
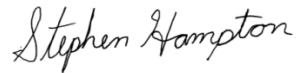


Number of pages in this package ~~230~~ [including additional pages 3]

TEST LOCATION:			
<input type="checkbox"/> UL or Affiliate	<input type="checkbox"/> WTDP	<input type="checkbox"/> CTDP	<input checked="" type="checkbox"/> OTHER
Company Name	Air Quality Sciences, Inc		
Address	2211 Newmarket Parkway, Suite 106 Marietta, GA 30067		

CLIENT INFORMATION	
Company Name	Sharp Electronics Corp
Address	Sharp Plaza Mahwah, NJ 07430 United States

AUDIT INFORMATION:			
<input checked="" type="checkbox"/> Description of Tests	Per Standard No.	UL 867	Edition 4th
<input type="checkbox"/> Tests Conducted by +	<u>Hien Mai</u>		
	<u>Stephen Hampton</u>		
	Printed Name	Signature	
<input type="checkbox"/> UL Staff witnessing testing (WTDP only)			
<input type="checkbox"/> Authorized Signatory (CTDP, TPTDP, TCP)	Printed Name	Signature, and include date for CTDP, TPTDP, TCP	
Reviewed and accepted by qualified Project Handler	<u>Tim Lassila</u>	<u>Tim Lassila</u> <u>2010-05-06</u>	
	Printed Name	Signature	

TESTS TO BE CONDUCTED:			
Test No.	Done	Test Name	<input type="checkbox"/> Comments/Parameters <input type="checkbox"/> Tests Conducted by ++
1	<u>x</u>	PEAK OZONE LOCATION DETERMINATION AND OZONE TEST	HIGH FAN SPEED WITH ALL FILTERS IN PLACE; HUMIDITY MODE OFF
2	<u>x</u>	PEAK OZONE LOCATION DETERMINATION AND OZONE TEST	LOW FAN SPEED WITH ALL FILTERS IN PLACE; HUMIDITY MODE OFF
3	<u>x</u>	PEAK OZONE LOCATION DETERMINATION AND OZONE TEST	WITH ALL FILTERS REMOVED at the fan speed that generated highest ozone from the testing with filters in place; HUMIDITY MODE OFF

[ ] Tests conducted in accordance with \_\_\_\_\_ that were considered representative of the same tests required by \_\_\_\_\_ are identified with dual paragraph/clause references in the title of each test on the individual datasheets. Where test names differ or additional test were conducted in accordance with \_\_\_\_\_, they are identified by the standard and paragraph/clause information enclosed by parenthesis.

Test Equipment- See "TEST EQUIPMENT INFORMATION"  
Samples - See "TEST SAMPLE IDENTIFICATION"

**Instructions -**

+ - When all tests are conducted by one person, printed name and signature can be inserted here instead of including printed name and signature on each page containing data. Must indicate number of pages in the data package.  
++ - When test conducted by more than one person, printed name and signature of person conducting the test can be inserted next to the test name instead of including printed name and signature on each page containing data. Must indicate number of pages in the data package.

**Special Instructions/Features -**

**1 - Five filters:**

- a) True HEPA filter (white)
- b) Washable Deodorizing filter (black)
- c) Pre-filter
- d) Humidifying Filter
- e) Sensor filter

We will be testing with all five filters removed.

**2 - Air outlet is on top**

**3 - Three fan speeds**

- a) low
- b) Medium
- c) high

We will be testing in high and low.

**4 - Plasmacluster (ion/plasma) - test in the CLEAN AIR ON position**

**5 - Humidity function - We will not be using this mode and not be filling the air cleaner with water. CLEAN AIR & HUMIDITY OFF.**

**6 - Quick Clean Model - Not applicable for this testing. Please keep off.**

**CONTACT: Tim Lassila - UL Camas, WA - 360-883-1551  
Timothy.lassila@us.ul.com**

**Unless specified otherwise in the individual Methods, the tests shall be conducted under the following ambient conditions. Confirmation of these conditions shall be recorded at the time the test is conducted.**

Ambient		Relative		Barometric	
Temperature, C	<u>25±2</u>	Humidity, %	<u>50±5</u>	Pressure, mBar	<u>N/A</u>

Tested by: Hien Mai  
 Printed Name



Signature

Test Dates 04/22/2010  
-04/25/2010

TEST EQUIPMENT INFORMATION


Inst. ID No.	Instrument Type	Test Number +, Test Title or Conditioning	Function /Range	Last Cal. Date	Next Cal. Date
<u>1</u>	<u>Ozone monitor</u>	<u>1,2,&amp; 3 (80023-011AA, -012AA,&amp;-013AA) Peak ozone, performance, and ozone testing</u>	<u>0-400 ppb</u>	<u>04/10</u>	<u>07/10</u>
<u>2</u>	<u>CO monitor</u>	<u>1,2,&amp; 3 (80023-011AA,-012AA,&amp;-013AA) Performance validation</u>	<u>0-1000 ppm</u>	<u>04/10</u>	<u>10/10</u>
<u>3</u>	<u>Anemometer Air Flow Meter</u>	<u>1,2,&amp; 3 (80023-011AA, -012AA,&amp;-013AA) Peak ozone and performance validation</u>	<u>0-30 m/s</u>	<u>01/10</u>	<u>01/11</u>
<u>4</u>	<u>Manometer</u>	<u>1,2,&amp; 3 (80023-011AA, -012AA,&amp; -013AA) Ozone testing</u>	<u>0-1300 mBar</u>	<u>11/09</u>	<u>11/10</u>

+ - If Test Number is used, the Test Number must be identified on the data sheet pages or on the Data Sheet Package cover page.

