January 26, 2005

Mr. Larry Sunshine
Bentax USA
418 Meadow Street
Fairfield CT 06824

Dear Mr. Sunshine:

We appreciate the opportunity to be of service to you. Please find enclosed one bound copy of Intertek Report No. 3069544-002 covering the tests performed on your behalf.

Model(s) Tested:
Bentax In-Duct Unit

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,

Terence O'Beirne
Senior Project Engineer
Appliance Group

Enclosure

TOB/pc

REPORT
INTERTEK, ETL SEMKO

SINCE 1896

3933 US ROUTE 11 CORTLAND, NEW YORK 13045

Project No. 3069544 Date: January 26, 2005

REPORT NO.

3069544-002

RENDERED TO:

Bentax USA
418 Meadow Street
Fairfield, CT 06824

Report Scope:	Performance testing of an in-duct air purification system
Limitation Statement:	The test data and results contained in this report are provided for client information and evaluation. No conclusions are drawn by Intertek.
Authorization:	The tests were authorized by signed Intertek Quote No. 16475199 dated December 13, 2004.
Standards Used:	Modified ANSI/AHAM AC-1-2002 entitled, "American National Standard Method for Measuring Performance of Portable Household Electric Cord-Connected Room Air Cleaners"
Sample Description:	One Bentax In-Duct air cleaner unit was brought by the client to the laboratory on December 13, 2004.
Date of Tests:	December 13, 2004

Test Method:

Objective

To evaluate the effectiveness of Bentax USA's air purification equipment by comparing its reduction of airborne particles to a control's natural decay in a typical indoor environment. This environment has been designed to be similar to a typical consumer application such as homes, offices, etc. The key to this experiment is to eliminate any outside influences not consistent with a typical commercial or residential environment.

Testing Method

Test facility

The tests were conducted in a closed room 10.5 x 12 x 8 ft equipped with an exhaust system to clean the room between tests. The room also had a ceiling fan used primarily for evenly spreading the contaminants injected into the room for the most accurate measurements.

In order to test this specific equipment, a duct system was utilized to supply air to the room in order to model, as close as possible, a real indoor environment. The supply air was taken from outside the test chamber. The Bentax equipment was installed in this duct system which supplied a measured amount of ionized air into the room.

Dissemination of dust particles and mold spores into the closed room

Roughly One (1) gram of each contaminant, dust particles and mold spores (Aspergillus Fumigatus), was introduced into the test room by utilizing an injection system. An initial concentration of 0.789 parts/cc of mold and 292.2 parts/cc of dust was achieved prior to the start of the test. The contaminant was spread evenly in the closed room by the ceiling fan mounted in the middle of the room's ceiling. The fan was on as the contaminant was introduced into the room and was turned off after 60 seconds. Thereafter, the decay of the particles/spores was measured at one (1) minute intervals until the test was completed. The particle/spore count was measured using a TSI Aerodynamic Particle Sizer Model 3321.

Temperature and humidity

The temperature was held at a level between 65°F and 75°F, and the humidity was held at a level between 35 and 45%. The temperature was measured by a Vaisala Temperature/Humidity Sensor Model HMW30YB.

Data logging

The particle data were recorded continuously by an automated computer data acquisition system directly connected to the TSI Particle Sizer. Data was logged every minute during the test period using a proprietary software program, the temperature and humidity was averaged over the period.

Ion count

The ionization level of both positive and negative ions was controlled by the tested equipment and held at an average of 1,000 – 1,400 ions/cm^3. The measurements were performed by Ion-meter IM 5005, Umwelt-Technic AG, Germany (calibration unknown).

Testing

The steps of the actual testing procedure were as follows:

a) The room was cleaned by the heavy duty exhaust system that re-circulates the air until the contamination level of airborne particles in the room is below 0.03 part/cc.
b) The heavy duty exhaust system was turned off and sealed.
c) The air contaminants, dust particles or mold spores, were introduced by an injection system and then spread evenly in the room for 60 seconds using the ceiling mounted fan.
d) Measurements of the decay of the particles/spores in the air were taken and recorded by the data-logger.

