

DISINFECTION TUNNEL

Another layer of protection



A&W Disinfection Tunnel



A&W Disinfection Tunnel

Introduction

The A&W disinfectant spray tunnel is designed to add another layer of protection to the many conventional procedures implemented during a pandemic, by lightly discharging effective disinfectant on individuals passing through them. These robustly built tunnels are best deployed at high footfall locations and in addition, the spray system and its hypochlorous acid (HOCL) disinfectant are

- Non-toxic
- Zero-alcohol
- Non-flammable
- Non-chloride (bleach) based
- No known effects on eyes
- Reduces microbial load, bacteria and non-enveloped bacteria

This system complements other control measures such as social distancing, face masks and washing hands.



A&W Disinfection Tunnel

Compact Booth



This compact walk-through disinfectant booth with the smallest footprint is an economical solution for premises with lower footfalls and space constraints, designed to be easily deployed at shop entrances, small restaurants & offices. It is equipped with top and side spray nozzles to lightly discharge hypochlorous acid (HOCL) disinfectant automatically on individuals passing through, it eradicates up to 99% of bacteria and viruses on surfaces, clothes, personal belongings including exposed skin. It is also safe to breathe while in the tunnel.

It is activated by a foot pedal and ceases the spray automatically after the individual emerges from the tunnel after 15-20 seconds.

- Entry-activated by mechanical foot-operated pedal or automatic sensor
- Automatic exit deactivation with sensor
- Top and side spray nozzles
- Stainless steel frame
- Acrylic wall
- PVC curtain strips
- Non-slip rubber matted floor
- Weight: 85kg
- Dimensions: 1m (W) x 1m (D) x 2.2m (H)



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Standard Chamber

Designed with office looks and users in mind, this fully automated walk-through disinfectant spray tunnel is equipped with top and side spray nozzles lightly discharging hypochlorous acid (HOCL) disinfectant on individuals passing through. It is activated by sensors for entry and exit, eradicate up to 99% of bacteria and viruses on surfaces, clothes, personal belongings including exposed skin with 15-20 seconds exposure.

- Sensors activation for entry/exit
- Top and side spray nozzles
- Stainless steel frame
- Powder-coated borders
- Non-slip rubber matted floor
- Weight: 160kg
- Dimensions: 1.5m (W) x 1m (D) x 2.2m (H)





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Industrial Tunnel



For use in industrial applications, factories, production floors, and loading bays. This unit is robust and activates automatically on entry and exit. It comes with top and side spray, discharging hypochlorous acid (HOCL) disinfectant on individuals passing through. It eradicates up to 99% of bacteria and viruses on surfaces, clothes, personal belongings including exposed skin and also safe to breathe while in the tunnel. It is activated by a foot pedal and ceases the spray automatically after the individual emerges from the tunnel after 15-20 seconds.

- Sensors activation for entry/exit
- Top and side spray nozzles
- Stainless steel frame
- Aluminium borders
- Non-slip rubber matted floor
- Weight: 220kg
- Dimensions: 1m (W) x 2.6m (D) x 2.2m (H)



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Hypochlorous Acid (HOCL)

A colourless liquid with weak chlorine odour, HOCL is a weak acid that occurs naturally in human body when neutrophils (or white blood cells) fights pathogens through phagocytosis, a major mechanism of our innate immune defense. During phagocytosis, invading pathogens are engulfed, ingested and eliminated through microbicidal effect.

Chemical Name

150PPM Hypochlorous Acid (Water Based)

Physical Hazards

None

Health & Environmental Hazards

None

Composition

0.01500% Hypochlorous Acid

0.00160% Hypochlorite Ion

99.9834% Water

Eye Contact

No known effect

Inhalation

No known effect

Skin Contact

No known effect

Ingestion

Wash out mouth with water, seek medical attention



A&W Disinfection Tunnel

Test Report

TEST REPORT

OUR REF. NO.: MW00741-29/04/20 DATE: 05/05/20

COMPANY : AIK MOH PAINTS & CHEMICALS PTE LTD Page 1 of 2
 20 TUAS STREET
 SINGAPORE 638457

DATE SAMPLE RECEIVED : 29/04/20

DATE OF TESTING : 01/05/20-02/05/20

SAMPLE DESCRIPTION : Water Based Hand Sanitizer (DERA)

TEST METHOD USED : With reference to BS EN 1040:2005 -Chemical disinfectants and antiseptics. Quantitative Suspension test for the evaluation of basic bactericidal activity of chemical disinfectants and Antiseptics (phase 1)

ON ANALYSIS, THE FOLLOWING RESULTS WERE OBTAINED:

1) TEST MICROORGANISM USED: *Staphylococcus aureus* ATCC 6538

Contact Time (minutes)	Starting Concentration		Final Concentration CFU per ml (Plate Count)	Log ₁₀ Reduction Achieved	Percentage Kill of Test Microorganism
	CFU per ml	Log ₁₀			
5	3.9 x 10 ⁷	7.59	0, 0	7.59	99.999

THE REPORT SHALL NOT BE REPRODUCED EXCEPT IN FULL, WITHOUT THE WRITTEN APPROVAL OF THE LABORATORY, THIS REPORT MUST NOT BE USED FOR ANY ADVERTISING PURPOSES.

