



गणेश वैज्ञानिक अनुसन्धान संस्थापन

(भारत सरकार के साथ तेल आयुक्त एवं दिल्ली सरकार के खाद्य मंत्रालय द्वारा अनुमोदित)

GANESH SCIENTIFIC RESEARCH FOUNDATION

(Approved Competent Laboratory by Government of India and Delhi Govt.)



TEST CERTIFICATE

Issued to:	Report No.: 15025
AIR FOR LIFE, UK LIMITED, SUITE	Date of Issue: 02-03-2021
MILTON KEYNES BUSINESS CENTRE FOXHUNTER DRIVE,	Reference: Client's Letter
HAYLEY COURT, LINFORD WOOD, M KGD MILTON	Kind Attn.:
KEYNES	Format TCF-GSRF/09/2019

SAMPLE PARTICULARS

Name of Sample by Client: AFL MINI SANIFIER ^(R)	Test Start: 19-02-2021
Product Details – AFL MINI SANIFIER ^(R) with NASA Developed AFLPCO Technology & AFL PLASMA ^(R) Technology	Test Completed: 02-03-2021
Batch No.: REGULAR	Samples Qty: 01
Sampling done by Manufacturer/Client	Date of sample receipt: 18-02-2021

Description- Complies with efficient Filter less Cold Plasma Air Purifier. The sample meets the criteria as per the below test for mentioned reference standards in this Test Certificate. Complies Standards: SS-EN ISO 1644-2, ISO 14644, SS-EN ISO 14644-1 and IEST-G-CC1002. UL Standard for Safety for Electric Air Cleaners, UL 867, Section 37 Fourth Edition, 21 st Day of December 2007. Electrostatic Air Cleaners, UL 867, Section 40, Fifth Edition, August 4, 2011 revision: August 7, 2018 CSA 22-2 No.187-15, Section 7, February 2015, April 2016 Revision	Features- <i>AIR FOR LIFE's Second generation Mini Sanifier with AFL's proprietary NASA developed AFLPCO technology destroys the germs by sanitizing the air and surfaces in rooms upto 330 sq.ft. areas. It complies with filter-less technology & uses dual advanced ionisation technologies; which releases human friendly negative ions to destroys up to 99.9% of impurities thus killing bacteria, viruses, and eliminating dust, VOC's cigarette smoke and allergens.</i> <i>Easily connects with 12W input power with Input current <9mA Ions Output : >80 million/cm³/s ions Input Voltage : 110~240V/ AC Adaptor Ultraviolet Violet (LED UVC Lamp) wavelength: 253.7nm</i>
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S.No	Parameters	Results	Specifications	Method
1	Visual Inspections	Meet the Criteria EN 980	Sample complies with clear marking and proper instructions for use/installment.	SOP-GSRF-19-2019
2	Physical Dimensions	Meet the Criteria	Width – 109mm Height – 155mm Depth – 393 mm	SOP-GSRF-19-2019
3	Net Weight	Meet the Criteria EN 980	Unit weight – 410gm ± 2 gm	SOP-GSRF-19-2019
4	Safety	Meet the Criteria EN 14971 (2009) EN 60601-1 (1990+A1:1993, A11: 1993, A2: 1995, A13:1996)	Safe & No Chemicals release, Eco Friendly with no toxic chemicals are generated. It stays cool during testing and thus to keep in spaces with children around	SOP-GSRF-19-2019
5	Noise	Meet the	Produces very less intensity noise	SOP-GSRF-19-2019

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	Levels	Criteria	($<20\text{dB}$), with a very silent operation.	
6	Cleaning/Maintenance	Meet the Criteria	Filter-less technology requires no major cleaning. Maintenance requirement is at minimal.	SOP-GSRF-19-2019
7	Odor	Meet the Criteria	Air should be free from Bad Odor/Smell	SOP-GSRF-19-2019
8	Vapor-Phase Volatile Organic Chemicals (VOC's) Estimation (The relative humidity of the air in the chamber was 23%, the temperature was 22°C and the atmospheric pressure was 986mbar)	Meet the Criteria	Less than $0.25\text{mg}/\text{m}^3$	A total of 9 Volatile Organic Chemicals (VOC's) were tested for air processed from AFL Air Sanifier, using Gas Chromatography Mass Spectroscopy (GCMS) with a standard run time of 15 minute. For each test, a mixture of 9 VOCs (as mentioned below) were vaporized in the chamber after the chamber had thermally stabilized at the test condition. After the VOC concentrations reached the steady state initial level, the air cleaner placed inside the chamber were turned on, and the concentration decays of the VOCs were determined by sorbent tube sampling followed by thermal desorption and GC/MS analysis. The Clean Air Delivery Rate (CADR) were calculated for each VOC based on the measured concentration decay, and are reported in the following section along with the measured concentration decay curves. VOC's are listed below:- Chloroform, Ethylbenzene, Toulene, Xylene, Dichlorobenzene, Dichloroethene, Dichloropropene, Dicholoromethane, Hexacholrobutadine
9	Particulate Matter (PM)	Meet the Criteria	More than 99.988% reduction	At the beginning there were about $9.000\text{ particles}/\text{cm}^3$ in air, which is $9.000.000.000/\text{m}^3$. After 20 minutes of processing, the levels has been reduced to less than $0.050\text{ particles}/\text{cm}^3$, which is a reduction of $>99\%$. Particle size 1.0 microns.
10	Fine Suspended Particulates matter ($\text{PM}_{2.5}\text{ g}/\text{m}^3$)	Meet the Criteria	More than 99.998% of elimination ratio	The sample product was placed under the set of $2.9\text{m} \times 1.4\text{m} \times 2.0\text{m}$ of test chamber. The particulates were injected in the chamber and prior to processing, were made sure that the concentration of $\text{PM}_{2.5}$ particles to be mixed and