The following additional information is required when using client's or rented equipment, or when a UL ID Number for an instrument number is not used. The Inst. ID No. below corresponds to the Inst. ID No. above.

Inst. ID No.	Make/Model/Serial Number/Asset No.
<u>1</u>	<u>Thermo Electron Corp./ TEI 49i/609315320</u>
<u>2</u>	<u>Teledyne Instruments/ 300EU/112</u>
<u>3</u>	<u>TSI Velocicalc/8345/02120235</u>
<u>4</u>	<u>Meriam Absolute Manometer/350/938880-P1</u>
<u>5</u>	<u>Environmental Chamber/LLC</u>
<u>6</u>	<u>Ruler SIN 500510258 AND 410610250</u>
<u>7</u>	<u>Atomic Clock SIN 80375418</u>
<u>8</u>	<u>30" Aluminum Table</u>
<u>9</u>	<u>Ring Stand with Ring</u>

[ ] Test equipment information is recorded on UL's Laboratory Project Management (LPM) database. (This statement may be selected only if datasheets are completed at a UL facility)

Tested by: Hien Mai  Test Dates 04/22/2010  
-04/25/2010  
 Printed Name Signature

TEST SAMPLE IDENTIFICATION:


The table below is provided to provide correlation of sample numbers to specific product related information. Refer to this table when a test identifies a test sample by "Sample No." only.

Sample Card No.	Date Received	[ ] Test No.	Sample No.	Manufacturer, Product Identification and Ratings
784125 <u>AQS Product:</u> <u>80023-010AA</u>	2010-03-24 <u>AQS Rec'd</u> <u>Date:</u> <u>04/15/2010</u>	<u>Test:</u> <u>80023-</u> <u>011AA.</u> <u>012AA.</u> <u>013AA</u>	<u>1</u>	Ion Generators - Sharp KC-850U 120V, 60 hz. 0.8A 50W
784125 <u>AQS Product:</u> <u>80023-010BA</u>	2010-03-24 <u>AQS Rec'd</u> <u>Date:</u> <u>04/15/2010</u>	<u>N/A</u>	<u>2</u>	Ion Generators - Sharp KC-850U 120V, 60 hz. 0.8A 50W

+ - If Test Number is used, the Test Number or Numbers the sample was used in must be identified on the data sheet pages or on the Data Sheet Package cover page.

[ ] Sampling Procedure -

Only those products bearing the UL Mark should be considered as being covered by UL.

Tested by: Hien Mai  Test Dates 04/22/2010  
Printed Name Signature -04/25/2010

PEAK OZONE LOCATION DETERMINATION AND OZONE TEST UL 867, Sections 37 AND 37A

METHOD - PART A  
 PRODUCT RUN-IN

The appliance was placed in a room with a maintained temperature of 25±5°C and filtered air. The appliance was operated under maximum output conduction as described in the following table:

Ozone Output ( <b>CLEAN AIR ON</b> )	on
Fan Speed	high
<del>UV Lamp</del>	N/a
<del>Special Ionizer</del>	N/a

This test was repeated on a second sample.

METHOD - PART B  
 PEAK OZONE LOCATION DETERMINATION

While in a well-heated condition, the appliance was placed in an open space with a minimum height dimension of 8 ft. and a minimum side dimension of 10 ft. The appliance was placed in the center of the room and

- 30 inches above the floor.
- on the floor.
- attached to the ceiling or to the underside of a horizontal non-reactive surface at a minimum height of 30 inches.
- attached to a non-reactive vertical surface at a minimum height of 30 inches.

The periphery of the airstream in the plane parallel to and 2 inches from the surface of the air cleaner discharge grille was established and total area was recorded.

For bounded airstreams measuring less than 16 in<sup>2</sup>, five ozone measurements were taken. One in each quadrant of the airstream and one in the center of the airstream.

For bounded airstreams measuring 16 in<sup>2</sup> or larger, ozone measurements were taken in a 4 x4 in. grid pattern up to 10 measurements. For greater than 10 grid measurements, 10 measurements were taken evenly spaced across the airstream. One additional measurement was taken in the center of the airstream.

For ozone generating ionizing sources, one additional measurement was taken in the airstream directly in line with the source.

Only those products bearing the UL Mark should be considered as being covered by UL.

Tested by: Hien Mai  
Printed Name



Signature

Test 04/22/2010  
Dates -04/25/2010

PEAK OZONE LOCATION DETERMINATION AND OZONE TEST UL 867, Sections 37 AND  
(CONT'D) 37A

Ozone measurements were taken at the locations described above with the appliance operating

on both the highest and lowest fan speed ~~and at each ozone/high voltage output level setting.~~

on both the highest and lowest fan speed and at the minimum, middle, and maximum ozone/high voltage output level setting.

and with independently activated  ionizers  ~~UV lamps~~ operating.

