

ANTI-BACTERIAL TEST REPORT

Parameters	Contact Time	Concentration of challenged microbes (cfu/ml)	Concentration of microbes recovered (cfu/ml)	Microbial reduction (%)
Escherichia coli	1 minutes	3.0×10^8	ND < 10	99.99
	5 minutes	3.0×10^8	ND < 10	99.99
	10 minutes	3.0×10^8	ND < 10	99.99
Staphylococcus aureus	1 minutes	4.6×10^8	ND < 10	99.99
	5 minutes	4.6×10^8	ND < 10	99.99
	10 minutes	4.6×10^8	ND < 10	99.99
Pseudomonas aeruginosa	1 minutes	4.2×10^8	ND < 10	99.99
	5 minutes	4.2×10^8	ND < 10	99.99
	10 minutes	4.2×10^8	ND < 10	99.99
Aspergillus brasiliensis	1 minutes	1.4×10^6	ND < 10	99.99
	5 minutes	1.4×10^6	ND < 10	99.99
	10 minutes	1.4×10^6	ND < 10	99.99
Candida albicans	1 minutes	2.0×10^6	ND < 10	99.99
	5 minutes	2.0×10^6	ND < 10	99.99
	10 minutes	2.0×10^6	ND < 10	99.99

COV-OC43 TEST REPORT

Virus	Experimental condition			
	Exposure: 5 min		Exposure: 60 min	
	Virus + Solution II + white/visible light	Virus + white/visible light	Virus + Solution II + white/visible light	Virus + white/visible light
CoV-043	Negative	Positive	Negative	Positive

HFMD TEST REPORT

Virus	Experimental condition			
	Exposure: 5 min		Exposure: 60 min	
	Virus + Solution II + white/visible light	Virus + white/visible light	Virus + Solution II + white/visible light	Virus + white/visible light
CVA-6	Negative	Positive	Negative	Positive
CVA-16	Negative	Positive	Negative	Positive

RESONANCE TECHNOLOGY TEST REPORT (50-80mm distance elimination by frequency)

Sample Marking	Parameters / Challenged Bacteria	Contact Time	Concentration of challenged microbes (cfu/ml)	Concentration of microbes recovered (cfu/ml)	Microbial reduction (%)
Fushion Resonance Nano Copper Liquid Glass	Escherichia coli ATCC 8739	5 minutes	4.3×10^4	1.2×10^3	97.21
		10 minutes	4.3×10^4	1.0×10^3	97.67
	Staphylococcus aureus ATCC 6538	5 minutes	4.8×10^4	1.2×10^4	75.00
		10 minutes	4.8×10^4	1.0×10^3	97.92

SVHC TEST REPORT

According to the specified scope and evaluation screening, the test results of SVHC are $\leq 0.1\%$ (w/w) in the submitted sample. (Decision Rule: please refer to appendix 1: Category 1)	PASS
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Certifications

Coronavirus (CoV-OC43)
99.99%

HFMD (CVA-6)
99.99%

HFMD (CVA-16)
99.99%

HFMD (EV-A71)
99.99%

NOTE OF CERTIFICATION

DATE: 18 February 2020

This note serves to certify the following:

- We have tested the solution AirTum under laboratory conditions and found that AirTum was 99.99% efficient in degrading the human coronavirus 229E (CoV-OC43) and viral RNA when exposed to direct contact with the virus.

Professor Dr David Pereira
Director

NOTE OF CERTIFICATION

DATE: 2 March 2020

This note serves to certify the following:

- We have tested the solution AirTum under laboratory conditions and found that AirTum was 99.99% efficient in degrading the human coronavirus HFMD (CVA-6) and viral RNA when exposed to direct contact with the virus.

Professor Dr David Pereira
Director

NOTE OF CERTIFICATION

DATE: 2 March 2020

This note serves to certify the following:

- We have tested the solution AirTum under laboratory conditions and found that AirTum was 99.99% efficient in degrading the human coronavirus HFMD (CVA-16) and viral RNA when exposed to direct contact with the virus.

