

AQUAVITA

MEDICAL EQUIPMENT SUPPLIER

BROCHURE UV ZBER

UV-C Sterilizer Set / model FL-UVC1-16

PROTECT YOUR FAMILY FROM
INVISIBLE ENEMY



UV ZBER

Pongsak Mongkolrattanachart
info@aquavita.in
+6687087777

Bruno T. Radeconde
contact@aquavita.in
+66817377706

Win Chartpanich
win.c@aquavita.in
+66914451565

FIGHT VIRUSES & BACTERIAS

Aquavita company limited is a medical equipment suppliers providing to customers worldwide.

Our current fight is engaged against the spread of the Coronavirus. We have an international distribution contract for **UV Zber UV-C Sterilizer Lights** with **PSC Commercial Co., Ltd.**

PSC Commercial Company Limited was established in 1971. At that time, the company sold many types of electrical appliances such as lamps, lighting, electrical equipment and home appliances.

With more than ten years of experience in the electrical appliance industry, the company has accumulated specialized expertise in the lighting product business.

The company continues to grow and never cease to build on its reputation. We use experience, knowledge and expertise.



What exactly is UV-C Sterilizer Light?

Natural sunlight consists of 3 types of UV which are UV-A, UV-B, and UV-C. UV-C has the shortest wavelength followed by UV-B and UV-A respectively. The shorter the wavelength, the more harmful the UV radiation.

UV-C has the most energetic wavelength which is effective for destroying genetic material such as bacteria, germ, or virus.

However, we should avoid receiving direct UV-C Radiation as it could be dangerous to skin and eyes.

The modern technology allows people to apply the benefits of UV light for better living. Ultraviolet Germicidal Irradiation (UVGI) is the system that uses short wavelength UV-C to kill micro-organisms (e.g. Bacteria, virus and germs) by disrupting its DNA.

How UV destroys germs?

The UV-C sterilizer light is especially designed to imitate the natural UV-C, it is also known as Germicidal lamp or UV light.

In practice, the ability of UV sterilizer light to kill germs would rely on two factors.

- **The depth of UVC penetration:**

The ability of UV-C to penetrate objects has its limitation. It depends on the types of material's ability to absorb the UV-C.

- **The level of UV-C that contact the object:**

The effectiveness of UV-C to kill germs would depend on how long and how much light has emitted directly to the object.

The effectiveness problem occurs, if the UV-C is blocked, or objects haven't received UV-C long enough.

Different kinds of germs have different levels of UV-C endurance.

- UVC has the most efficient level in dry condition, and the amount of UV dose needed to kill germs would be double in humid condition.

- Avoid contact with direct UV-C radiation at all times (both skin and eyesight). UV-C reflection is also harmful, please be aware.

UVC sterilizer light attributes

- Killing micro-organisms/ germs e.g. Bacteria, Escherichia Coli (E. coli), Staphylococcus aureus, Salmonella Typhimurium, Pseudomonas Aeruginosa, etc.
- Reducing germs spreading in the air, and contagious disease.
- Reducing unpleasant scent

UVZBER

FL-UVCI-16



UV-C kills both
VIRUSES & BACTERIAS

99%

within

9:00

minutes

for a 35 sqm room



DELAY START

Remote controlled



Surface coverage of up to

100 sqm

UV-C bulbs' lifespan of up to

9,000 hours

16

PHILIPS TUV18 30 Watts

Total Power 480 Watts



Use examples:

Schools, universities, associations, sports club, theatres, cinemas, public transport stations, hotels, restaurants, embassies, clinics, hospitals, offices, stores, factories, private homes...