Ozone measurements were monitored for a period of 2 minutes, and recorded for use during Part D - Ozone Test.

This test was repeated on a second sample.

METHOD - PART C  
CHAMBER HALF-LIFE


Prior to testing of an appliance model, the chamber ozone half-life was determined using the theoretical air exchange rate, 1.18 1/h, and an initial steady state ozone concentration of 0.100 to 0.200 ppm.

\* Note #1 to Technician - If the measured chamber half-life is not equal to 31 ±2 minutes, the air exchange rate shall be adjusted and the ozone half-life measurement shall be reconducted until this value is obtained.\*

The air exchange rate was adjusted and the chamber half-life value was again determined using an initial steady state ozone concentration of 0.100 to 0.200 ppm.

METHOD - PART D  
OZONE TEST

The appliance was placed in a chamber having a volume of 950-1100 cubic feet (26.9-31.1 m<sup>3</sup>) with a minimum side dimension of 8 feet (2.4 m) and a maximum height dimension of 10 feet (3.0 m) without openings. The test chamber walls, ceiling, and floor were surface treated stainless steel or other nonporous, non-reactive material.

Tested by: Hien Mai  Test 04/22/2010  
Printed Name Signature Dates -04/25/2010

PEAK OZONE LOCATION DETERMINATION AND OZONE TEST UL 867, Sections 37 AND 37A  
(CONT'D)

During the test, the test room was maintained at a temperature of 25±2°C (77±4°F) and a relative humidity of 50±5 percent. Prior to the start of this test, the ozone background level was measured with the product off. The measurement was subtracted from the maximum measurement during the test.

**\*Note #2 to Technician - If the measured ozone background level is greater than 0.005 ppm, the chamber must be purged and the ozone background level measured again prior to inception of the test.\***


- The appliance was placed in the center of the test chamber and
- 30 inches above the floor.
  - on the floor.
  - attached to the ceiling or to the underside of a horizontal non-reactive surface at a minimum height of 30 inches.
  - attached to a non-reactive vertical surface at a minimum height of 30 inches.

The ozone monitor sampling tube was located 2 inches (50mm) from the air outlet of the product and was pointed directly into the air stream. Ozone or high voltage output level/measurement location was as/where ozone emissions were determined highest during Part B - Peak Ozone Emissions Determination.

The emission of ozone was monitored for 24 hours on both the high and low fan speeds to determine the concentration.

**\* Note #3 to Technician - The monitoring of ozone can be stopped after 8 hours if the measured chamber ozone concentration has reached steady-state. For the purpose of this measurement steady state is defined as:**

- a) Negative or zero slope for the plot of chamber ozone concentration vs. time ([C(t)] vs. t), during hour 7 to 8 of monitoring, and fluctuation not greater than + 10 percent or 2 ppb around the mean, whichever is greater during the same time period,
- b) Positive slope for the plot of chamber ozone concentration vs. time, during hour 7 to 8 of monitoring, mean ozone concentration less than 20 ppb, and fluctuation not greater than + 2 ppb around the mean, during the same time period, or
- c) Positive slope for the plot of chamber ozone concentration vs. time, during hour 7 to 8 of monitoring, mean ozone concentration greater than or equal to 20 ppb and less than 38 ppb, a normalized slope for hour 7-8 less than or equal to 0.0153 (ppb/hr)/mean ppb, and fluctuation not greater than + 10% around the mean, during the same time period.\*

Tested by: Hien Mai  Test 04/22/2010  
Printed Name Signature Dates -04/25/2010

PEAK OZONE LOCATION DETERMINATION AND OZONE TEST UL 867, Sections 37 AND  
(CONT'D) 37A


The test was repeated with [~~the fan not functioning~~] [the particle filters removed] **at the fan speed that generated highest ozone from the testing with filters** [~~ozone monitoring circuitry bypassed~~].

SEE PAGE 2 FOR FILTERS TO BE REMOVED.

The test was repeated on a second sample.

\* Note #4 to Technician - Testing of a second sample is not required if the maximum measured ozone concentration of the first sample measured less than 0.030 parts per million.\*



Tested by: Hien Mai  Test Dates 04/22/2010  
-04/25/2010  
 Printed Name Signature

PEAK OZONE LOCATION DETERMINATION AND OZONE TEST UL 867, Sections 37 AND 37A  
 (CONT'D)

RESULTS PART A  
 PRODUCT RUN-IN

- Sample 1 completed the 48 hour run-in period.
- Sample 2 completed the 48 hour run-in period.

RESULTS - PART B  
 PEAK OZONE LOCATION DETERMINATION

Sample 1: 80023-010AA


Fan Speed	Measured Ozone, ppm					
	High			Low		
<del>Ozone/High Voltage Output Level</del>	on	on	Min	on	on	
Air Filters in place	yes	no		yes	no	
Measurement Location 1	0.001	0.001		0.002		
Measurement Location 2	0.002	0.002		0.002		
Measurement Location 3						
Measurement Location 4						
Measurement Location 5						
Measurement Location 6						
Measurement Location 7						
Measurement Location 8						
Measurement Location 9						
Measurement Location 10						
Center of the Airstream	0.002	0.002		0.0024		
Measurement in Line with the Source						

The location of the peak ozone measurement was Center of Airstream, Low with filter, see Illustration \_\_\_ for visible indication of location.