These measurements were conducted first on the controlled natural decay of the particles/spores. After that was completed, steps (a) through (d) as described above were repeated with the client's equipment turned on which maintained a consistent ion level in the room. Repeating the test provides a comparison of the equipment to the control's test case.

Results

The dust particles decayed naturally at a rate of 12.6% during the fifteen (15) minute test period. The Bentax equipment's decay rate of the dust particles was 85.8% during this same time period. See chart 1 below.

The mold spores decayed naturally at a rate of 67.1% during the first nine (9) minutes of the test period. The Bentax equipment's decay rate of the mold spores was 91.1% during the first nine (9) minutes of the test period. The duration of this test period was shortened because after nine minutes, the mold spore count during the Bentax equipment's decay rate was below the capabilities of the testing facility's measuring equipment. See chart 2 below.

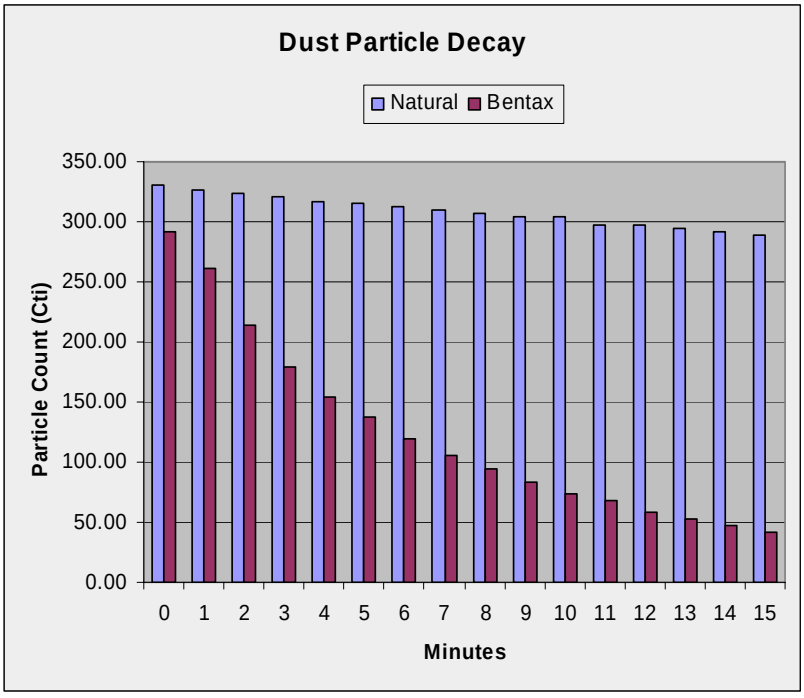


Chart 1

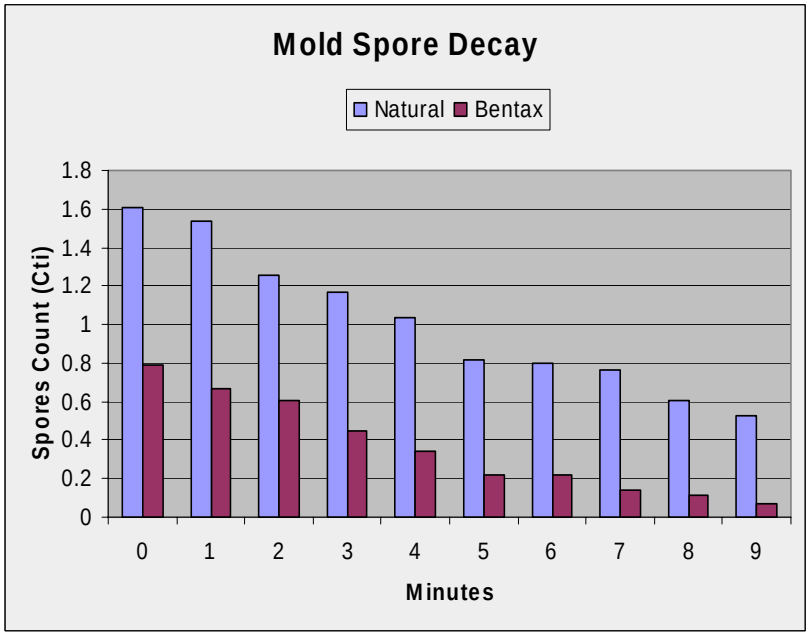


Chart 2

The raw data from the test results can be found in the attached appendices.

