

Nuwave, LLC

TEST REPORT

SCOPE OF WORK

Removal Rate Testing - Air Purifier - [47251;472**]

REPORT NUMBER

210430143GZU-003

ISSUE DATE

17-Sep-2021

[REVISED DATE]

None

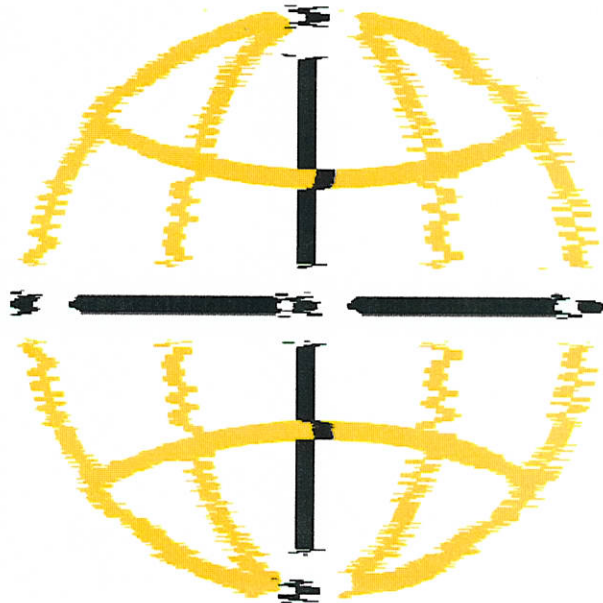
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DOCUMENT CONTROL NUMBER

AP-US-TRF_V5.1[31-05-2021]

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Test Equipment List:

Equipment Name	Type	Number	Calibration Date	Due Date
Laser Aerosol Spectrometer	3340	SA016-23-04	2021/2/26	2022/2/25
Aerodynamic Particle Sizer	3321	SA016-23-05	2021/1/26	2022/1/25
Fluidized Bed Aerosol Generator	3400A	SA016-23-05	2021/6/4	2022/6/3
Air Cleaner testing Chamber		SA016-23	2021/6/4	2022/6/3

Device Under Test Description:

The device(s) tested for this report were/was Model 47251

The following device settings were used during testing: 120V/60Hz, Turbo Speed, Ionizer On, Tested on the Floor



Results of pollutants remove rate for Cigarette Smoke:

Monitored particle size ranges for the Cigarette Smoke particulates were: 0.1-1 microns.

Model/Configuration: S210430143-007, 47201, 120V/60Hz, Turbo Speed, Ionzier ON, Tested on the Floor

Time (min)	Cigarette smoke				
	0.1µm	0.11µm	0.12µm	0.13µm	0.14µm
10	89.30%	90.21%	90.61%	91.52%	92.82%
20	99.43%	99.41%	99.45%	99.54%	99.67%
30	99.95%	99.95%	100.00%	100.00%	99.93%
40	99.99%	99.99%	100.00%	100.00%	100.00%
50	100.00%	100.00%	100.00%	100.00%	100.00%
60	100.00%	100.00%	100.00%	100.00%	100.00%
70	100.00%	100.00%	100.00%	100.00%	100.00%
80	100.00%	100.00%	100.00%	100.00%	100.00%
90	100.00%	100.00%	100.00%	100.00%	100.00%
100	100.00%	100.00%	100.00%	100.00%	100.00%
110	100.00%	100.00%	100.00%	100.00%	100.00%
120	100.00%	100.00%	100.00%	100.00%	100.00%

Time (min)	Cigarette smoke				
	0.15µm	0.16µm	0.17µm	0.18µm	0.19µm
10	92.17%	93.40%	91.75%	92.59%	91.02%
20	99.52%	99.46%	99.66%	99.43%	99.51%
30	100.00%	99.97%	100.00%	100.00%	99.90%
40	100.00%	100.00%	100.00%	100.00%	100.00%
50	100.00%	100.00%	100.00%	100.00%	100.00%
60	100.00%	100.00%	100.00%	100.00%	100.00%
70	100.00%	100.00%	100.00%	100.00%	100.00%
80	100.00%	100.00%	100.00%	100.00%	100.00%
90	100.00%	100.00%	100.00%	100.00%	100.00%
100	100.00%	100.00%	100.00%	100.00%	100.00%
110	100.00%	100.00%	100.00%	100.00%	100.00%
120	100.00%	100.00%	100.00%	100.00%	100.00%

