



# PROVEN REAL LIFE COVID TESTING

- AIR AND SURFACES - REAL WORLD



**MICROBE**  
MARINE

PROTECTING LIFE THROUGH SCIENCE



**CORONAVIRUS TEST**

PATIENT INFORMATION			
Name	DOB	Sex	Age
Primary Diagnosis	City	Date of Birth	Home Phone
Alternate Contact Name and Phone	Cell Phone	Email Address	Fax



## MUTATING VIRUSES ARE A FACT OF LIFE

In 2002 due to the prevalence of SARS-CoV-1 epidemic in the Far East numerous Hospital and Hotels installed the Oxygen Cluster Units from .

Tests conducted following installation of OCP showed air and surface samples had killed up to 99.99% of viruses previously there within 5 minutes.



# GOVERNMENT ENDORSED FOR 2003

- INSTALLATIONS FOR SARS-COV-1 ACROSS HONG KONG GOVERNMENT BUILDINGS AND HOSPITALS



Australian Government  
Austrade

2 March 2004

Bio-Oxygen Australia Pty. Ltd.  
36 Bennett Place  
Castle Hill NSW 2154  
Australia

Dear Sir,

We want to acknowledge the outstanding export sales that your company has achieved to Hong Kong over the last 12 years.

[A] We understand that your Air Purification, Sterilization and Odour Control Equipment is installed in many prestigious projects in Hong Kong such as Hong Kong Parliament House, Supreme Court Building, Hong Kong Police Headquarters Building and numerous other Government Buildings as well as most major Government and Private Hospitals including the Public Health Laboratories and Hong Kong University Medical Centre. Your equipment also treats the air in major Office Buildings such as The Centre Building (at the time, the tallest office building in Hong Kong) and Cathay Pacific Headquarters Building and many major Shopping Centres and Markets as well as Refuse Collection Centres. Your Hong Kong Job Reference List is very impressive and is an outstanding success for Australian technology.

[B] We noticed that Bio-Oxygen Air Purification, Sterilization and Odour Control Equipment is named and included in the Hong Kong Government Indoor Air Quality Standard:

*"General Specifications for Air Conditioning, Refrigeration, Ventilation and Central Monitoring & Control System Installation in Government Buildings of the Hong Kong Special Administrative Region, 2001 Edition, Volume II, refer to Paragraph C1.16 "Bio-Oxygen Air Purifier".*

[C] We also noticed that Bio-Oxygen Odour Control Equipment is included and named in the Hong Kong Government Specifications for Refuse Storage:

*"Refuse Storage and Collection Building (Refuse Storage and Material Recovery Chambers and Refuse Chutes) Regulation", refer to Paragraph 11 "Bio-Oxygen Odour Control".*

[D] We understand that Bio-Oxygen was one of the first technology companies to be recommended by the Australian Innovation Council to join the Australian Technology Showcase. The ATS is a joint program of the NSW and Australian Governments. The purpose of the ATS is to show the world that other than Wool, Wheat, Coal and Meat, Australia also offers high tech products such as Bio-Oxygen equipment.

"Bio-Oxygen Air Purification, Sterilization and Odour Control Equipment is named and included in the Hong Kong Government Indoor Air Quality Standard"

# GOVERNMENT ENDORSED AGAIN IN 2020

- TESTING WAS DONE IN WARDS WITH CRITICALLY ILL COVID19 PATIENTS

UNITED ARAB EMIRATES  
MINISTRY OF HEALTH & PREVENTION



الإمارات العربية المتحدة  
وزارة الصحة وقاية المجتمع

Facility and services department

May 28, 2020

**To Whom It May Concern**

## **BIO-OXYGEN STERILIZATION UNITS**

This is to confirm that ICS Group LLC and Air Quality Management Control have successfully installed the Bio-Oxygen Sterilization system in multiple Covid-19 Quarantine facilities across the UAE, on behalf of the Ministry of Health and Prevention during the height of the coronavirus global pandemic.

We can also confirm that these installations were carried out in the ventilation systems in order to sterilize the air and all surfaces within our quarantine facilities. This was done to eliminate viruses, bacteria and other pathogens, and prevent cross infections, whilst protecting our frontline healthcare workers and staff in these facilities.

The MOHAP has been fully satisfied with the performance of the BioOxygen system, for the sterilization and improvement of indoor air quality in our facilities.

