中国认可
国际互认
检测
TESTING
CNAS L0823

202019005395

广州市微生物研究所有限公司

GUANG ZHOU INSTITUTE OF MICROBIOLOGY CO., LTD.

检 测 报 告

TEST REPORT

Report Number	QX20210638
Name of Sample	UVC Air Disinfection Unit
Applicant	Signify Luminaires (Shanghai) Co., Ltd.

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TEST REPORT

Date Received: Aug. 16, 2021
Date Analyzed: Aug. 18, 2021

Name of Sample	UVC Air Disinfection Unit	Source of Sample	Delivery
Applicant	Signify Luminaires(Shanghai) Co. , Ltd.	Client	——
Manufacturer	Zhejiang Howell Illuminating Technology Co., Ltd.	Brand	——
Type and Specification	UVCA110	Quantity of Sample	1PC
Date of Production	2021.05.28	State of Sample	Machine
Batch Number	——	Packing of Sample	In box
Standard and Methods	<Technical Standard For Disinfection>2002-2.1.3 Air disinfection effect evaluation test		
Items of Analysis	Laboratory Test (*Staphylococcus albus* 8032)		
Remarks	Applicant Address: 2F,Building 1, No.2555, Hechuan Road, Minhang District, Shanghai; Manufacturer Address: No.1228 Tanjialing West Road, Lanjiang Street, Yuyao, Ningbo, Zhejiang, China.		

To be continued

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Method for Testing Air Disinfection:

1. Test Equipment
   1) Strain: *Staphylococcus albus*
   2) Microbial aerosol generator: TK-3
   3) Culture media: NA
   4) Sampling equipment: Liquid impingement sampler
2. Test Conditions
   1) The volume of the test chamber: 3 m^3
   2) Environment temperature: (20~25) ℃
   3) Environment humidity: (50~70) % RH
3. Operation Conditions of the Machine
   Set the switch to position "The highest wind speed".
4. Test Procedures
   1) Get a bacteria slant culture (4~5 generation) which is incubated at 37 ℃ for 24 h, wash the culture from this slant with 10 mL NB, filter the liquid culture by aseptic cotton buds, and dilute this inoculum with NB to suitable concentration. Then make atomized bacterial suspension.
   2) The equipment is placed in the two test chambers respectively, close the door, and open the HEPA filter. Simultaneously operate the environmental control devices until the experimental cabin temperature to be (20~25) ℃, relative humidity to be (50~70)%RH, Turn off the chamber environmental control system.
   3) Release microbial aerosol: turn on the microbial aerosol generator, then turn on the ceiling fan, turn off the fan after 5 min, and let stand for 5 min.
   4) At the same time, the test group and the control group were sampled with liquid impingement sampler.
   5) The test group started the sample and sampled after 120 min of action, and the control group also sampled in the corresponding time period.
   6) Choose 2 NA plates (the same batch) as the negative control, and culture them on the same condition with the samples.
   7) Run the test three times.
5. Computational Formula

Natural decay rate $N_t(\%)=\frac{V_0-V_t}{V_0}\times 100$

Where: V_0 = Original Bacteria Count of Control group; V_t = Bacteria Count after Treatment of Control group .

Killing Rate $K_t(\%)=\frac{V_1\times(1-N_t)-V_2}{V_1\times(1-N_t)}\times 100$

Where: V_1 = Original Bacteria Count of test group; V_2 = Bacteria Count after Treatment of test group.

To be continued

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Test results

Number of Sample	Test Strain	Test Time (min)	Test Number	Control Group: Original Bacteria Count V_0 (cfu/m³)	Control Group: Bacteria Count after Treatment V_t (cfu/m³)	Control Group: Natural Decay Rate N_t (%)	Test Group: Original Bacteria Count V_1 (cfu/m³)	Test Group: Bacteria Count after Treatment V_2 (cfu/m³)	Killing Rate K_t (%)
QX20210638-1	*Staphylococcus albus*	120	1	3.20×10^6	2.30×10^6	28.13	3.36×10^6	$<3.20\times10^2$	>99.99
			2	3.74×10^6	2.59×10^6	30.75	4.00×10^6	$<3.20\times10^2$	>99.99
			3	3.58×10^6	2.34×10^6	34.64	3.78×10^6	$<3.20\times10^2$	>99.99

Note: No microorganisms grew in the negative control group.

End of report

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广州市微生物研究所有限公司 检验检测专用章

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