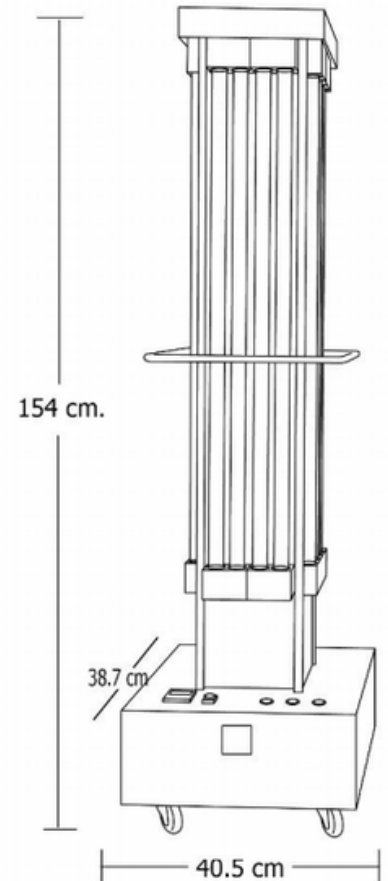


2 colors
WHITE
BLACK

Dimensions
H154 cm.
W40.5 cm.
D38.7 cm.

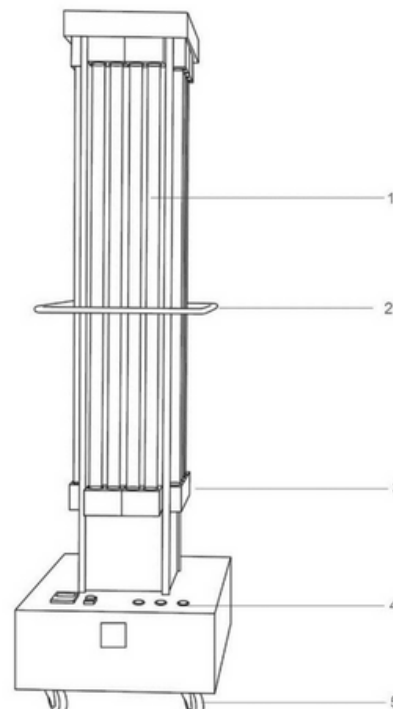
Product Information

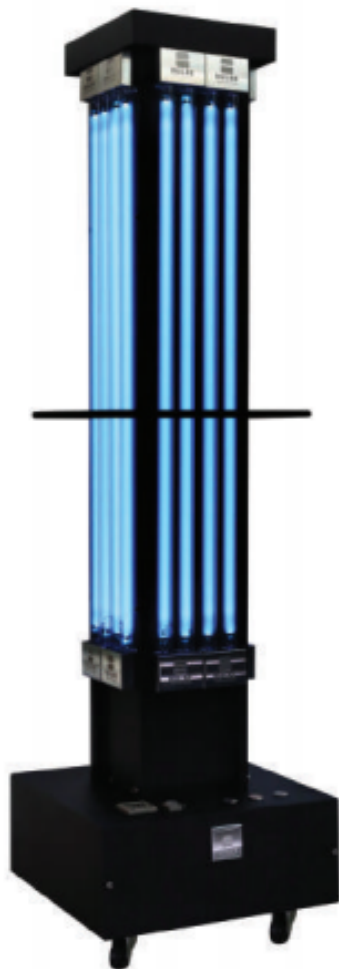
Product	UV-C Sterilizer Light
Model	FL-UVC1-16
Attributes	Killing Germs, Bacteria and Virus.
Voltage	220-240 v
Light Tube	Philips TUV T8 30W1SL/25
Wattage	480 watt
No. of Tube	16 pcs.
Dimensions	W: 40.5 x L: 38.7 X H: 154 (cm)
Life Time	9,000 hours
Operating Space	100 square meters
Timing Mode	Electronic Timing Device
Product Function	<ul style="list-style-type: none"> ● Delay Start System ● Operating Timer Setting



Components

1. UV-C Tubes 16 Units
2. Handle
3. Lamps holders
4. Control Panel
5. Wheels





Light Tube

Philips TUV T8 30W 1SL/25 - 16 units

General Information

Cap-Base	G13 [Medium Bi-Pin Fluorescent]
Remarks	Warnings and Safety: A lamp breaking is extremely unlikely to have any impact on your health. If a lamp breaks, ventilate the room for 30 minutes and remove the parts, preferably with gloves. Put them in a sealed plastic bag and take it to your local waste facilities for recycling. Do not use a vacuum cleaner. DANGER: Risk Group 3 Ultra Violet product. These lamps emit high-power UV radiation that can cause severe injury to skin and eyes. Avoid eye and skin exposure to unshielded product. Use only in an enclosed environment which shields users from the radiation.
Main Application	Disinfection
Useful Life (Nom)	9000 h
System Description	-