TECH Note - Please see boost function instruction under special instructions and also as indicated on pg. 2 WITH ALL FILTERS REMOVED at the fan speed that generated highest ozone from the testing with filters in place. So it is only necessary to record data for either high or low with filters removed.

TL on 2010-05-06 - testing on sample 2 was determined not needed based on testing done on Sample 1.

Only those products bearing the UL Mark should be considered as being covered by UL.

Tested by: Hien Mai  Test 04/22/2010  
 Printed Name Signature Dates -04/25/2010

PEAK OZONE LOCATION DETERMINATION AND OZONE TEST UL 867, Sections 37 AND 37A  
 (CONT'D)


Sample 2: 80023-010AB NOT TESTED

Fan Speed	Measured Ozone, ppm					
	High			Low		
Ozone/ <del>High Voltage Output Level</del>	on	on	Min	on	on	
Air Filters in place	yes	no		yes	no	
Measurement Location 1						
Measurement Location 2						
Measurement Location 3						
Measurement Location 4						
Measurement Location 5						
Measurement Location 6						
Measurement Location 7						
Measurement Location 8						
Measurement Location 9						
Measurement Location 10						
Center of the Airstream						
Measurement in Line with the Source						

The location of the peak ozone measurement was \_\_\_\_\_, see Illustration \_\_\_ for visible indication of location.

TECH Note - Please see boost function instruction under special instructions and also as indicated on pg. 2 WITH ALL FILTERS REMOVED at the fan speed that generated highest ozone from the testing with filters in place. So it is only necessary to record data for either high or low with filters removed

Only those products bearing the UL Mark should be considered as being covered by UL.

Tested by: Hien Mai  Test 04/22/2010  
Printed Name Signature Dates -04/25/2010

PEAK OZONE LOCATION DETERMINATION AND OZONE TEST UL 867, Sections 37 AND  
(CONT'D) 37A

RESULTS - PART C  
CHAMBER HALF-LIFE

Theoretical Air Exchange Rate, 1/h	<u>1.18</u>
------------------------------------	-------------

Using the theoretical air exchange rate above the measured chamber ozone half-life was 0.506 hour (30.3 minutes) h.


- The measured chamber ozone half-life was 31±2 minutes.
- The measured chamber ozone half-life was not 31±2 minutes. (Continue Results Below)

Air Exchange Rate After Adjustment, 1/h	
---	--

After air exchange rate adjustment, the measured chamber ozone half-life was \_\_\_\_\_ h.

- The measured chamber ozone half-life was 31±2 minutes.
- The measured chamber ozone half-life was not 31±2 minutes.

Only those products bearing the UL Mark should be considered as being covered by UL.

Tested by: Hien Mai  Test 04/22/2010  
Dates -04/25/2010  
Printed Name Signature

PEAK OZONE LOCATION DETERMINATION AND OZONE TEST UL 867, Sections 37 AND  
(CONT'D) 37A

RESULTS - PART D  
OZONE TEST

Sample 1 - 80023-011AA High Fan Speed: **with Filters in place:**

The test was halted after 8 hours. Data showing steady-state condition is attached.

$O_3(t)$  = Maximum ozone concentration measured: 0.002 parts per million (PPM) by volume.

$O_3(\text{Background})$  = Ozone background level before test: 0.0002 parts per million.

The maximum measured ozone level =  $O_3(t) - O_3(\text{Background}) =$  0.002 parts per million.


The maximum measured ozone level did not exceed 0.030 parts per million - only one sample tested.

The maximum measured ozone level was between 0.030 and 0.050 parts per million - test repeated on sample 2.

The sample produced a transitory concentration in excess of 0.050 parts per million, but less than 0.100 parts per million. The average of any five consecutive one minute average measurements was less than 0.050 parts per million - test repeated on sample 2.

The sample produced a transitory concentration in excess of 0.050 parts per million, but less than 0.100 parts per million. The average of any five consecutive one minute average measurements was not less than 0.050 parts per million - test halted.

The maximum measured ozone level exceeded 0.100 parts per million - test halted.

Tested by: Hien Mai  Test Dates 04/22/2010  
-04/25/2010

Printed Name

Signature

PEAK OZONE LOCATION DETERMINATION AND OZONE TEST UL 867, Sections 37 AND  
(CONT'D) 37A

Sample 1 - 80023-012AA Low Fan Speed **with Filters in place:**

The test was halted after 8 hours. Data showing steady-state condition is attached.

$O_3(t)$  = Maximum ozone concentration measured: 0.001 parts per million (PPM) by volume.

$O_3(\text{Background})$  = Ozone background level before test: 0.0002 parts per million.

The maximum measured ozone level =  $O_3(t) - O_3(\text{Background})$  = 0.001 parts per million.


The maximum measured ozone level did not exceed 0.030 parts per million - only one sample tested.

The maximum measured ozone level was between 0.030 and 0.050 parts per million - test repeated on sample 2.

The sample produced a transitory concentration in excess of 0.050 parts per million, but less than 0.100 parts per million. The average of any five consecutive one minute average measurements was less than 0.050 parts per million - test repeated on sample 2.