Time (min)	Cigarette smoke				
	0.2µm	0.225µm	0.25µm	0.275µm	0.3µm
10	93.34%	89.70%	94.42%	97.14%	90.32%
20	99.76%	100.00%	97.97%	98.57%	96.77%
30	99.92%	100.00%	100.00%	100.00%	100.00%
40	100.00%	100.00%	100.00%	100.00%	100.00%
50	100.00%	100.00%	100.00%	100.00%	100.00%
60	100.00%	100.00%	100.00%	100.00%	100.00%
70	100.00%	100.00%	100.00%	100.00%	100.00%
80	100.00%	100.00%	100.00%	100.00%	100.00%
90	100.00%	100.00%	100.00%	100.00%	100.00%
100	100.00%	100.00%	100.00%	100.00%	100.00%
110	100.00%	100.00%	100.00%	100.00%	100.00%
120	100.00%	100.00%	100.00%	100.00%	100.00%

Results of pollutants remove rate for Cigarette Smoke:

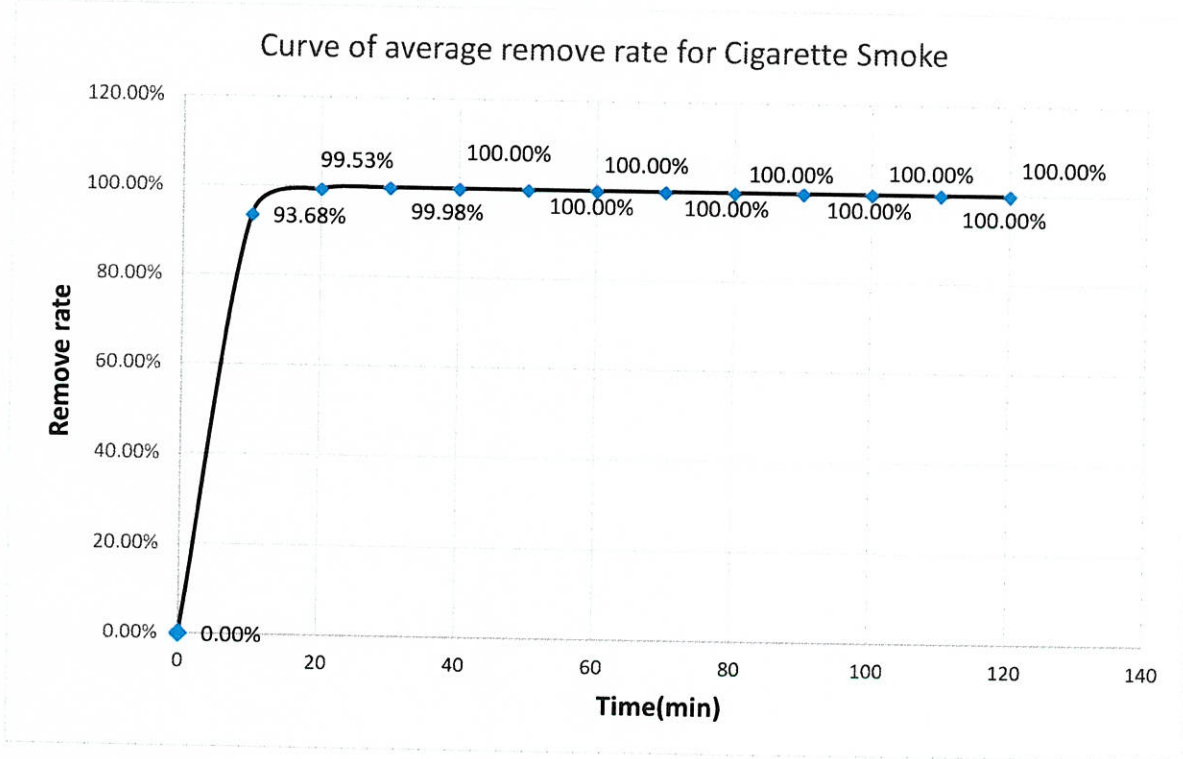
Monitored particle size ranges for the Cigarette Smoke particulates were: 0.1-1 microns.

