

<b>Tested device</b>	<b>NUVOHLA ROOM</b>
<b>Date</b>	September 2021
<b>Test performed</b>	Assessment of the reduction of environmental pollutants (air quality)
<b>Place</b>	Air quality laboratory room (8m <sup>3</sup> )
<b>Realized by</b>	Esther Montesinos
<b>Supervised by</b>	Dr. Pere Monagas

## PROCEDURE

To carry out relevant tests of the product, an 8m<sup>3</sup> room has been used. Within the room, stable conditions of temperature (20 ± 3 °C) and relative humidity (50 ± 5 %) have been maintained.

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 environmental pollutants reduction capacity. For each test performed, 5 samples have been taken every 30 min. At the end of the test, results obtained after 2h of operation have been taken as relevant to assess the product efficiency against environmental pollutants.

## COLLECTED DATA

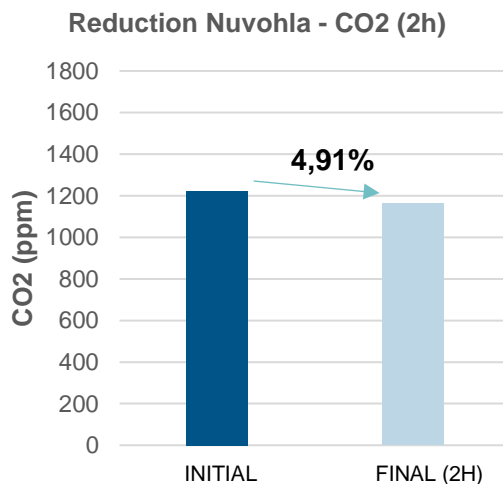
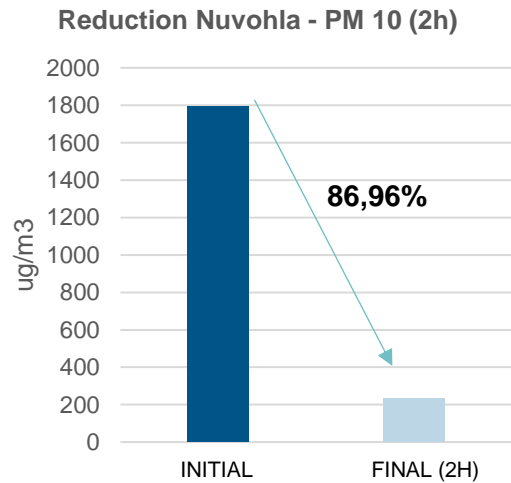
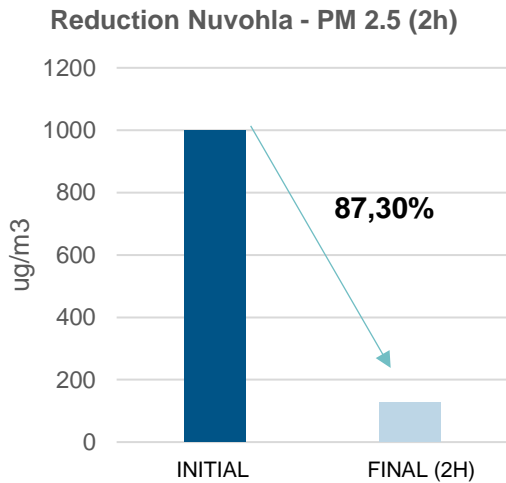
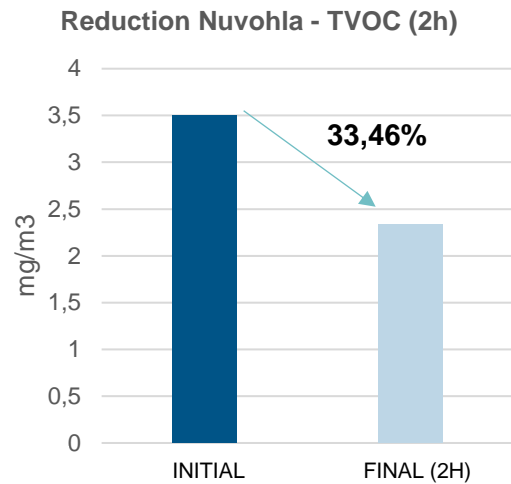
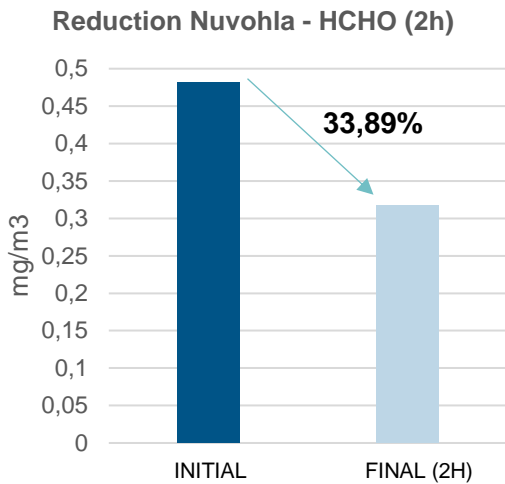
TEST	SAMPLE	HCHO (mg/m <sup>3</sup> )	TCOV (mg/m <sup>3</sup> )	PM 2.5 (µg/m <sup>3</sup> )	PM 10 (µg/m <sup>3</sup> )	CO2 (ppm)
TEST 1 – Device turned off (Control)	0h	0,629	4,572	1000	1798	1340
	30min	0,585	4,254	1000	1798	1395
	1h	0,533	3,874	1000	1798	1387
	1h 30min	0,601	4,349	1000	1798	1372
	2h	0,628	4,545	1000	1798	1340
TEST 2 – Device operating (Nuvohla)	0h	0,481	3,503	1000	1794	1223
	30min	0,377	2,735	456	817	1259
	1h	0,325	2,356	501	923	1236
	1h 30min	0,309	2,240	89	165	1212
	2h	0,318	2,331	127	234	1163

## RESULTS

To assess the obtained results, values obtained at 0h have been considered as initial, and the ones obtained after 2h as final.

TEST	SAMPLE	HCHO (mg/m <sup>3</sup> )	TVOC (mg/m <sup>3</sup> )	PM 2.5 (µg/m <sup>3</sup> )	PM 10 (µg/m <sup>3</sup> )	CO2 (ppm)
1 (Control)	0h	0,629	4,572	1000	1798	1340
	2h	0,628	4,545	1000	1798	1340
<b>Reduction (%)</b>		<b>0,16</b>	<b>0,59</b>	<b>0,00</b>	<b>0,00</b>	<b>0,00</b>
2 (Nuvohla)	0h	0,481	3,503	1000	1794	1223
	2h	0,318	2,331	127	234	1163

<b>Reduction (%)</b>	<b>33,89</b>	<b>33,46</b>	<b>87,30</b>	<b>86,96</b>	<b>4,91</b>
----------------------	--------------	--------------	--------------	--------------	-------------



**CONCLUSIONS**

It has been possible to validate the efficiency of the Nuvohla device for the improvement of air quality in a space of 8m<sup>3</sup>, obtaining values of reduction of around **33% in formaldehyde (HCHO) and volatile**

**organic components (VOCs )**, and around **87% for suspended particles (PM2.5 and PM10)**. There has also been a **4.91% reduction in CO2..**