Light Technical

Color Code	TUV
Color Designation	- [Not Specified]
Depreciation at Useful Lifetime	10 %

Operating and Electrical

Power (Nom)	30 W
Lamp Current (Nom)	0.37 A
Voltage (Nom)	102 V

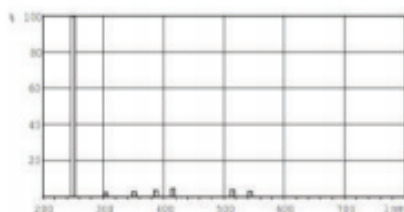
Approval and Application

Mercury (Hg) Content (Nom)	2.0 mg
----------------------------	--------

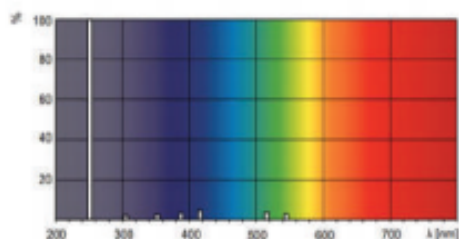
UV

UV-C Radiation at 100 hr	12.0 W
--------------------------	--------

Photometric data



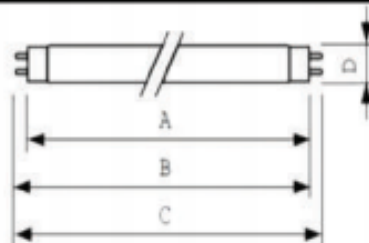
XDPB_XUVTLD-Spectral power distribution B/W



XDPB_XUVTLD-Spectral power distribution Colour

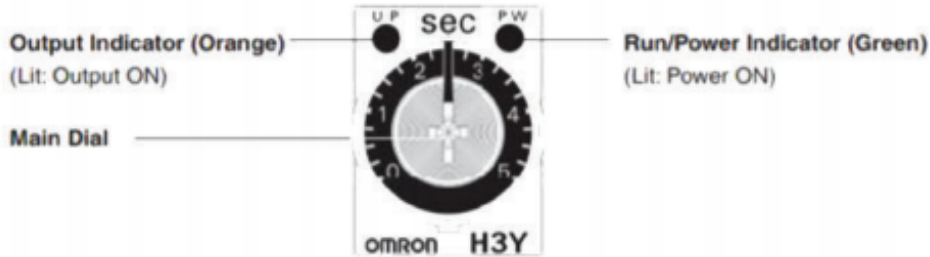
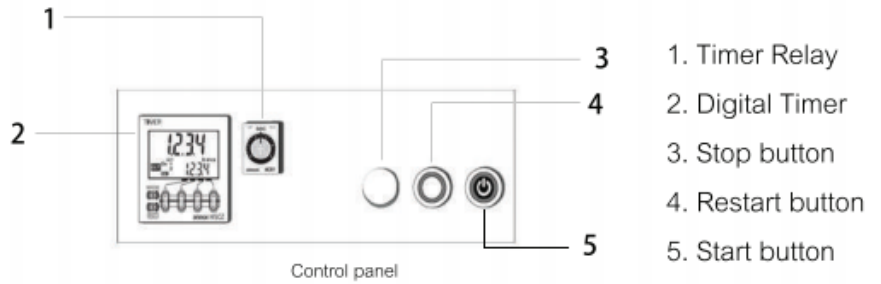
Dimensions

Product	D (max)	A (max)
TUV 30W 1SL/25	28 mm	894.6 mm
B (max)	B (min)	C (max)
901.7 mm	899.3 mm	908.8 mm



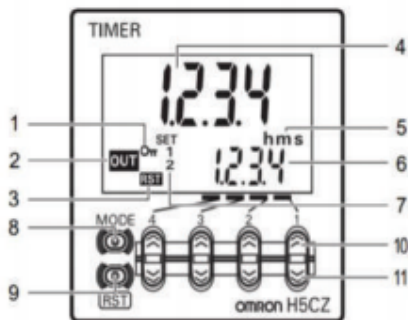
Control Panel

1. Timer Relay



The time can be set by turning the timer to the desired number of time delays.