Yours Sincerely,,

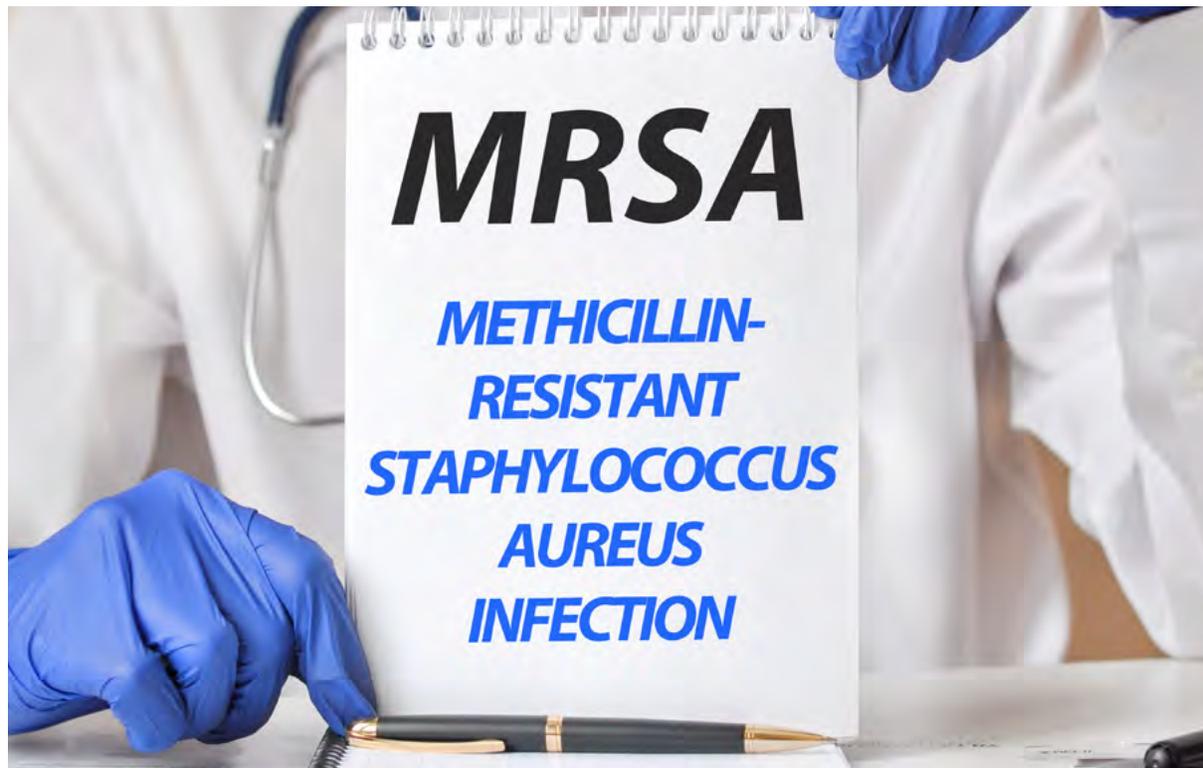
Facility and services department

Waheed Almulla



# 'GOLDEN STAPH' KILLED

- EFFECTIVE IN LAB AND HOSPITAL CONDITIONS



## Test Report Sheet (Main Page)

Principal: Ming Duang

Company: Beijing Othai Environmental Science & Technology Co. Test Date: 2007, June 12

Name of Equipment: 'Bio-Oxygen' Air Purifier

Number of Equipment & Condition: one, normal in line for testing

Manufacturer: Beijing Othai Environmental Science & Technology Co.

Product Lot: N/A

Sample Code: 2007-V-0005

Sample Received by: Jianjun Zhao

Test Date: 2007, June 12

Purpose and Requirement of Test: To best the disinfection efficiency with microbial aerosols

Test Standard: Reference (Disinfection Technical Specifications – 2002 Edition)

Persons performing Test: Jianjun Zhao, Jie Wang, Gubuo Weng

Testing Conditions and Poceedures (a brief description):