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				stabilized by the detector. Monitoring off the concentration of PM2.5 particles in the air before turning on the product and after processing (1 hour later). Control Test- The test protocol was as same as the experiment without putting the product in order to understand the performance of the product in suppression effect of PM2.5. Control Test value – 2109 Sample Test value - 05
11	Total Bacterial Count in surrounding air (CFU/m ³)	Meet the Criteria	More than 99.9% Elimination ratio	The sample product was placed under the set of 2.9m x 1.4m x 2.0m of test chamber. Total Bacterial counts were analyzed in air before and after processing (an hour later). Control Test- In order evaluate the performance of product in suppression effect of total bacterial count. Test procedure is as same as the experiment without the sample i) Before processing – 3.75×10^3 ii) After processing – 0.596×10^1
12	Ozone Emission Testing of Household Electrostatic Air Cleaners	Meet the Criteria	The instrument meet the criteria for emittance of ozone not exceeding a concentration of 0.050 ppm. Furthermore, a second sample was not required to be tested, according to UL 867, where as the first sample's maximum emissions were less than 0.030 ppm, which fulfills the exception in the Section 40.1.1.	Ozone concentrations less background level; In units of PPM. Teledyne - Advanced Pollution Instrumentation ozone monitor.



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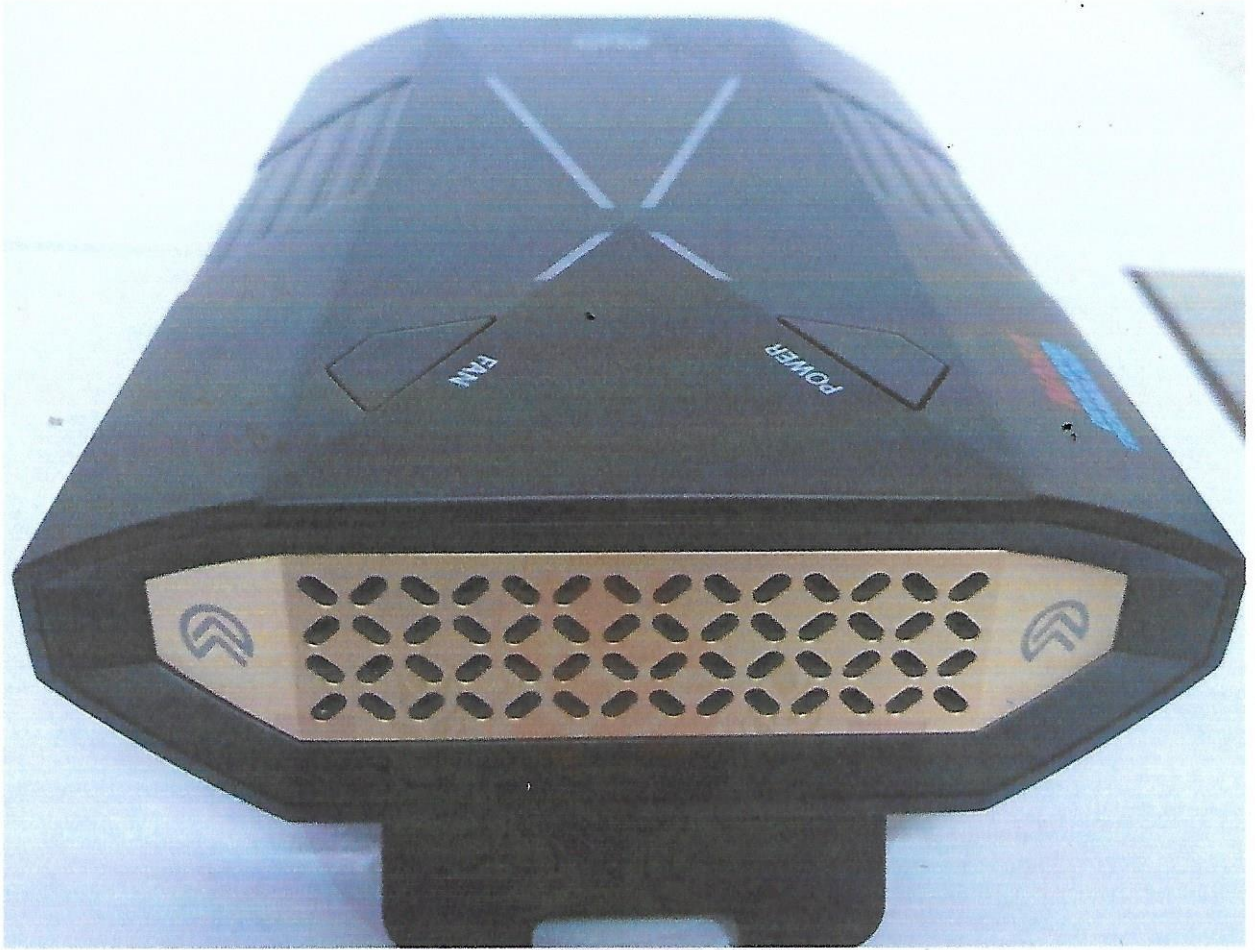


