

Tested device	CYCLOHNIC
Date	December 2021
Test performed	Assessment on the reduction of microbiological contamination (air)
Place	Microbiology laboratory room (8m ³)
Realized by	Esther Montesinos
Supervised by	Dr. Pere Monagas

PROCEDURE

To carry out relevant tests of the product, an 8 m³ room has been used, where comfort conditions for microorganisms were maintained in terms of temperature (20 ± 3 °C) and relative humidity ($50 \pm 5\%$).

Two tests have been performed, the first one with the device turned off (as a control) and the second one with the device under normal conditions of operation to assess its effectiveness of the elimination of microorganisms. A total of 3 samples were taken for each test at 1 hour intervals. At the end of the test, results obtained after 2h of operation have been taken as relevant values. Each test was repeated 3 times to minimize variability in the results obtained.

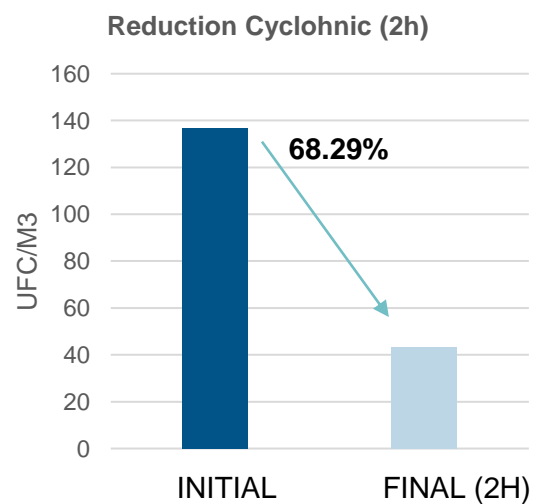
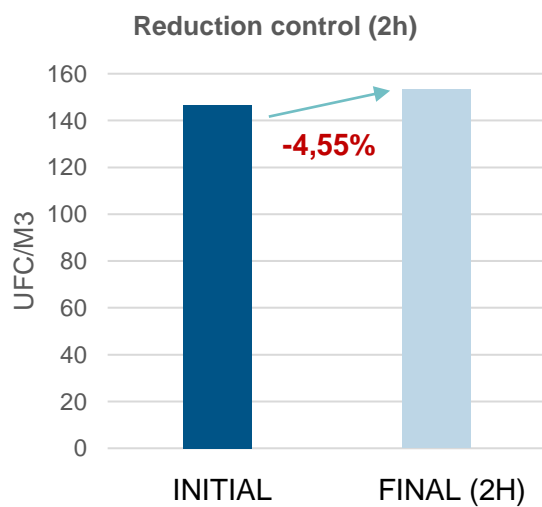
OBTAINED DATA

TEST	SAMPLE	T(°C)	HR(%)	UFC/m³
TEST 1 – DEVICE TURNED OFF (CONTROL)				
1.1	0h	20,4	51,9	150
	1h			170
	2h			140
1.2	0h	20,4	51,9	110
	1h			120
	2h			130
1.3	0h	20,4	51,9	180
	1h			170
	2h			190
TEST 2 – DEVICE OPERATING				
2.1	0h	21,0	52,7	130
	1h			100
	2h			30
2.2	0h	21,1	52,0	110
	1h			40
	2h			40
2.3	0h	20,0	52,4	170
	1h			70
	2h			60

RESULTS

In order to evaluate the results obtained, the average of the three repetitions performed for each test was taken as final values.

TEST	SAMPLE	UFC/m ³	Reduction (%)
1 (Control)	0h	147	--
	2h	153	-4,55%
2 (Cyclohnic)	0h	137	--
	2h	43	68,29%



CONCLUSIONS

The Cyclohnic's device ability to reduce airborne microorganisms has been validated, resulting in an **average reduction of 68.29% in 2 hours of operation.**