1. Micro-organism Tested: Staphylococcus Aureus 6538
2. TK Microbial Aerosol Generator, Anderson 6 airborne Microbial Sampler, Aerosol Counter and so on.
3. TK Microbial Aerosol Generator generating Staphylococcus Aureus produced aerosols, spray flow 8 l/minute. Aerosol concentration after 5 minutes:  $1.4 \times 10^5$  and then turn on Air Purifier, adjust output to No.8 and test each sample for 5, 10 and 30 minutes. The sampling airflow capacity is 28.3 l/minute and the sampling time is 1 minute, 2 minutes respectively. The control group is tested without the air purifier for an equal time. The sampling airflow and time were the same.
4. The above tests are repeated 3 times.
5. The bacteria samples are then incubated at 37 C

Test Result

The average disinfection efficiency of the Bio-Oxygen Air Purifier is:

After 5 Minutes = 99.73%

After 10 Minutes = 99.91%

After 30 Minutes = 99.27%

The detailed results are shown on the attached table.

Test Person/Technical Title: Zhagbo Weng, Assistant Researcher  
2007, June 18

Review Panel Signatures:

Wenchen Lu, Song Li, Kai Zhao

Under Institute Seal

# H1N1 VIRUS DEFENCE

- LONG TERM USE OF OCP UNITS FOR VIRUS PROTECTION



ams Laboratories Pty Ltd

ABN 47 075 467 757

8 Rachael Close

SILVERWATER NSW 2128

Australia

Tel: +61 2 9704 2300 Fax: +61 2 9737 9425

*Certificate of Analysis/Test Report*

*Dated: 22/04/2010*

CLIENT: **BIO-OXYGEN AUSTRALIA**  
36 Bennett Place, Castle Hill NSW 2154

REF NO: **1003525**

ATT: **Philipp Leicher**

ORDER NO: Not Given

SAMPLE DESCRIPTION:  
**Bio-Oxygen Model 8000 Air Purifier**

DATE RECEIVED: 15/04/10  
DATE COMMENCED: 15/04/10

**EXAMINATION:** Test the virucidal efficacy of the Bio-Oxygen Model 8000 Air Purifier against **Human Influenza Virus Type A (H1N1)** in a surface carrier test after 5 and 10 minutes treatment times. The equipment consisted of the Bio-Oxygen Model 8000 Air Purifier inside a test chamber. This was fully prepared and operated by Client.

**METHOD:** ASTM- E1053-97: Standard Test Method for Efficacy of Virucidal Agents Intended for Inanimate Environmental Surfaces.

**CONDITIONS:**

**VIRUS STRAIN:** The test virus used was **Human Influenza Virus Type A (H1N1)**. The isolate was obtained from the Institute of Clinical Pathology and Medical Research, Westmead, New South Wales.

**CELL SUBSTRATE:** The Madin Darby Canine Kidney (MDCK) cells were stored in liquid nitrogen prior use. MDCK cells were obtained from CSL Bioscience. They were used to assay the test virus.

**TEMPERATURE & HUMIDITY:** 26-28° C and 50-60% RH.

**RESULTS:**

**REDUCTION OF VIRUS AFTER TREATMENT**

Bio-Oxygen Treatment	Virus Titre (TCID <sub>50</sub> )	Reduction in Viable Viruses (%)
Virus Control (no treatment)	3,160,000	-
5 minutes	316	99.99
10 minutes	316	99.99

Virus Titre: Estimate of virus numbers; TCID: Tissue Culture Infective Dose

**CONCLUSIONS:**

The test results demonstrate that the product complies with the virucidal efficacy requirements for disinfectants as specified in TGO 54 and 54A of the Australian Therapeutic Goods Administration.

Signed :   
Paul Priscott, PhD  
Managing Director

# AIRLINE APPROVED

- USED ACROSS SKY CARGO AND STAFF LOCATIONS



Date : 8<sup>th</sup> July 2020

To Whom It May Concern

Dear Sir/Madam,

The Emirates Group has been using AQMC-Bio odour control and air sterilization equipment since 2008.

Bio-Oxygen Middle East has successfully provided Air sterilization/odour control for kitchen exhaust, food outlets, atrium level & Costa cafe in our Emirates Headquarters Group in Dubai. Following on from the success of this, we specify the AQMC-Bio equipment into any new facilities in the Emirates Group.

Bio-Oxygen Middle East has also completed work on our iconic development JW Marriott Marquis Dubai in 2011 in the treatment of Kitchen exhaust and indoor air quality.