Model/Configuration: S210430143-007, 47201, 120V/60Hz, Turbo Speed, Ionzier ON, Tested on the Floor

Time (min)	Cigarette smoke				
	0.325µm	0.35µm	0.4µm	0.45µm	0.5µm
10	80.00%	91.67%	90.00%	100.00%	100.00%
20	100.00%	100.00%	100.00%	100.00%	100.00%
30	100.00%	100.00%	100.00%	100.00%	100.00%
40	100.00%	100.00%	100.00%	100.00%	100.00%
50	100.00%	100.00%	100.00%	100.00%	100.00%
60	100.00%	100.00%	100.00%	100.00%	100.00%
70	100.00%	100.00%	100.00%	100.00%	100.00%
80	100.00%	100.00%	100.00%	100.00%	100.00%
90	100.00%	100.00%	100.00%	100.00%	100.00%
100	100.00%	100.00%	100.00%	100.00%	100.00%
110	100.00%	100.00%	100.00%	100.00%	100.00%
120	100.00%	100.00%	100.00%	100.00%	100.00%

Time (min)	Cigarette smoke				
	0.6µm	0.7µm	0.8µm	0.9µm	1µm
10	100.00%	100.00%	100.00%	100.00%	100.00%
20	100.00%	100.00%	100.00%	100.00%	100.00%
30	100.00%	100.00%	100.00%	100.00%	100.00%
40	100.00%	100.00%	100.00%	100.00%	100.00%
50	100.00%	100.00%	100.00%	100.00%	100.00%
60	100.00%	100.00%	100.00%	100.00%	100.00%
70	100.00%	100.00%	100.00%	100.00%	100.00%
80	100.00%	100.00%	100.00%	100.00%	100.00%
90	100.00%	100.00%	100.00%	100.00%	100.00%
100	100.00%	100.00%	100.00%	100.00%	100.00%
110	100.00%	100.00%	100.00%	100.00%	100.00%
120	100.00%	100.00%	100.00%	100.00%	100.00%

Curve of average remove rate for Cigarette Smoke



Results of pollutants remove rate for Dust:

Monitored particle size ranges for the Dust particulates were: 0.5-3 microns.

Model/Configuration: S210430143-007, 47201, 120V/60Hz, Turbo Speed, Ionzier ON, Tested on the Floor

Time (min)	Dust				
	<0.523µm	0.542µm	0.583µm	0.626µm	0.673µm
10	90.01%	90.26%	90.10%	90.17%	90.07%
20	99.10%	98.97%	98.75%	98.97%	99.11%
30	99.89%	99.93%	99.91%	99.94%	99.81%
40	99.99%	99.95%	99.98%	99.98%	100.00%
50	100.00%	100.00%	99.98%	100.00%	99.98%
60	100.00%	100.00%	100.00%	100.00%	99.98%
70	100.00%	100.00%	100.00%	100.00%	100.00%
80	100.00%	100.00%	100.00%	100.00%	100.00%
90	99.99%	100.00%	100.00%	100.00%	99.98%
100	100.00%	99.98%	100.00%	100.00%	100.00%
110	100.00%	100.00%	100.00%	100.00%	100.00%
120	100.00%	100.00%	100.00%	100.00%	100.00%

Time (min)	Dust				
	0.723µm	0.777µm	0.835µm	0.898µm	0.965µm
10	89.83%	89.23%	89.43%	90.09%	89.41%
20	99.02%	99.00%	99.03%	98.80%	98.81%
30	99.91%	100.00%	99.81%	99.92%	99.86%
40	99.95%	100.00%	99.98%	99.97%	99.96%
50	100.00%	100.00%	99.98%	100.00%	100.00%
60	100.00%	100.00%	99.98%	100.00%	100.00%
70	100.00%	100.00%	99.98%	100.00%	100.00%
80	100.00%	100.00%	100.00%	100.00%	100.00%
90	100.00%	100.00%	100.00%	100.00%	100.00%
100	100.00%	100.00%	100.00%	100.00%	100.00%
110	100.00%	100.00%	100.00%	100.00%	100.00%
120	100.00%	100.00%	100.00%	100.00%	100.00%

