

# Corporación Empresarial Altra, S.L.

## OZONE TEST REPORT

### SCOPE OF WORK

Ozone Emissions Testing of Household Electrostatic Air Cleaners for Model: AZX6AIQBOX

### REPORT NUMBER

105446890CRT-001

### ISSUE DATE

May 16, 2023

### PAGES

10

### QUOTE NUMBER

Qu-0135540-2

### DOCUMENT CONTROL NUMBER

GFT-OP-10o (16-Oct-2017)

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## TEST REPORT FOR

Report No.: 105446890CRT-001

Date: May 16, 2023

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## SECTION 1

### SUMMARY

The representative sample(s) have been tested, investigated, and found to comply with the requirements of the following Standard(s) given the restrictions below:

Electrostatic Air Cleaners, UL 867, Section 40, Fifth Edition, August 4, 2011 revision: August 16, 2021

The equipment identified in this report has been found to 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, as the first sample's maximum emissions were less than 0.030 ppm, which satisfies the exception in the Section 40.1.1.

The sample provided for testing included an ARX CeraDyna fan (Part# - FD1240-A0241D) which is not incorporated in the final product as per the product manual. The fan produces an airflow of ~1.36 m/s at the sampling point, which is critical to meeting the requirements of the above standard. Therefore, airflow is required for the reported values.

This report completes our evaluation covered by Intertek Project Number G105446890 which has been authorized by Intertek quote number: Qu-01355540-2. 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 the undersigned.

### OZONE EMISSIONS SUMMARY

FAN SPEED	FILTER(S)	O3/VOLTAGE SETTING	C(t) <sub>max</sub> [ppm]
On	No	-	0.004*

\*Result requires use of a fan with a minimum air flow as reported

Completed by: Lydia Choi / Ateet Shah  
Title: Engineer / Project Engineer

Reviewed by: Michael Hudon  
Title: Staff Engineer

Signature: 

Signature: 

Date: 5/26/23

Date: 31 May 2023

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## SECTION 2

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## CHAMBER EQUIPMENT INFORMATION

TEST EQUIPMENT LIST

Instrument	Model	Intertek Ctrl #	Cal Due Date
Teledyne – Advanced Pollution Instrumentation Ozone Calibrator	T703	D823	09-13-2023
Teledyne – Advanced Pollution Instrumentation Ozone Monitor	T400	D804	*
Vaisala – Temperature & Humidity Transducer	HMD-70Y	T1307	06-21-2023
Fluid Components International- Flow meter	ST75V	302952	08-29-2023
TSI – Anemometer	9535	303-B210-AN- Water Heater Lab	09-14-2023

\* The T400 Ozone Monitor is calibrated using the T703 calibrator.

## SECTION 3

## UNIT UNDER TEST INFORMATION

MODEL INFORMATION			
Manufacturer:	Corporación Empresarial Altra, S.L.	Pre-Filter:	No
Model Number:	AZX6AIQBOX	HEPA Filter:	No
Production/Prototype/ Design	Production	ESP Filter:	No
Fan Speeds:	On/Off	Carbon Filter:	No
O3/Voltage Settings:	-	UV Light:	No
O3 Monitor:	-	Ionizer:	Yes
Model Notes:	The sample provided for testing included an ARX CeraDyna fan (Part# - FD1240-A0241D) which is not incorporated in the final product as per the product manual. Unit only acceptable for use with a minimum air flow of 9.7 SCFM		