2. Digital Timer

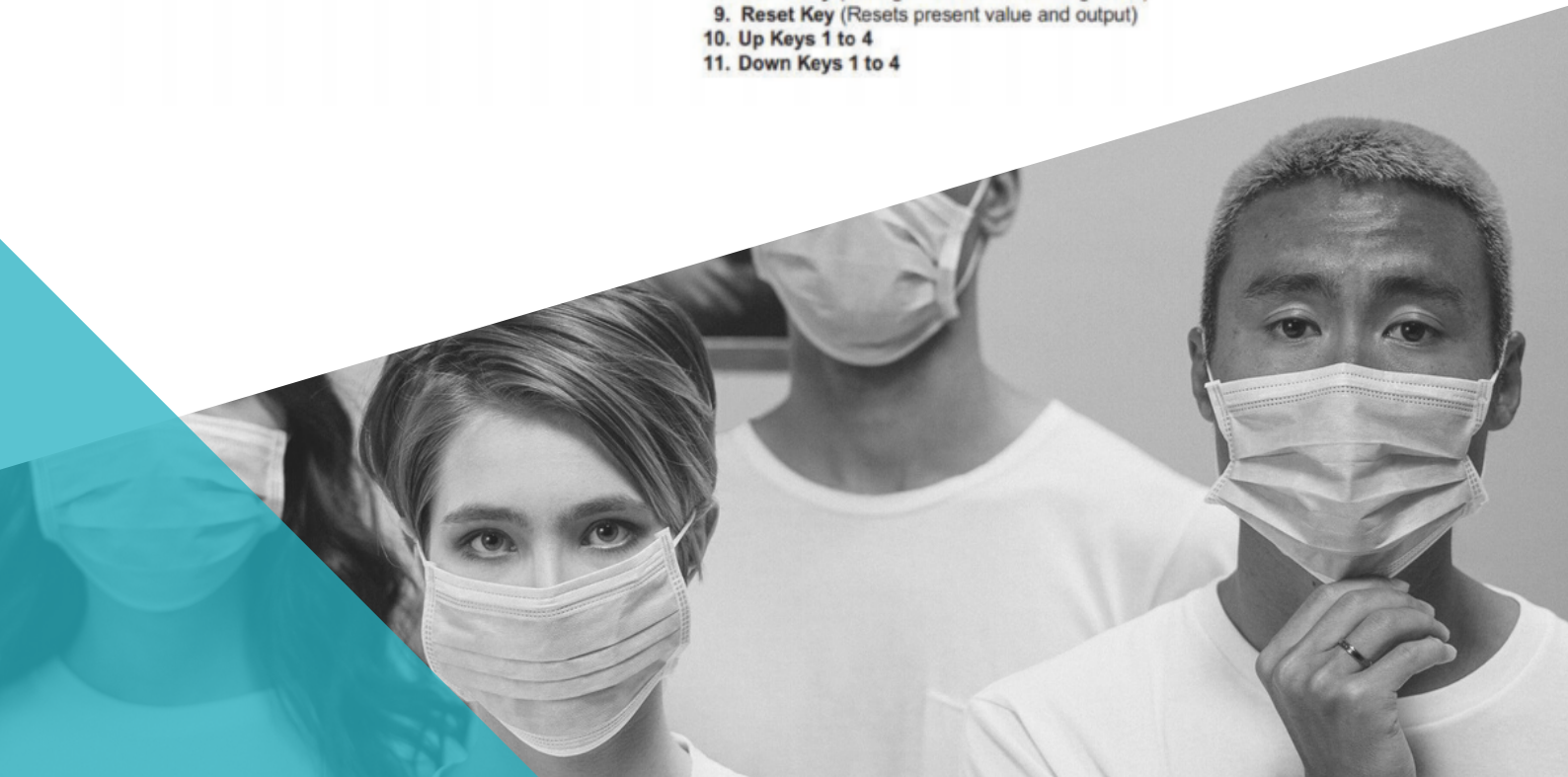


● Display Section

1. Key Protect Indicator
2. Control Output Indicator
3. Reset Indicator
4. Present Value Display (Main Display)
(Character height: 10 mm)
5. Time Unit Indicators (If the time range is 0 min, 0.0 min, 0 h, 0.0 h, or 0 h 0 min, these indicators flash to indicate timing operation.)
6. Set Value Display (Sub-display)
(Character height: 6 mm)
7. Set Value 1, 2 Indicator

