December 14, 2016

Sherman Oaks, CA 91403-3514

Dear Mr. Pedersen:

We appreciate the opportunity to be of service to you. Please find enclosed one copy of Intertek Report No. 102782445CRT-002 covering the tests performed on your behalf.

Model(s) Tested:
AD3000

If there are any questions regarding the results contained in this report, or any of the other services offered by Intertek, please do not hesitate to contact me.

Sincerely,

Mike Podoliak
Technician
Energy Efficiency Group

Test Report

3933 US ROUTE 11 CORTLAND, NEW YORK 13045

Project No. G102782445 Date: December 14, 2016

REPORT NO. 102782445CRT-002

RENDERED TO:

Sherman Oaks, CA 91403-3514

Report Scope:	This testing is for AHAM AC-1 and EPA Energy Star program for Room Air Cleaners.
Limitation Statement:	The test data and results contained in this report are provided for client information and evaluation.
Authorization:	The tests were authorized signed Intertek Quote No. Qu-00733611 dated October 18, 2016.
Standards Used:	ANSI/AHAM AC-1-2015 entitled, "Association of Home Appliance Manufacturers Method for Measuring Performance of Portable Household Electric Room Air Cleaners" and IEC 62301 Ed. 2 entitled, "Household Electrical Appliances – Measurement of Standby Power"
Sample Description:	One prototype unit model AD3000, was supplied by the client and received on October 20, 2016.
Date of Tests:	December 1-2, 9, 2016

Test Method:

Tests were performed in accordance with ANSI/AHAM AC-1-2015 entitled ""Association of Home Appliance Manufacturers Method for Measuring Performance of Portable Household Electric Room Air Cleaners". This standard method has defined limits of measurability. The practical limits of measurability are: Dust 10 to 400 CADR, Tobacco smoke 10 to 450 CADR and Pollen 25 to 450 CADR. The statistical validity of test results outside of the stated practical limits is questionable and unevaluated. Clean Air Delivery Rates (CADR's) were determined using Tobacco Smoke, AC Fine Test Dust, and Paper Mulberry Pollen.

Additional requirements for energy taken from IEC 62301 Ed. 2 entitled, "Household Electrical Appliances – Measurement of Standby Power".

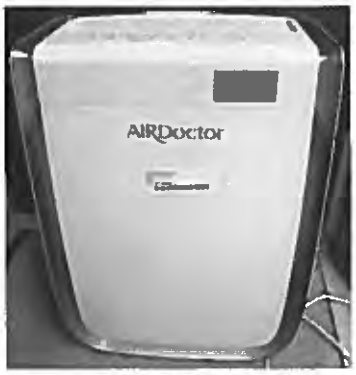
Monitored particle size ranges for the three particulates were as follows:
Smoke - 0.10-1.0 microns; Dust - 0.5-3 microns; Pollen - 5-11 microns.

Test Equipment List:

Equipment Used	Model Number	Intertek Control #	Cal. Due Date	Date Cal. Performed
Airborne particle Spectrometer	HSLAS II	N1203	1/12/17	1/12/16
Aerodynamic Particle Sizer	3321	A-261	10/12/17	10/12/16
Fluidized Bed Aerosol Generator	3400	--		
Temperature/Humidity Sensor	HMW30YB	T680	10/10/17	10/10/16
Power Analyzer	WT210	G065	10/10/17	10/10/16

Device Under Test Description

The device tested for this report was Model AD3000. The following device settings were used during testing: Highest Fan Speed, Ionizer On. This device contains features which require ozone testing for Energy Star Certification.



AD3000

Results of Performance Tests:

Model/Configuration	Test Particulate	Natural Decay Rate	CADR (FT^3/Min)	CADR STDEV.	Power (Watts)
AD3000, Unit 1, 1610201103-001, Highest Speed, Ionizer on, 120 Volts, 60 Hertz	**Smoke**	**0.00248**	**326.2**	**2.5**	**114.7**
	Dust	**0.00477**	**343.2**	**2.9**	**116.8**
	Pollen	**0.09724**	**373.2**	**34.5**	**116.3**

Conclusion:

The results reported are within the limits of measurability of the ANSI/AHAM AC-1-2015 "Association of Home Appliance Manufacturers Method for Measuring Performance of Portable Household Electric Room Air Cleaners" Test Method.

Energy Star CADR Testing:

Test Sample Information

Manufacturer/ Organization Name	Model Number	Serial Number	Nameplate Voltage	Nameplate Frequency Hz	Nameplate Watts
Envion	AD3000	NA	NA	NA	NA

Test Criteria

Test Voltage	Test Frequency	Ambient Test Temperature °F	Ambient Humidity %RH
120v +/- 1	60Hz +/- 1Hz	70°F +/- 5°F	40% +/- 5%

Test Results

Test Sample	Test Voltage	Test Frequency	Ambient Test Temperature °F	Ambient Humidity %RH	Dust CADR	Watts	Dust CADR/Watt
1610201103-001	119.7	60	68	40	343.2	116.8	2.9

Conclusion:
Qualifying air cleaners must have a minimum 50 CADR (Dust) and CADR/watts must be ≥ 2 (Dust). These results illustrate that this sample does meet the Energy Star Program performance requirements.

Stand By Power Testing:

Test Criteria – IEC 62301

Test Voltage	Test Frequency	Total Harmonic Distortion of the Electricity Supply System	Ambient Test Temperature °F
115v +/- 1%	60Hz +/- 1%	≤ 2%	73.4°F +/- 9°F

Test Results

Test Sample	Test Voltage	Test Frequency	Total Harmonic Distortion of the Electricity Supply System	Ambient Test Temperature °F	Standby Power Watts
1610201103 -001	115.1	60	0.22%	67.1	0.5

Conclusion:

Minimum Standby Power Requirement is < 2 Watts. The results illustrated in the Standby Power Data shows that this unit meets the criteria.

Report Reviewed By:

Brian Bielawa
Engineer
Energy Efficiency
Group

Report Completed By:

Michael T. Podoliak
Tech 1
Energy Efficiency

May 11, 2017

EN1822 European HEPA Test
LMS Technologies, Inc.

Test Type :	*EN1822*	***Test Requested By:***	*Ideal living management*
Test Number:	*T051117A*	***Filter Mfgr:***	
Flow Rate/Velocity:	*60 fpm, 30 cm/s*	***Filter/Media ID # :***	*Filter #2*
Test Aerosol:	*KCl, Neutralized*	***Filter/Media Size:***	*13.5" x 16.25" x 1.5"*
ΔP ("H2O):	*0.0850", 21.3 Pascals*		

Size Rang(µm)	***Initial*** *Fractional Efficiency(%)*
0.0030	100.000