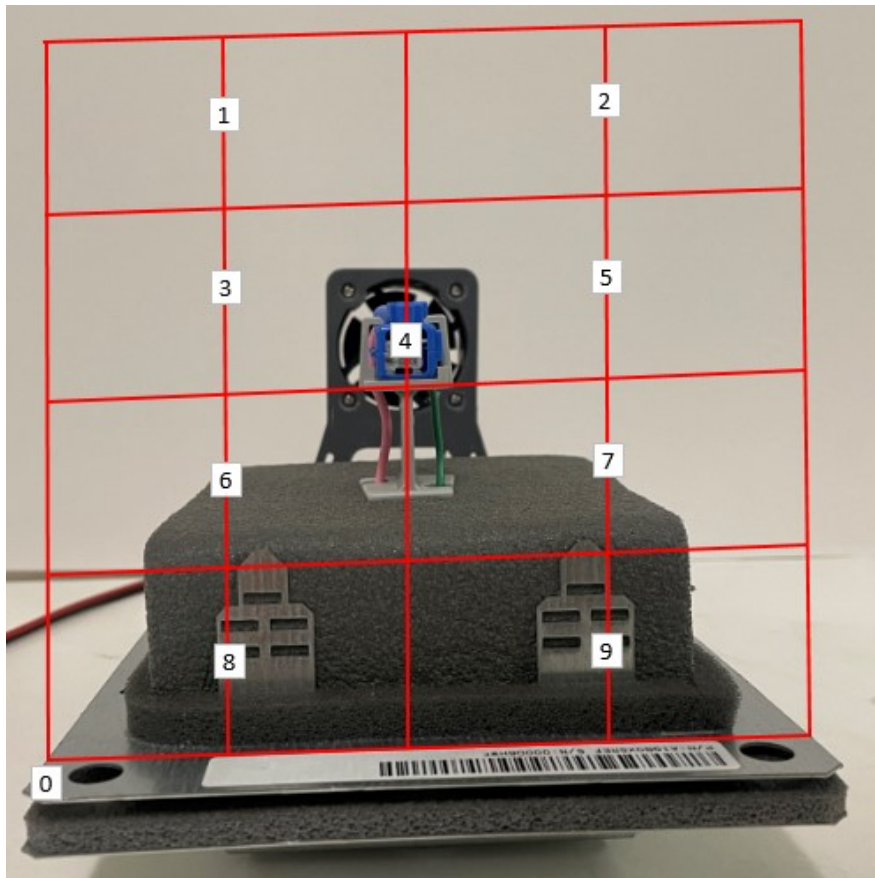
RUN-IN TEST			
FIRST SAMPLE			
Run-in Start:	5/8/23 10:30 AM	Run-in End:	5/10/23 10:58 AM
Run-in Temperature:	77 +/- 4 °F	Tracking Number:	CRT2305051446-001
Serial Number:	000D7KFB	Manufacture Date:	4/11/23
Sample Notes:	NA		
SECOND SAMPLE			
Run-in Start:	NA	Run-in End:	NA
Run-in Temperature:	NA	Tracking Number:	CRT2305051446-002
Serial Number:	NA	Manufacture Date:	NA
Sample Notes:	Per the exception listed under clause 40.1.1 of UL 867, the second sample was not required to be tested.		

**SECTION 4**

**PEAK OZONE TEST**

GRILL AND AIR PERIPHERY DIMENSIONS			
		Date of Test:	5/10/23
Grill Height:	5.5	Air Periphery Height:	5.5
Grill Width:	5.5	Air Periphery Width:	5.5
Estimated Grill Area:	30.250	Est. Air Periphery Area:	30.250
Notes:	Measurements are in Inches		

PEAK LOCATION			
Loc.	X	Y	
-	[inches]	[inches]	
1	1.38	4.81	
2	4.13	4.81	
3	1.38	3.44	
4	2.75	3.00	
5	4.13	3.44	
6	1.38	2.06	
7	4.13	2.06	
8	1.38	0.69	
9	4.13	0.69	
* Location measurements are coordinates in reference to the center point.			



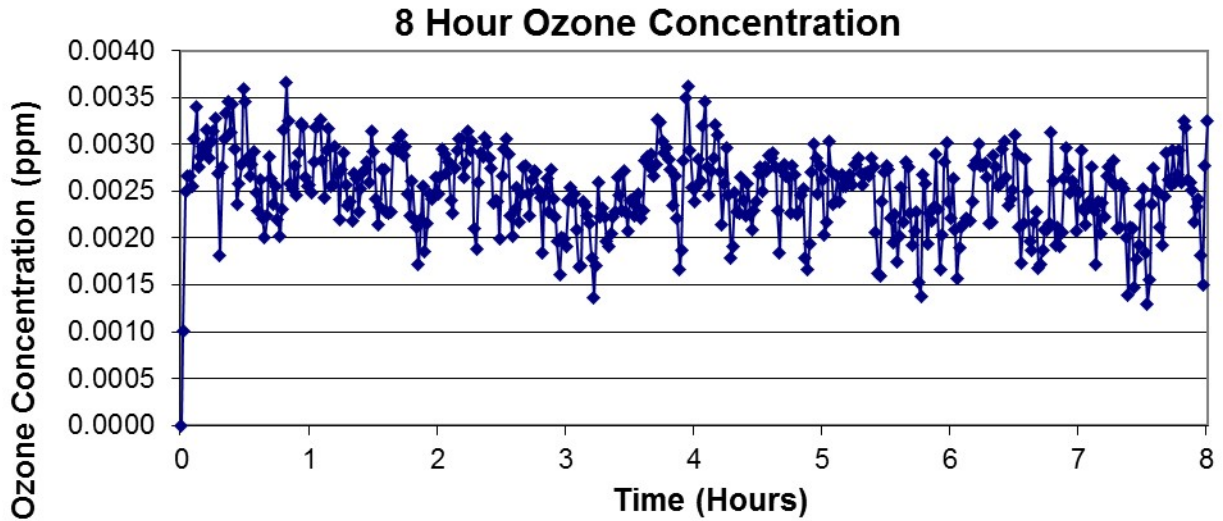
PEAK OZONE CONCENTRATIONS (ppm)	
Location	<i>Without Filter(s)</i>
	<i>On</i>
1	0.0005
2	0.0013
3	0.0010
4	0.0028
5	0.0018
6	0.0021
7	0.0018
8	0.0003
9	0.0005

Note: Peak Ozone Test concentrations are shown with background subtracted.