TEST REPORT

Mechem
Eurofins Mechem Pte. Ltd.
No. 127 Woodlands Industrial Park ES Woodlands e-Terrace Singapore 757520
 Telephone: 6533 6038, 6453 3548 Fax: 6458 4543
 GST/Business Reg. No. L96706029A

OUR REF. NO.: MW00741-29/04/20 DATE: 05/05/20

2) TEST MICROORGANISM USED: *Pseudomonas aeruginosa* ATCC 10145 Page: 2 of 2

Contact Time (minutes)	Starting Concentration		Final Concentration CFU per ml (Plate Count)	Log ₁₀ Reduction Achieved	Percentage Kill of Test Microorganism
	CFU per ml	Log ₁₀			
5	1.7 x 10 ⁷	7.23	0, 0	7.23	99.999

REMARKS:
THE SAMPLE IS TESTED AS PER RECEIVED.

 TEH HOOI KUAN
 ASSISTANT LABORATORY MANAGER
 (MICROBIOLOGY)

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Test Results (Petri Dish)

Source: Korea Testing & Research Institute

▶ Escherichia coli



Initial 7.5×10^5 CFU/ml

▶ Staphylococcus Aureus



Initial 3.6×10^5 CFU/ml

▶ Salmonella Typhi



Initial 2.7×10^5 CFU/ml

▶ Vibrio Parahaemolyticus



Initial 2.8×10^5 CFU/ml

▶ E.coli O-157 bacteria



Initial 4.1×10^5 CFU/ml



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Viral Inactivation Effect

Source: Korea Ministry for Food, Agriculture, Forestry and Fisheries

1. Test Object : Influenza A virus (H1N1)
2. Disinfectant : Hypochlorous acid solution @ 20ppm, pH 6.1
3. Test Sample : Add and mix 0.1ml of H1N1 suspension at 1ml of disinfectant
4. Test Method : Measure viral infection values of the mixture at 15sec and 1min under room temperature
5. Control Plot : Purified water
6. TCID₅₀ : median tissue culture infectious dose

Test Object	Log TCID ₅₀ /ml		
	Initial	After 15sec	After 1min
Sample	6.5	<1.5	<1.5
Control plot	6.5	-	6.5

Hypochlorous acid was able to inactivate virus in 15 seconds to detection limit value of <1.5



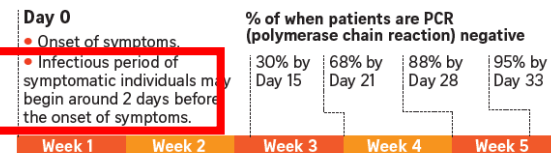
Resources

New Covid-19 finding could change discharge criteria

After 11 days, a person with Covid-19 is no longer infectious, although tests may still pick up the virus in his body, a local study has found. **Clara Chong** looks at how this finding could potentially allow many more patients to be discharged earlier, freeing up healthcare resources for testing and treatment.

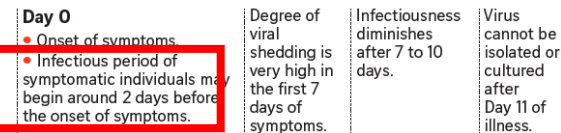
CURRENT DISCHARGE SYSTEM

Patients are discharged only after testing negative two times in a row over a period of 24 hours.



Note: Based on an analysis of 766 local patients (NCID data) and accumulated data since the start of the Covid-19 pandemic.

TIME-BASED SYSTEM



Note: Based on accumulated data since the start of the Covid-19 pandemic.

ABOUT THE VIRUS

Median incubation period: ... Asymptomatic infection: ...

Published on The Straits Times, 24 May 2020

How long Sars-CoV-2 stays on

Surface type	Average time
Paper	Less than 3 hours
Tissue paper	Less than 3 hours
Wood	More than 1 but less than 2 days
Cloth	More than 1 but less than 2 days
Glass	More than 2 but less than 4 days
Banknote	More than 2 but less than 4 days
Stainless steel	More than 4 but less than 7 days
Plastic	More than 4 but less than 7 days
Mask inner layer	More than 4 but less than 7 days
Mask outer layer	More than 7 days

Published on The Straits Times, 20 May 2020



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Summary

The deployment of a disinfection tunnel

1. Doesn't stop an infectious COVID-19 infected person from shedding the virus
2. It is a preventive measure since the infectious period of a symptomatic individual may begin around 2 days before the onset of symptoms.
3. Use with other measures
4. Non-toxic, non-alcohol, non-flammable disinfectant

Contact Us

Wilfred Tan

wilfred@wholesome.sg

65 96722335

Dylan Eng

dylaneng@atdiopl.com

65 92282607



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