Test Equipment List:

Equipment Used	Model Number	Intertek Control #	Cal. Due Date
Laser Aerosol Spectrometer	HSLAS 0.065	N829	12/05
Aerodynamic Particle Sizer	3321	A-261	01/05
Fluidized Bed Aerosol Generator	340000	--	--
Sola Voltage regulator (120 Vac)	MCR	V245	06/05
Temperature/Humidity Sensor	HMW30YB	T680	11/05
Power Transducer	AGH-002B	E399	04/05

Results of Performance Tests:

Model/Configuration	Test Particulate	Natural Decay Rate	CADR	CADR STDEV.
Bentax In-Duct unit	**Dust**	**0.00424**	**125.0**	**2.5**
	Mold	**0.11245**	**158.4**	**14.6**

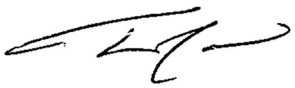
Summary

Testing of the Bentax unit was designed to simulate real world use. A test chamber duplicating typical household conditions was modified to introduce outside air processed by the Bentax unit as might be seen in a standard installation.

The above results were achieved under the following conditions:

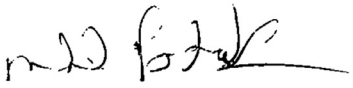
1. There was no requirement for any of the client's equipment to be in the room during the testing; and
2. The client's equipment does not utilize any type of filtering system.

Report Reviewed By:



Terence J. O'Beirne
Senior Project Engineer
Appliance Group

Tested By:



Michael Podoliak
Technician
Appliance Group

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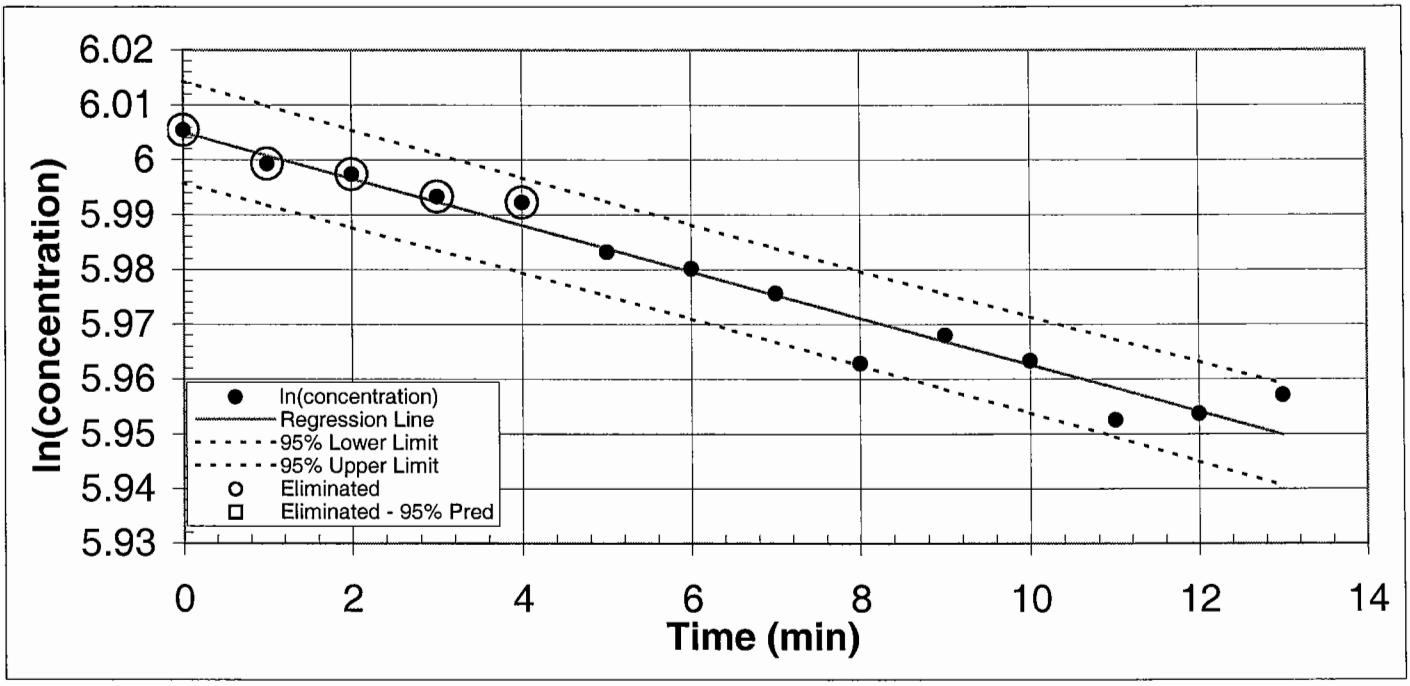
ITS Intertek Testing Services