Our Emirates Sky Cargo facility is also treated by the AQMC-Bio system. The equipment has even successfully treated areas of mold.

Our Emirates Flight Training Academy is also treated by AQMC-Bio Systems for Air Sterilization and Odor. In addition to Our Emirates Aviation University.

Most recently due to air sterilization concerns, we have added the treatment to our offices, clinics & staff travel areas with excellent results.

We are more than satisfied with the AQMC-Bio units we have installed and are happy to recommend the equipment to other companies for similar applications since we regard the technology as an essential factor in controlling odour and air Sterilization.

Yours sincerely,

Janaka Wijayawardana  
VP - Facilities Operations and Projects



# ON-SITE TEST TO ESTABLISH EFFICACY OF BIOCIDES TREATMENT

The test uses Phi6 bacteriophage: an enveloped virus, similar in structure to influenza virus and coronaviruses. The diameter of these RNA viruses is also similar, being ~100nm.

Thus considered a useful and safe biosafety level 1 biohazard surrogate for effective viricidal testing in environments where antiviral technology is to be used to rapidly and accurately quantify virus infectivity using plaque assays.

The results showing its use as a proven useful application to provide a safe disinfection layer while allowing staff to continue to work unhindered in their particular environments.

**The above tests are repeated 3 times. The bacteria samples are then incubated at 37 C**

## TEST RESULT

THE AVERAGE DISINFECTION EFFICIENCY OF THE BIO-OXYGEN AIR PURIFIER IS:

**AFTER 5 MIN = 99.73%**  
**AFTER 10 MIN = 99.91%**

# COMPLIANCE APPROVED

- ONE OF THE MANY CERTIFICATES



## CERTIFICATE OF COMPLIANCE

**Certificate Number** UL-US-2004453-0  
**Report Reference** E515151-20201014  
**Date** 28-Oct-2020

**Issued to:** Air Quality Management Company  
9360 Santa Anita Avenue Rancho Cucamonga, CA  
United States 91730

**This is to certify that representative samples of** AGGZ - Electrostatic Air Cleaners, Fixed  
See Addendum Page for Product Designation(s).

Have been investigated by UL in accordance with the Standard(s) indicated on this Certificate.

**Standard(s) for Safety:** UL 867, 5th Ed., Revision Date: 2018-08-07

**Additional Information:** See the UL Online Certifications Directory at <https://iq.ulprospector.com> for additional information

This Certificate of Compliance does not provide authorization to apply the UL Mark. Only the UL Follow-Up Services Procedure provides authorization to apply the UL Mark.

Only those products bearing the UL Mark should be considered as being UL Certified and covered under UL's Follow-Up Services.

Look for the UL Certification Mark on the product.

A handwritten signature in black ink.

Bruce Mahrenholz, Director North American Certification Program

UL LLC

Any information and documentation involving UL Mark services are provided on behalf of UL LLC (UL) or any authorized licensee of UL. For questions, please contact a local UL Customer Service Representative at <http://ul.com/about/locations>.



# TESTED AND COVID EFFECTIVE

- COVID SURROGATE TEST DONE IN WORKING ENVIRONMENT



**AQMC UK**

Air Sterilisation | Surface Disinfection | Odour Control

4 September 2020

Dear Madam/Sir

### Covid-19 Surface Reductions Results

Testing of the AQMC air sterilisation system against Covid-19 was conducted by Campden BRI scientific laboratories on 19th August 2020. Using the enveloped surrogate virus, Bacteriophage  $\phi 6$  (a surrogate for enveloped viruses such as Covid-19's SARS Cov2), Campden tested the AQMC system at a customer site in their male toilet area. Areas, including the sink, walls, ceiling and floor, were inoculated by Campden with the surrogate virus. AQMC's MK system then continually released oxygen clusters into the area and swabs were taken by Campden after set times. The toilets remained in constant use by staff during the tests to provide a real life scenario.

Campden's results found that AQMC's MK system provided continued and effective treatment in eradicating the surrogate Covid-19 virus from all surfaces. After 30mins AQMC provided a 1-2 log surface reduction, with a greater 2-4 log reduction after 2hrs.

As a result our customers are installing the MK system in their offices and amenity areas (toilets, changing, canteens) at their sites across the UK.

Yours sincerely,

Emma Mogg

Managing Director

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