The sample produced a transitory concentration in excess of 0.050 parts per million, but less than 0.100 parts per million. The average of any five consecutive one minute average measurements was not less than 0.050 parts per million - test halted.

The maximum measured ozone level exceeded 0.100 parts per million - test halted.

Project No. 10SC02597 File E222307 Page 14  
Tested by: Hien Mai  Test Dates 04/22/2010  
-04/25/2010  
Printed Name Signature

PEAK OZONE LOCATION DETERMINATION AND OZONE TEST UL 867, Sections 37 AND  
(CONT'D) 37A

Sample 1 - 80023-013AA (High) ~~(Low)~~ **Fan Speed with Filters removed:**

The test was halted after 8 hours. Data showing steady-state condition is attached.

$O_3(t)$  = Maximum ozone concentration measured: 0.002 parts per million (PPM) by volume.

$O_3(\text{Background})$  = Ozone background level before test: 0.0002 parts per million.

The maximum measured ozone level =  $O_3(t) - O_3(\text{Background})$  = 0.001 parts per million.


The maximum measured ozone level did not exceed 0.030 parts per million - only one sample tested.

The maximum measured ozone level was between 0.030 and 0.050 parts per million - test repeated on sample 2.

The sample produced a transitory concentration in excess of 0.050 parts per million, but less than 0.100 parts per million. The average of any five consecutive one minute average measurements was less than 0.050 parts per million - test repeated on sample 2.

The sample produced a transitory concentration in excess of 0.050 parts per million, but less than 0.100 parts per million. The average of any five consecutive one minute average measurements was not less than 0.050 parts per million - test halted.

The maximum measured ozone level exceeded 0.100 parts per million - test halted.

Tested by: Hien Mai  Test Dates 04/22/2010  
-04/25/2010  
Printed Name Signature

PEAK OZONE LOCATION DETERMINATION AND OZONE TEST UL 867, Sections 37 AND (CONT'D) 37A

Sample 2 -NOT TESTED High Fan Speed with filters in place:

The test was halted after 8 hours. Data showing steady-state condition is attached.

$O_3(t)$  = Maximum ozone concentration measured: \_\_\_\_\_ parts per million (PPM) by volume.


$O_3(\text{Background})$  = Ozone background level before test: \_\_\_\_\_ parts per million.

The maximum measured ozone level =  $O_3(t) - O_3(\text{Background})$  = \_\_\_\_\_ parts per million.

The sample produced a transitory concentration in excess of 0.050 parts per million, but less than 0.100 parts per million. The average of any five consecutive one minute average measurements was less than 0.050 parts per million.

The sample produced a transitory concentration in excess of 0.050 parts per million, but less than 0.100 parts per million. The average of any five consecutive one minute average measurements was not less than 0.050 parts per million.

The maximum measured ozone level exceeded 0.100 parts per million - test halted.

Tested by: Hien Mai  Test Dates 04/22/2010  
-04/25/2010  
Printed Name Signature

PEAK OZONE LOCATION DETERMINATION AND OZONE TEST UL 867, Sections 37 AND  
(CONT'D) 37A

Sample 2 - NOT TESTED Low Fan Speed with filers in place:

The test was halted after 8 hours. Data showing steady-state condition is attached.

$O_3(t)$  = Maximum ozone concentration measured: \_\_\_\_\_ parts per million (PPM) by volume.

$O_3(\text{Background})$  = Ozone background level before test: \_\_\_\_\_ parts per million.


The maximum measured ozone level =  $O_3(t) - O_3(\text{Background})$  = \_\_\_\_\_ parts per million.

The sample produced a transitory concentration in excess of 0.050 parts per million, but less than 0.100 parts per million. The average of any five consecutive one minute average measurements was less than 0.050 parts per million.

The sample produced a transitory concentration in excess of 0.050 parts per million, but less than 0.100 parts per million. The average of any five consecutive one minute average measurements was not less than 0.050 parts per million.

The maximum measured ozone level exceeded 0.100 parts per million - test halted.



Tested by: Hien Mai  Test 04/22/2010  
Printed Name Signature Dates -04/25/2010

PEAK OZONE LOCATION DETERMINATION AND OZONE TEST UL 867, Sections 37 AND (CONT'D) 37A

Sample 2 -NOT TESTED (High) **(Low) Fan Speed with Filters removed:**

The test was halted after 8 hours. Data showing steady-state condition is attached.

$O_3(t)$  = Maximum ozone concentration measured: \_\_\_\_\_ parts per million (PPM) by volume.

$O_3(\text{Background})$  = Ozone background level before test: \_\_\_\_\_ parts per million.

The maximum measured ozone level =  $O_3(t) - O_3(\text{Background})$  = \_\_\_\_\_ parts per million.

The maximum measured ozone level did not exceed 0.030 parts per million - only one sample tested.


The maximum measured ozone level was between 0.030 and 0.050 parts per million - test repeated on sample 2.

The sample produced a transitory concentration in excess of 0.050 parts per million, but less than 0.100 parts per million. The average of any five consecutive one minute average measurements was less than 0.050 parts per million - test repeated on sample 2.

The sample produced a transitory concentration in excess of 0.050 parts per million, but less than 0.100 parts per million. The average of any five consecutive one minute average measurements was not less than 0.050 parts per million - test halted.

