

CASE STUDY

Bioquell Rapid Bio Decontamination Service

Resuming Operations in Wuhan after COVID-19 Shutdown

**SUCCESSFUL
POST COVID-19
DISINFECTION
WAS CONDUCTED
IN A MAJOR
PHARMACEUTICAL
MANUFACTURING
FACILITY, CHINA**

BACKGROUND INFORMATION

Issue: Following the COVID-19 lockdown, Environmental Monitoring (EM) at a major international provider of biologics Contract Development and Manufacturing Organizations (CDMO) services in China indicated spore contamination in a production room.

Despite exhausting all disinfection methods in their records, including the manual application of a sporicide, there was a repeated failure of the EM test standards. Consequently, the production of a valuable batch of product worth \$5M USD was being delayed.

Our Solution: The fungal species identified, (*Chaetomium globosum* and *Chaetomium unguicola*) are notoriously challenging to remove using conventional methods, as the key is to locate and eliminate the reservoir from where the contamination starts.

Bioquell, an Ecolab Solution, was able to provide its Rapid Bio Decontamination Service (RBDS), utilising 35% hydrogen peroxide vapour technology to cover **every exposed surface** within the deployment area. This provides a 6-log sporicidal kill, including in the contamination reservoir.

RAPID BIO DECONTAMINATION SERVICE (RBDS) FROM BIOQUELL FOR SPORE ELIMINATION

Following the **COVID-19 lockdown** in China, the facility was ready to begin manufacturing

Environmental Monitoring revealed the presence of **excessive spores** in a cleanroom, **delaying** the **production** of a batch worth \$5M USD

Bioquell Rapid Bio Decontamination Service (**RBDS**) was selected to perform enhanced disinfection on an as needed contract basis

Existing disinfection methods were tried and **repeatedly failed** EM test standards

18 **Bioquell RBDS** units were deployed by trained Bioquell staff and the **3,800m³** space was **successfully decontaminated** at the facility



**AFTER BIOQUELL RBDS,
THE COMPANY PASSED
ITS ENVIRONMENTAL
MONITORING TESTS AND
WAS ABLE TO RESUME
OPERATIONS**

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CHALLENGES

Timescale

Requirement: To rapidly resume production immediately following the COVID-19 outbreak and lockdown.

Our Solution: Almost immediately after the lockdown was lifted, Bioquell was able to quickly complete the decontamination of almost 4000m³ of production space including the HVAC.

Efficacy Needs

Requirement: 6-log bio-decontamination throughout the entire enclosed space to ensure no spores remain.

Our Solution: Bioquell hydrogen peroxide delivers a 6-log sporicidal kill on all surfaces in an enclosed area.

Documentation Needs

Requirement: To demonstrate efficacy against the spores causing the continuous EM failures.

Our Solution: Full evidence-based efficacy report showcasing Bioquell's capability in effectively eliminating the targeted pathogen.

Additional Challenges

Requirement: Integrity of wall panels must be maintained to avoid blistering. No compatibility testing possible in advance.

Our Solution: To provide evidence of previous results on panel integrity after Bioquell bio-decontamination in other comparable facilities.

Requirement: Validation of eradication of identified fungal species (*Chaetomium globosum* and *Chaetomium unguicola*) in the HVAC with use of Biological and Chemical Indicators (BIs & CIs).

Our Solution: Use of an alternative decontamination protocol involving pulsing through hydrogen peroxide vapour during a decontamination cycle.



“Bioquell RBDS allowed us to quickly resolve our challenge and begin operations with confidence.”

QA SENIOR DIRECTOR

Bioquell RBDS may be able to respond immediately in your region.

Visit bioquell.com for additional details.



18 BIOQUELL
RBDS UNITS
DEPLOYED



3800m³
AREA COVERED



274 BIs & CIs
USED **100%**
SUCCESS



100% PASS
RATE FOR
INDEPENDENT
AIR SAMPLES*



COMPLETED **ON**
SCHEDULE

*Dust particle counter, dust particle multi-point inspection system, sampling device, environment comprehensive parameter monitor and FFU central controller.

USE BIOQUELL PRODUCTS SAFELY.
ALWAYS READ THE LABEL AND PRODUCT INFORMATION BEFORE USE.

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