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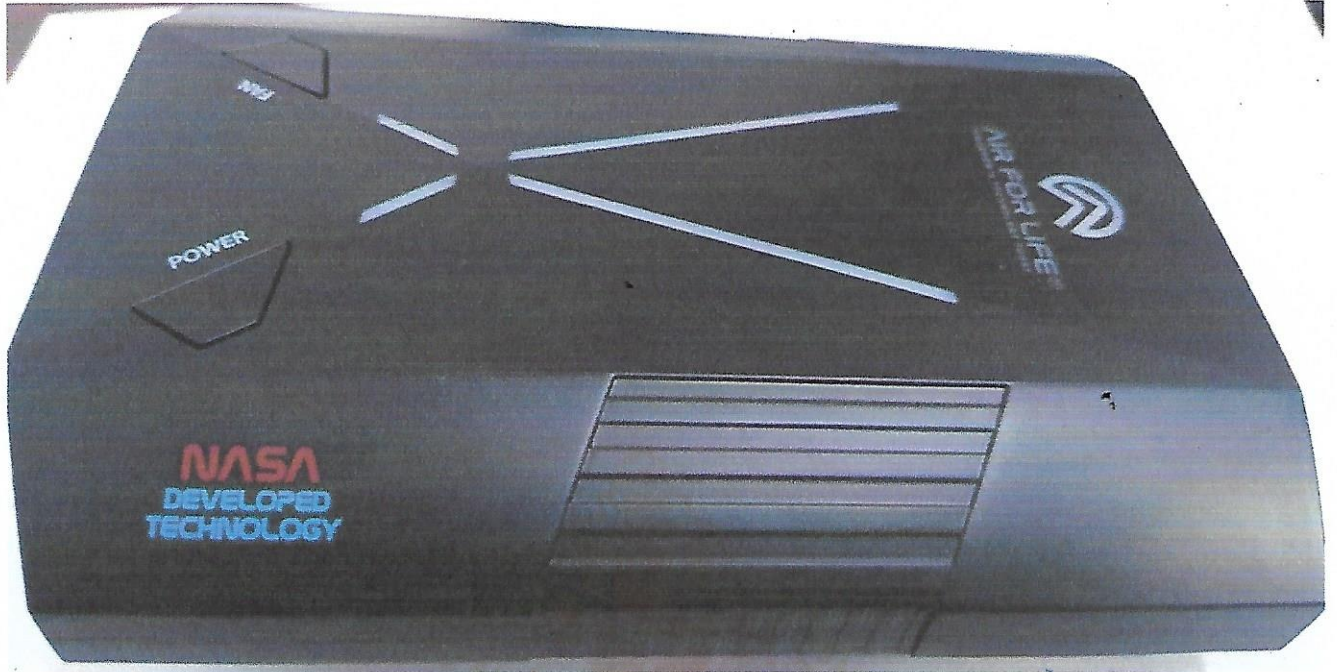
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ANALYST
NOTE:

AUTHORISED SIGNATORY

- Results# shows the performance tested under laboratory conditions for the submitted sample by the client, please note that the test may not reflect the reality of use.
- Laboratory is not responsible for safety of the users in any case, these results do not purport to address all of the safety concerns, if any associated with use of the final product.
- Reference Specimen Immediately after inoculation value is of untreated fabric/sample
- Methods* are mentioned for reference purposes, as laboratory have developed inhouse methods to perform the tests
- (0.5) can be given as ND as per method.
- Contact Time may vary for ± 10 minutes.
- The test is subcontracted to another laboratory.

End of the Report (Total 5 pages)