Professor Dr David Pereira
Director

NOTE OF CERTIFICATION

DATE: 11 February 2020

This note serves to certify the following:

- We have tested the solution AirTum under laboratory conditions and found that AirTum was 99.99% efficient in degrading the human coronavirus HFMD (EV-A71) and viral RNA when exposed to direct contact with the virus.

Professor Dr David Pereira
Director

H1N1 Influenza
> 99%

Staphylococcus Aureus
99.9999%

Salmonella Typhimurium
& Candida Albicans
99.99%

REACH Test (EU)

ANALYTICAL TEST REPORT

Client Reference: 2020-02-0001

Report Title: H1N1 Influenza

Client Details: [Redacted]

Sample Description: [Redacted]

Method of Test: [Redacted]

Results:

Parameter	Result
H1N1 Influenza	> 99%

ANALYTICAL TEST REPORT

Client Reference: 2020-02-0002

Report Title: Staphylococcus Aureus

Client Details: [Redacted]

Sample Description: [Redacted]

Method of Test: [Redacted]

Results:

Parameter	Result
Staphylococcus Aureus	99.9999%

TEST REPORT NO. ASL-0177-19-5

Client Reference: 2019-12-0001

Report Title: Salmonella Typhimurium & Candida Albicans

Client Details: [Redacted]

Sample Description: [Redacted]

Method of Test: [Redacted]

Results:

Parameter	Result
Salmonella Typhimurium	99.99%
Candida Albicans	99.99%

SGS Test Report

Client Reference: 2020-02-0003

Report Title: REACH Test (EU)

Client Details: [Redacted]

Sample Description: [Redacted]

Method of Test: [Redacted]

Results:

Parameter	Result
REACH Test (EU)	Pass

ROHS-Compliant

Skin Sensitivity Test

Child-Safe Test

Non-Corrosive and Material Safety Test

ANALYTICAL TEST REPORT

Client Reference: 2020-02-0004

Report Title: ROHS-Compliant

Client Details: [Redacted]

Sample Description: [Redacted]

Method of Test: [Redacted]

Results:

Parameter	Result
ROHS-Compliant	Pass

TEST REPORT

Client Reference: 2020-02-0005

Report Title: Skin Sensitivity Test

Client Details: [Redacted]

Sample Description: [Redacted]

Method of Test: [Redacted]

Results:

Parameter	Result
Skin Sensitivity Test	Pass

TEST REPORT

Client Reference: 2020-02-0006

Report Title: Child-Safe Test

Client Details: [Redacted]

Sample Description: [Redacted]

Method of Test: [Redacted]

Results:

Parameter	Result
Child-Safe Test	Pass

TEST REPORT

Client Reference: 2020-02-0007

Report Title: Non-Corrosive and Material Safety Test

Client Details: [Redacted]

Sample Description: [Redacted]

Method of Test: [Redacted]

Results:

Parameter	Result
Non-Corrosive and Material Safety Test	Pass

Interim List of Household Products and Active Ingredients for Disinfection of Novel Coronavirus (2019-nCoV)

Table 2. Active Ingredients and their Working Concentrations Effective Against Coronaviruses

	Active Ingredient (A.I.)
1	Sodium hypochlorite (0.1 – 0.5%) ¹
2	70% ethyl alcohol ¹
3	Povidone-iodine (1% iodine) ¹
4	Chloroxylenol (0.24%) ²
5	50% isopropanol ³
6	0.05% benzalkonium chloride ³ (Quaternary Ammonium Compound)
7	50ppm iodine in iodophor ³
8	0.23% sodium chlorite ³
9	1% cresol soap ³ (sodium alkyl-ben-zene sulfonate)
10	Hydrogen peroxide (0.5-7.0%) ⁴

Phase 1: AirTum™ Air & Surface Sterilization using 3% Hydrogen Peroxide or 0.08% QAC formulation

¹ Sattar SA, Springthorpe VS, Karim Y, Loro P. (1989). Chemical disinfection of non-porous inanimate surfaces experimentally contaminated with four human enteroviral viruses. Epidemiol. Infect. 103:493-502. Tested against