setup, and wireless communication for faster cycle times
- ▲ Mobile systems allow for access throughout a facility
- ▲ Integrated and fixed systems available as well
- ▲ Systems such as the **Bioquell BQ-50** (far left) and **Bioquell ProteQ** (left allow facilities to operate their own mobile equipment)



CONTACT US NOW FOR FURTHER INFORMATION ▶

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PLEASE SPEAK TO YOUR ACCOUNT MANAGER FOR FURTHER INFORMATION

References

1. Cascella M, Rajnik M, Cuomo A, et al. Features, Evaluation and Treatment Coronavirus (COVID-19) [Updated 2020 Mar 20]. In: StatPearls [Internet]. Treasure Island (FL): StatPearls Publishing; 2020 Jan-. Available from: <https://www.ncbi.nlm.nih.gov/books/NBK554776/>
2. N van Doremalen, et al. Aerosol and surface stability of HCoV-19 (SARS-CoV-2) compared to SARS-CoV-1. *The New England Journal of Medicine*. DOI: 10.1056/NEJMc2004973 (2020).
3. Evaluating the virucidal efficacy of hydrogen peroxide vapour; Goyal, S.M. et al.; *Journal of Hospital Infection*, Volume 86, Issue 4, 255 - 259

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