AC-1 Air Cleaner Testing Facility

Order Number	3069544
Date	12/13/04 16:04:54
Report Number	1
Test Number	0

Dust Natural



TIME(MIN)	Cti	ln(Cti)	TIME(MIN)	Cti	LN(Cti)
0.00	405.64	6.01	11.00	384.73	5.95
1.00	403.16	6.00	12.00	385.17	5.95
2.00	402.37	6.00	13.00	386.49	5.96
3.00	400.75	5.99			
4.00	400.33	5.99			
5.00	396.72	5.98			
6.00	395.51	5.98			
7.00	393.74	5.98			
8.00	388.72	5.96			
9.00	390.73	5.97			
10.00	388.90	5.96			

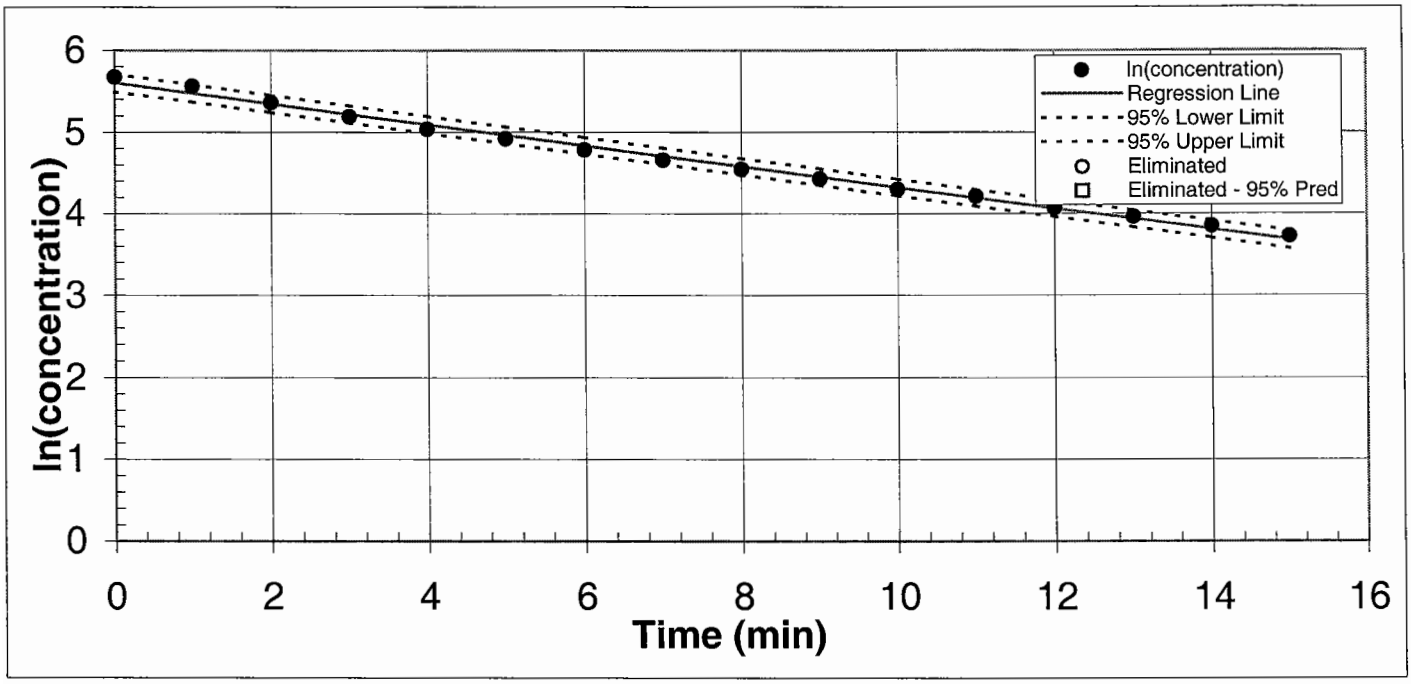
Quantity	*Measured*	*Lower Limit*	*Upper Limit*	*Acceptable*
Decay Constant	0.00424	-	-	
Slope Standard Deviation (cfm)	0.26	-	1.00	YES
Background at Injection (part/cc)	0.006	-	0.03	YES
Initial Concentration (part/cc)	405.6	200	400	NO
Data points used	14	9	-	YES
Average Temperature (°F)	70	65	75	YES
Average Humidity (%RH)	40	35	45	YES
Average Input Voltage (volts)	120.6			
Average Test Unit Power (watts)	0.4			
Coefficient of Determination	0.958			