The maximum measured ozone level exceeded 0.100 parts per million - test halted.

Only those products bearing the UL Mark should be considered as being covered by UL.

Tested by: Hien Mai  Test Dates 04/22/2010  
-04/25/2010  
 Printed Name Signature

NOTE #5 TO LABORATORY TECHNICIAN: The maximum allowable ozone concentration is 0.050 ppm.

NOTE #6 TO LABORATORY TECHNICIAN: For samples with transitory concentrations in excess of 0.050 ppm, but less than 0.100 ppm, the average of any five consecutive one minute average measurements shall be used when recording the maximum ozone concentration measured.

Date	Time	Test Instance	Ambient Temperature, C	Relative Humidity, %	Barometric Pressure, mBar
<u>04/22/2010-</u> <u>04/23/2010</u>	<u>15:00</u> <u>8:08</u>	<u>1 - High Speed</u> <u>with filters</u>	<u>24.9 - 25.8</u>	<u>45.1 - 52.1</u>	<u>964.9</u>
<u>04/23/2010-</u> <u>04/24/2010</u>	<u>9:20</u> <u>9:20</u>	<u>2 - Low Speed</u> <u>with Filters</u>	<u>24.6 - 26.0</u>	<u>50.0 - 52.2</u>	<u>966.5</u>
<u>04/24/2010-</u> <u>04/25/2010</u>	<u>11:35</u> <u>11:35</u>	<u>3 - High Speed</u> <u>w/out Filters</u>	<u>25.0 - 25.7</u>	<u>47.8 - 50.2</u>	<u>964.6</u>

NOTE #7 TO LABORATORY TECHNICIAN: Environmental conditions shall be monitored and recorded for the duration of the Ozone Test.

TESTING OBSERVATIONS:


NOTE #8 TO LABORATORY TECHNICIAN: Document any observations during the testing (for example - temperature out of range for 5 minutes). Include date, time, technician name and observation observed.

Only those products bearing the UL Mark should be considered as being covered by UL.

