OXIZONE Product Efficacy Summary

UNIVERSITY OF LEEDS

Air and surface testing against listed pathogens

Air disinfection efficiency

Pathogen	1 hour
E. Coli	100%
S. aureus	100%
A. fumigatus	100%

Surface disinfection evaluation efficiency

Pathogen	8 hours	24 hours	48 hours
E. Coli	79.6%	97.7%	99.9%
S. aureus	87.4%	91.1%	99.5%
C. difficile	91.4%	98.1%	99.6%

The HPA (Health Protection Agency) Test Results

Airbourne Test Results - 5 minutes

- **MS2 coliphage**

(enveloped single stranded RNA coliphage)

- **Staphylococcus epidermidis**

(a gram positive cocci)

Micro-organism	Percentage Efficiency
▪ MS-2 coliphage	92.17%
▪ Staph. epidermidis	98.11%

Surface Test Results – 1 hour

- **MS2 coliphage**

(enveloped single stranded RNA coliphage)

- **MRSA**

(a gram positive cocci)

Micro-organism	Percentage Efficiency
▪ MS-2 coliphage	59.47%
▪ MRSA	51.81%

SGS

Total Bacteria count - Reduction Percentage %

(Tested products as listed)

Total Bacteria Count cfu/m3	MF20	AS20	WT10
After 4 hours	>99.46%		
After 8 hours		>99.38%	
After 12 hours	>99.77%		>99.69%
After 24 hours		>99.69%	>99.77%

** Summary data sheet, full reports available upon request*

www.o3group.uk
028 9065 6552

NHS **Test Results :** Epsom and St Helier University Hospitals

As an AP(Decontamination) and MDSO, I investigated these "plug and play" units and we have found **we can achieve a 99% pathogen airborne and surface reduction** *in clinical treatment, EBME workshop and equipment library areas.*

With the review of this technology now complete and in use in Trust Endoscopy Decontamination Unit and Endoscopy Treatment rooms to treat VOCs and to reduce HCAI the reports attached point to the OXIZONE Air Steriliser Units effectiveness to combat Covid 19 in clinical areas.

The technology is actually **300 times more effective than HEPA filtration**, *Directors of Infection Prevention & Control (DIPC) have deployed PCO (or Photo Catalytic Oxidization) in treatment rooms.*

The World Health Organization has warned that the Covid 19 virus is also spread via air and remains viable for a number of hours, the Chinese government adopted the use of these devices in Wuhan to clean air and surfaces

In the Health Protection Agency report of the OXIZONE device carried out at Porton Down, the government's Public Health England laboratory, they used MS2 Coliphage NCIMB 10108 an enveloped single stranded RNA coliphage surrogate for Norovirus. As you can see this virus comes into the same grouping as Coronavirus in terms of elimination by UV disinfection.

The **HPA tests show a 92.17% reduction** *of airborne MS2 Coliphage within five minutes and a reduction on surfaces of* **59.47% within one hour**.

The recent Leeds university airborne tests on the OXIZONE Air Steriliser device show **100% reduction** *of Staphylococcus Aureus, E-coli and Aspergillus Fumigatus in one hour and* **99% reduction on surfaces within 24 hours.**

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Report Summary below - (Full report by Phil Convery, Infection control lead)

- 10 units installed in key locations around EOC and 111 call centre
- Absenteeism monitored before and after unit installation
- Clear reduction from 2013 to 2014/15
- Over 42% reduction in absenteeism
- Full sickness breakdown for EOC and 111 combined as below:

	Sickness Reason	S13 Cold, Cough, Flu - Influenza	S14 Asthma	S15 Chest & respiratory problems	S16 Headache / migraine	S21 Ear, nose, throat (ENT)	S23 Eye problems	S25 Gastrointestinal problems	S27 Infectious diseases	S98 Other known causes - not elsewhere classified	S99 Unknown causes / Not specified	Grand Total
111 & EOC NORTH	Sep-13	73	33	12	52	109	0	13/	18	0	238	776
	Sep-14	23	6	99	43	14	7	045	0	58	78	484
	Dec-13	124	123	174	41	57	15	238	0	56	365	1305
	Dec-14	134	0	76	61	46	0	117	0	5	85	635
	Mar-14	92	198	207	259	154	0	148	0	0	262	1431
	Mar-15	46	0	90	108	173	8	113	7	19	205	891

CORONAVIRUS AND OXIZONE

Excerpt from article by Dr D Webber

Dr Webber has a background of over 45 years in microbiology (including 16 years at U.C. Swansea, 16 years as Microbiologist with Fospur/Ashland and 17 years as Technical Director of Microbial Innovations Limited).

OXIZONE units have been shown to kill a wide range of microbes that are more difficult to eradicate than viruses, including bacterial species that produce endospores (Clostridium difficile, Geobacillus stearothermophilus), Gram-positive bacteria (Staphylococcus aureus, MRSA, S. epidermidis, Listeria monocytogenes and L. innocua), Gram-negative bacteria (Escherichia coli and Pseudomonas aeruginosa), and moulds (Aspergillus fumigatus) in both the air and/or on surfaces.

SARS-CoV-2 belongs to the same group of viruses that cause colds and influenza. The use of OXIZONE units in call centres and offices at an NHS Trust has been shown to reduce the incidence of illness-related absences; particularly reported cases of colds, coughs and influenza, as well as reducing other chest and respiratory problems.

Without testing OXIZONE against SARS-CoV-2 (or a suitable surrogate) we cannot categorically state that we can kill this coronavirus: however there is a great deal of scientific evidence that this technology can kill a wide range of other microbes that are much more difficult to eradicate than SARS-CoV-2.

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