Time (min)	Dust				
	1.037µm	1.114µm	1.197µm	1.286µm	1.382µm
10	90.22%	89.87%	88.72%	89.66%	92.54%
20	98.63%	99.28%	99.43%	99.47%	99.04%
30	99.79%	99.94%	99.93%	99.74%	99.79%
40	100.00%	100.00%	100.00%	100.00%	99.89%
50	100.00%	100.00%	100.00%	100.00%	100.00%
60	100.00%	100.00%	100.00%	100.00%	100.00%
70	100.00%	100.00%	100.00%	100.00%	100.00%
80	100.00%	100.00%	100.00%	100.00%	100.00%
90	100.00%	100.00%	100.00%	100.00%	100.00%
100	100.00%	100.00%	100.00%	100.00%	100.00%
110	100.00%	100.00%	100.00%	100.00%	100.00%
120	100.00%	100.00%	100.00%	100.00%	100.00%

Results of pollutants remove rate for Dust:

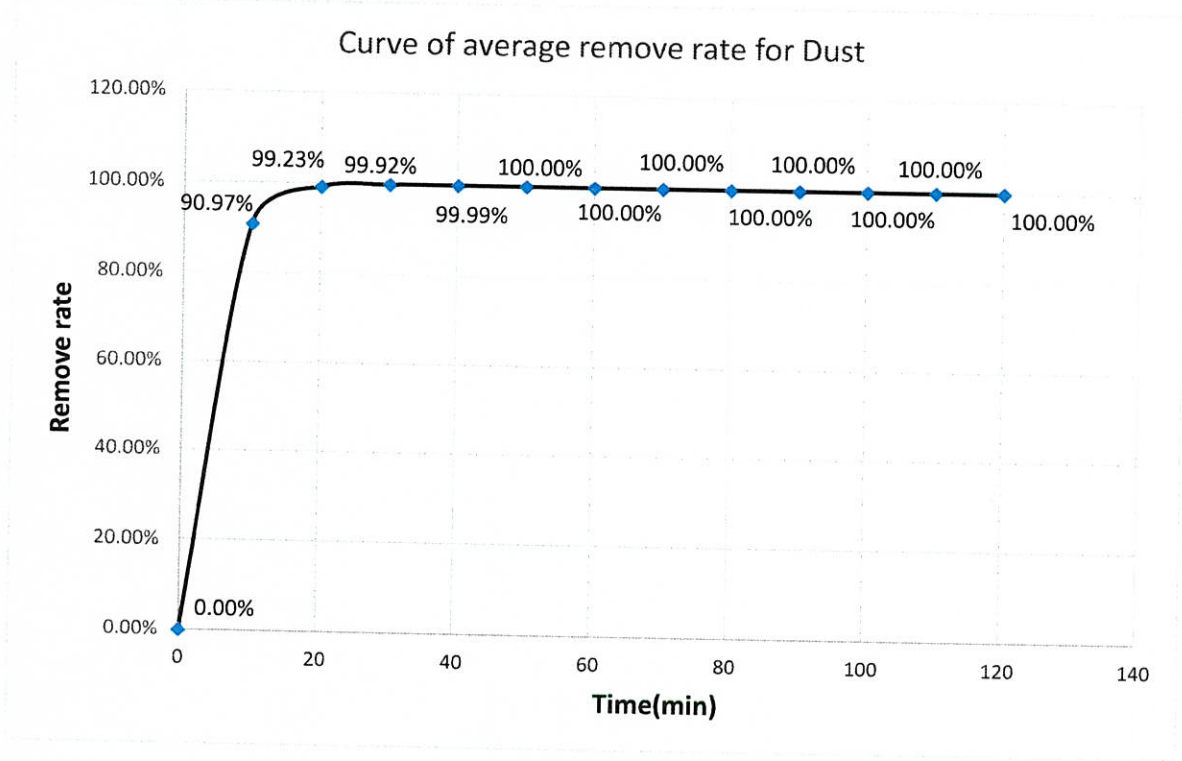
Monitored particle size ranges for the Dust particulates were: 0.5-3 microns.

