

广州市微生物研究所 GUANG ZHOU INSTITUTE OF MICROBIOLOGY

检测报告 TEST REPORT

Report Number KJ20190486

Name of Sample Air Purifier

Applicant Sino Vantage Industrial Ltd.







GUANG ZHOU INSTITUTE OF MICROBIOLOGY TEST REPORT

Date Received: Mar. 13, 2019

| | Date Analyzed: Mar. 26, 2019 | | | | | | | | |
|------------------------|--|--------------------|------------|--|--|--|--|--|--|
| Name of Sample | Air Purifier | Source of Sample | Delivery | | | | | | |
| Applicant | Sino Vantage Industrial Ltd. | Client | Wilson Lam | | | | | | |
| Manufacturer | Sino Vantage Industrial Ltd. | Brand | LightAir | | | | | | |
| Type and Specification | CFPro900 | Quantity of Sample | 1PC | | | | | | |
| Date of Production | - 2ª | State of Sample | Machine | | | | | | |
| Batch Number | 124 | Packing of Sample | In box | | | | | | |
| Sample Picture | | | | | | | | | |
| Standard and Methods | GB 21551.3-2010 Antibacterial and cleaning function for household and similar electrical appliances-Particular requirements of air cleaner | | | | | | | | |
| tems of Analysis | Eliminating Bacterial Rate (Aspergillus niger ATCC16404) | | | | | | | | |
| items of marysis | Eliminating Bacterial Rate (Aspergillus nig | eer ATCC16404) | | | | | | | |

To be continued







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Air Disinfection Test Method:

1. Test Equipment

1) Strain: Aspergillus niger

2) Microbial aerosol generator: TK-3

3) Culture media: PDA

4) Sampling equipment: six-stage sieve sampler

2. Test Conditions

1) The volume of the test chamber: 30 m³

2) Environment temperature: (20~25) ℃

3) Environment humidity: (50~70) %RH

3. Operational Conditions of the Machine

Set the switch to position "The highest wind speed".

4. Test Procedure

- To the 4th to 7th generation of Aspergillus niger roxell culture, add 5.0 ml to 10.0 ml of 0.05% (v / v) Tween 80 aqueous PBS solution, scrap the Aspergillus niger conidia in solution and transfer the spore suspension with glass beads in the flask, lightly shaking 1 min and filter removed hypha. Centrifuge 20min in the range of 5000r / min ~ 6000r / min . Then observe under the microscope (400 times), if there are still hypha in the suspension, to be centrifuged. Diluted with physiological saline solution to the appropriate concentration before use.
- 2) The equipments are placed in the 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 °C~25 °C, relative humidity to be 50%~70%, Turn off the chamber environmental control system.
- 3) Release microbial aerosol: turn on the microbial aerosol generator, release the microbial aerosol 15 min ~20 min at 0.2 MPa, operate the ceiling mixing fan, then turn off the fan after 10 min, and let stand for 15 min.
- Original Bacteria aerosols collected by six-stage sieve sampler.
- 5) The air cleaner 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 respectively.
- 6) Choose 2 PDA plates (the same batch) as the negative control, and culture them on the same condition with the samples.
- Run the test three times and take the mean as the final result.
- 5. Computational Formula

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

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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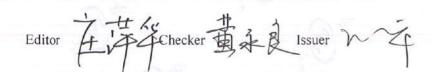
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Test Results

| Number of Sample | | Test Strain | Test Number | Control Group | | | Test Group | | |
|------------------|-----------------------|----------------------|----------------|---|--|---------------------------------------|-------------------------------------|---|------------------------|
| | Test Time (min) | | | Original Bacteria Count V ₀ (cfu/m ³) | Bacteria Count after Treatment V_t (cfu/m 3) | Natural Decay Rate N, (%) | Original Bacteria Count V1 (cfu/m³) | Bacteria Count after Treatment V ₂ (cfu/m ³) | Killing Rate K_t (%) |
| KJ20190486-1 | 60 | Aspergillus niger | 1 | 7.42×10 ⁴ | 4.58×10 ⁴ | 38.27 | 5.85×10 ⁴ | 7 | 99.98 |
| | | | 2 | 6.85×10 ⁴ | 4.41×10 ⁴ | 35.62 | 7.11×10 ⁴ | 0 7 | 99.98 |
| | | | 3 | 7.86×10 ⁴ | 4.93×10 ⁴ | 37.28 | 6.39×10 ⁴ | 7 | 99.98 |
| | | | Mean | | | A** | | | 99.98 |

Note: The negative control group was sterile growth.

*** End of report***





Date Reported







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