ITS Intertek Testing Services

AC-1 Air Cleaner Testing Facility

Order Number	3069544
Date	12/13/04 20:42:25
Report Number	1
Test Number	0

Dust Measured



TIME(MIN)	Cti	ln(Cti)	TIME(MIN)	Cti	LN(Cti)
0.00	292.15	5.68	11.00	67.49	4.21
1.00	260.51	5.56	12.00	58.39	4.07
2.00	213.21	5.36	13.00	52.65	3.96
3.00	179.52	5.19	14.00	46.85	3.85
4.00	154.36	5.04	15.00	41.37	3.72
5.00	136.81	4.92			
6.00	119.71	4.79			
7.00	105.42	4.66			
8.00	94.15	4.54			
9.00	83.80	4.43			
10.00	73.65	4.30			

Quantity	*Measured*	*Lower Limit*	*Upper Limit*	*Acceptable*
Decay Constant	0.12822	-	-	
Slope Standard Deviation (cfm)	2.52	-	12.92	YES
Background at Injection (part/cc)	0.024	-	0.03	YES
Initial Concentration (part/cc)	292.2	200	400	YES
Data points used	16	9	-	YES
Average Temperature (°F)	69	65	75	YES
Average Humidity (%RH)	39	35	45	YES
Average Input Voltage (volts)	120.6			
Average Test Unit Power (watts)	0.4			
Coefficient of Determination	0.995			