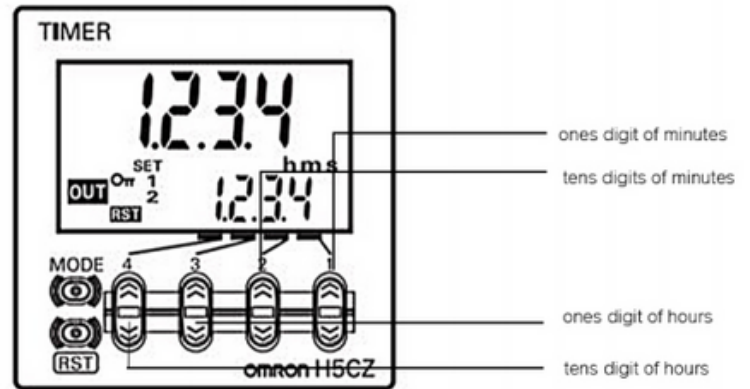
● Operation Key

8. Mode Key (Changes modes and setting items)
9. Reset Key (Resets present value and output)
10. Up Keys 1 to 4
11. Down Keys 1 to 4

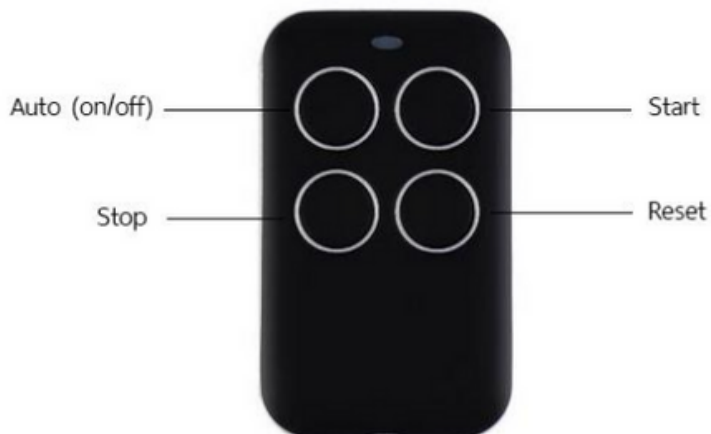


Work instructions

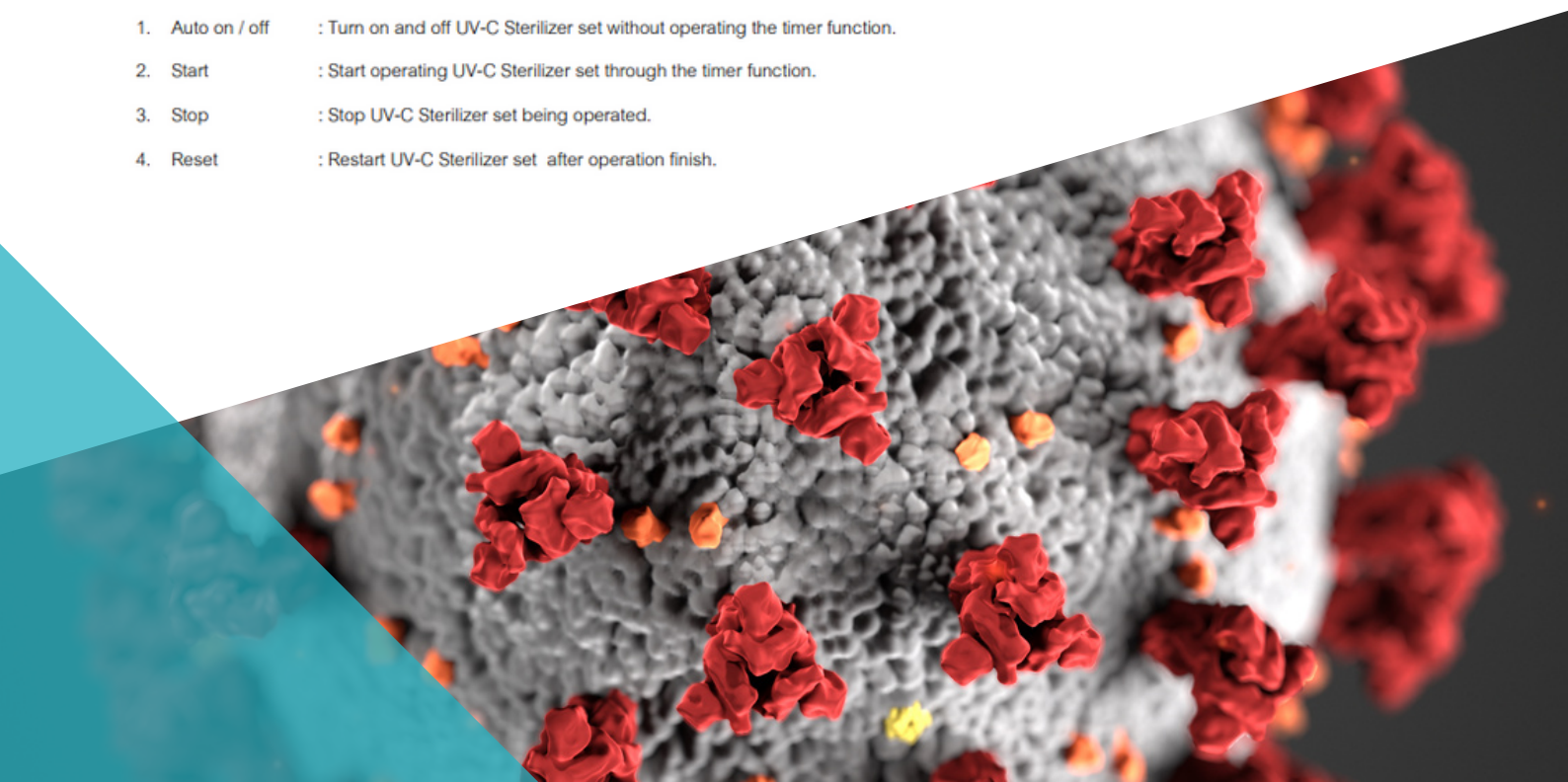
1. Plug-In UV-C Light Set.
2. Turn on Power button.
3. Setting Relay time.
4. Setting Operating time.
5. Press Start button.
*Press Reset after operation finish.
6. Press Stop button to stop UV-C Sterilizer set being operated.
7. After Operation finish, please wait 5-10 minutes for air-ventilation.
8. Open doors/ windows for receiving fresh air.



Remote control



1. Auto on / off : Turn on and off UV-C Sterilizer set without operating the timer function.
2. Start : Start operating UV-C Sterilizer set through the timer function.
3. Stop : Stop UV-C Sterilizer set being operated.
4. Reset : Restart UV-C Sterilizer set after operation finish.



Operating Time Calculation

Operating Time is calculated by this formula. (Source: Dr. Michael

Templeton, Department of Civil and Environmental Engineering,

Imperial College London IUVA Vice-President for Europe, Middle East and

Africa region) and compare the results with radiation dose for inactivating

various viruses and bacteria.

$$Time = \frac{UV\ dose}{UV\ light\ intensity}$$

Operating spaces (Square meters)	Operating time to kill bacteria (Bacillus Anthracis-Anthrax / Bacillus anthracis spore-Anthrax spores / Clostridium tetani / Escherichia coli / Mycobacterium tuberculosis.)		Operating time to kill viruses. (Bacteriophage-Ecoli / Infectious Hepatitis / Inflenza / Poliovirus-Poliomyelitis)	
	90%	100%	90%	100%
16	2m 15s	4m 17s	33s	45s
25	3m 23s	6m 25s	48s	1m 7s
36	4m 46s	9m 4s	1m 8s	1m 35s
49	6m 45s	12m 50s	1m 37s	2m 14s
56	8m 6s	15m 24s	1m 56s	2m 40s
81	10m 8s	19m 15s	2m 25s	3m 20s
100	11m 35s	22m	2m 46s	3m 49s



Research on UV-C's ability to kill Germs.