Tested by: Hien Mai

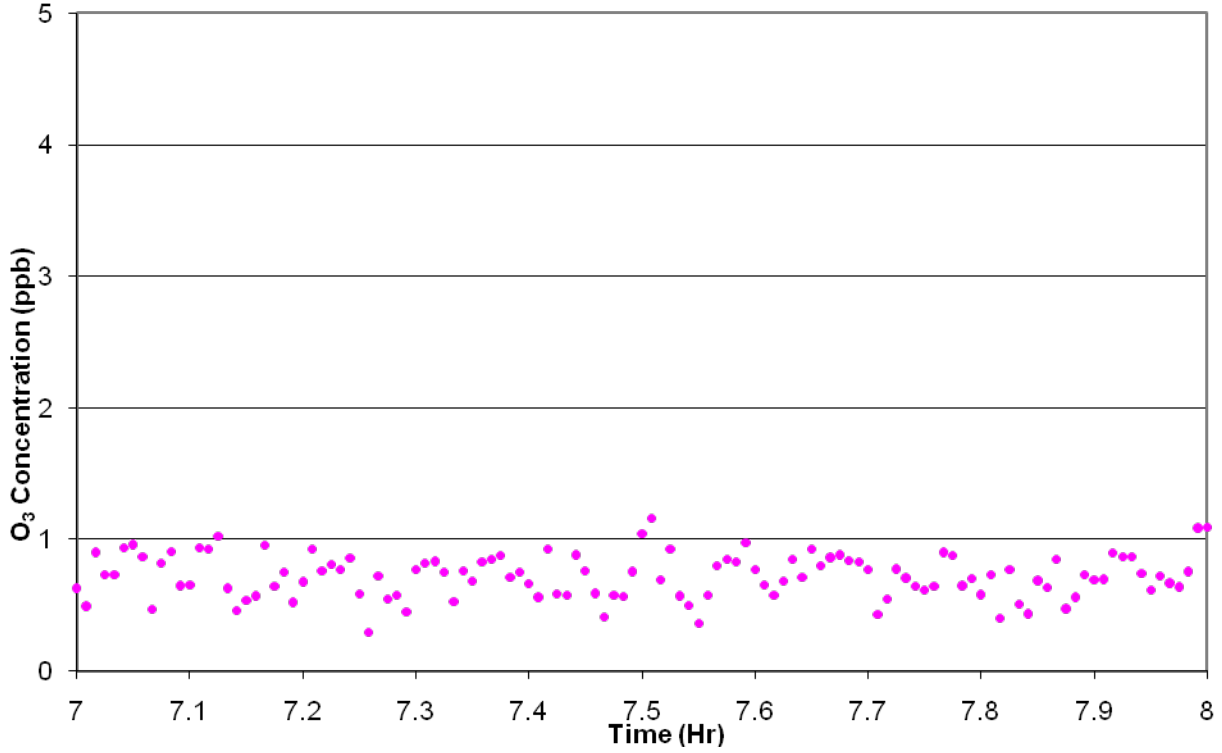
Printed Name




Signature

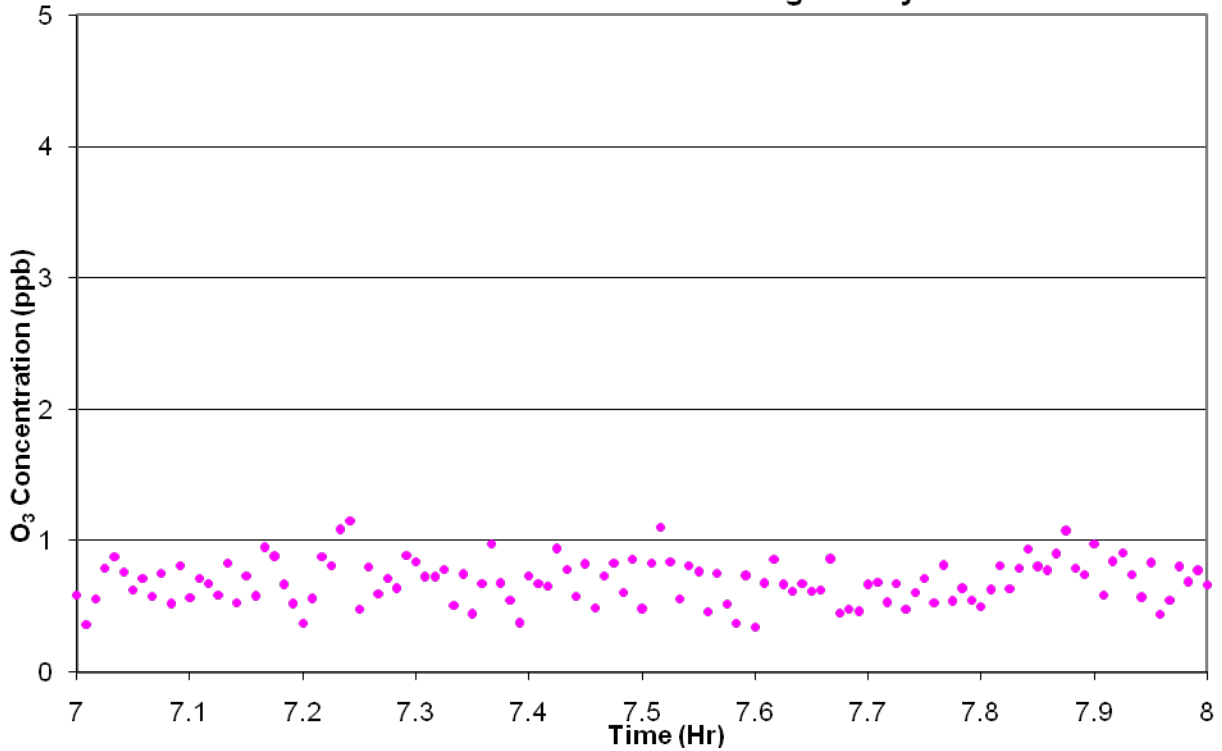
Test Dates 04/22/2010  
-04/25/2010

80023-011AA High Speed with Filters  
Ozone Test Results Hours 7-8 Showing Steady-State Condition



