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检测
TESTING
CNAS L0823
202019005395

Test No. KJ20220521

GUANG ZHOU INSTITUTE OF MICROBIOLOGY CO., LTD.

NATIONAL CENTER OF QUALITY INSPECTION AND TESTING ON AIR PURIFICATION PRODUCTS

TEST REPORT

Date Received: Apr. 01, 2022
Date Analyzed: Apr. 12, 2022

Name of Sample	Hygea Air Wearable Purifier	Source of Sample	Delivery
Applicant	Hygea International Ltd.	Client	
Manufacturer	——	Brand	HYGEA AIR
Type and Specification		Quantity of Sample	1PC
Date of Production	——	State of Sample	Machine
Batch Number	——	Packing of Sample	In box
Sample Picture			
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	——		

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: 1 m^3
   2) Environment temperature: (20~25) ℃
   3) Environment humidity: (50~70) % RH
3. Operation Conditions of the Machine
   Just power on during the test.
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.
   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 Time (min)	Test Strain	Test Number	Control Group			Test Group		Killing Rate K_t (%)
				Original Bacteria Count V_0 (cfu/m^3)	Bacteria Count after Treatment V_t (cfu/m^3)	Natural Decay Rate N_t (%)	Original Bacteria Count V_1 (cfu/m^3)	Bacteria Count after Treatment V_2 (cfu/m^3)	
KJ20220520-1	120	*Staphylococcus albus*	1	3.42×10^5	2.27×10^5	33.63	3.26×10^5	4.06×10^4	81.24
			2	2.85×10^5	2.02×10^5	29.12	3.04×10^5	3.52×10^4	83.66
			3	2.46×10^5	1.70×10^5	30.89	2.66×10^5	3.26×10^4	82.27

Note: No microorganisms grew in the negative control group.

End of report

Editor Checker Issuer

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