**SECTION 5**

**MAX OZONE TEST**

START DATE OF TEST: March 10, 2023  
 SAMPLE: First  
 FAN SPEED: On  
 FILTER(S): Without Filter



MAXIMUM OZONE TEST RESULTS							
	UL Ref.	Pass/Fail	Mean	Min	Max	Delta	Units
Background C(t) O3:	40.4.3	PASS	0.002	0.001	0.002	0.001	[ppm]
Test 1min C(t) O3:	40.1.2	PASS	0.003	0.000	<b>0.004</b>	0.004	[ppm]
Test 5min C(t) O3:	40.1.2	PASS	0.003	0.002	0.003	0.002	[ppm]
Chamber Temperature:	40.4.2	PASS	77	77	77	1	[degF]
Chamber Humidity:	40.4.2	PASS	50	49	52	2	[%RH]
Chamber Static Pressure:	-	PASS	0.02	0.01	0.03	0.01	["H2O]
Chamber Supply Air Flow:	-	-	21	20	21	0	[SCFM]
Required to Test 2nd Sample:	40.1.1	NO					
Test Duration:	*40.4.6	8 hours					

*\*Indicates a reference to a UL CRD*

NOTES: Peak Test Location 4

**SECTION 6**

**APPENDIX**

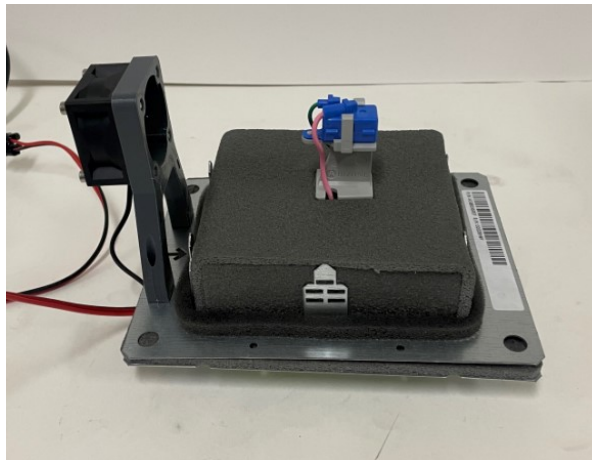
**DATA FILES**

TEST NAME	RAW DATA FILE
Model Half Life	5275 Altra halflife ozonelog.csv
Max Ozone: On w/o Filter	Peak ONWOF Altra ozonelog.csv

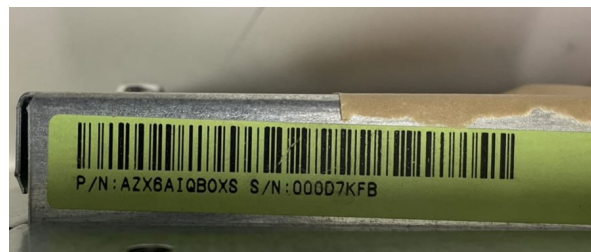
**ATTACHMENT DOCUMENTS**

DOCUMENT	SOFT-COPY FILE NAME
ARB Application	NA
Chain of Custody: Sample 1	COC_CRT2305051446-001.pdf
Chain of Custody: Sample 2	COC_CRT2305051446-002.pdf

**UUT PHOTOGRAPHS**



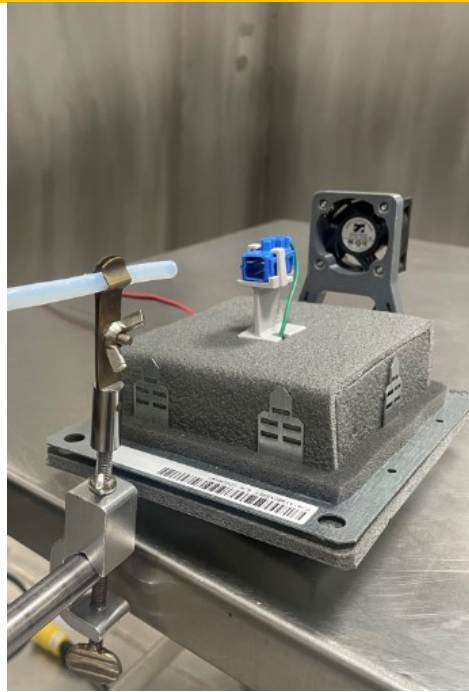
UUT



Nameplate



UUT PHOTOGRAPHS: PEAK TEST



**Location 4**  
On w/o FILTER

UUT PHOTOGRAPHS: MAX OZONE TESTS



**Location 4**  
On w/o FILTER

**7.0 REVISION SUMMARY**

Date/Proj # Site ID	Project Handler/ Reviewer	Section	Description of Change
			None