Tested by: Hien Mai  Test 04/22/2010  
Printed Name Signature Dates -04/25/2010

**80023-012AA Low Speed with Filters  
Ozone Test Results Hours 7-8 Showing Steady-State Condition**



Tested by: Hien Mai

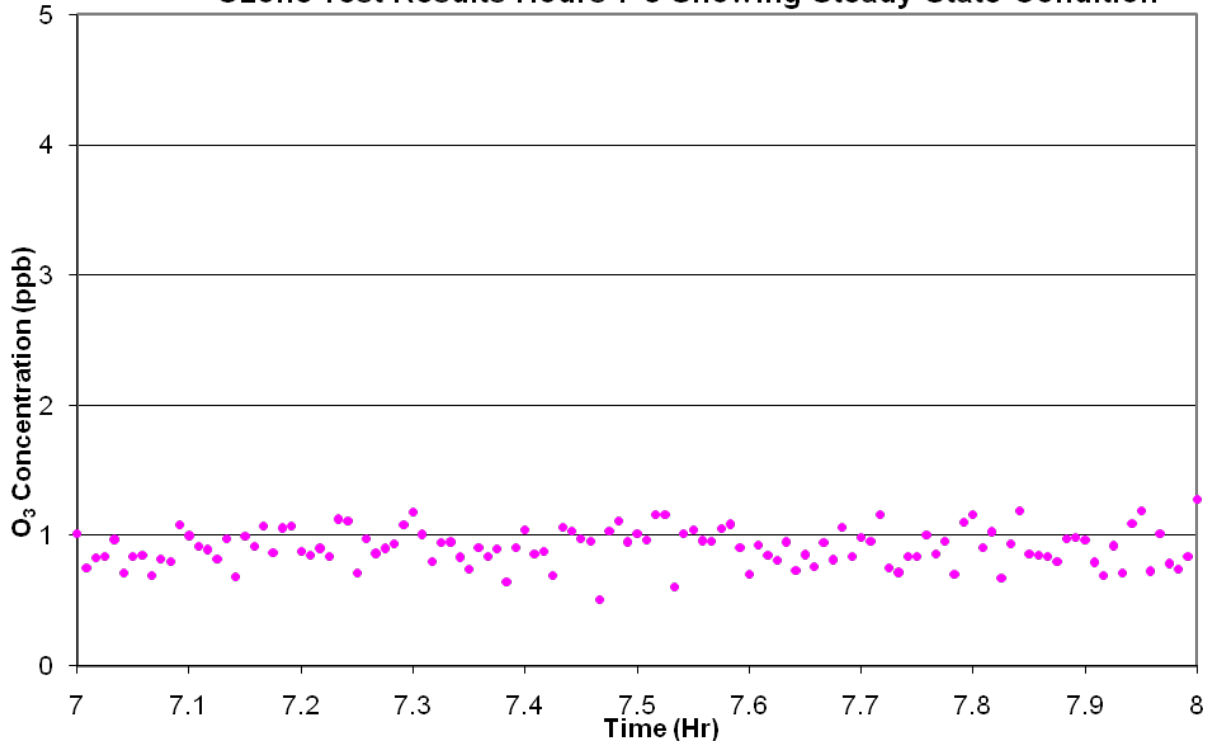


Test Dates 04/22/2010  
-04/25/2010

Printed Name

Signature

**80023-013AA Hi Speed without Filter  
Ozone Test Results Hours 7-8 Showing Steady-State Condition**




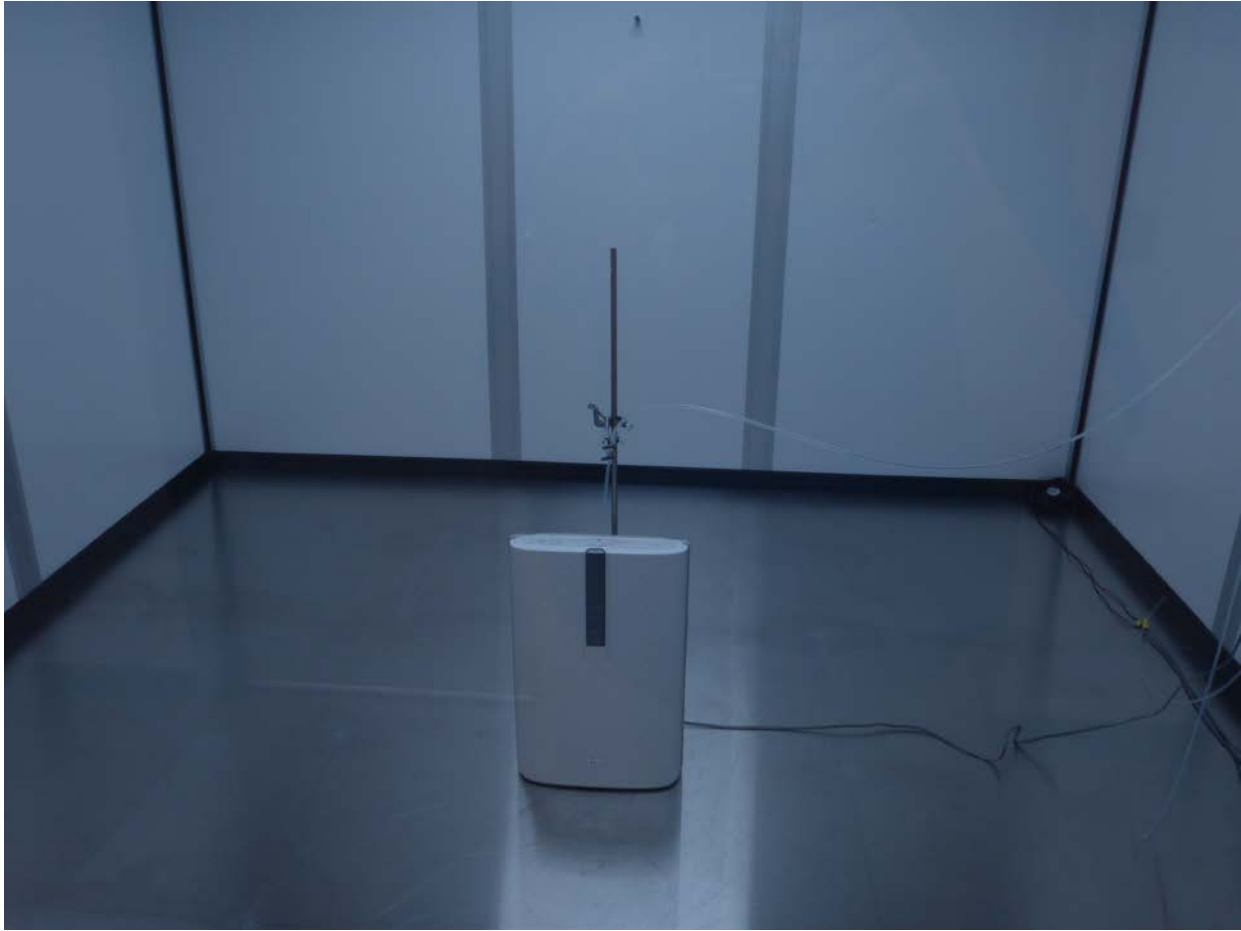
Tested by: Hien Mai  Test 04/22/2010  
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Illustration 1 (80023-010AA)



Project No. 10SC02597 File E222307 Page 23

Tested by: Hien Mai  
Printed Name



Signature

Test 04/22/2010  
Dates -04/25/2010

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