



中国认可  
国际互认  
检测  
TESTING  
CNAS L0823



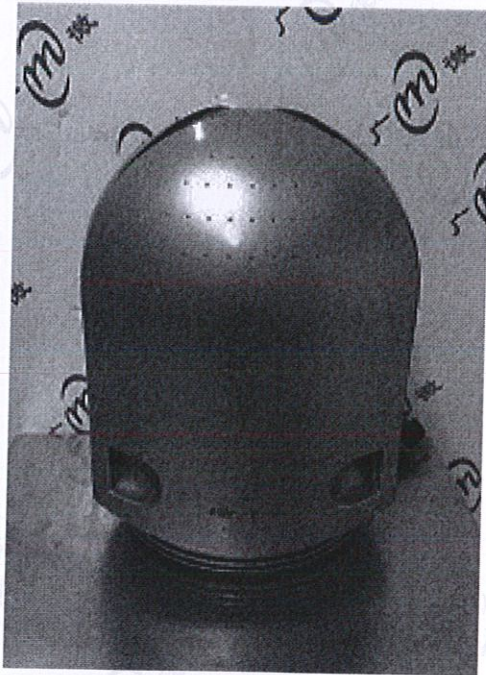
201719001121

Test No.KJ20181600(B)

# GUANGZHOU TESTING CENTER OF INDUSTRIAL MICROBIOLOGY

## TEST REPORT

Date Received: Sept. 14, 2018  
Date Analyzed: Sept. 26, 2018

Name of Sample	Airfree Air Sterilizer	Source of Sample	Delivery
Applicant	Jebsen Consumer Products (China) Company Limited	Client	Lao Yanyi
Manufacturer	Airfree Produtos Electronicos, S.A.,	Brand	AirFree
Type and Specification	P125	Quantity of Sample	1PC
Date of Production	---	State of Sample	Machine
Batch Number	---	Packing of Sample	In box
Sample Picture			
Standard and Methods	1. GB/T 18801-2015 Air cleaner 2. GB 21551.3-2010 Antibacterial and cleaning function for household and similar electrical appliances-Particular requirements of air cleaner		
Items of Analysis	Eliminating Bacterial Rate ( <i>Escherichia coli</i> 8099)		
Remarks	This report replaces the report KJ20181600(R) issued on October 16, 2018, and the original report is invalid.		



\*\*\*To be continued\*\*\*



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### Test Method for Air Purifier Disinfection Performance:

1. Test Equipment

- 1) Strain: *Escherichia coli*
- 2) Microbial aerosol generator: TK-3
- 3) Culture media: NA
- 4) Sampling equipment: six-stage sieve sampler

2. Test Conditions

- 1) The volume of the test chamber: 3 m<sup>3</sup>
- 2) Environment temperature: (20~25) °C
- 3) Environment humidity: (50~70) %RH

3. Operation Conditions of the Air Purifier

The test process was electrified.

4. Test Procedure

- 1) Get a bacteria slant culture (4~7 generation) which is incubated at 37 °C for 24 h, wash the culture from this slant with 10 mL NB, filter the liquid culture by aseptic cotton buds, and dilute this inoculums with NB as appropriate.
- 2) The equipments are placed in the test chambers, close the door, and turn on the HEPA filter system. Simultaneously operate the environmental control devices until the temperature reaches 20 °C~25 °C, relative humidity reaches 50-70%. 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 10 min, and let stand for 15 min.
- 4) Original bacteria aerosols collected by six-stage sieve sampler.
- 5) Turn on the fan during the test. The air purifier are adjusted to the highest air cleaning mode setting for test (test group). Bacteria aerosols (control group and test group) are collected at 60 min .
- 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 and take the mean as the final result.

5. Computational Formula

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

Where:  $V_0$  = original bacteria count of control group;  $V_t$  = bacteria count after treatment of control group.

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

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			Test Group		Killing Rate $K_t$ (%)
				Original Bacteria Count $V_0$ (cfu/m <sup>3</sup> )	Bacteria Count after Treatment $V_t$ (cfu/m <sup>3</sup> )	Natural Decay Rate $N_t$ (%)	Original Bacteria Count $V_1$ (cfu/m <sup>3</sup> )	Bacteria Count after Treatment $V_2$ (cfu/m <sup>3</sup> )	
KJ20181600(B)-1	<i>Escherichia coli</i>	60	1	$1.08 \times 10^5$	$5.54 \times 10^4$	48.70	$1.06 \times 10^5$	$3.39 \times 10^3$	93.77
			2	$1.03 \times 10^5$	$5.38 \times 10^4$	47.77	$1.15 \times 10^5$	$3.57 \times 10^3$	94.06
			3	$1.12 \times 10^5$	$5.63 \times 10^4$	49.73	$1.02 \times 10^5$	$2.93 \times 10^3$	94.29
			Mean						94.04

\*\*\* End of report\*\*\*



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Date Reported