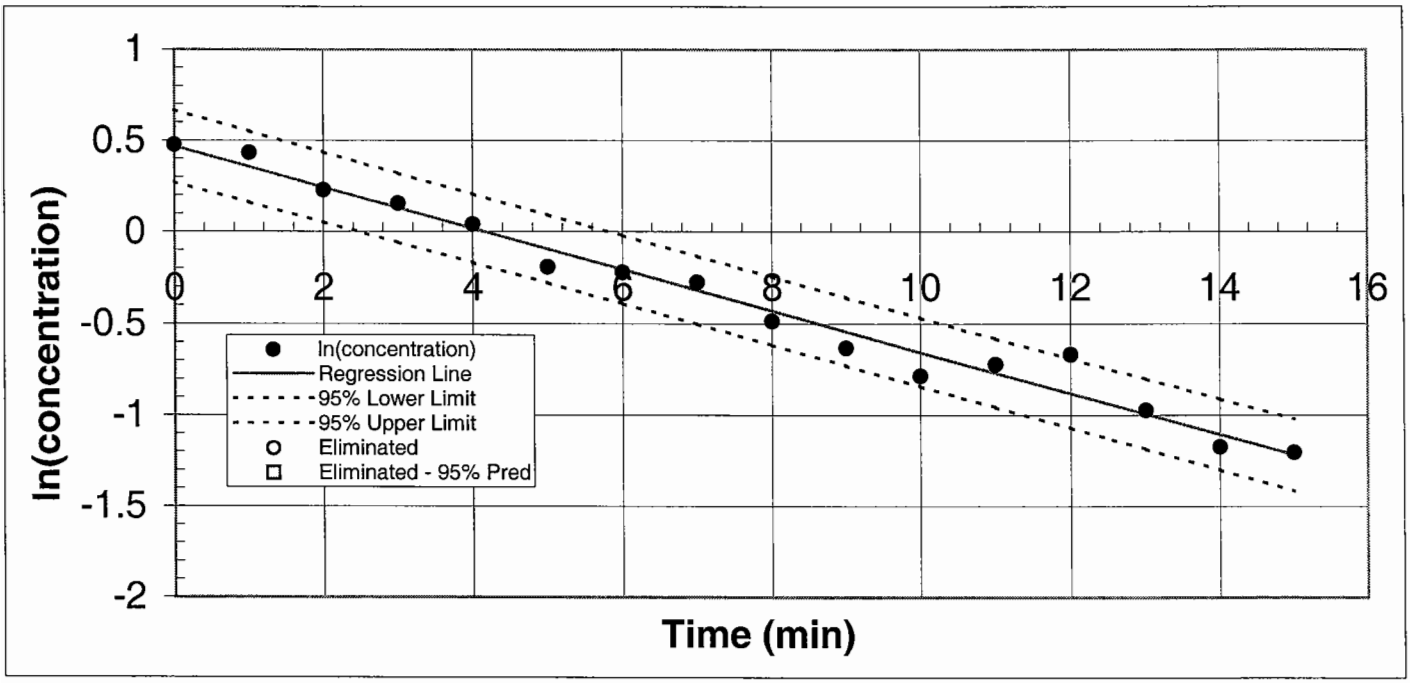
CADR	**124.96**			
CADR Standard Deviation	2.5	-	12.5	YES

ITS Intertek Testing Services

AC-1 Air Cleaner Testing Facility

Order Number	3069544
Date	12/13/04 21:15:48
Report Number	1
Test Number	0

Mold Natural



TIME(MIN)	Cti	ln(Cti)	TIME(MIN)	Cti	LN(Cti)
0.00	1.61	0.48	11.00	0.49	-0.72
1.00	1.54	0.43	12.00	0.51	-0.67
2.00	1.26	0.23	13.00	0.38	-0.97
3.00	1.17	0.15	14.00	0.31	-1.17
4.00	1.04	0.04	15.00	0.30	-1.20
5.00	0.82	-0.19			
6.00	0.80	-0.22			
7.00	0.76	-0.28			
8.00	0.61	-0.49			
9.00	0.53	-0.63			
10.00	0.46	-0.79			