Model/Configuration: S210430143-007, 47201, 120V/60Hz, Turbo Speed, Ionzier ON, Tested on the Floor

Time (min)	Dust				
	1.486µm	1.596µm	1.715µm	1.843µm	1.981µm
10	91.06%	91.86%	94.04%	92.36%	91.00%
20	99.43%	99.10%	99.22%	100.00%	99.50%
30	99.86%	100.00%	100.00%	100.00%	100.00%
40	100.00%	100.00%	100.00%	100.00%	100.00%
50	100.00%	100.00%	100.00%	100.00%	100.00%
60	100.00%	100.00%	100.00%	100.00%	100.00%
70	100.00%	100.00%	100.00%	100.00%	100.00%
80	100.00%	100.00%	100.00%	100.00%	100.00%
90	100.00%	100.00%	100.00%	100.00%	100.00%
100	100.00%	100.00%	100.00%	100.00%	100.00%
110	100.00%	100.00%	100.00%	100.00%	100.00%
120	100.00%	100.00%	100.00%	100.00%	100.00%

Time (min)	Dust				
	2.129µm	2.288µm	2.458µm	2.642µm	2.839µm
10	94.24%	94.87%	88.64%	94.59%	92.00%
20	99.28%	98.72%	100.00%	100.00%	100.00%
30	100.00%	100.00%	100.00%	100.00%	100.00%
40	100.00%	100.00%	100.00%	100.00%	100.00%
50	100.00%	100.00%	100.00%	100.00%	100.00%
60	100.00%	100.00%	100.00%	100.00%	100.00%
70	100.00%	100.00%	100.00%	100.00%	100.00%
80	100.00%	100.00%	100.00%	100.00%	100.00%
90	100.00%	100.00%	100.00%	100.00%	100.00%
100	100.00%	100.00%	100.00%	100.00%	100.00%
110	100.00%	100.00%	100.00%	100.00%	100.00%
120	100.00%	100.00%	100.00%	100.00%	100.00%

Curve of average remove rate for Dust



Results of pollutants remove rate for Pollen:

Monitored particle size ranges for the Pollen particulates were: 5-11 microns.

Model/Configuration: S210430143-007, 47201, 120V/60Hz, Turbo Speed, Ionzier ON, Tested on the Floor

Time (min)	5.048µm	5.425µm	Pollen 5.829µm	6.264µm	6.732µm
10	95.15%	89.47%	98.04%	93.51%	95.88%
20	100.00%	100.00%	99.02%	99.57%	99.59%
30	100.00%	100.00%	100.00%	100.00%	100.00%
40	100.00%	100.00%	100.00%	100.00%	100.00%
50	100.00%	100.00%	100.00%	100.00%	100.00%
60	100.00%	100.00%	100.00%	100.00%	100.00%
70	100.00%	100.00%	100.00%	100.00%	100.00%
80	100.00%	100.00%	100.00%	100.00%	100.00%
90	100.00%	100.00%	100.00%	100.00%	100.00%
100	100.00%	100.00%	100.00%	100.00%	100.00%
110	100.00%	100.00%	100.00%	100.00%	100.00%
120	100.00%	100.00%	100.00%	100.00%	100.00%

Time (min)	7.234µm	7.774µm	Pollen 8.354µm	8.977µm	9.647µm
10	97.09%	96.10%	97.79%	98.01%	99.61%
20	99.90%	99.93%	100.00%	100.00%	100.00%
30	100.00%	100.00%	100.00%	100.00%	100.00%
40	100.00%	100.00%	100.00%	100.00%	100.00%
50	100.00%	100.00%	100.00%	100.00%	100.00%
60	100.00%	100.00%	100.00%	100.00%	100.00%
70	100.00%	100.00%	100.00%	100.00%	100.00%
80	100.00%	100.00%	100.00%	100.00%	100.00%
90	100.00%	100.00%	100.00%	100.00%	100.00%
100	100.00%	100.00%	100.00%	100.00%	100.00%
110	100.00%	100.00%	100.00%	100.00%	100.00%
120	100.00%	100.00%	100.00%	100.00%	100.00%

Time (min)	10.37µm	11.14µm	Pollen
10	96.97%	100.00%	
20	100.00%	100.00%	
30	100.00%	100.00%	
40	100.00%	100.00%	
50	100.00%	100.00%	
60	100.00%	100.00%	
70	100.00%	100.00%	
80	100.00%	100.00%	
90	100.00%	100.00%	
100	100.00%	100.00%	
110	100.00%	100.00%	
120	100.00%	100.00%	

Curve of average remove rate for Pollen