Inactivation of Viruses on Surfaces by Ultraviolet Germicidal Irradiation - J Occup

Environ Hyg. 2007; 4(6): 400-405.

Published online 2007 Nov 7.

doi: 10.1080/15459620701329012

PMCID: PMC7196698

PMID: 17474029

https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7196698/

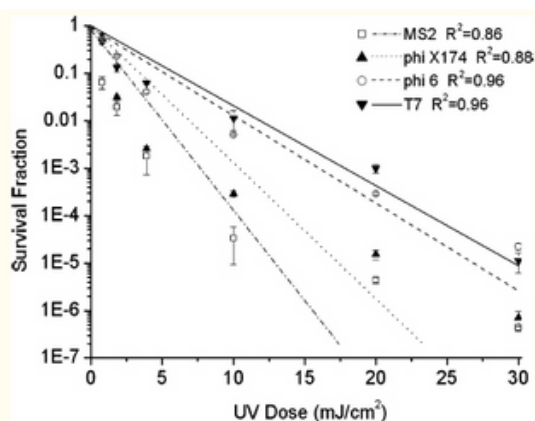


FIGURE 2. Survival fraction of surface viruses (MS2, phi X174, phi 6, and T7) exposed to UVGI at RH 55%. Error bars represent one standard deviation of the mean of at least three trials.

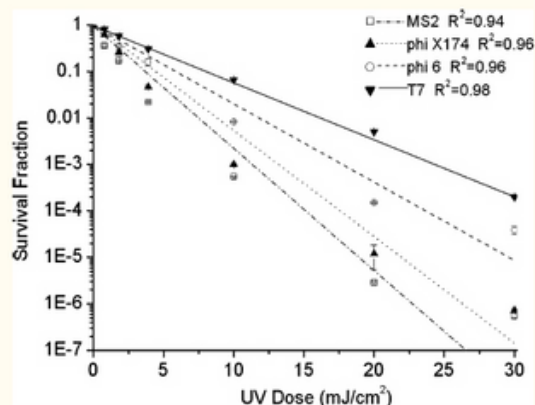


FIGURE 3. Survival fraction of surface viruses (MS2, phi X174, phi 6, and T7) exposed to UVGI at RH 85%. Error bars represent one standard deviation of the mean of at least three trials.

CONCLUSIONS

The effects of UV dose, type of virus nucleic acid, and RH on the effectiveness of UVGI to inactivate surface viruses were evaluated in a UV exposure chamber.

For virus inactivation on the surface, the effectiveness of UVGI strongly depended on a type of virus nucleic acid.

Viruses with dsRNA or dsDNA could be less susceptible to UVGI inactivation.

For 90% surface virus inactivation, the UV dose for dsRNA and dsDNA viruses was approximately 2 to 3 times higher than ssRNA and ssDNA viruses, respectively.

The susceptibility factor for the viruses was higher at 55% RH than at 85% RH possibly because when RH increases, water sorption onto the virus surface might provide protection against UV-induced DNA or RNA damage.



2 colors
WHITE
BLACK

Dimensions
H154 cm.
W40.5 cm.
D38.7 cm.

AQUAVITA

MEDICAL EQUIPMENT SUPPLIER

Contacts:

Bruno T. Radegonde

+66817377706 or contact@aquavita.in



Win Chartpanich

+66914451565 or win.c@aquavita.in

Pongsak Mongkolrattanachart

+6687087777 or info@aquavita.in

Aquavita Co., Ltd.

3689/9 Charoenraj Road, Bangkok,
Bangkorleam, Bangkok 10120 Thailand

AUTHORIZED DISTRIBUTOR OF



Now the new normal for:

- Schools,
- universities,
- associations,
- sports club,
- theatres,
- cinemas,
- public transport stations,
- hotels,
- restaurants,
- embassies,
- clinics,
- hospitals,
- offices,
- stores,
- factories,
- private homes...