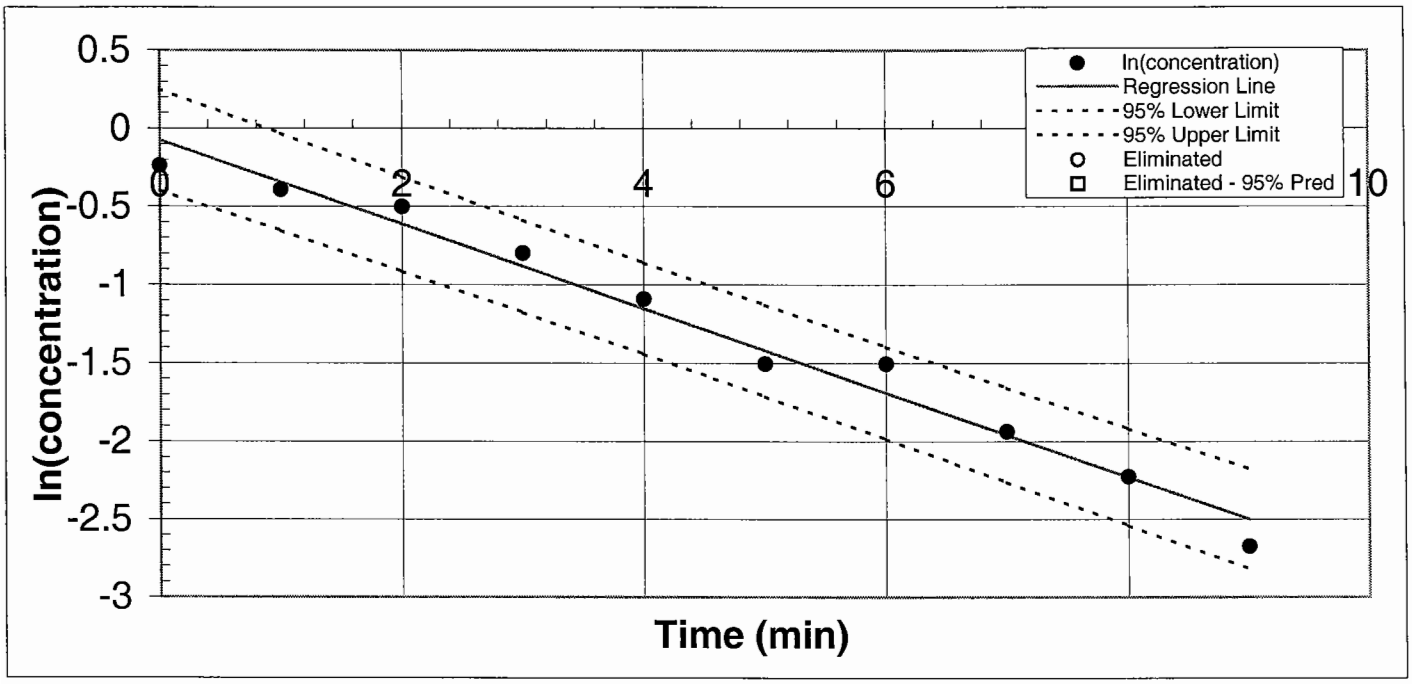
Quantity	*Measured*	*Lower Limit*	*Upper Limit*	*Acceptable*
Decay Constant	0.11245	0.095	0.143	YES
Slope Standard Deviation (cfm)	4.62	-	11.33	YES
Background at Injection (part/cc)	0	-	0.03	YES
Initial Concentration (part/cc)	1.611	4	9	NO
Data points used	16	5	-	YES
Average Temperature (°F)	68	65	75	YES
Average Humidity (%RH)	41	35	45	YES
Average Input Voltage (volts)	120.6			
Average Test Unit Power (watts)	0.4			
Coefficient of Determination	0.977			

ITS Intertek Testing Services

AC-1 Air Cleaner Testing Facility

Order Number	3069544
Date	12/13/04 21:38:42
Report Number	1
Test Number	0

Mold Measured



TIME(MIN)	Cti	ln(Cti)	TIME(MIN)	Cti	LN(Cti)
0.00	0.79	-0.24			
1.00	0.67	-0.39			
2.00	0.61	-0.50			
3.00	0.45	-0.80			
4.00	0.34	-1.09			
5.00	0.22	-1.51			
6.00	0.22	-1.51			
7.00	0.14	-1.94			
8.00	0.11	-2.23			
9.00	0.07	-2.67			

Quantity	*Measured*	*Lower Limit*	*Upper Limit*	*Acceptable*
Decay Constant	0.26956	-	-	
Slope Standard Deviation (cfm)	13.87	-	27.17	YES
Background at Injection (part/cc)	0.018	-	0.03	YES
Initial Concentration (part/cc)	0.789	4	9	NO
Data points used	10	5	-	YES
Average Temperature (°F)	70	65	75	YES
Average Humidity (%RH)	40	35	45	YES
Average Input Voltage (volts)	120.6			
Average Test Unit Power (watts)	0.3			
Coefficient of Determination	0.980			

CADR	**158.37**			
CADR Standard Deviation	14.6	-	31.7	YES